



# Abstracts of Papers

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**10<sup>th</sup> CES Biennial Conference**

**University of Economics, Prague  
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### **Session 1 – Information Age**

(Chair: Oleg Sidorkin) Room 203

**Patrik Jankovič.** Efficiency of Digital Network Utilization as a Determinant of Development

#### **Abstract**

Aim of this paper is to quantify the efficiency of digitization adoption. We use nonparametric methods to answer the question how efficiently digitization is adopted by consumers, business and governments of European countries in last 5 years. Digitization in a broader societal context is understood as the economic and social transformation triggered by the massive adoption of digital technologies. It has positive effect on productivity and economic growth. The main inspiration to measure this specific aspect of digitization comes from Katz (2013) who declare, that usage of broadband is a key component of digitization. Digitization adoption includes the utilization and adoption of all commercial activities, government services, social media adoption and data usage. Katz and Koutroumpis (2013) who follow Sabbag et al. (2012) and create composite index of digitization for measuring the impact of digitalization on GDP and welfare. Previous composite digitization indexes took under consideration broadband accessibility, affordability or its subscription and use of internet by population (Lehr et al., 2006). Sabbag introduced variables to measure also the usage of the internet by governments, individuals and retail. Composite indexes have developed from these times to the present form of Digital economy and society index (DESI) formed by European Commission (EC) since 2014. This complex indicator provides 34 single indicators and enables us measure specific aspect of digitization, its adoption process.

**Oliver Kovacs.** The Dark Corners of Industry 4.0 - Grounding Economic Governance 2.0

#### **Abstract**

This paper analyses the fourth industrial revolution by shifting towards a more complexity-aware economics. In so doing we concentrate on the complexity of interactions in the development of Industry 4.0 and the Digital Economy by shedding light on the major set of dark corners (unintended consequences) that are calling for cultivating governance in favor of structural change. We therefore formulate the basic principles of economic governance 2.0 in contributing to the sustainable development of Industry 4.0 and the Digital Economy.

**Petr Horák and Oleg Sidorkin.** The effects of R&D subsidies revisited

#### **Abstract**

The effects of research and development (R&D) subsidies on patenting are heterogeneous in nature. Moreover, endogeneity caused by multi-step selection of grant applicants makes empirical evaluation difficult. We use a unique dataset on the evaluation of grant applications and a novel instrumental variable identification strategy, which originates from the grant evaluation process, to estimate the causal effects of R&D subsidies in the Czech Republic over 2011-2014. We exploit the random assignment of experts, who evaluate grant applications, and their leniency to give higher scores as an instrumental variable. As a result, we show that R&D subsidies have strong positive mid-term effects on propensity to apply for patents and the number of patent applications. However, these results are driven to a large extent by firms with higher prior research intensity.

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### **Session 2 – Global Value Chains and Industry**

(Chair: Martin Lábaj) Room 204

**Petr Pleticha.** Power Relations and Knowledge Spillovers in Global Value Chains: Evidence from Sectoral Input-Output Tables

#### **Abstract**

This paper investigates how value chain integration links to productivity with respect to the value chain composition. The analysis is based on a production function framework and panel data regressions where the data is provided by the new release of the World Input-Output Database covering 43 countries and 56 industries from 2000 to 2014. The results suggest that value chain composition is an important factor determining the relationship between productivity and value chain integration. From an industry perspective, engaging with less productive partners is more beneficial than with those more technologically developed. A suspected reason for such discrepancy is that knowledge spillovers in global value chains are overrated, whereas the hindrance to functional upgrading caused by value chain participation is largely neglected.

**Martin Labaj and Viktória Švardová.** Industrial robots and global value chains of manufacturing

### **Abstract**

In this paper, we identify the effects of industrial robots on global organization of production activities of manufacturing. These effects may differ across industries. Thus, in contrast to De Backer et al. (2018) we focus on specific industries and we try to identify the role of robots for their global value chains' length and spatial distribution. Besides, we analyze the effects of industrial robots on the shape and shifts of the so called smiley curves. Finally, our aim is to explore whether the increased robotization influenced selected countries' participation in the global value chains differently.

**Erika Stracová and Martin Lábaj.** Drivers of deindustrialisation: Structural decomposition analysis

### **Abstract**

In this paper, we analyse the main drivers of the deindustrialisation trends over the last decades. In the first step, the so-called subsystem analysis allows us to reveal the proportion of the activity of each industry that comes under the individual subsystems. Using this approach, we can identify the total effects of the final use of manufacturing products on production, value added and employment generation. In the second step, we identify the drivers of deindustrialisation using the structural decomposition analysis. We decompose the overall manufacturing employment (value added) change into the contribution of several factors, mainly changes in labour productivity (direct value added coefficients), changes in the structure of production, changes in the import of intermediate products, changes in the manufacturing final demand structure, changes in the shares of manufacturing expenditures on the total expenditures or changes in the final demand volume. Finally, we use the potential drivers of deindustrialisation identified by the structural decomposition analysis as covariates in a regression model of deindustrialisation proposed by Rodrik, 2016.

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## **Session 3 – Quantitative Economics I.**

(Chair: Martin Gregor) Room 209

**Jakub Mikulka.** The Impact of Winning and Losing Streaks on the Bettors' Behavior

### **Abstract**

This empirical study examines the relationship between winning and losing streaks and the behavior of bettors using a unique dataset provided by a betting company operating in the Czech Republic. The main advantage of this dataset is access to the betting histories of the company's registered customers and it consists of the two segments lottery and sports betting. Some customers are active in both segments. We find that the length of a winning streaks has positive effect on the probability of win, ticket revenue, stake size and odds within both lottery and sports betting segment. The opposite holds for the length of a losing streak. The cross effects of the length of a sport winning streak on lottery betting behavior and vice versa are qualitatively the same as those for direct effects; however, the cross effects of losing streaks are qualitatively opposite to the direct effects. Our findings are consistent with the hot hand hypothesis because the probability of win is increased after a winning streak.

**Stanislav Anatolyev and Alena Skolkova.** Many Instruments: Implementation in STATA

### **Abstract**

The seminal article by Bekker (1994, *Econometrica* 62) proposed estimators and standard errors robust to numerosity of instruments in an instrumental variable (IV) regression. We introduce a STATA command, `mivreg`, that implements consistent estimation and testing in linear IV regressions with many (possibly weak) instruments, based on the progress in econometric theory since then. The command `mivreg` covers both homoskedastic and heteroskedastic environments, estimators that are both non-robust and robust to error normality and projection matrix asymptotics, both parameter tests and specification tests, and both original and Fuller modified versions. We also run a small simulation experiment using `mivreg`.

