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# Book of Abstracts



**APVV**



NÁRODNÁ BANKA SLOVENSKA  
EUROSYSTEM

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# Closing the gaps: the positive effects of welfare inclusion on immigrants' labor market integration

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This paper examines the effects of welfare inclusiveness on the labor market integration of migrants in host countries. We situate this research in the existing debate about the role of welfare states and social policies in immigrant integration. While some scholars have theorized that inclusionary approaches are most conducive to successful integration because they maximize the equality of opportunity of immigrants and native-born citizens, others have argued that inclusive approaches discourage especially newcomers from becoming economically active. By using a novel IESPI (Immigrant Exclusion from Social Programs Index) dataset, which measures welfare inclusiveness towards immigrants based on measures of formal rules and legislation, we evaluate the relative merits of these competing hypotheses. To this purpose, we compile longitudinal data covering 19 developed countries over a period of three decades (1990-2019) and examine labor market integration in terms of native-immigrant gaps in labor force participation and unemployment rates. Our findings reveal that inclusiveness of social policy decreases native-immigrant labor force participation gap and increases unemployment rate gap. Hence, inclusive welfare approaches not only foster equality of opportunity between migrants and native-born citizens but also lead to more favorable outcomes for immigrants. Nevertheless, we also find that the integration effects of the inclusiveness of social policy vary across programs. While greater inclusiveness of some instruments has an enabling role on immigrants with regards their labor market integration, others may be trapping them in welfare or enabling native-born citizens more, who on average tend to command greater economic and social resources to gain advantage in the labor market.

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# The Employment of Socially Excluded Communities in the Slovak Republic: A General Equilibrium Approach

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In this paper, we identify communities that suffer from social exclusion and structural unemployment and evaluate different types of active labour market policies that support their integration to the labour market, with a focus on the activation works and the inclusive programmes. We further construct a computable general equilibrium model of a small open economy to estimate a potential impact of these policies on an economic performance. Calibration of the model is based on a social accounting matrix and individual microeconomic data that are applied for a disaggregation of households and producers and a dynamization of active labour market policies. According to our results, both types of active labour market policies have a positive impact on the employment of excluded communities but differ in a degree of potential improvement. We find out that the inclusive programmes provide much better results than the activation works in terms of structural unemployment and potential production in the Slovak economy.

# Under Pressure? Performance Evaluation of Police Officers as an Incentive to Cheat: Evidence from Drug Crimes in Russia

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This paper investigates the use of high-powered incentives for civil servants in the public sector by analyzing possible manipulations of seized drug amounts by Russian police. First, using a bunching estimator, I document a significant excess mass of heroin cases above the punishment threshold. Next, combining the bunching with an event study framework, I study the incentives for police officers to manipulate and find evidence consistent with the motivation arising from the officers' performance evaluation. Further negative consequences of the inappropriate incentives are inequality in the enforcement of law and prolonged sentences. Thus, I determine that police officers are more likely to manipulate the drug amounts seized from repeat offenders. The overall effect of manipulation on the sentence length of drug users is an additional year of incarceration, which is a 67% increase on the average sentence length without manipulation.

# Can a short-term job trial programme kick-start young jobseekers' career?

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In this paper, we perform a counterfactual evaluation of a publicly funded short-term hiring subsidy designed for young jobseekers in Hungary: namely, the 90-day job trial programme, which was introduced in 2015 a part of the Youth Guarantee scheme. The analysis is based on a linked administrative dataset of PES registers and social security records. We rely on propensity score matching for causal inference and compare job trial participants and participants in public works and classroom training programmes. Our estimates indicate that compared to participation in the public works programme, participation in the 90-day job trial improved employment prospects of young people: job trial participants spent 14-23 days more in employment within six months after the programme ended, the probability of being employed is higher by 4-7.7% six months after the programme on the whole sample. The difference is lower compared to the training participants: job trial participants spent 7.5-12 days more in employment status. The impact is weaker on the 12-month horizon compared to both control groups. It is the most employable young jobseekers who participate in the 90-day job trial subsidy: they have higher levels of education, live in more developed regions, spent less time in the NEET (not in employment, education, or training) status, and have more work experience than the pool of eligible jobseekers. These findings suggest that the programme did not reach disadvantaged and vulnerable groups, who needed help the most.

# Using online job vacancies to predict key labour market indicators

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We explore data collected as a side product of administering an online job advertisement portal with dominant market coverage in Slovakia. Namely, we process the information on the aggregated, quarterly registered number of online job vacancies. We provide an assessment of the potential of this information in predicting the official vacancy statistics and the development of other indicators relevant in labour market analysis. In analysing the online data and official vacancy statistics' cross-correlation, we found similarities with comparable studies reported for the Netherlands and Italy. Additionally, we assess the online job vacancy data's predictive potential by comparing out-of-sample estimates of three simple linear models. We show that vacancy data are not only

attractive in now-casting, but combining it with an auto-regression model, substantially improved the precision of predictions, especially in the case of medium-term predictions (exceeding six months). Besides a favourable performance in improving predictions of the official vacancy statistics, we have also revealed a promising potential of online vacancy data in predicting the number of employed and unemployed persons and the usual working time.

