Svatopluk Kapounek, Hana Vránová (eds.)

ECONOMIC COMPETITIVENESS AND SUSTAINABILITY

23rd Annual International Conference

March 25th–26th, 2021

Abstracts

MENDELU
Faculty
of Business
and Economics

Mendel University in Brno
Faculty of Business and Economics

Svatopluk Kapounek
Hana Vránová (eds.)

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What Affects Income in Sub-Saharan Africa?

Raymond Kofi Adjei[a] and Veronika Kajurová[b]

Abstract
The factors affecting income is a crucial and widely debated topic among decision-makers and academicians in Sub-Saharan Africa (SSA). There are numerous literature mainly supporting, and some opposing the various elements that characterize income generation and economic growth in SSA. This paper investigates the impacts of selected determinants of income in SSA. To achieve this aim, we examine the effects that the macroeconomic variables such as international trade, foreign aid, FDI inflows, and inflation have on income. We also incorporate a monetary policy element by introducing money market interest rate and examining its effects on income. In this research, two different models are developed using the panel regression model to characterize the effects of the selected macroeconomic variables on income in SSA. The best model was selected based on Hausman test. The analysis of the results revealed that international trade increases income in the two models and was statistically significant. The results from the first model revealed that almost all the 25 SSA countries were significant but not significant for the second model. Year estimator was not significant for model 1 and model 2.

Keywords
FDI, fixed effects model, foreign aid, income, inflation, international trade, random effects model, Sub-Saharan Africa, money market interest rates

JEL Classification
B27, E01, E43, F14, F35

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Cross Border Banking and Bank Performance; A Comparative Study between Local and Foreign Commercial Banks in Ghana

Erasmus Afriyie Yaw[a]

Abstract
The study examines cross-border banking and bank performance and compares the financial performance of local and foreign commercial banks in Ghana. The study sourced five years of data from the Orbis database from 2013 to 2017. Twenty commercial banks were selected for the study, of which ten are locally owned and ten foreign-owned. The study employs financial ratios such as profitability ratio, asset quality ratio, liquidity ratio, and capital adequacy ratio to perform the comparative analysis between the local and foreign commercial banks. The data was computed with Excel and Stata. The results indicate that the foreign commercial banks performed better in (ROA), (ROE), (CDR), (CTI), (CAR), and (SIZE) except for (NIM), (NPL), and (LAR) during the period under study. The study recommends that a range of policy measures should be deployed to enhance the engagement of foreign banks and encouraging them to engage in the financial deepening agenda. Furthermore, financial infrastructures should be strengthened consistently across countries that share strong cross border links to aid quick access to credit information across countries to enhance the efficiency of payments systems.

Keywords
bank performance, cross-border banking, commercial banks Ghana

JEL Classification
G21, G30, G34, G38

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Role of Maternity in the Remuneration of Employed Women

Irena Antošová[a], Naďa Hazuchová[b] and Jana Stávková[b]

Abstract
Gender differences in the remuneration of employees as well as the effect of maternity to women's carrer are currently a topic of discussions across all EU. The paper aims to identify the effect of factors on the income of employed women in the context of maternity. The EU-SILC microdata of 2019 found that the employment income of men and women differs by 17% on average in all EU countries. How do monitored factors that affect the position of women on the labour market manifest themselves on the level of women's income from the employment is assessed in the univariate analysis. However the factor 'Childcare', ie. whether employed women have children or not, was identified as insignificant on women's income. Simultaneously the effect of maternity on the number of full-time and part-time jobs of women was confirmed. In countries of Central and Eastern Europe, such as Poland, the Czech Republic or Latvia, there is an apparent overwhelming prevalence of full-time work (above 90%) and women are very rarely allowed to work part-time or such conditions are created for part-time work that women almost never take advantage of them.

Keywords
income differences, gender, employee, maternity

JEL Classification
D31, O15, P46

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Financial Crime and Punishment: A Meta-Analysis

Laure de Batz[a] and Evzen Kocenda[b]

Abstract
We examine how the publication of intentional financial crimes committed by listed firms is interpreted by financial markets, using a systematic and quantitative review of existing empirical studies. Specifically, we conduct a meta-regression analysis and investigate the extent and nature of the impact that the publication of financial misconducts exerts on stock returns. We survey 111 studies, published between 1978 and 2020, with a total of 439 estimates from event studies. Our key finding is that the average abnormal returns calculated from this empirical literature are affected by a negative publication selection bias. Still, after controlling for this bias, our meta-analysis indicates that the publication of financial crimes is followed by statistically significant negative abnormal returns, which suggests the existence of an informational effect. Finally, the MRA results demonstrate that crimes committed in the U.S. (and more generally in common law countries) and accounting frauds carry particularly weighty information for market participants. The results call for more transparency from enforcers along enforcement procedures, to foster timely and proportionate market reactions and support efficient markets.

Keywords
meta-analysis, event study, financial misconduct, fraud, financial markets, information and market efficiency, returns, listed companies

JEL Classification
C83, G14, G18, K42, N24

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DEA in Performance Measurement of Two-stage Processes: Comparative Overview of the Literature. How to Identify Inefficient Segments in Agricultural Enterprises?