**Jozef Kisel'ák, Štefan Lyócsa, Neda Todorova and Tomáš Výrost.** Exploiting highs and lows for volatility forecasting

### **Abstract**

We derive two estimators of integrated variance that are based on either the high and opening ( $RV_t^H$ , upside variance estimator) or low and opening ( $RV_t^L$ , downside variance estimator) prices. They are as easy to calculate as the usual realized variance ( $RV_t$ ). Both estimators are consistent and as efficient as the  $RV_t$ . We demonstrate the relevance of the new estimators in a day-ahead volatility forecasting study using heterogeneous autoregressive models on a sample of data for 432 stocks of S&P 500 constituents over a time period from January 2007 to October 2016. We show several specifications of volatility models that combine the different volatility estimators and lead to more accurate volatility forecasts for almost all stocks in our sample. We also find strong evidence that with respect to next day's volatility, the use of downside volatility estimator is more informative than the upside volatility estimator, which we interpret as evidence of the stylized asymmetric volatility effect on the U.S. equity market.

**Martin Gregor.** Electives shopping, grading competition, and grading norms

### Abstract

This paper analyzes grading competition between instructors of elective courses when students shop for grades and the instructors maximize class size. We suppose a school imposes a ceiling on the mean course score to limit grade inflation, where the mean is evaluated for a representative sample of students. Under this norm, we demonstrate that curriculum flexibility (more listed courses and less required courses) increases realized top scores as well as realized mean scores. To tame incentives to provide excessively large scores, a top-score norm can be combined with the mean-score norm. We consider three scenarios. First, the school directly caps top scores. Then, grading competition divides students into a concentrated group of achievers and a dispersed group of laggards. Second, the school normalizes the top scores by lowering the mean-score ceiling. Then, upon the normalization, the scores distribution of a rigid curriculum paradoxically first-order stochastically dominates the scores distribution of a flexible curriculum. Hence, curriculum flexibility becomes costly to all students. Third, the school asks for the mean-score ceiling to be preserved ex post, and not ex ante. Then, the instructors stop competing for students which introduces sorting inefficiency. Overall, addressing grade inflation through grading norms generates rich and nuanced effects on the scores and grades distributions.

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## Session 4 – Economic Thought

(Chair: Vít Bárta) Room 210

**Karel Dyba and Hana Lipovska.** České ekonomické století

### Abstract

České země zažily v letech 1918–2018 pět odlišných ekonomických systémů, které ovlivňovaly výkonnost české ekonomiky. Cílem tohoto příspěvku je na základě srovnání dobových odhadů vymezit výchozí ekonomickou úroveň českého hospodářství v rámci rakousko-uherské ekonomiky, odhadnout podíl českých zemí na československém hospodářství a konečně odhadnout míru vyspělosti resp. zaostávání vůči Rakousku. V předvečer první světové války byla ekonomická úroveň českých zemí zhruba o 10–20 % nižší ve srovnání s rakouskými zeměmi, které dosahovaly 90 % úrovně německé. V meziválečném období tvořila rakouská ekonomická úroveň 87 % úrovně české, do roku 1931 však Rakousko české země opět dohnalo. Samotné české země přitom dosahovaly o 10 % vyšší ekonomické úrovně než celé Československo a o 50–60 % vyšší úrovně než Slovensko s Podkarpatskou Rusí. Po druhé světové válce Rakousko zaostávalo za Československem o 28 let. Centrálně administrovaná československá i česká ekonomika však svůj potenciál postupně ztrácela a od 60. let ji Rakousko předešlo. V roce 2017 dosahovala česká ekonomická úroveň zhruba 70 % rakouské ekonomické úrovně, což je srovnatelné s výkonem zemí bývalé NDR, jejichž HDP na osobu se vůči západoněmecké ekonomické úrovni zvýšilo z 30–43 % v roce 1990 na současných 74 %.

**Petr Wawrosz.** How to strengthen corruption contracts

### Abstract

Corruption contracts are in democratic countries illegal and considered immoral. Their participants thus cannot use standard procedures to find a second party, to negotiate the content of the contract, to check if it performs what was promised, and to enforce the promises. This increases the risks associated with the contract. Illegality or immorality of the contract make both parties more vulnerable – each party can threaten to reveal the contract and denounce the second party. Theory usually sees connecting a corruption contract with a previously established legal contract as the best way to reduce risks and to strengthen the corruption contract. This paper presents the opposite approach. We demonstrate how a corruption contract can establish the base for further

contracts and how it leads to mutually advantageous dependency of all its participants who often create corruption networks that damage people who do not participate in corruption. The paper gives examples of such networks in the Czech Republic and briefly discusses how to limit the power of the networks.

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### **Session 5 – Banking Regulation and Finance** (Chair: Michal Hlaváček) Room 212

**Mikhail Mamonov.** Hidden Negative Capital in Banking: What Happens When Regulatory Forbearance Disappears?

#### **Abstract**

After the global economic crisis of 2008-2009, bank capital remains insufficient and fragile in many countries around the globe forcing financial regulators to decrease the degree of forbearance regarding the license withdrawals to prevent the risk of spreading the problems to healthier banks in advance. This situation perfectly describes the recent developments in the banking system of Russia, a small open economy that had suffered from the Western sanctions, a non-stopping economic crisis and regulatory perturbations. This provides a valid laboratory to analyze the size of hidden negative capital (HNC) in banking and what may happen with it when the regulatory forbearance vanishes. Applying the Heckman selection models, this paper estimates the size of HNCs in still operating banks using monthly data from December 2009 to May 2017. The results suggest that before the change of the Bank of Russia's senior management in mid-2013, the average level of HNCs was rather high – 14% of the banking system's total assets – and rather permanent in time. But as early as half a year after the senior management change, the average size of HNCs started contracting rapidly, coming close to 4% by mid-2016. In the last 12 months of the time span, the HNCs stabilized at 4%. This new policy has produced a strong indirect positive effect: large part of fragile banks has started addressing their problems in advance, i.e. without waiting for the Central Bank's intervention. The effectiveness of these new policy cannot be attributed to other factors such as macroeconomic stabilization or improvement and/or rising profitability of bank operations.

**Václav Brož and Evžen Kočenda.** Mortgage-related bank penalties and systemic risk in the United States

#### **Abstract**

We analyze the link between mortgage-related regulatory penalties levied on banks and the level of systemic risk in the United States. We assume frequency decomposition of volatility spillovers which allows us to draw conclusions about system-wide risk transmission with short-, medium- and long-term dynamics. We find that after the possibility of a penalty is first publicly announced, long-term systemic risk in the U.S. banking sector tends to increase. In contrast, the settlement with regulatory authorities leads to a decrease in the long-term connectedness in the system. Our analysis might be relevant both to authorities imposing the penalties and those in charge of financial stability.