### Parallel Sessions I., Stream B: Macro policy

## Towards mitigation of digital divide in V4 countries

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For the EU Member States, the digitisation of the economies is one of the key elements nowadays. The V4 countries are also involved with some region-specific features: the values of the DESI in all V4 countries are below the European average. Consequently, initiatives occur to foster policies supporting digitisation. After the period when the policies were primarily oriented to assure the high level of connectivity of citizens, current policies address new challenges: differences in skills necessary to take advantage of connectivity and in offline outcomes of digitalisation among various social groups. In this context, our paper attempts to propose an inside view of problems of digital inequality and its extreme case - the digital divide - in the V4 countries context. According to the literature, the three levels of the digital divide can occur. In our paper, we focus on the third level of the digital divide. The goal of our paper is threefold. Firstly, we try to identify the groups of the population the most affected by the third level of the digital divide in the V4 region. The individual microdata provided by EUROSTAT (round 2019) are employed. The logistic regression analysis is used to identify the crucial factors. We compose measures in five offline outcome areas of the digital economy: economic, social, political, institutional, and educational. Secondly, we try to identify the extent of third-level digital divide occurrence in V4 countries. We compose a specific modified digital divide index. Thirdly, our findings motivate us to propose a critical assessment of national Recovery Plans for V4 countries, a reflection on whether the proposed strategic plans copy our findings about the most digitally disabled parts of the population. Thus, we try to contribute to the discussion about needed policy measurements to mitigate the modern forms of the digital divide.

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## Beyond the Balassa-Samuelson Effect: Do Remittances Trigger the Dutch Disease?

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In this paper we investigate the impact of international financial inflows in the form of personal remittances on the real exchange rate using a sample of 134 developing and emerging economies (EMDEs) over the years 1980-2019. Using the heterogeneous panel cointegration approach, we find that the remittances exert a long-term pressure on the real appreciation of the domestic currency, which is beyond the level of real appreciation implied by the Balassa-Samuelson effect. Consequently, we find evidence that remittances might contribute to triggering the phenomenon of the Dutch disease. We also find evidence for heterogeneity in the effects of remittances on the real exchange rate over the long-term: having floating exchange rate, higher level of economic freedom and higher financial development reduces the long-run appreciation of the real exchange rate due to the remittance inflows and thus, the risk of the Dutch disease arising from the remittances inflows.

# Does the National Bank Beat Survey Forecasts of Slovak GDP and Inflation?

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We use a unique dataset to compare the accuracies of macroeconomic forecasts by the National Bank of Slovakia, a survey of commercial banks operating in the country and simple benchmark models. We apply recent methods to test the equality of forecast errors from different sources and over multiple horizons. Our bootstrap-based correction to the standard Diebold-Mariano test statistic takes care of the persistence of forecast errors observed in the data. Increased persistence in our application arises partially from the design of the survey, which asks bank analysts for monthly updates in their forecasts. We find that the national bank's inflation forecasts are the most accurate on both the current year's and next year's horizons. The same result holds for GDP on the shorter horizon. However, in the case of GDP outlook for the next calendar year, forecast combinations of commercial banks are the most accurate.

# Implementation of unconventional monetary policy measures in the forecasting framework of the Czech national bank

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In response to 2008 financial crisis as the policy rates hit their lower bounds central banks adopted unconventional policies when delivering their announced targets. This was also case of CNB adoption of exchange rate floor. However, quantitative easing become widely applied policy. Such policies can either directly target the interest rates or the quantities of assets. Taking into account specific features of Czech economy, this work presents modifications of the core projection model allowing for long term assets. The modification demonstrate ability of CNB to consider and assess various unconventional policies. Such ability is important for monetary policy decision making process. It also demonstrates CNB readiness to respond to economic developments.

# Impact of Governance on Populism: Evidence from dynamic panel regression models

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The phenomenon of populism is widespread in the 21st century. Populist parties are also gaining votes in democracies where the people have never lived better than they do now. This paper analyses the impact of world governance indicators on populism. The panel data includes 40 developing and developed countries and covers the period from 2000 to 2018. Our baseline results suggest that good institutional infrastructure reduces populism. Moreover, it is shown that unemployment and an immigration-shock is positively correlated with populism. By contrast, we do not find robust evidence that trade intensity would strengthen populism trends.

## COVID-19, Working from Home and the Potential Reverse Brain Drain

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The COVID-19 pandemic has led to a substantial increase in the prevalence of working from home among white-collar occupations. This can have important implications for the future of the workplace and quality of life. We discuss an additional implication, which we label reverse brain drain: the possibility that white-collar migrant workers return to live in their countries of origin while continuing to work for employers in their countries of destination. We estimate the potential size of this reverse flow using data from the European Labor Force Survey. Our estimates suggest that the UK, France, Switzerland and Germany each have around half a million skilled migrants who could perform their jobs from their home countries. Most of them originate from the other EU member states: both old and new. We discuss the potential economic, social and political implications of such reverse brain drain.

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## Report on Productivity and Competitiveness of the Slovak Republic 2020

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Slovakia entered the COVID-19 recession in the midst of a productivity slump and on the verge of the middle-income trap. The pandemic further increased the need to address socio-economic issues that were impeding Slovakia's convergence in the past decade. Yet, the crisis also offers a unique opportunity not to get back to normal, but to find a way forward and create a more resilient and internationally competitive Slovakia economy. Therefore, as we transition into the recovery stage, the goal lies in implementing changes that boost Slovakia's standing in global value chains, reduce regional and gender inequalities, prepare for the digitalisation age, and as a result, enhance the country's productivity and competitiveness. In this Report we first present the recent development of the main productivity indicators. We then discuss the implications of the COVID-19 pandemic for the Slovak economy. Lastly, we examine two areas, innovation and regional disparities, that Slovakia needs to improve in order to overcome the productivity slump.

# Linear and Nonlinear Effects of Mobility on COVID-19 - The Way to Effective Measures

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This paper deals with the linear effects of social distancing measures on COVID-19 cases and deaths using country- and day-fixed effects on panel of daily data consisting of 29 European countries. Nonlinear effects are examined through the sociodemographic, health and economic characteristics of the countries under consideration, using a difference-in-difference approach. To gain a deeper understanding of the non-linear effects, quantile regressions are used to examine the effects of changes in mobility and stringency on COVID-19 cases and deaths in individual quantiles of the distribution of the dependent variable. The estimation results suggest that the positive effects of mobility on COVID-19 cases or deaths depend on population density, median population age, share of elder people in the population, extreme poverty, health characteristics of the population, GDP per capita, life expectancy or stage of human development. The analysis is extended by economic effects in Slovakia, where the linear and nonlinear effects of the stringency of measures on various categories of sales from eKasa are examined. Findings suggest that sales in sectors that are essential for consumers, such as retail and grocery, are relatively resistant to tightening measures, while sectors that are less essential for consumers are proven to be sensitive to social distancing measures.