Tatiana Bencová[a] and Andrea Boháčiková[b]

Abstract
Standard non-parametric Data Envelopment Analysis (DEA) introduced by Charnes, Cooper, Rhodes (1978) does not provide adequate detail to identify the specific sources of inefficiency embedded in the activities on the level of production sub-processes of an enterprise, without considering the internal structure of the business. One of the DEA applications is to evaluate efficiency of two-stage processes where all outputs of the first stage are intermediate measures which are considered as inputs of the second stage. In the recent years there has been an exponential growth in the number of publications related to theory and applications of efficiency measurement for two-stage systems. These models assess both overall efficiency score of whole process and each of the individual sub-processes. Results from the analysis gives approach to the significant more detailed information that would otherwise remain hidden in the "black box" of efficiency analysis. Opening the black box of efficiency analysis offers managers to monitor and measure efficiency of their production sub-processes. The aim of this paper is twofold. The first task is to survey and classify the two-stage DEA models and to present the applications of these models across the literature. The second aim is to point out the application options for agricultural enterprises with internal structures.

Keywords
data envelopment analysis, efficiency, intermediate product, internal structures, two-stage process, agricultural enterprises

JEL Classification
C61, Q12, Q19

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Differences in the Effects of Fare Subsidies in Rail Transport: A Comparison of the Czech Republic and Slovakia

Nina Bočková[a] and Jakub Lofaj[b]

Abstract
The aim of this paper is to compare the impact of the government's decision to intervene in the pricing of rail passenger fares between the Czech Republic and the Slovak Republic. Both countries are already among the advanced economies that should support the market environment. However, over the past five years, the governments of both countries have cracked down on rail fare pricing and bus transport, respectively. Based on our findings, it was found that in the Czech Republic the change in the fare affected 45.8% of the population and did not bring a significant increase in the volume of transport, in Slovakia only 15.5% of the population was affected by the registration obligation. In Slovakia, there has been a significant increase in transported passengers and passenger-kilometers in the years following the introduction of free fares, 15.2%. In both countries, state budget spending increased, with taxpayers bear the burden. This only had a short-term benefit for the beneficiary population.

Keywords
rail transport, free fare, fare subsidy, Czech Republic, Slovakia, comparison

JEL Classification
R480

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The Income Instability of Slovak Farmers

Andrea Boháčiková[a], Tatiana Bencová[b], Zuzana Kapustová[c] and Marián Tóth[d]

Abstract
Managing risk in farming is one of the important issues for agricultural producers and policy makers nowadays. Especially, income from farming varies substantially over time, due to number of internal and external factors affecting production and prices. In the EU, every year at least 20% of farmers experience an income loss of more than 30% compared with their average income in the three previous years. However, the income drops do does necessarily mean that the level of income reached is particularly low or negative. It refers to the unstable financial situation and high level of income volatility. In the CAP, there exist mechanisms to mitigate the income risk and ensure stability of farmers. Under the II Pillar, the CAP offers the support in the way of insurance premiums, mutual funds, and Income stabilisation tool. The Income Stabilisation Tool (IST) represents the compensation to farmers for a "severe drop" in income, if the farm experienced an income loss of more than 20% compared to the 3-years average annual income, or the 5-years average annual income, excluding highest and lowest entry (Olympic average). The tool has not been implemented in Slovakia, or any other European country, due to number of obstacles and shortcomings in realisation. The main objective of the paper is to examine the income instability of Slovak farmers and the potential level of indemnification from the IST.

Keywords
income, stability, agriculture, risk management, CAP

JEL Classification
Q10, Q13, Q14

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Investigating the Influence of Behavioral and Socio-demographic Factors on Thai Consumers' Purchase Intention Towards Traceable Organic Rice Product

Harry Jay Cavite[a], Panya Mankeb[b] and Suneeporn Suwanmaneepong[b]

Abstract
Despite the increased popularity of organic rice in Thailand's domestic market, little is known about how consumers' behavioral and socio-demographic factors influence their purchase intention. Grounded on the theory of planned behavior, this research investigates consumers' purchase intention for traceable organic rice. Responses were collected from 243 organic rice consumers in a farmers' market in Chachoengsao Province, Thailand, following a convenience sampling approach. Data were analyzed using factor analysis, multiple linear regression, and one-way ANOVA to determine the factors predicting consumers' purchase intention and identify any differences with respect to socio-demographic variables. Results reveal that subjective norms, perceived behavioral control, health consciousness, and knowledge of product traceability have a significant positive influence on consumers' intention to purchase traceable organic rice. However, socio-demographic variables – age, income, and education, were found to have no impact on purchase intention. This study's findings offer theoretical and managerial insights to community enterprises and policymakers to fully understand consumer behavior for organic rice and implement effective marketing strategies and policies.