**Martin Hodula and Lukáš Pfeifer.** A Profit-to-Provisioning Approach to Setting the Countercyclical Capital Buffer: The Czech Example

#### **Abstract**

Over the last few years, national macroprudential authorities have developed different strategies for setting the countercyclical capital buffer (CCyB) rate in the banking sector. The existing approaches are based on various indicators used to identify the current phase of the financial cycle. However, to our knowledge, there is no approach that directly takes into consideration banks' prudential behavior over the financial cycle as well as cyclical risks in the banking sector. In this paper, we propose a new profit-to-provisioning approach that can be used in the macroprudential decision-making process. We construct a new set of indicators that largely capture the risk of cyclicity of profit and loan loss provisions. We argue that banks should conserve a portion of the cyclically overestimated profit (non-materialized expected loss) in their capital during a financial boom. We evaluate the performance of our newly proposed indicators using two econometric exercises. Overall, they exhibit good statistical properties, are relevant to the CCyB decision-making process, and may contribute to a more precise assessment of both systemic risk accumulation and risk materialization. We believe that the relevance of the profit-to-provisioning approach and the related set of newly proposed indicators increases under IFRS 9.

**Václav Brož and Evžen Kočenda.** Mortgage-related bank penalties and systemic risk in the United States

### **Abstract**

We analyze the link between mortgage-related regulatory penalties levied on banks and the level of systemic risk in the United States. We assume frequency decomposition of volatility spillovers which allows us to draw conclusions about system-wide risk transmission with short-, medium- and long-term dynamics. We find that after the possibility of a penalty is first publicly announced, long-term systemic risk in the U.S. banking sector tends to increase. In contrast, the settlement with regulatory authorities leads to a decrease in the long-term connectedness in the system. Our analysis might be relevant both to authorities imposing the penalties and those in charge of financial stability.

**Vaclav Broz and Michal Hlavacek.** What Drives the Distributional Dynamics of Client Interest Rates on Consumer Loans in the Czech Republic? A Bank-level Analysis

### **Abstract**

We study the bank-level distributional dynamics and factors of client interest rates on consumer loans in the Czech Republic. We take into account that client interest rates can have different fixation periods, focus on the consumer loans category, which exhibits multimodal client interest rate distributions, and employ an alternative measure to the mean interest rate – the mode measure. We show that in recent years, most banks in the Czech Republic have started to provide new consumer loans at unprecedentedly low client interest rates. The bank-level analysis then reveals that reduced market concentration (increased market competition) and to some extent also accommodative monetary policy and changes in the market for housing loans and mortgages have been driving this development. Our results are in line with the international literature but are novel in the Czech context.

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## **Session 6 – Public Economics**

(Chair: Filip Pertold) Room 205

**George Kudrna, Chung Tran and Alan Woodland.** Sustainable and Equitable Pensions with Means Testing in Aging Economies

### **Abstract**

A means-tested pension system has a distinct feature that tailors the level of pension benefits according to individual economic status. In the context of population aging with widening gaps in life expectancies, this feature generates an automatic adjustment mechanism that (i) mitigates the pressing fiscal cost of an old-age public pension program (fiscal stabilization device); and (ii) redistributes pension benefits to those in need with shorter life expectancies (redistributive device). To evaluate this mechanism, we employ an overlapping generations model with population aging. Our results indicate that this novel automatic adjustment mechanism plays an important role in containing the adverse effects of population aging on the fiscal costs and progressivity of a pension system. More pronounced aging scenarios with widening mortality gaps between high- and low-income groups of individuals further strengthen the role of this mechanism. A proper design of means testing can devise a sufficiently strong automatic mechanism to keep public pensions in aging economies sustainable and equitable.

**Matej Boór.** Government size in Czech republic and Slovakia from different perspectives

### **Abstract**

The government size represents a certain degree of redistribution of the resources in the economy, and there are several possibilities for its quantification. Approaches to quantifying government size are primarily based on the role of the state in the national economy that changes over time. The most widely used approach to quantifying government size is the spending approach, which we are also deeply concerned with in the article. The quantification of government size via several approaches in the Czech Republic and Slovakia is the main contribution of the article.

**Richard Kališ.** Using The DEA Method To Optimize The Number Of Beds Within Slovak Hospital Sector

### **Abstract**

The Slovak hospital sector is characterized by overcapacity in total number of beds due to inherited infrastructure. In this paper, we use the Data Envelopment Analysis technique to optimize the number of beds for 62 Slovak hospitals. Augmented models with variables and constant returns to scale are used. Moreover, our models are robust by accounting for quality of hospital care as well as long-standing problem with low number of medical staff. According to calculated technical efficiency, 20% to 33% of beds could be shut down to hold

other variables constant at current levels. Up to 10% reduction in total number of beds would be satisfactory in roughly 30% of all hospitals.

### **Ján Palguta, Filip Pertold.** Do Higher Wages Produce Career Politicians? Evidence from Two Discontinuity Designs

#### **Abstract**

In many studies of electoral contests, wages paid to politicians affect both selection of candidates into electoral race and on-the-job incentives of incumbents for office performance. We aim to differentiate between selection and incentive effects of higher wages on re-election by employing two regression discontinuity designs (RDD) based on: 1) population thresholds exogenously shifting politicians' wages and 2) electoral seat thresholds splitting candidates into bare incumbents and barely non-elected candidates. We find that higher wages do not increase electoral incumbency advantage, suggesting that once we account for selection at the seat thresholds, the incentive effect of higher wages does not impact officeholders' re-election chances. Our results further show that higher wages motivate bare incumbents to re-run much less compared to past barely non-elected candidates. Incumbency per se thus changes the decision-making over repeated candidacy.

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## **Session 7 – International Economics**

(Chair: Michael Moritz) Room 206

### **Svatopluk Kapounek and Zuzana Kučerová.** Historical Decoupling in the EU: Evidence from Time-Frequency Analysis

#### **Abstract**

We investigate economic cycle comovements and identify directions of relationships to discuss the spread of asymmetric shocks across the European Union during twenty years from the euro adoption. We contribute to traditional wavelet analysis with historical overview of 35 years economic cycle comovements changes in 24 EU countries with a particular attention to the main milestones of the European integration process.

We show the significant economic cycle synchronization between France and the EU and point out the decoupling of Germany, the United Kingdom and countries in Southern Europe. In addition, we find strong evidence of comovements between the three Baltic countries. Our results do not support the idea of increasing business cycle synchronization of monetary union members.

### **Cezary Baraniecki and Vilem Semerak.** More than Roads? A Gravity Model Analysis of the Institutional effects of Trade in the Belt and Road

#### **Abstract**

Export data from 2007 – 2016 with 175 exporters and 195 importers is combined with institutional data from World Governance Indicators in order to ascertain the institutional effects on trade. This effect is measured by three different metrics using a gravity model: the effects on trade due to institutional quality of exporters and importers, the effects of particularly good and bad institutions and the effects of institutional similarity. These results are then used in order to analyze China's Belt and Road Initiative and its possible goals. China was found to export more to nations with good institutions and far less to nations with poor institutions, even when only looking at trade flows between China and B&R nations. Existing funding information and agreements listed in the last B&R Forum did not follow China's trend of exporting more to nations with good governmental institutions. Instead, a negative correlation exists between B&R funding and agreements and the institutional quality leading to the conclusion that China is not just strengthening existing trading relationships with the B&R Initiative but rather is pursuing other goals, such as trade diversification.