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## Female leadership and female employment in the times of COVID - the case of Poland

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The aim of this paper is to show the different impact of COVID-19 on companies' employment and innovation performance conditional on gender board composition. We use 2 COVID waves of Ensterprise Survey.

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## The impact of repeated mass antigen testing for COVID-19 on the prevalence of the disease

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In the absence of effective vaccination, mass testing and quarantining of positive cases and their contacts could help to mitigate pandemics and allow economies to stay open. We investigate the effects of repeated mass testing on the COVID-19 pandemic caused by the SARS-CoV-2 virus, using data from the first-ever nationwide rapid antigen testing implemented in Slovakia in autumn 2020. After the first round of testing, only districts above an ex-ante unknown threshold of test positivity were re-tested. Comparing districts above and below the threshold, we provide evidence that repeated mass antigen testing can temporarily reduce the number of new infections. Our results suggest that mass testing coupled with the quarantining of positive cases and their contacts could be an effective tool in mitigating pandemics. For lasting effects, re-testing at regular intervals would likely be necessary.



## Decision-Making in the Household and Material Deprivation

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Researchers explain effects of income transfers targeted to women by increase in women empowerment that enables women to allocate household resources according to their preferences. This explanation assumes that income transfers targeted to women do not correlate with other unobserved determinants of household outcomes. This paper, combined with findings from other studies, shows that this assumption might not hold. It is well known that the extent of men's decision-making determines household outcomes. And that it correlates with presence of income transfers targeted to women. I find that collaborative decision-making in a household predicts better living conditions than the predominant decision-control accrued to men and especially women. This result suggests that increased collaborative decision-making could be the actual cause of the income transfers impact and not women empowerment per se. Therefore, individual-specific (usually female-specific) targeting of social assistance perhaps should not be unambiguously preferred to household-specific targeting.

## Endogenous social norms: equilibrium and its efficiency

**Pavel Ilinov**

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**Ole Jann**

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We model endogenous social norm formation in the heterogeneous economy with different social groups. We assume that each agent chooses a stochastic choice rule from a finite set of alternatives while facing conformity concerns. Conformity is modeled as the disutility of deviating from the endogenous average choice rule. Our main finding is that under the relative entropy cost assumption, the resulting interior equilibrium social norm is utilitarian socially optimal. All inefficient corner equilibria are eliminated using myopic dynamic equilibrium selection. Our analysis provides a fundamental link between two models of stochastic choice: the discrete rational inattention model and the model of control costs. Relative entropy assumption gives grounds for the equivalence of the aggregated stochastic choice data in the two models.

## Collusion by Exclusion in Public Procurement

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This paper studies bid rigging in auctions with bidder preselection. We develop a theoretical model to analyze the optimal behavior of a bid-rigging cartel and show how two-stage auction formats, in which the first stage is used to preselect bidders, may be exploited. Bidder preselection based on opening bids allows cartels to exclude rivals and thereby increase procurement costs. To test our predictions, we use administrative data from public procurement in Slovakia. By leveraging a unique auction format reform we show that after a preselection procedure was abandoned, the savings gap between potentially rigged and non-rigged auctions decreased by 48%. In contrast to the conventional motivation for two-stage auctions, our analysis suggests that two-stage auctions might facilitate bid rigging and increase procurement costs.

# Are 'Dezider' and 'Irena' (un)happier than 'Jan' and 'Eva'? Counterfactual decomposition analysis

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Numerous studies have investigated differences in subjective well-being (SWB) across cultures, whereas only a small number of them has focused on cultures/ethnicities within a country. Though there have been ample amounts of empirical work on factors affecting various domains of SWB over a four-decade history, our understanding of ethnic happiness gaps is limited. This study contributes to this literature by analyzing some of the main determinants of the subjective well-being (SWB) gaps between non-Roma and marginalized Roma populations in Slovakia. Researchers often use the cognitive component of SWB (usually proxied by life satisfaction questions) as the only indicator of SWB, whereas the emotional (affective) component of SWB (the experience of positive affect and negative affect) is frequently ignored. We utilize two recent datasets – the standard EU-SILC microdata, and its counterpart especially administrated for the Marginalized Roma Communities. A unique combination of these two datasets allows us to decompose ethnic gaps in both components of SWB. Analyses are performed at the mean and across the whole distribution of SWB scores. Our results suggest an average gap in the emotional component of SWB of around 11% between the majority and Roma populations. The gap in SWB gradually decreases over the distribution of the self-rated happiness score, and it even turns negative, albeit insignificant at the 90th percentile. It is primarily factors – which can be thought of as necessities from the perspective of the majority population – that significantly contribute to reducing the ethnic gap in SWB. These factors mainly include access to education and housing. In addition, had the average Roma-minority family the same composition (number of children and adults in the household) as an average non-Roma family, the SWB gap would even further increase, hinting at the importance of intra- household interpersonal links for the Roma population. Our results could be of interest to policymakers attempting to improve the well-being of vulnerable minorities, especially through educational policies.

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## Time Costs and Search Behavior

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Sequential search is often costly and time-consuming. The time cost is usually unknown ex ante and its presence and duration must be inferred as the search progresses. We disentangle the effect of time cost on search behavior from people's (in)ability to perceive time delay between offers. We find that people are able to infer the existence of the time cost, but their inference is imperfect. We also compare the effect of time cost with the effect of monetary cost and find that the time cost reduces the amount of exerted search, but not as much as the monetary cost does. Discriminating between the effects is critical for increasing the empirical validity of search models and designing mechanisms capable of improving the quality of decisions, especially in unfamiliar or infrequently encountered situations.