Keywords
organic rice, purchase intention, community enterprise, socio-demographic factors, Thailand

JEL Classification
M, Q

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Scoring Model for False Positive Signals Filtering

Michal Dufek[a], Milan Fičura[b] and Naděžda Chalupová[c]

Abstract
Modeling of portfolio returns in order to improve the performance of the trading system draws attention of many portfolio managers and researchers. One of the crucial steps in the process of construction (and testing) of the most suitable trading systems to recognize which signals are false positive to exclude them and therefore achieve lower shortfalls in equity. Many approaches for solving the suggested econometric problem exist: researching the influence of the measures capturing the behavior of other subjects (attention or sentiment of investor, other asset prices etc.) or the asset itself (price, volume etc.). In this paper we design deterministic meta (scoring) model which excludes false positive signals and thus decrease shortfalls in managed equity and simultaneously improve risk-adjusted performance of the underlying trading systems. The goal of this contribution is to lower market risk via elimination of lost periods for a specific trading system. To eliminate them we designed scoring model to filter out such entries which are not validate with it. Scoring model is a state automat (traffic lights system to switch between the regimes) which switch off/switch on a trading system.

Keywords
signal filtering, variables selection, commodity trading, scoring model

JEL Classification
C58, G11, F17

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Is Domestic Currency Depreciation a Blessing or a Curse for External Debt Management? Evidence for a Panel of Emerging Countries

Boris Fisera[a], Menbere Workie Tiruneh[b] and David Hojdan[c]

Abstract
We investigate the effect of domestic currency depreciation on the external debt for a panel of 41 emerging economies over the years 1999–2019. Using heterogenous panel cointegration methods, we find that domestic currency depreciation leads to an increase in external debt over the long-term. We also find that higher exchange rate volatility contributes to an increase in external debt burden over the long-term. We find asymmetric effects of exchange rate depreciation on external debt: the depreciation contributes to a more significant increase in the case of floating exchange rate regimes. Furthermore, we find that higher central bank independence reduces the effect of currency depreciation on external debt, while higher financial development enhances the effect of depreciation on external debt. Consequently, our results suggest that for emerging economies, having more volatile and floating exchange rates leads to greater risk of a long-term increase in external debt burden due to currency depreciation.

Keywords
external debt, exchange rate, currency depreciation, exchange rate volatility, exchange rate regime, DFE estimator, PMG estimator

JEL Classification
E50, F31, F34

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Staying on Board or Going Own Way? Factors Behind Offspring Succession Decisions in Family Firms

Peter Gál[a] and Marian Holienka[b]

Abstract
Family business (FB) significantly influences the career prospects of entrepreneurs' children. They are often naturally expected to take over the FB when adult. However, while such pathways seem straightforward, only few students with parent entrepreneurs wish to continue in this tradition, whereas the succession intention is considerably higher in case the parents' business is considered as FB (14.6% vs. 2.6%). The research question of our study is: Which factors influence the succession intention of university students in the FB? We studied four dimensions potentially influencing the succession intentions in FB: the parents (or interactions between the parents and the child), the FB itself (or relations between the child and the FB), the family (or relations between the child and the family), and characteristics of the individual him-/herself, represented by gender. Data were obtained in the GUESSS project 2018 edition. Our main sample comprised of 18,151 individuals from five CEE countries, and we identified 2,350 students with parents entrepreneurs in FBes – a final sample for our study. We employed binomial logistic regression to estimate the probability of odds of having a succession intention in FBes. Our findings suggest that working for FB, individual's affective and normative commitment to it, being exposed to parents' instrumental assistance and verbal encouragement, positive family reaction, and gender are significantly related to succession intention.

Keywords
decision-making, entrepreneurship, family business, GUESSS project, succession intention

JEL Classification
D91, J23, L26

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Research and Development Expenditure and Education Expenditure and Their Relationship with Economic Growth

Eva Grebe[a]

Abstract
The author of the presented work deals with two aspects of the state's spending policy: a spending policy on research and development and spending on education, and their relationship to economic growth. The author of this paper comes from the fact that the countries that have chosen to support science, research and innovation as key national priorities, are now among the most prosperous. The thesis aims to answer the research question of whether the approach to spending on education is more important than the approach to spending on research and development? The working hypothesis is that expenditure on education has a longer-term impact on the country's economic growth than expenditure on research and development. The research method used is a quantitative method of correlation analysis, in which expenditures on education and expenditures on research and development are compared, and both are correlated with economic growth. The research concludes that the dependence between the two monitored variables is very weak or non-existent.

Keywords
economic policy, economic growth, education expenditure, research and development expenditure, education policy

JEL Classification
H52

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The Impact of a Smartphone or Tablet Application on Learning Transfer in the Field of Continuing Vocational Training

Christine Hinrichsen[a]

Abstract
Does training work? Every year, organizations invest large sums in training of their employees. It is not surprising that the question of successful learning transfer is becoming increasingly important. Based on a qualitative literature research, the definition and theoretical model of learning transfer is presented in this article. Furthermore, this article examines the extent to which a smartphone or tablet application can promote successful learning transfer. It can be concluded that the successful learning transfer depends on the objective-oriented interaction of the stakeholders involved in a continuing vocational training in the fields of participant characteristics, training design and work environment. A smartphone or tablet application is a precious tool for this purpose.