### **Michael Moritz and Johannes Schäffler.** German FDI in the Czech Republic – Employment Effects in the Home Country

#### **Abstract**

Does foreign direct investment lead to employment growth or employment losses in the home country? To address this question, a unique database about German firms with foreign direct investment (FDI) in the Czech Republic and firms without FDI in any country has been established within the IAB-ReLOC project. By developing a new method for linking firm-level data with establishment-level data of the Institute for Employment Research (IAB), this database is now linked with the IAB employment data. As the exact dates of the investments abroad are known, the employment development of firms with foreign affiliates and firms without FDI is compared for the same time periods. The analysis shows that the two observation groups actually

develop differently. In the years after the investment, the employment of multinational enterprises in the home country shrinks relative to the employment of the reference group. The negative trend continues for up to five years. However, not all types of jobs are affected adversely. The downward trend refers to medium- and low-skilled workers only, whereby the demand for high-skilled workers even increases after the investment.

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### **Session 8 – Wealth, Growth and the Economics of Education**

(Chair: Daniel Münich) Room 116

#### **Ivo Bakota. Wealth Distribution and Macroeconomic Implications of Financial Policy**

##### **Abstract**

This paper analyzes the effects of firm's leverage in a model with heterogeneous agents, life-cycle, incomplete markets and portfolio restrictions. Previous studies (Algan et al, 2009), assuming the infinitely lived households, found relatively small real quantitative effect of firm's leverage decision. Therefore, in such setting, it can be argued Modigliani-Miller theorem holds approximately. This paper augments their model by incorporating parsimonious life-cycle and capital depreciation shocks. Contrary to previous findings, increasing the firm's leverage influences the long-run average of aggregate capital. The reason why adding life-cycle changes the result is because it helps generate substantial mass of agents close to borrowing constraint, whose savings decision rules are not linear. Increasing leverage lowers the savings rate of wealth poor agents and slightly increases the savings rate of other agents. Furthermore, adding capital depreciation shocks makes returns to equity more risky, further differentiating the two assets in the economy.

#### **Martin Guzi and Martin Kahanec. Income Inequality and the Size of Government: A Causal Analysis**

##### **Abstract**

Expansion of the public sector and redistributive policies may reduce income inequality but formal tests suffer from the problem of endogeneity of government size with respect to the distribution of income. Studying 30 European countries over the period 2004-2015, we apply fixed-effect, system generalized method of moments, and instrumental variable estimation techniques to identify a causal relationship between income inequality and government size, measured as the government revenue and social expenditure share in GDP. Using a novel instrument – the number of parties in the ruling coalition – we find that accounting for the possible endogeneity of government size increases the magnitude of the estimated (negative) effects. Our findings thus indicate that much of the literature underestimates the true role of the government in attenuating income inequality. The results are robust to different measures of inequality and measures of government size.

#### **Jana Krajčová and Daniel Münich. The impacts of raising teacher quality on education and economic growth**

##### **Abstract**

In the study we simulate possible relevant scenaria in the development of teaching quality in the Czech Republic, as a key co-determinant of the quality of education schools provide and thus also of the country's long-term economic growth. The key parameter - the quality of teachers' work - is usually measured by the change in pupils' test scores over the course of one school year (once other factors have been controlled for) and is thus an indication of the value added by the teacher's work. In our simulations we use the latest results from the PISA survey and quantify the impact of several possible scenaria in the development of the probability distribution of teacher quality, both on the future development of PISA scores among 15-year-old Czech pupils and (following on from previous IDEA studies) on the knock-on effect on the country's long-term economic growth from a rise in the population's level of education. The scenaria we consider and compare include: (1) Autonomous development without external intervention to raise the attractiveness of the teaching profession, (2) Stagnation of pupils' test scores (3) Natural replacement of teachers with an emphasis on raising the selectiveness of the teaching profession (4) Lifelong training and raising the quality of every teacher's work and (5) Combination of lifelong training and natural replacement. The study aims to draw attention to the negative trends in Czech schooling and point out that even relatively natural and simple reforms have a measurably positive economic impact, if they are monitored over a sufficiently long period.

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## Session 9 – Corporate Finance

(Chair: Jan Hanousek) Room 207

**Ketevani Kapanadze, Irakli Barbakadze and Nino Kokashvili.** How Participating in the Shadow Economy Affects the Growth of Latvian Firms

### Abstract

This paper examines the relationship between the growth of Latvian firms and their involvement in the shadow economy in 2015. When up to 10% of the overall economic activity of firms is in the shadow economy, this had a growth-enhancing effect on firms that recorded non-positive growth during the last five years. Using the perceptions of corruption and interview languages as instruments of measuring the shadow economy participation rate, the authors conclude that there is a positive relationship between perceptions of corruption and the shadow economy participation rate

**Andrea Pataconi, Sharon Belenzon and Honggi Lee.** Towards a legal theory of the firm: The effects of enterprise liability on asset partitioning, decentralization and corporate group growth

### Abstract

Limited liability is a key attribute of the corporate form and one of the most important institutional innovations of the nineteenth century. However, when the owner of a corporation is another corporation as in many corporate groups, an important justification for limited liability - to protect small, passive investors from unlimited losses - is severely weakened. Accordingly, countries differ considerably in their propensity to protect parent and sister companies from the liabilities incurred by other group affiliates, with some countries (e.g. Germany) viewing a subsidiary as an integral part of the group that controls it while others (e.g. Great Britain) emphasizing the legal rather than the economic substance. In this paper, we construct a novel country-level measure of enterprise liability, the propensity of courts to hold an entire group liable for the obligations of one of its subsidiaries. Using data from sixteen countries in Europe, the Americas, and Asia, we examine how enterprise liability affects firm boundaries, internal organization, and corporate group growth. We find that in countries where enterprise liability is weaker, groups tend to partition their assets more finely into distinct legally independent subsidiaries and grant their subsidiaries more autonomy. Groups also tend to grow faster. This paper highlights one underappreciated channel - risk compartmentalization through incorporation - through which legal systems affect economic outcomes.

**Jan Hanousek, Anastasiya Shamshur and Jiri Tressl.** Corruption Uncertainty and Corporate Investments; To Bribe or not to Bribe?

### Abstract

Using a large sample of private firms from 2001 to 2013, we study the effect of corruption uncertainty on corporate investments. We find that a higher uncertainty about the level of corruption is associated with lower corporate investments. This relationship is significant only in the sample of domestic firms, while foreign-majority-controlled firms are not affected by corruption uncertainty. Overall, an average domestic firm which operates in an environment in the top quartile of corruption uncertainty invests about 18% less than similar corporations in the lowest quartile. These results are robust to alternative specifications, hypotheses, and matching analysis.