# Shrinkage for Gaussian and t Copulas in Ultra-High Dimensions

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Copulas are a convenient framework to synthesize joint distributions, particularly in higher dimensions. Currently, copula-based high dimensional settings are used for as many as a few hundred variables and require large data samples for estimation to be precise. In this paper, we employ shrinkage techniques for large covariance matrices in the problem of estimation of Gaussian and t copulas whose dimensionality goes well beyond that typical in the literature. Specifically, we use the covariance matrix shrinkage of Ledoit and Wolf to estimate large matrix parameters of Gaussian and t copulas for up to thousands of variables, using up to 20 times lower sample sizes. The simulation study shows that the shrinkage estimation significantly outperforms traditional estimators, both in low and especially high dimensions. We also apply this approach to the problem of allocation of large portfolios.

## Ridge Model Averaging

**Alena Skolkova**

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Model averaging becomes an increasingly popular alternative to model selection. Ridge regression and model averaging serve the same purpose, minimization of a mean squared error through shrinkage, though in different ways. In this paper, I combine the ridge machinery with Mallows model averaging by Hansen (2008, *Journal of Econometrics* 146) to utilize the capabilities of averaging and ridge regularization simultaneously. Via a simulation study, I examine the finite sample improvements obtained by replacing the least squares estimation with a ridge regression. I investigate different DGP configurations and degrees of correlation among predictors. Due to an implicit ability of the ridge regression to accommodate many correlated predictors without blowing up the estimate variance, ridge-based model averaging is especially useful when one deals with sets of moderately to highly correlated predictors.

## Double machine learning for sample selection models

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This paper considers the evaluation of discretely distributed treatments when outcomes are only observed for a subpopulation due to sample selection or outcome attrition. For identification, we combine a selection-on-observables assumption for treatment assignment with either selection-on-observables or instrumental variable assumptions concerning the outcome attrition/sample selection process. We also consider dynamic confounding, meaning that covariates that jointly affect sample selection and the outcome may (at least partly) be influenced by the treatment. To control in a data-driven way for a potentially high dimensional set of pre- and/or post-treatment covariates, we adapt the double machine learning framework for treatment evaluation to sample selection problems. We make use of (a) Neyman-orthogonal, doubly robust, and efficient score functions, which imply the robustness of treatment effect estimation to moderate regularization biases in the machine learning-based estimation of the outcome, treatment, or sample selection models and (b) sample splitting (or cross-fitting) to prevent overfitting bias. We demonstrate that the proposed estimators are asymptotically normal and root-n consistent under specific regularity conditions concerning the machine learners and investigate their finite sample properties in a simulation study. We also apply our proposed methodology to the Job Corps data for evaluating the effect of training on hourly wages which are only observed conditional on employment. The estimator is available in the causalweight package for the statistical software R.

# Exploiting highs and lows in volatility forecasts: A novel approach to test for asymmetric volatility effects

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We present a novel approach to estimate the asymmetric volatility effect that is based on two new estimators of integrated variance: an upside variance estimator, based on (intraday) high and opening prices, and a downside variance estimator, based on low and opening prices. Under ideal settings, both estimators are consistent and as efficient as the usual realized variance. Using a sample of 432 S&P 500 constituents, we perform an in- and out-of-sample forecasting study and find that the downside volatility estimator tends to be more informative of the next day's volatility, which we interpret as evidence of a stylized asymmetric volatility effect in the U.S. equity market.

Parallel Sessions II., Stream B: Finance

# Wealth, Assets and Life Satisfaction: A Metadata Instrumental-Variable Approach

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We analyse the relationship between wealth/assets and life satisfaction. Using the Household Finance and Consumption Survey microdata from Slovakia in 2017, we first show that real assets (being the major component of household wealth) and life satisfaction are positively correlated. We address endogeneity concerns thanks to the metadata of the survey: we use the interviewers' ratings of the respondents' quality of dwellings to instrument the value of real assets. We show that the 2SLS estimate is positive and higher than the baseline OLS estimate, confirming that real assets are measured with error in survey data. Finally, we use the paradata to show that living next to a neighbour with better house quality significantly decreases one's happiness. Our results suggest that around half of the total effect of real assets on life satisfaction is relative.

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# Exchange Rate Synchronization for a set of Currencies from Dierent Monetary Areas

**Nuno Baetas da Silva**

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The degree of co-movement between currencies remains an important subject for international trade and monetary integration across countries. However, the economic literature has given limited answers about the directional relationships among currencies, and whether they have a leader or a driver. Using the Hodrick-Prescott filter and the wavelet methodology, this paper analyzes exchange rate synchronization for a set of twelve currencies belonging to different monetary areas covering the period

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between January 1980 and July 2020. The empirical results reveal that: i) the U.S. dollar still plays an essential role as a foreign exchange anchor; ii) the euro shows an out-of-phase relationship with the vast majority of currencies, including with the other European currencies; iii) the British pound seems to have departed significantly from the European single currency; iv) the Brazilian real leads the Chinese yuan for most of the sample, and both currencies record great dissimilarities with the other currencies; v) in the absence of short-term foreign exchange market frictions, average bilateral distances between currencies are smaller, and vi) during the international financial crisis, exchange rates became more synchronized.