Keywords
learning transfer, training design, human capital, lifelong learning

JEL Classification
I25, M12

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Donate-what-you-want: Does a Contribution of the Retailer Affect Customers' Giving to Charity While Shopping at German Grocery Stores?

Jens-Markus Horn[a]

Abstract
Many companies engage in Corporate Social Responsibility activities, such as Cause-related Marketing. Especially for retailers, offering customers to round up their shopping bill amount is a suitable way to collect a substantial sum of donations. As the willingness-to-pay – or willingness-to-donate – varies among consumers, a fixed donation size does not fully utilize the maximum amounts they would donate if they had a free choice. This paper aims to explore whether an additional contribution of the retailer influences the size of customers' donations to a good cause when they are paying their shopping bill at the checkout, while being allowed to determine the size of their donation. Data collection has been carried out through an online survey of customers of German food retail stores. The study reveals that an additional contribution of the retailer significantly increases the sum of customer donations by about 25 percent, with varying effects of different retailer contributions. Moreover, the framing of asking for the donation has a considerable impact on customers' willingness-to-donate, too: If stated as a percentage of the shopping bill amount, donations are significantly larger than donations stated in terms of an absolute amount or as a share included in the total payment. These scenarios are a more flexible way of rounding up the shopping bill amount. Hence, they are presumably an eligible concept for food retailers in the context of Cause-related Marketing.

Keywords
corporate social responsibility, cause-related marketing, willingness-to-pay, rounding up, checkout charity, consumer elective pricing, pay-what-you-want, shared social responsibility, retail

JEL Classification
D64, L81, M14

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Comparison of Performance of Minimum-Variance, Minimum-VaR and Minimum-CVaR Portfolios in Long Term and During COVID-19 Crisis

Matúš Horváth[a]

Abstract
In this paper, the performance of indices and optimal portfolios with respect to different risk measures is compared. The use of standard deviation as a risk measure in Modern Portfolio Theory is criticised due to its symmetry; the use of risk measurement based on loss distribution is preferred. The basic principles of the Mean-Variance portfolio and the most widespread alternative risk measures – Value-at-Risk and Conditional-Value-at-Risk – and the algorithms that lead to the minimisation of these characteristics are described. These algorithms are then applied to the real stock prices included in the EURO STOXX 50 and S&P 500 indices. Calculated return and risk characteristics of the constructed portfolios and underlying indices are then compared. The comparison is focused on the period of COVID-19 crisis in 2020 and also on the longer term period before this crisis.

Keywords
portfolio optimisation, VaR, CVaR, Minimum-VaR portfolio, Minimum-CVaR portfolio, return, risk, Sharpe ratio

JEL Classification
G11

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Cloud Platforms: An Overview Considering Options for Digital Twin Implementation

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Abstract
Industry 4.0 introduces new digitalization opportunities for companies to advance their innovative potential via incorporating new technologies that allow them to reduce cost and time. With the benefits on one side, the other side carries the risk of inappropriate use of these technologies, which can lead to unnecessary expenses and wasted time. This article focuses on one such promising technology, called Digital Twin. To support proper use of this technology, it examines cloud platforms that offer Digital Twin implementation. Our main objective is to categorize available platforms to make it easier for companies to choose the best-fitting Digital Twin cloud platform to their needs. To this end, we define four categories that characterize the level of Digital Twin cloud support. Their definition is then used as a driver of the evaluation of available cloud platforms to support decision making in a company context. Besides, the article includes an evaluation of the most advanced platforms, especially their strengths and weaknesses. With such a knowledge base, the decision on the appropriate cloud platform for Digital Twins can be expected to lead to savings in company time and costs.

Keywords
Digital Twin, cloud platform, decision making, Industry 4.0

JEL Classification
L8, O3

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The Role of Loyalty in the Relationship Between Destination Image and Behavioral Intention to Re-visit

Vo Viet Hung[a], Hoang Duc Sinh[b] and Zuzana Tuckova[c]

Abstract
This paper aims to carefully investigate the impact of the destination loyalty variable on behavioral intention to re-visit. This study proposes an integrated behavioral model that included tourist loyalty, destination image, service quality, tourist satisfaction, and behavioral intentions to re-visit. The relationship between all variables in the structural model would be considered from the visitor's perspective. In addition, the results found the loyalty variable has both direct and indirect effects on behavioral intention. The path of relationship between variables would present in this study. A total of 189 questionnaires was used to collect information from visitors who visit the heritage site in Thua Thien Hue province, Vietnam.

Keywords
destination loyalty, destination image, service quality, tourist satisfaction, behavioral intention, re-visit

JEL Classification
D11, M31, Z32

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Financial Development and Distribution of Income in Low and Middle-Income Countries

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Abstract
This paper examines the relationship between financial development and income inequality, the distribution of income in LMICs. To this effect, a dynamic panel estimation technique, system Generalized Method of Moments, is employed with a dataset of 44 economies over the period 1995–2010. Other variables that have been related to income inequality in previous research are also controlled for. The findings indicate the existence of a U-shaped relationship between financial development and income inequality. Financial development decreases income inequality until the development reaches a certain level. Beyond that level, it increases inequality. The results also provide evidence for Kuznets curve, an inverted U-shaped relationship between GDP per capita and income inequality.