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## **Session 10 – Quantitative Economics II.**

(Chair: Filip Matějka) Room 209

### **Volha Audzei and Sergey Slobodyan. Sparse Restricted Perception Equilibrium**

#### **Abstract**

In this work we consider a concept of sparse rationality (developed recently by Gabaix, 2014) as a selection tool in a model with multiple equilibria. Under sparse rationality paying attention to all possible variables is costly, and the agents could choose to over- or under-emphasize particular variables, even fully excluding some of them. Our main question is whether an initially mis-specified equilibrium (the Restricted Perceptions Equilibrium, or RPE) is compatible with the equilibrium choice of sparse weights, describing allocation of attention to different variables by the agents inhabiting this RPE. In a simple New Keynesian model, we find that the agents stick to their initial mis-specified AR(1) forecasting model choice when monetary policy is less aggressive or inflation becomes more persistent. We also identify a region in the parameter space where the agents find it advantageous to pay attention to no variable at all.

### **Sergei Mikhailishchev. Welfare Analysis of Optimal Menu Allocation with Bounded Rational Agents**

#### **Abstract**

There is empirical evidence that people make mistakes during discrete choice decisions and limited menu set could be optimal. We argue that there are two possible sources of mistakes: agents either misperceive true values of available alternatives or misperceive their own tastes. We propose a simple model with welfare maximizing benevolent principal and heterogeneous agents who are prone to mistakes. Social planner knows the distribution of mistakes and tastes in population, but not individual preferences. He maximizes sum of agents' utilities by choosing the number and values of available alternatives. We study optimal distribution of alternatives and provide welfare analysis. When agents misperceive values of available options it could be optimal to restrict the choice. In addition, social planner allocates options far from each other in order to reduce the possibility of mistakes and when there is a population of agents he creates alternatives that matches tastes both of majority and partisan groups while leaving middle groups without close match. However, when agents misperceive their own tastes it is never optimal to restrict choice and social planner allocates options close to each other.

### **Botond Köszegi, Filip Matějka. An Attention-Based Theory of Mental Accounting.**

#### **Abstract**

We analyze how an agent with costly attention optimally attends and responds to shocks in basic consumption decisions, explaining several types of mental accounting, and making additional predictions. When allocating consumption among goods with different degrees of substitutability, the agent may create budgets for the more substitutable products. But if the goods are complements, the agent is consistent with naive diversification may choose a fixed, unconsidered mix of products. When managing her consumption from and transfers between an investment account and a checking account, the latter of which she has an incentive to balance, the agent's marginal propensity to consume (MPC) out of shocks to the checking account is greater than her MPC out of shocks to the investment account. Furthermore, because paying attention to her budgeting is costly, the agent prefers to reduce spending risk, and she is more averse to risk in the checking account than in the investment account. As a result, she may optimally switch to a cheaper substitute product when a random price increase occurs.

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## **Session 11 – Economic Policy and Institutions**

(Chair: Pavol Minarik) Room 210

### **Aisha Baisalova and Elizaveta Shashkova. Impact of Economic and Political Freedom on Self-Selection in International Migration**

#### **Abstract**

This paper using modified gravity model of migration investigate self-selection patterns of international migration driven by economic and political freedom factors based on the sample of 78 OECD and non-OECD countries' bilateral migration data by gender and education. We find that economic freedom is significant only for high educated migrants; political freedom is the most significant for low educated migrants. Moreover, across all levels of education, political freedom is more significant for women than for men. Possible explanation of this

phenomena is that, first, women are more responsive to higher political freedom in the destination because their rights in the origin countries with low political freedom are more constrained than those of men; secondly, low educated people are more sensitive to political freedom than other categories of migrants, because their rights are the least protected in the origin countries or host countries with low level of political freedom. These results imply that development of institutions supporting economic freedom might lead to positive self-selection of migrants. Additionally, political freedom attracts women to a higher degree than men, which can be important for demographic considerations.

### **Olexiy Kyrychenko.** The Impact of the Crisis-Induced Reduction in Air Pollution on Infant Mortality in India: A Policy Perspective

#### **Abstract**

Credible estimates of the health effects associated with air pollution are of considerable importance for research and policy agenda. Such estimates could provide effective stimuli for environmental regulation and a valid means of policy evaluation. However, there is still a shortage of empirical studies linking health and air quality for most of the developing countries. Filling this niche, our research estimates the causal impact of the sharp reduction in particulate air pollution driven by the Global Financial Crisis of 2008 on district-level infant mortality in nine high-focus states of India. Utilizing plausibly exogenous geographic variation in the crisis-induced changes in air quality and novel datasets rarely used by the economists before, we find that the infant mortality rate fell by 24 percent more in the affected districts during the post-crisis period, implying that 1338 fewer infants died than would have in the absence of the air pollution reduction. The analysis of the pathophysiological mechanism indicates that the effect of interest is strongest in the postneonatal period, specific for respiratory infections and might be related to some infectious diseases. The estimates are within the range reported in other economic studies and appear to be robust to a variety of specifications and falsification tests. Back-of-the-envelope calculations suggest that the estimated decline in infant mortality translates into an annual average per-household monetized gain of 289 U.S. dollars. Resulting health benefits attributable to the crisis-induced reduction in air pollution can be used as a benchmark to assess the efficiency of the potential policies designed to improve air quality in the selected Indian districts.

### **Richard Kališ, Martin Labaj and Peter Mandžák.** Entry and Competition in Healthcare professions: evidence from Slovakia

#### **Abstract**

In this paper, we follow Schaumans and Verboven (2008) and provide first empirical entry model on the relationship between market size and number of firms for pharmacies and physicians as strategic complements in Slovakia. We focus on estimation of market size thresholds required to support different number of firms. Our aim is to explore whether number of pharmacies can affect market size threshold to support given number of doctors, and vice versa. Our preliminary results suggest significant drops in entry thresholds for given profession once there is at least one firm of another type present in the local market.

### **Pavol Minarik.** Post-communist church-state settlements in Central Europe: A public choice perspective

#### **Abstract**

Church-state relations were thoroughly altered during the post-communist transition in Central European countries. The settlement between the state and the churches typically included restitution of property taken by the communist governments and reform of the church finance. While most countries have adopted a model where the state subsidizes churches, the Czech Republic has chosen a model of complete financial separation between the state and the churches. Also, while most countries reformed the church-state relations in the 1990s, the Czech settlement was only reached in 2012. The paper explains why it took so long for the Czechs to reach a settlement based on the specific preferences of the Czech population, the median voter theorem and a bargaining theory. In most of the Central European countries the two-dimensional issue of church property restitutions and church subsidies effectively collapsed into a one-dimensional issue of how much the state should support the churches. In the Czech case, where the median voter position would be no restitution and no subsidy, a position that would violate constitutional principles, the settlement was an outcome of negotiation between the government and the churches.

**Session 12 – Socioeconomics**

(Chair: Barbara Pertold-Gebicka) Room 116

**Klara Kaliskova and Alena Bicakova.** Does Longer Maternal Childcare Improve Children's Future Outcomes? The Impact of a Four-year Paid Parental Leave

**Abstract**

The impact of the duration of family leave on labor market outcomes of mothers has received a lot of attention in previous research, less is known about the impact on the well-being of children. The existing evidence on the effect of family leave on child outcomes is mixed and focuses primarily on leaves with short or medium duration. We study the impact of an extremely long (four years) paid family leave on a variety of child outcomes. To achieve this goal, we exploit the variation in family leave duration induced by a major parental leave allowance reform in the Czech Republic in 1995 that extended the paid family leave from three to four years. Using a combination of the regression discontinuity and difference-in-differences design, we identify the impact of the 1995 reform on three sets of child outcomes: labor market outcomes, educational attainment, and family relations.