**Who will be the next in line to join the Euro Area? -  
A business cycle synchronization evidence****Nuno Baetas da Silva***University of Coimbra,  
Faculty of Economics*

The aim of this paper is to investigate business cycle synchronization between seven candidate countries to the Euro Area (EA) - Bulgaria, Czech Republic, Croatia, Hungary, Poland, Romania and Sweden - and the Euro Area (EA-12/EA-19) and between France and Germany, the core economies. The Hodrick-Prescott filter is used to decompose the real Gross Domestic Product (GDP) into trend and cyclical components for the period 1995Q1-2019Q4. The results point to the existence of a strong business cycle correlation between Sweden and the Euro Area, Germany, and France. The second highest correlation was observed for the Czech Republic followed by Hungary, Poland and Croatia. In contrast, Bulgaria and Romania show the weak business cycle synchronizations with both the Euro Area and the core economies. We conclude that Sweden is the most prepared country to be the next passenger in the single currency train from the perspective of business cycle synchronization.

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Faculty of National Economy***Financial Market Uncertainty in the US:  
Measurement, Trends, and Effects****Roman Horvath***Charles University***Svatopluk Kapounek***Mendel University*

Based on a textual analysis of more than 100 million articles published from 1885-2017 in 11 major US newspapers, we develop a new monthly index of financial market uncertainty as well as uncertainty subindexes for banks and stock, bond and money markets. We find that spikes in the uncertainty indexes correspond to major financial, political and policy events. The subindexes show distinct patterns, suggesting the benefits of measuring uncertainty at a more disaggregated level. Our regression results show that financial uncertainty not only affects a number of macroeconomic and financial variables but that the reaction to financial uncertainty shocks is stronger and faster during recessions consistent with finance uncertainty multiplier theory.

## Efficiency and effectiveness of the COVID-19 government support: Firm-level evidence from the first wave of the pandemic

**Tibor Lalinsky**  
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**Rozália Pál**  
*EIB*

We utilize several unique firm-level datasets in order to assess the efficiency and effectiveness of the government support aiming to curb the economic consequences of the coronavirus (COVID-19) pandemic. The results, drawing on the experience of a small open European country (Slovakia), suggest the distributed COVID-19 subsidies save non-negligible number of jobs and sustain economic activity during the first wave of the pandemic. General distribution rules designed on the fly may bring close to optimal results, as relatively more productive, privately owned, foreign-demand oriented firms are prioritized and firms with a higher environmental footprint or zombie firms record a relatively lower chance of obtaining government funding. By assuming constant cost elasticities to sales, we show that the pandemic deteriorates strongly firm profits and increases significantly the share of illiquid and insolvent firms. Government wage subsidies somewhat mitigate firm losses and have statistically significant effect, but relatively mild compared to the size of the economic shock. Our estimates also confirm that larger firms, receiving smaller relative size of the support, have more space to cover their additional liquidity needs by increasing trade liabilities or liabilities to affiliated entities, while SMEs face higher risk of insolvencies.

## Dynamic Analysis of Perceptions on Firms Financing Behavior: A Behavioral Perspective

**Jarko Fidrmuc**  
*ZU Friedrichshafen*

**Florian Horky**  
*Zeppelin University Friedrichshafen*

We analyze the role of expectations on firms external financing decisions on the example of European SMEs via the ECB's SAFE dataset. We combine standard cost optimization approaches with behavioral economics aspects. Using multinomial logit methodology, we show that firms' lending behavior is driven by expectations, which are based on former experience and monetary policy, as well as biased by 'animal spirits.' Our results stress the importance of a financial supervision, considering all transmission channels of external finance and implementing a comprehensive communication strategy. Furthermore, our analysis reveals the importance of a financial education for managers in SMEs. Finally, our results are important to further understand the dynamics of external financing behavior, which becomes especially important in the context of economic crises, like the actual Covid-19 Pandemic.

## Firm Relocations, Commuting and Relationship Stability

**Kristína Hrehová**  
*CERGE-EI*

**Erika Sandow**  
*Umea University*

**Urban Lindgren**  
*Umea University*

In this paper, we study the impact of firm relocation on commuting distance and the probability of married couples and cohabiting couples with children separating. We use Swedish register data for 2010-2016 and select employees of relocating firms with one workplace and more than 10 employees. Focusing on this sample allows us to use plausibly exogenous variation in the commuting distance arising from the relocation. We extend the literature on the effect of commuting on stability of relationships by reducing the possibility for unobserved time-variant factors to bias our estimates. While previous literature has focused on the difference between short- and long-distance commuting, we focus on changes in the commuting distance that are externally induced by firm management. We find a small but statistically significant negative effect

of increased firm relocation distance on family stability. A 10 km change in the commuting distance leads to a 0.09 percentage point higher probability of separation if the commuter stays with the firm for the next 5 years.

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## Industry conditions and value creation in M&As

**Jana Fidrmuc**

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**Tereza Tykvova**

*University of St.Gallen (HSG)*

Prior studies relate acquirer value creation in mergers and acquisitions to deal, target, or acquirer characteristics. This paper focuses on industry sentiment reflected in 10-K filings of acquirers' close peers as an important determinant for value creation. As a first step, we show that negative industry sentiment is associated with other root causes of difficult industry conditions. As the main result, we show that deals announced when industry sentiment is more negative are associated with higher acquirer abnormal returns. We argue that these deals have higher synergies and we discuss and rule out alternative explanations for the relationship between abnormal returns and industry sentiment. Our results support a hypothesis that more synergetic deals happen during poorer industry conditions because managers are dissuaded from wasting corporate resources in difficult times.