Keywords
financial development, income inequality, LMICs

JEL Classification
D33, G20, 015, 016

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Allocation of Public Contracts Awarded by Central Public Administrative Bodies. Evidence from the Czech Republic

Radek Jurčík[a]

Abstract
The main goal of this paper is analysis of spatial pattern of public procurement allocation tendered by Czech central government institutions. The main findings point at a lower financial allocation per 1 inhabitant in lagging regions, as defined by the Czech regional policy, compared with non-lagging regions. The importance of the spatial hierarchy factor in explaining the spatial pattern is emphasized. In this article author deals with spatial dimension of public procurements tendered by central government institutions in the Czech Republic. Author claims that such an issue is highly relevant when considering the goal of harmonious and balanced territorial development.

Keywords
public procurements, spatial pattern, territorial disparities, Czech Republic

JEL Classification
R12, O18, R58, O22

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How to Avoid Knowledge Loss Using Analytic Hierarchy Process (AHP)

Natalia Khazieva[a] and Dagmar Cagáňová[b]

Abstract
The purpose of this paper is to present a new perspective in displaying knowledge loss by using the Analytic Hierarchy Process (AHP). The theoretical approach is based on the work of C. Bratianu and al. about the equilibrium equation of the level of organizational knowledge and on applying the mathematical model of AHP developed by Saaty. Bratianu et al. argue that the dynamic equilibrium equation for the level of the total organizational knowledge includes (a) knowledge creation inside the organization (positive contribution); (b) knowledge acquisition from the external environment (positive contribution); (c) knowledge loss (negative contribution). Thus, to reach the equilibrium equation, we shall minimize negative impact of knowledge loss. The authors use the AHP model since it enables for structuring the main elements of knowledge loss. In the present research, the authors of the paper consider a structure composed of three levels. The overall goal – to decrease knowledge loss – is situated at the top of the provided hierarchy. Based on literature review, the authors of the paper have selected three possible criteria (dismissal of employees, retirement of employees, and knowledge management failures). The authors of the paper have proposed some alternatives to these elements and put them at the lowest hierarchical level. This structured model of AHP is going to be applied as an empirical research.

Keywords
analytic hierarchy process, knowledge loss, knowledge management

JEL Classification
O3

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Migration as Unwelcomed Necessity? Experts' Perceptions of the Czech Migration Policy

Radka Klvaňová[a]

Abstract
Nowadays many countries, including the Czech Republic face serious shortages of labor force in certain sectors as well as demographic pressures related to population ageing. Migration, especially of high-skilled workers, has been perceived as an important factor contributing to competitiveness of the economies. In this paper, we discuss experts' perceptions on how migration has been treated by the Czech state in recent years (following the 2008–2010 economic crisis). We draw on qualitative semi-structured interviews conducted in 2018–2019 with 80 experts from the various sectors (state, private, non-governmental, academic) dealing with migration. Our analysis of the interviews with stakeholders in the field of migration in the CR suggests several challenges for migration policy making: (i) prevailing perception of migration as threat, (ii) prevailing orientation on temporary labor migration, (iii) lack of coherent and systematic conceptual approach towards migration. We argue that migration has been perceived as unwelcomed necessity: while migrant workers are highly demanded in the Czech labor market, their presence is tolerated rather than welcomed and they are eventually imagined as those who will leave after they are not needed rather than encouraged to settle and integrate into the Czech society.

Keywords
migration policy, Czechia, circular migration, securitization

JEL Classification
J18

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Conversational Interface for Unconventional Access to Business Relational Data Structures

Pavel Kostelník[a] and František Dařena[b]

Abstract
Chatbots and conversational interfaces present an ideal opportunity to significantly simplify access to business data. Technical expertise is required to operate with these structures. This paper presents a summary of current options available for accessing business data and proposes a conversational interface (a chatbot) as an alternative. While current options supply mostly static solutions and rely on complicated user interfaces, a chatbot can offer a revolutionary interface and redefine how business users access company data. Conversational interface is able to completely eliminate the block of technical expertise necessary to achieve the competitive advantage. Distinctions, differences and mapping techniques between relational querying and a conversational interface are discussed. Problem of keeping structural context as a part of conversation flow is analyzed and this article suggests methods to mitigate this issue. Storytelling is described in greater detail as means to drive a guided conversation. Propositions and conclusions given in this paper are demonstrated by a sample application – a conversational interface into business data relational database. Technology stack and major components of the sample application are described. This article concludes with the business opportunity that comes from introducing a chatbot to access relational data structures. It closes with limitations of the sample application and possibilities of further research.