**Miroslava Federicova.** Gender Gap in Application to Selective Schools: Are Grades a Good Signal?

**Abstract**

Grades are important factors in school transition. However, conditional on cognitive skills, grades differ substantially between girls and boys. This paper examines the role grades play in explaining the gender difference in application rates to selective schools, and shows that, conditional on the probability of admission, this gap can be explained by grades. This gives rise to a few interesting conjectures regarding what makes a grade, what matters for admission and how people make educational choices. Moreover, the role of grades in decision making may also help to explain other social differences in application decisions, i.e. regarding applicants' socio-economic background, race, etc., which may be even more severe than the gender bias.

**Barbara Pertold-Gebicka.** Parental Leave Length and Mothers' Careers: What Can Be Inferred from Occupational Allocation?

**Abstract**

This paper shows that the time spent on parental leave affects mothers' careers several years after childbirth. I take advantage of a reform changing the timing of parental benefits payment effective in the Czech Republic in 2008. Introducing the possibility of flexible timing of benefits collection over the period of two to four years, as opposed to the only option of four years before, the reform significantly increased the share of mothers returning to work before their youngest child turns four. This further translates to increased representation of employed mothers in high skilled occupations and increases average occupation wage of the affected mothers six years after childbirth. These findings indicate that shorter leaves are beneficial for mothers' careers, at least in the medium run.

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**Session 13 – International Monetary Economics**

(Chair: Roman Horváth) Room 205

**Michal Franta, Tomáš Holub and Branislav Saxa.** Balance sheet implications of the Czech National Bank's exchange rate commitment

**Abstract**

We present projections of the Czech National Bank's balance sheet after the discontinuation of the exchange rate commitment. Our model addresses the situation of a large central bank balance sheet with assets almost exclusively consisting of foreign-exchange reserves in the circumstances of a catching-up economy exhibiting an exchange rate appreciation trend. Apart from the baseline projection, several counter-factual scenarios are discussed. The scenarios concern the questions about the balance sheet evolution in cases of no exchange rate commitment and the commitment with earlier discontinuation. The simulated counter-factual duration of negative CNB's equity, and thus the period of no profit distribution to the government, would not differ substantially from the baseline. Fiscal implications of the exchange rate commitment are thus estimated to be relatively small and related only to the period after the year 2030. Our stochastic simulations, however, show that the uncertainty bands are very wide. In addition, we show that the simulation tool can be employed for the discussion about the consequences of long-run decline in currency in circulation, the asset side composition and the resumption of foreign exchange income sales by the central bank.

### **Anna Pestova and Natalia Rostova.** Measuring monetary policy (in)effectiveness in Russia: a structural dynamic factor model approach

#### **Abstract**

In this paper, we estimate the effect of monetary policy shocks on a wide range of Russian macroeconomic indicators using modern structural dynamic factor model approach (SDFM). The main advantage of the DFM over the standard structural vector autoregression models (VARs) is that DFMs allow us to avoid “the curse of the dimensionality” and at the same time include the large number of macroeconomic series into the model. The monetary policy shocks here are identified by means of sign restrictions. 57 monthly time series spanning from 2003 to 2017 are used to estimate the SDFM. The structural model is also re-estimated for the two sub-periods which correspond to the monetary policy shift from the exchange rate targeting to inflation targeting in Russia: January 2003 – June 2008 and January 2010 – February 2017. The results for the whole period indicate the significant negative impact of the contractionary monetary policy shock on the real and financial sectors of the economy. The estimated model for the first period points to the non-significant effect of the restrictive monetary policy shock on market interest rates. That confirms the poor efficiency of interest rate channel of monetary transmission during pre-2008 crisis period. The results for the second period show that the most of responses are surprisingly not significant. That could be explained by the several notions. During that period, the monetary policy conducted by the Bank of Russia was not perfectly homogenous. Indeed, since 2013 the Central Bank has changed the main policy instrument and in 2014 finally moved to the inflation targeting and the floating exchange rate regime. Moreover, we found some evidence that “the price puzzle” might exist in the Russian economy for the considered 2010-2017 period. These results for Russian economy may be interpreted as the evidence that the monetary policy tightening in Russia has a limited ability to restrain inflation.

### **Jaromir Baxa and Tomas Sestoradt.** The Czech Exchange Rate Floor: Depreciation without Inflation?

#### **Abstract**

After introducing the exchange rate floor and the rapid depreciation of the Czech koruna in 2013 by 7 %, the output growth returned, but the inflation remained low, so that it did not allow the Czech National Bank to return back to normal for more than three years. Using the time-varying parameter VAR model with stochastic volatility, we show this development was not surprising: The exchange rate pass-through to prices was rather low and gradually decreasing since the early 2000's, suggesting the limited potential effects of the exchange rate commitment on inflation. On the other hand, the pass-through to output growth increased. These results hold even when the period with the exchange rate floor and the zero lower bound is excluded from the sample, and they are robust to other sensitivity checks. Our results are consistent either with flattened Phillips curve, rising quality of the Czech exports and participation in global value chains, or small effect of the exchange rate commitment on inflation expectations, when not paired with temporary price-level targeting. Moreover, we highlight the usefulness of models accounting or time-variation of parameters for the policy analysis.

### **Svatopluk Kapounek and Zuzana Kučerová.** Behavioural Selection and Exchange Rate Movements: Much Cry and Little Wool?

#### **Abstract**

Exchange rates and its movements could be explained by established economic theories and by many empirical exchange rate models that try to explain and forecast the movements of exchange rates. We show that forecasting performance is affected by time-varying behavioural selection of factors which are considered as important determinants of exchange rate movements. In this way we employ Dynamic Model Averaging and identify time-varying probability to include regressors into the models of the 6 most traded Forex currency pairs in the long-term period from 1979 to 2016. We conclude that the traditional theoretical models do not serve as a good way for proper testing and forecasting of exchange rate movements nowadays because, in many cases, large exchange rate swings could be also explained by behavioural determinants than by macroeconomic fundamentals. In this way, we use google queries and newspaper articles to identify uncertainty and behavioural attention at the selected markets.

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## **Session 14 – Bank Performance** (Chair: Evžen Kočenda) Room 206

### **Anastasiya Shamshur and Laurent Weill.** Does Bank Efficiency Influence the Cost of Credit?

### **Abstract**

Using a large sample of firms from nine European countries, this study examines the relationship between bank efficiency and the cost of credit for borrowing firms. We hypothesize that bank efficiency – the ability of banks to operate at lower costs – is associated with lower loan rates and thus lower cost of credit. Combining firm-level and bank-level data, we find support for this prediction. The effect of bank efficiency on the cost of credit varies with firm and bank size. Bank efficiency reduces the cost of credit for SMEs, but does not exert a significant influence for either micro companies or large firms. Furthermore, the effect is driven by large banks, where improvements in bank efficiency tend to be strongly associated with lower cost of credit. We also find that lower bank competition facilitates the transmission of greater bank efficiency to lower cost of credit. Overall, our results indicate that measures that increase bank efficiency can foster access to credit.