**Parallel Sessions II., Stream D: Education**

## The Impact of Same-Race Teachers on Student Behavioral Outcomes

**Bohdana Kurylo**

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Previous papers on the impacts of same-race teachers have documented that students taught by same-race teachers improve their performance on state exams. However, little is known about whether the positive impact extends beyond test scores to student behavioral outcomes. Using the random assignment of teachers to the U.S. public schools within the Measures of Effective Teaching (MET) project, I show that same-race teachers increase the effectiveness of communications with Black students. I find that this effect is driven by better teacher explanations and consequent improved student understanding, which aligns with the literature about culturally relevant pedagogy. Additionally, I do not find empirical evidence supporting two alternative explanations for the positive effects of a same-race teacher on communication: i) higher general communication ability of Black teachers and ii) more teacher attention directed towards same-race students. Understanding the impacts of same-race teachers is of great importance, as student behavioral outcomes predict their success in the long-term perspective. Further, the findings may also suggest that training non-minority teachers in using culturally relevant pedagogy may improve the performance of disadvantaged minority students in the short-term by complementing diversification of the teacher labor force.

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## Paternal Circular Migration and Development of Socio-Emotional Skills of Children Left Behind

**Davit Adunts**

*CERGE-EI*

This study investigates the short-run effect of paternal absence due to circular migration on the socio-emotional skills of their children left behind. To address the endogeneity of the migration decision, and building on previous studies, this study focuses on children whose fathers have all engaged in circular migration. Furthermore, using quasi-exogenous variation in the timing of return migration induced by bilateral migration laws between Ukraine and Poland, I circumvent the bias related to the return migration decision. The findings of this study suggest that current paternal absence due to circular migration negatively affects the socio-emotional skills of children left behind. Overall, this result suggests that circular migration is not necessarily a "triple-win" solution that benefits all involved parties.

# New Evidence on the Predictive Power of Locus of Control in Human Capital Investment Decisions

**Ágnes Szabó-Morvai**  
*KRTK KTI*

**Kiss Hubert János**  
*KRTK KTI*

We study the relationship between locus of control and human capital investment decisions in adolescence. We use machine learning to come up with the best specifications and report three main findings. First, effort is an important conduit through which locus of control operates and it is different from the expectation channel that has been already documented in the literature. Second, while high-end decisions (those related to tertiary education) are associated with locus of control even after controlling for exogenous variables, cognitive abilities, and the conduits (expectations and effort), in the case of low-end decisions (those not related to university studies) we observe a weaker relationship that disappears once we consider exogenous variables and cognitive abilities. Third, when investigating which groups are affected by locus of control, we show that locus of control plays a greater role for females than for males and the importance of locus of control depends crucially on parental preferences.

# From the classroom to maternity ward and public works. What happens when compulsory schooling age is decreased?

**Anna Adamecz-Volgyi**  
*UCL SRI & KRTK KTI*

**Agnes Szabo-Morvai**  
*KRTK KTI*

**Suncica Vujic**  
*University of Antwerp*

**Daniel Prinz**  
*The Institute for Fiscal Studies*

While extensive literature investigates the effects of longer schooling, we know very little about what happens when compulsory schooling is shortened. This paper looks at the effects of decreasing the compulsory school leaving age from 18 to 16 on teenage outcomes by age 18 in Hungary. We show that the reform increased the probability of teenage motherhood and participation in public works programs while it did not affect the prevalence of teen abortions. Thus, we find that marginal teenage women opted for exit strategies that are expected to induce large social and economic costs in the future.

Parallel Sessions III., Stream A: Banking and finance

# Bank Margins and Financial Frictions: Bank-Based and Market-Based Systems Specifics

**Svatopluk Kapounek**  
*Mendel University in Brno*

**Zuzana Kučerová**  
*Mendel University in Brno*

**Bilge Canbaloglu**  
*Ankara Yıldırım Beyazıt Üniversitesi*

We examine the cyclical behaviour of banks' lending margins and financial frictions and dynamics of the price of capital after the financial crisis. We show heterogeneous impact of monetary policy in different market systems and point out the role of liability structure. In addition, we put special emphasis on bank bond purchases with respect to bail-in regulatory framework.



# Volatility spillovers of Central and Eastern European currencies

**Peter Albrecht**

*Mendel university in Brno*

This paper aims on the volatility spillover effects and the interdependence between the Central and Eastern European (CEE) foreign exchange rates (Czech Republic, Croatia, Hungary, Poland, and Romania) and Eurozone from November 2013 to May 2021. The volatility spillovers are identified by the measure proposed by Diebold and Yilmaz (2009). We find significant spillovers mostly in periods of economic-policy shocks.

# The role of fiscal rules in political-business cycle: The case of Visegrad Group countries

**Matej Boór**

*University of Economics in Bratislava*

The state budget is a tool in a competitive political struggle. The tendency of politicians to use the state budget to win votes is at the heart of the theory of the political-economic cycle. For that reason, it may appear that certain countries use pro-cyclical fiscal policy. The challenge of implementing fiscal rules is to ensure the long-term sustainability of public finances. They can also play a role in mitigating the effects of political-economic cycles. The present paper is precisely concerned with the link between fiscal rules and the political-economic cycle in the Visegrad Group countries.

# Does Bank Efficiency Affect the Bank Lending Channel in China?

**Zuzana Fungacova**

*Bank of Finland*

**Eeva Kerola**

*Bank of Finland*

**Laurent Weill**

*University of Strasbourg*

This work examines the impact of bank efficiency on the bank lending channel in China. Using a sample of 175 Chinese banks over the period 2006-2017, we investigate how the reaction of the loan supply to monetary policy actions depends on a bank's efficiency. While bank efficiency does not exert an impact on the effectiveness of monetary policy transmission overall, it does favor the transmission of monetary policy for banks with low loan-to-deposit ratios. In addition, the expansion of shadow banking activities has been associated with a positive impact of bank efficiency on monetary policy transmission. These results suggest that bank efficiency may influence the bank lending channel in certain cases.