Keywords
chatbot, relational database, storytelling, NLP, conversational interface, story graph

JEL Classification
O300

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Measuring the Impact of Digitalisation on Fair Taxation

Tina Krieger[a] and Hagen Müller[b]

Abstract
Digitalisation is a megatrend that places high expectations on tax administrations: Within the framework of sustainability concepts, there are mainly the SDG 10 and SDG 8, that can be the subject to tax law and tax administration. The question arises how tax administrations can manage to enable fair, i.e. legally compliant, taxation in the light of globally and digitally operating taxpayers. Here, digitalisation opens up an enormous opportunity for the tax administration to uncover new potential. This paper focuses on the research question if digitalisation of the tax administrations can contribute to fair taxation. Based on our economic model for digital tax administration, we derived a total of seven implications about the various interrelationships in the area of digitalisation of the tax administrations and fair taxation. To test these model implications' practical relevance, we have combined four different datasets and operationalised the implications accordingly. The subsequent quantitative analysis demonstrated that the dataset provided empirical support for our model's most important implication as well as for some further sub relations. Particularly noteworthy is the significant relationship between the variables digitalisation index in % (2017) and the shadow economy in % of GDP (2019). This provides reasonable grounds for the plausibility of our model implications and fulfils an essential prerequisite for answering our research question in the affirmative.

Keywords
digitalisation, fair taxation, psychological costs of tax evasion, quantitative analysis, shadow economy, sustainability, tax compliance time, tax evasion

JEL Classification
H26, H30, D90

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The Impact of Different Voting Methods on Citizens' Participation in Participatory Budgeting. The Case of the Czech Republic.

Soňa Kukučková[a] and Marie Poláchová[b]

Abstract
Participatory budgeting (PB) is currently one of the modern global trends of involving citizens in deciding how to distribute public resources. However, low citizens' participation in the voting phase of PB is often criticized undermining the legitimacy of the process. The article focuses on the application of the Democracy 2.1 (D21) voting method, often used in Czech municipalities with PB, because it is promoted as an appropriate voting method to enhance the voters' engagement in voting. This article aims to identify Czech municipalities implementing PB with the D21 method and its modification and to evaluate the impact of the use of the D21 voting method on participation rate in PB, concretely on the voter turnout in PB. Using publicly available information on the websites of individual municipalities and on the websites about concrete participatory budgets, this article suggests that municipalities with the D21 method and the modified D21 method have higher voter turnout in PB than municipalities using another voting method. The results indicate that the choice of a proper voting method may play an important role in citizens' participation in PB. The paper may be useful to PB organizers, citizens, and communities involved in the PB process.

Keywords
participatory budgeting, voting method, voter turnout

JEL Classification
H11, H76, H79

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Mobile Application opinio

Jaromír Landa[a] and Jan Přichystal[b]

Abstract
The article deals with the motivation of the origin and architecture of the mobile application opinio. Its goal is to make it easier for customers to make a decision-making process when choosing a product. The opinio application presents users with aggregated and analyzed reviews of regular customers for selected product categories. The user has the opportunity to get information about the most discussed product features and customer review sentiment. The application allows you to filter, search or compare products. It also includes a tool for scanning product labels for easier identification of the products you are looking for. The application is written in Kotlin language and is based on MVVM architecture. It uses the Android Jatpack libraries including the Navigation Component. It is structured as a single activity application. The minimal version of OS Android the application can run on is 5.0.

Keywords
Android OS, customer reviews, mobile application, product selection

JEL Classification
L86

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Influence of Inheritance Tax on Tax Evasion

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Abstract
In this paper it is investigated, if there is a connection regarding the amount of tax evasion and the taxation of inheritances. Countries which levy an inheritance tax (high or low) and countries which don't levy an inheritance tax are compared regarding their success in fighting tax evasion over the time period from 1991–2017. As the inheritance tax is one of the most unpopular taxes, it is assumed, that it has influence on the amount of tax evasion overall, if and how the tax is levied. The results show, that in countries which abolished the inheritance tax, the success in fighting tax evasion in the following time period is significant lower. There is also evidence, that countries with high inheritance tax revenues are not able to reduce tax evasion in the same amount, as countries with lower inheritance tax revenues. So the inheritance taxation seems to have influence on the volume of tax evasion.

Keywords
inheritance tax, estate tax, tax evasion, shadow economy

JEL Classification
H24, H26, K34

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Logistic Regression of the Czech Purchasing Inclination Regarding Luxury Fashion in the Covid-19 Era – Diversity over Sustainability?

Radka Macgregor Pelikánová[a], Eva Daniela Cvik[b] and Martin Hála[c]

Abstract
The sustainability projected into the CSR of businesses, especially businesses able to afford it, such as luxury fashion businesses, should meet stakeholder expectations and lead to an increase in the loyalty of customers and their buying inclination. Since times of crises should be the milestones magnifying pre-existing opportunities and threats, then the COVID-19 pandemic should accelerate and emphasize the significance of the concept of sustainability for the luxury fashion industry and ultimately lead to an increase of its CSR and the appreciation of that by customers. However, what is the reality of such expectations regarding the multi-stakeholder model and partnership? Since the official financial and non-financial results for 2020 are not yet available, then it appears as highly relevant and illustrative to perform a logistic regression based on data gained from an investigative survey employing a questionnaire of a homogenous Czech group of purchasers. Then, to critically compare the resulting logistic models and their coefficient with field observations and, via a holistic and empiric Meta-Analysis, heuristically achieve a deeper understanding of the Czech purchasing inclination to luxury fashion in the COVID-19 era. Several unexpected propositions emerge and call for further study and confirmation, rejection or correction. Do Czech customers really care more for the diversity than for sustainability and this despite COVID-19?