### **Petr Teplý and Petr Hanzlík. Key Determinants of Net Interest Margin of EU Banks**

#### **Abstract**

In this paper, we analyse a relationship between net interest margin (NIM) of EU banks and market interest rates in a low-interest rate environment. We analyse a large sample of annual data on 629 banks from EU member countries during the 2011-2016 period. Unlike other researchers, we also deal with the period of zero and negative rates in 2015-2016, what makes our results unique. We test three hypotheses and come to the three main conclusions. First, NIM eroded during the whole observed period for all types of investigated banks. Second, a higher market concentration, proxied by the Herfindahl index, leads to higher NIM. Finally, we show a positive concave relationship of NIM with short-term interest rate observed in previous studies. Contrary to other researchers, we find a negative relationship between NIM and the slope of the yield curve.

### **Evzen Kocenda and Ichiro Iwasaki. Bank Survival in European Emerging Markets**

#### **Abstract**

We analyze bank survival on large dataset covering 17 European emerging markets during the period of 2007-2015 by estimating the Cox proportional hazards model. We group banks across countries and according to their financial soundness. Our results show that progress in banking reforms positively affects bank survival. The economic impact of various determinants is largest for average banks measured by their soundness. Financial indicators predict bank survival rate with intuitively expected impact that is economically less significant in comparison to other factors. Specifically, ownership structure and legal form are the key economically significant factors that exhibit strongest economic effect on bank survival. We further document importance of banks being listed with respect to their survival. We also show that probability of exit increases after number of directors increases beyond a threshold. The results are robust no matter how bank are grouped, with respect to alternative specifications as well as alternative assumptions on survival distribution.

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## **Session 15 – Public Finance and Taxation**

(Chair: Jan Libich) Room 203

### **Stanislav Klazar and Barbora Slintakova. Does the income taxation have effect on debt of corporate sector?**

#### **Abstract**

Theory supposes that corporate income taxation encourages companies to issue debt as opposed to equity finance because interests are deductible while dividends not. In addition, international differences in tax regimes incentivize multinational firms to shift debt to optimize their taxes. Since the high debt level can have adverse consequences we decided to find out whether the taxation is one of the causes of the corporate sector indebtedness. We used a macroeconomic approach, i. e. all the variables were constructed on the country-level, and employed data for 18 EU member countries for the period 2006–2014. The model for the short-term indebtedness suggests that there is a relationship between the corporate debt and the debt-shifting incentive or the thin-capitalization rule. However the models for the total indebtedness do not provide any evidence that the corporate taxation influences the corporate sector debt. The firms' debt was affected rather by the macroeconomic factors.

### **Petr Jansky and Miroslav Palansky. Estimating the scale of profit shifting and tax revenue losses related to foreign direct investment**

#### **Abstract**

Governments' revenues are lower when multinational enterprises avoid paying corporate income tax by shifting their profits to tax havens. In this paper, we ask which countries' tax revenues are affected most by this tax

avoidance and how much. To estimate the scale of profit shifting, we start by observing that the higher the share of foreign direct investment from tax havens, the lower the reported rate of return on this investment. Like the 2015 World Investment Report of the United Nations Conference on Trade and Development, we assume that the reported rate of return is lower due to profit shifting. Unlike the report, however, we provide illustrative country-level estimates of profit shifting related to foreign direct investment which enables us to study the distributional impact of international corporate tax abuse. We find that, on average, higher-income countries lose the least and lower-income countries lose the most corporate tax revenue relative to their GDP. On the basis of these estimates, we conclude that profit shifting thus deepens the existing income inequalities and the differences in government revenues between countries. Furthermore, we compare our results with three other recent studies that use different methodologies to derive country-level estimates of tax revenue losses that can be related to profit shifting. In the first comparison of its kind we find that every study identifies differences across income groups, but the nature of these differences varies across the four studies.

### **Laure de Batz.** Financial Impact of Regulatory Sanctions on French Listed Companies

#### **Abstract**

This paper challenges the reputation for leniency of sanctions by the French Financial Market Authority, despite repetitive regulatory tightenings: scarce procedures, lax verdicts, low fines, ending neglected by analysts and investors. Using an event study methodology, the information content of sanctions on listed companies is assessed, from 2004 to 2016. The results demonstrate that the market reacts when learning that a firm is named in a sanction, as an offender, an acquitted, or a victim of others' financial misconduct, but to a limited extent, supporting the lenient reputation of the Regulator. Guilty firms experience significant negative abnormal returns after the decision and its publication, though to a limited extent in absolute and relative terms. Conversely, settlements (lighter and shorter procedures, associated with lower fines) do not convey information. Being acquitted implies contrarian corrections, depending on the step of the procedure. Finally, victim companies suffer negative abnormal returns after the sanction, suggesting double punishment.

### **Jan Janků and Jan Libich.** Ignorance Isn't Bliss: Uninformed Voters Drive Budget Cycles

#### **Abstract**

The paper shows that blissful ignorance does not apply to fiscal policy. In countries with uninformed voters, politicians attempt to 'buy' votes by substantially increasing government expenditures in election years. This generates costly budget cycles and macroeconomic fluctuations. Unlike much of the earlier literature that found this effect only in low-income countries or new democracies, we demonstrate that it has occurred in many prosperous countries with an established political system. In particular, constructing a comprehensive Informed-voter (INFOVOT) index and quantifying it for the 1995-2014 period, we show that only the top third of OECD countries with well-informed voters has not experienced political budget cycles. In contrast, the bottom third of OECD countries with poorly-informed voters has consistently seen a deterioration of the budget balance by 0.7-1.2% of GDP in election years. This represents an increase of 18-30% relative to their usual (non-election) budget deficits. Interestingly, for the intermediate group of countries with moderately-informed voters, for example Austria, France, Germany, Japan, Luxembourg, the U.K. and the U.S., election budget cycles occurred during the 1995-2008 period, but not since. We discuss why their election year deficit hikes (of 0.5-0.8% of GDP) may have disappeared after the Global financial crisis – drawing on the rational inattention literature. All our results are supported by a large number of robustness checks, including the use of a yearly version of the index ( $\Delta$ INFOVOT). We conclude by offering some policy recommendations that could improve the voters' incentives to process fiscal policy information, helping to escape an 'ignorance trap' whereby uninformed voters choose politicians whose policies reinforce the voters' ignorance.