## The Microfinance Disappointment: An Explanation based on Risk Aversion

**Dagmara Celik  
Katreniak**

*City, University of London*

**Hosny Zoabi**

*The New Economic School*

**Alexey Khazanov**

*Boston College*

**Omer Moav**

*University of Warwick and IDC*

**Zvika Neeman**

*Berglas School of Economics,  
Tel Aviv University*

Recent research indicates that microcredit has not contributed significantly to poverty reduction. Take up of affordable credit by the poor for investment in businesses, education and health turned out to be very low. We argue that this can be explained by risk aversion when investment affects the probability of success of a risky project. Our model abstracts from fixed costs in the production technology commonly assumed in the existing literature. There are no imperfections in the loan market, and we abstract from assumptions about false beliefs by the poor regarding the production function or other behavioral assumptions. We design an online experiment that tests the main predictions of our model (the results of the experiment should be ready by mid-summer). Finally, we conclude that to facilitate investment and thereby reduce poverty, policy should be aimed at reducing the risk faced by the poor.

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## Attentional Role of Quota Implementation

**Sergei Mikhailishchev**

*CERGE-EI*

**Andrei Matveenko**

*University of Copenhagen*

In this paper, we introduce a new role of quotas, e.g. labor market quotas: the attentional role. We study the effect of quota implementation on the attention allocation strategy of a rationally inattentive (RI) manager. We find that quotas induce attention: a RI manager who is forced to fulfill a quota, unlike an unrestricted RI manager, never rejects minority candidates without acquiring information about them. We also demonstrate that in our model quotas are behaviorally equivalent to subsidies. In addition, we analyze different goals that the social planner can achieve by implementing quotas. First, quotas can eliminate statistical discrimination, i.e. make the chances of being hired independent from the group identity. Second, when the hiring manager has inaccurate beliefs about the distribution of a candidate's productivities, the social planner can make the manager behave as if she had correct beliefs. Finally, we show how our results can be used to set a quota level that increases the expected value of the chosen candidates.

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## On the Measuring of the Mere Exposure Effect on Art Market

**Jana Peliova**

*University of Economics in Bratislava*

Despite the attention behavioral economics is attracting, there is still demand for more rigorous testing of the effects of feelings on financial decisions and aggregate outcomes of these decisions. The current study presents empirical evidence on the impact of mere exposure on subjective preferences towards visual art. Following an extensive literature research, an elaborated experimental design was developed. People prefer to invest in the familiar assets, as they feel more comfortable to put money in something they can readily recall, see or access. In accordance to our predictions, the experimental data suggests the 17.5% increase in bidding on the previously exposed art piece, comparing to the control group.

# Trends in the publication of experimental economics articles

**Ernesto Reuben**  
*NYU AD*

**Andrej Svorenčík**  
*University of Mannheim*

**Sherry Li**  
*University of Arkansas*

**Sigrid Suetens**  
*Tilburg University*

**Theodore Turocy**  
*University of East Anglia*

We report data on the experimental articles published in the last two decades in seven prominent, general-interest economics journals, considering laboratory and other types of experiments separately. In addition, we also look at time trends in the characteristics of the published experimental articles. We find an overall increasing trend in the publication of experimental research. This is mainly driven by non-lab experiments, which have overtaken lab experiments in all considered outlets. The reversal of fortunes is most striking in the AER, where the share of lab experiments more than halved over the past twenty years and converged to the share of lab experiments in other Top 5 journals. We also observe some heterogeneities in publication, citations, rankings, and locations of authors' affiliations across journals and types of experiments.

Parallel Sessions III., Stream C: (De)regulation of pharmacies in Slovakia: entry and competition effects

## Pharmaceutical care: past, present and future

**Tomáš Tesar**  
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Comenius University in Bratislava*

Pharmaceutical care was first defined in 1990 by Hepler and Strand as “the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient’s quality of life”. Worldwide, pharmaceutical care is currently considered a patient-centred approach, replacing the previous product orientation (dispensing medications). The pharmacist actively cooperates not only with the patient but also with healthcare professionals in health promotion, disease prevention, evaluation, monitoring, adjustment and initiation of drug use in order to ensure an effective and safe drug regimen, achieve positive clinical results and reduce the economic costs of care. The International Pharmaceutical Federation defined a pharmacist in 2016 as “a scientifically-trained graduate healthcare professional who is an expert in all aspects of the supply and use of medicines. Pharmacists assure access to safe, cost-effective and quality medicines and their responsible use by individual patients and healthcare systems.”. Currently, patient safety is coming in the forefront of interest worldwide in healthcare delivery. Patient safety is the absence of preventable harm to a patient during the process of providing health care and reduction of the risk of unnecessary harm associated with health care to an acceptable minimum. An acceptable minimum refers to the collective notions of given current knowledge, resources available and the context in which care was delivered weighed against the risk of non-treatment or other treatment. Ensuring the safe prescribing and dispensing of medication to patients is the key function of a pharmacist. Pharmacists ensure that patients not only get the correct medication and dosing, but that they have the guidance they need to use the medication safely and effectively.

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## Analysis of pharmacy ownerships

**Miroslava Snopková**  
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Slovak Chamber of Pharmacists*

**Erik Gyerpál**  
*Slovak Chamber of Pharmacists*

Background: The regulations for pharmacy ownership differ worldwide according to the governing bodies responsible for pharmacy practice in the region. Slovakia pharmaceutical sector has gone with extensive liberalization since 2004 what could affect the input of different interest groups into this sector. Using Slovak profit and loss statement from 2013– 2018 we investigated the link between income tax and ownership. For analyses we used data (net sales, profits, income tax and staff costs) provided by Finstat portal for request the Slovak Chamber of Pharmacists. The ownership structure compared Slovak and foreign pharmacies. We also compared

”chain pharmacies” (pharmacies based on the same brand) and other pharmacies (non-chain).

Results: The number of pharmacies from 2013 with foreign owners increased by 41% while the number of Slovak pharmacies increased by 28%. Results showed almost 50% a lower payment of income tax for foreign-owned pharmacies between analyse period. The chain pharmacies paid a lower income tax than the other pharmacies. The number of chain pharmacies increased by 29% while the number of non-chain pharmacies increased by 22.60%. The income tax was paid by almost all chain pharmacies lower than the compared non-chain pharmacies.