Keywords
corporate social responsibility (CSR), Czech purchasers, logistic regression models, luxury industry, sustainability

JEL Classification
D12, D84, L21, M14, Q01

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Influence of Electoral Uncertainty on Corporate Investment in Secondary Sector

Michal Mádr[a]

Abstract
The aim of the paper is to identify whether electoral uncertainty affects corporate investment in secondary sector. Specifically, the paper focuses on net fixed asset investment and parliamentary election. As the basic research question, it is assumed that a decline in corporate investment is expected in the parliamentary election year. The changes in corporate investment are researched on company level within twenty-three EU member states. In total, the paper analyses about 270,000 firms in period 2006–2015. The different impacts of electoral uncertainty on corporate investment are also explored both in SMEs and in large companies. The results indicate that the effect of holding the parliamentary elections on corporate investment in the secondary sector is statistically inconclusive. Looking more closely, electoral uncertainty may have a negative impact on investment in manufacturing (C) and construction (F) industries, whereas no influence was identified in the case of electricity (D) and water supply (E). Specifically, the level of net fixed assets to total assets in election year is about 0.36 lower in comparison with non-electoral years. Looking at SMEs and large businesses, electoral uncertainty has higher influence on net fixed asset investment in SMEs than in large companies, especially in manufacturing industry. Specifically, in case of SMEs, the level of net fixed assets to total assets in election year is about 0.3 lower in comparison with non-electoral years.

Keywords
electoral uncertainty, corporate investment, secondary sector, SMEs and large companies

JEL Classification
G31, O14, P16

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Regional Inequality in Budgetary Provision and its Decomposition by Sources: the Case of Russia

Marina Malkina[a]

Abstract
The aim of the research is an evaluation of inter-regional disparities in budget revenues per capita and an assessment of the factors influencing them in statics and dynamics, based on data of Russian Federation regions in 2010–2018. We have proposed a five-factor multiplicative model for the formation of budget revenues per capita, which describes the transition from GDP per capita to budget revenues per capita. This model shows how the budgetary provision of Russian regions is changing in the collection of taxes, as well as their distribution between the levels of the budgetary system, attracting non-tax revenues, and receiving interbudgetary assistance. To assess changes in the level of interregional differences at all these stages, we used the population-weighted Theil–Bernoulli index, which is a measure of entropy sensitive to the distribution of the bottom-part distribution. Using the method of decomposition of this index, proposed by Duro and Esteban for our multiplicative model, we evaluated the impact of five main sources of income and four intersect factors on regional inequality in budget revenues per capita, and determined their contribution to the convergence/divergence of Russian regions in budgetary provision.

Keywords
budget revenues per capita, inter-regional inequality, Theil–Bernoulli index, decomposition, convergence, divergence

JEL Classification
H71, H61, R12

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Organizational Commitment in the Light of Inter- and Intrapersonal Factors

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Abstract
Modern human resource management and leadership is strongly centered around the notion that talents, thus the most highly skilled and motivated employees, are among the most valuable success factors of contemporary business organizations, thus shifting their commitment in the focus of attention. Organizational commitment, as this contribution will argue, is a complex construct consisting of emotional and behavioral aspects. The present contribution summarizes the findings of three distinct studies and aims to give an overview of relevant research results in regards to the precursors of both emotional and behavioral commitment. This contribution summarizes the results of three separate studies conducted within the year 2020 and thus acts as a conclusion to the overall findings. All three papers summarized and depicted within this contribution aimed at fostering understanding of the nature of organizational commitment and its precursors from a strictly quantitative, empirical point of view. The three studies presented within this contribution show clearly, that organizational commitment is a complex construct with a set of both internal and external predictors. The analyses also show, that the application of transformational leadership seems to be among the strongest predictors of organizational commitment: While personality and values do influence the commitment and thus take on a relevant role, throughout all studies the role of leadership proved to be the dominant one.

Keywords
organizational, commitment, leadership, personality, values

JEL Classification
M12, M14, J24

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Factors Influencing Export Status of SMEs Located in Czech Republic

Ondřej Melichar[a], Šárka Stojarová[b] and Andrea Hrdličková[c]

Abstract
The main implication for business is that companies do not reach any size (in terms of number of employees) before they start exporting. Companies in different stages of their export development have different characteristics, policy makers should take it into account when designing policies. This article focuses on export behavior of Czech SMEs. In the Czech Republic there are not many articles about this topic. Theories and findings from foreign states are compared to reality in the Czech Republic.

Keywords
export status, export behavior, non-exporters, exporters, characteristics of company

JEL Classification
F14, F23

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Regional Disparities in the Functioning of Healthcare Sector in Poland. The Implementation of the DEA method

Katarzyna Miszczyńska[a] and Piotr Miszczyński[b]

Abstract
Analyzing regional disparity in public healthcare sector proves to be crucial in terms of public policy settlement. Differences in the level of financing of staff and material background are a problem to be solved by policy makers, but they are also an extremely important aspect from the patient's point of view in terms of the access to high-quality medical services. The main aim of the study is to apply the non-parametric method of Data Envelopment Analysis to measure the efficiency of Polish voivodeships between 2011–2016. The analysis was extended by window analysis, which not only evaluates healthcare technical efficiency in individual regions and quantifies the basic regional disparities, but also enables year-by-year comparisons of the results. The results of the showed that all 16 voivodeships were operating at relatively high levels of efficiency over the whole period. In each year only 2 or 3 voivodeships were inefficient.