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## **Session 16 – Corporate Finance**

(Chair: Jaromír Baxa) Room 207

### **Stephen Ferris, Jan Hanousek and Jiri Tressl.** Why Do Firms Bribe? The Persistence of International Corporate Corruption

#### **Abstract**

We examine the persistence of corporate corruption for a sample of privately-held firms from 15 Central and Eastern European countries over the years 2001 to 2015. Creating a new measure of corporate corruption based on firm operating inefficiencies, we find that corruption provides immediate enhancement in profitability and additional improvement when increased from previous levels. Corruption appears to grow corporate sales while reducing expenses. A channel analysis reveals that staff costs is the most common approach by which firms divert funds to make extra-legal payments. We conclude that corruption persists because of the profitability advantages it provides to firms.

**Ivan Sutóris.** Uncertainty shocks with heterogeneous firms and firm owners

### Abstract

This paper investigates effects of heightened uncertainty on firms and their owners. An uncertainty shock that increases dispersion in firm-specific productivity will typically lead to a drop in economic activity as firms delay investments due to the higher value of waiting. Given that in the real world, firm ownership is far from perfectly diversified, it is also likely that larger volatility affects firm owners as well. Motivated by empirical evidence showing that more financially developed countries respond less strongly to uncertainty shocks, I use a dynamic model with heterogeneity across both firms and risk-averse firm owners to look at how a degree of diversification affects the response of the economy to such a shock. If a substantial part of an entrepreneur's income comes from a single firm which they control, an increase in uncertainty will cause a further drop in investment and consumption and a greater increase in savings due to entrepreneur's precautionary motive and risk aversion. As a result, the impact of an uncertainty shock is more amplified in economies with lower degrees of diversification.

**Gerard Lobo, Mostafa Monzur Hasan, Abu Amin and Jiri Tressl.** Firm life cycle and loan contract terms

### Abstract

Using a sample of 13,065 firm-quarter observations of U.S. publicly traded firms from 1994 to 2015, we show that loan spreads follow a U shape over the life cycle of a firm. In particular, the cost of corporate borrowing decreases from the introduction to the growth stage and reaches the bottom in the mature phase. Loan spreads increase in the shake-out phase and peak in the decline phase. This result is mimicked when analysing the probability of covenant violations. Non-pricing terms of loan contracts, such as debt maturity and loan securitization follow the inverse U shape and U shape pattern, respectively, as well. The results are not specific to any benchmark stages. They are also not driven by unobserved firm level heterogeneity or by the use of specific firm life cycle measures. Overall, the results suggest that private credit markets take into account the distinct stages of firm development when setting loan pricing and loan characteristics

**Jaromir Baxa, Michal Paulus and Eva Michalikova.** Enforcement of the OECD Anti-Bribery Convention and Export Performance: Evidence from the Gravity Model.

### Abstract

In this paper, we infer the implicit costs of enforcement of the OECD Anti-Bribery Convention from a gravity model of international trade flows. Our aim is to check whether the non-enforcing countries do provide an implicit comparative advantage to its exporters. The model is estimated on a bilateral panel dataset of 131 countries, both on aggregate and product category (SITC) export data from the Comtrade database. To avoid the bias caused by zero trade flows, we use a two-step approach to calculate estimate the probability of non-zero trade flows first. The final model is estimated using the Poisson Pseudo-Maximum Likelihood estimator. Our results suggest that the enforcement of the Convention decreases exports to countries with higher corruption, but these emerging opportunities are not exploited by the other signatory countries that do not enforce the Convention actively. Rather, the exports from enforcing countries are substituted by the exports from other non-signatory countries. Therefore, all signatory countries have incentives to increase their activity in enforcing the rules against corruption and to equalize the conditions in international trade.

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## Session 17 – Wages (Chair: Jan Babecký) Room 204

**Jan Babecky, Kamil Galuscak and Diana Zigraiova.** Wage Dynamics and Financial Performance: Evidence from Czech Firms

### Abstract

This paper examines how the financial performance of a firm affects its wage policy. For this purpose, we match data on Czech firms from the Wage Dynamics Network survey covering the period 2010–2013 with balance sheet data. Controlling for a number of firm-specific characteristics and the environment in which firms operate, we find that financial performance matters for wage setting: contractual wages are more likely to grow in firms with a higher ratio of cash flow to total assets and in firms that invest more. Conversely, firms that froze or cut contractual wages during the survey period had lower cash flow over total assets, but not necessarily a lower investment ratio. The flexible wage component exhibits a similar pattern, but is more sensitive to demand shocks and firms' financial conditions.

### **Lenka Filipová.** Gender Wage Gap in the Czech Republic: Focus on Family-Career Balance and Social Norms

#### **Abstract**

This paper contributes to the literature with analyses of family-career preferences, social norms and impact of maternity and parental leave in explaining wage differentials between men and women, as well as between women with children and without them, using data from the rich survey of a representative sample of employees in the Czech Republic in 2011. This unique survey enables us to develop a wider model of wage determinants and to understand better the specific role of work-life preferences and social norms for wages, which are rarely considered in the previous literature and very important to understand the gender pay gap in the Czech Republic, the country with the second highest gender wage gap in the EU. The problem of high gender pay gap persists from the communist era in Czechoslovakia when, despite the fact that Czechoslovakia was the country with the lowest overall earning inequality in the world, the gender wage gap was quite high in comparison to other Central and Eastern European countries. In this paper we show that social norms and preferences influence wages on the Czech labour market and that women are not satisfied with the division of roles in the family since their preferences do not correspond with reality.

### **Jan Babecky, Clemence Berson, Ludmila Fadejeva, Ana Lamo, Petra Marotzke, Fernando Martins and Pawel Strzelecki.** Non-base wage components as a source of wage adaptability to shocks: Evidence from European firms, 2010–2013

#### **Abstract**

This paper provides evidence on the role of non-base wage components as a channel for firms to adjust labour costs in the event of adverse shocks. It uses data from a firm-level survey for 25 European countries that covers the period 2010–2013. We find that firms subject to nominal wage rigidities, which prevent them from adjusting base wages, are more likely to cut non-base wage components when they are hit by negative shocks. Firms thus use non-base wage components as a strategic margin to overcome base wage rigidity. We also show that while non-base wage components exhibit some degree of downward rigidity this is smaller than that observed for base wages.

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## **Session 18 – For High School Economics Teachers (in Czech)**

(Chair: Daniel Münich) Room 212

**Jakub Fischer**                      Statistika není nuda: Jak se vyznat v cenných údajích?

**Daniel Münich**                      Ochutnávky ze zajímavých výzkumů z oblasti ekonomie školství a vzdělávání

### **Krátké prezentace projektů z oblasti ekonomie pro učitele, jejich školy a žáky:**

**Jaroslav Ambrož (ČSE):** Experti do škol

**Filip Pertold (CERGE-EI):** Projekty v aplikované ekonomii pro nadané středoškolské studenty

**Jana Merunková (Yourchance.cz):** Program finančního vzdělávání

**Martina Bacíková (INEV):** Ekonomická olympiáda

**Markéta Fišerová (ČNB):** Iniciativy centrální banky na poli ekonomického a finančního vzdělávání

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