Conclusion: The results suggest tax optimization of foreign and chain pharmacies, which may be a growing problem for the sustainability of the pharmaceutical sector in Slovakia.

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## Modelling Pharmaceutical Retailing and Access to Pharmaceutical Products

**Richard Kališ**

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**Biliana Yontcheva**

*Düsseldorf Institute for  
Competition Economics*

The introduction of chains within the health care sector is widely debated. Many argue that chains result in lower quality of service and possible principal-agent issues. On the opposite side of the debate, supporters of chains argue that these are able to organize more efficient distribution models and negotiate lower prices with manufacturers. This, in turn, can be passed on to consumers in the form of, e.g. rebates. This reduction in costs yields higher profits, which in turn attracts more investment into the industry and results in a higher entry. This improves the availability of the product, once again resulting in gains for the economy. Our empirical contributions are two-fold. Firstly, we identify differences in demand across chains and independent sellers. Preliminary results show that consumers have a slight preference, all else being equal, for chains. Secondly, we identify differences in fixed costs across chains and independent sellers. We show the potential efficiency gains from the presence of chains and are able to calculate counterfactual industry losses due to the removal of this type of service.

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## The role of pharmacists in the age of automation

**Martin Lábaj**

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**Erika Majzlíková**

*University of Economics in Bratislava*

In this paper, we examine the role of pharmacists in the age of automation. Advances in the use of automation technologies replace many tasks previously performed by human workers. At the same time, new tasks in which labour has a comparative advantage have been created. Pharmacists as healthcare professionals can benefit from these advances, but their main tasks will shift away from retail to professional services complementing new technologies. We compare three different estimations of future automation probabilities for pharmacists based on the tasks they perform. We relate those probabilities to healthcare specialists, retailers and other services. Finally, we provide empirical evidence on the size of the effects in Slovakia based on detailed microdata on employment by occupation. Between 2014 and 2019, there was a relative shift of employment from pharmaceutical technicians to pharmacists in the Slovak labour market. This result is in line with predictions on automation probabilities for these occupations but identifying the role of automation in this process calls for further research.

## Persuasive Campaigns, Abortions and Fertility

**Kristína Hrehová**

*CERGE-EI*

Both pro-choice and pro-life NGOs believe their campaigns to be effective, but there is little evidence on this question due to the rare nature of abortion and the selective nature of activist location and intensity. In this paper, I provide the first empirical assessment of the conception and abortion-rate effects of a pro-life leaflet mailing campaign. I study an extensive mailing campaign that operated in Slovakia during 2016-2017 and employed widely used pro-life frames. To identify its effects, I use a municipality-level inverse probability weighting strategy. The results suggest that the campaign had a positive, statistically significant effect on conception rates, but there is no evidence it lowered abortion rates conditional on conception.

## Where are craft breweries located? The role of agglomeration, tourism, and know-how

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The objective of this paper is to analyse the location decisions of craft breweries in Slovakia. The paper employs a conditional logit model on a panel dataset of Slovak craft breweries and location attributes covering 79 counties in Slovakia for the period 1995-2019. The estimated results suggest that agglomeration economies are key determinants of location choices. However, the agglomeration of small breweries has notably strong effect, while the agglomeration of large breweries is statistically insignificant. The past brewing experience also seem to play some role in affecting location choices as well as the urbanization effects, but the latter drivers reduce the impact of the agglomeration externalities of similar firms. Further, important drivers of craft breweries location choices are demand factors linked to tourist sector development, whereas the local characteristics of potential local consumers seem to be insignificant determinants.

## Business Cycles and Exuberance Indicators. What Makes Credit and Housing Expansions Harmful?

**Anna Pestova**

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**Mikhail Mamonov**

*CERGE-EI*

We test a 'too good is bad' hypothesis. We show that bank credit growth and rising housing prices possess 'exuberance' features: they capture financial imbalances accumulated during the expansions and are associated with higher recession risk later on. Both exuberance indicators are non-monotonically linked to recessions: in the short-run, they decrease probability of a recession by up to 18 p.p. while in the long run they raise the probability of a crisis by up to 15 p.p. We show that this non-monotone relationship is driven by changes in aggregate demand. Global financial shocks outperform domestic shocks in predicting exuberance indicators and recession risk

# New Credit Drivers: Results from a Small Open Economy

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In developed economies, macroeconomic indicators such as unemployment and price indices tend to predict new credit expansion. We explore whether business and consumer surveys complement traditional macroeconomic variables in predicting new household and corporate loans in the following 3, 6, 9 and 12 months. Using monthly data for Slovakia starting in 2009 and ending in 2019, and 102 potential credit drivers, we use Bayesian model averaging to find that apart from interest rates and unemployment, traditional macroeconomic variables do not seem to drive credit market development. Instead, survey-based perceptions, calendar effects and policy uncertainty show relevant predictive power.

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# Too-Much-Branching: Cost of Debt of SMEs and Local Credit Market Characteristics in Slovakia

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We investigate nonlinear effects of bank branch saturation on SME costs of debt at regional level in Slovakia over the period 2013-2019. We adopt the two-step approach by firstly constructing an empirical model of bank branch localization, and then analyzing effects of positive and negative deviations from the optimal level of market saturation. We employ panel model with random effects in the first step and panel model with fixed effects in the second step with bootstrapped standard errors. We observe the 'too-much-branching' phenomenon with no effect of bank branch saturation in over-branched regions, but negative effect in under-branched regions. Firms mostly affected by this phenomenon are middle-sized, domestically owned, operating in low-tech industries and with better creditworthiness. Bank market characteristics tend to matter for pricing of firm's debt in over-saturated markets.