Keywords
data envelopment analysis, healthcare analysis, efficiency measurement, window analysis

JEL Classification
I11, I19, C69

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Influencer Marketing as a Tool of Decorative Cosmetics Promotion: Eye-tracking Experiment

Stanislav Mokrý[a], Jana Turčínková[b] and Kateřina Klátilová[b]

Abstract
With the advent of the Internet, interpersonal communication has changed dramatically. One of the areas that the introduction of Web 2.0 has brought is the phenomenon of social networks, which allow both peer-to-peer and many-to-many communication. In the field of online marketing, so-called influencer marketing is used based on use of social networks. Our paper deals with influencer marketing in promotion of decorative cosmetics. The primary data were obtained as part of an eye-tracking survey involving 35 women aged 18 to 34 years. The survey was carried out in March 2019 and in the eye-tracking laboratory at FBE Mendel University in Brno. We used eye-tracker SMI RED 250 set to frequency 120 Hz. Within the investigation, an A/B experiment with variations of stimuli was carried out. For example, we tested if the visualization of a face with makeup application and without application will lead to different observing time. We also tested if the visualization of a well-known person's face will gain more attention in comparison with a common face. Both hypotheses were rejected, i.e. there was no significant effect of these variations. References to sponsored cooperation in influencers post were also examined. According to our results, the majority of respondents do prefer, when influencers admit publically such cooperation.

Keywords
consumer behavior, cosmetics, eye-tracking, social media, influencer marketing

JEL Classification
C91, D91, M31

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Changes in Wage Structure in the Context of Wage Polarization in the Czech Republic

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Abstract
Existing studies have provided evidence of job polarization in many developed countries. The issue of wage polarization is less obvious: many articles do not address it at all, and some even confuse it with job polarization. At the same time, the significance of the phenomenon of polarization results precisely from the consequences of wage polarization: from the increase in wage inequality. The aim of this article is to find out whether wage polarization occurred in the Czech Republic during the period 2004–2018. The results imply a very slight wage polarization in the public sphere, which began to occur around 2015, mainly due to the faster growth of the lower decile (S10). Panel regression analysis shows that globalization reduces upper-tail inequality (S90/S50) while increasing lower-tail inequality (S50/S10). This fact may be the reason why job polarization does not seem to have been recorded in the context of the Czech Republic.

Keywords
wage polarization, labor market, wage inequality, technology, panel analysis

JEL Classification
J21, J23, J31

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Tax Regime and Financing of Non-profit Organizations in the Visegrad Group Countries

Milena Otavová[a], Pavel Semerád[b] and Matěj Maják[c]

Abstract
The tax regime and the subsequent funding of non-governmental non-profit organizations through the institution of tax assignations in the Visegrad Group is the main topic of this paper. The issue of taxation is discussed with the aim of proposing changes and recommendations and reducing administrative costs of non-profit organizations in the Czech Republic. The impacts of the introduction of tax assignations are identified on the basis of comparison of tax assignation models. Finally, some recommendations and suggestions for better operation of non-profit organizations are formulated.

Keywords
non-profit organization, taxation, tax assignations, gifts, donations, income tax

JEL Classification
H24, H25, H61

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Which Obstacles Prevent the Creation of the European Civil Code?

Ondřej Pavelek[a], Drahomíra Zajíčková[b] and Bohumil Vítek[c]

Abstract
European integration is undergoing a complex development caused by the current pandemic, BREXIT, or the economic crisis. What matters, however, is the role of law in the integration process. Undoubtedly, the law also affects the economy. One of the very ambitious projects is the creation of a single code of private law that would apply throughout the EU. The European Civil Code could thus contribute to improving the functioning of the internal market. At present, however, there are some obstacles to the creation of a European Civil Code. The aim of this article is to answer the question of what obstacles prevent the creation of the European Civil Code.

Keywords
private law, business law, European civil code, Rome I regulation, conflict law harmonisation, TFEU

JEL Classification
K

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Six Sigma – Perceptions Throughout Automotive Supply Chains

Marcel Rolf Pfeifer[a]

Abstract
Processes in the automotive industry strive for stability, allowing the whole supply chain to produce in a quasi defect-free production. This study investigates the perception of process capability of suppliers, customers, and production companies in the Czech Republic. Data gathered in autumn 2020 included in the automotive industry throughout the supply chain was checked for dependency with Pearson's Chi2-test and t-tests. All data was assessed assuming a normal distribution that was suggested by the Kolgoromov-Smirnov test. Classifying the sample showed differences in the perception of long-term process capabilities and whole process capabilities. Lower ranks showed off in lower process capabilities. Research showed a dependency for the companies with less than 1000 employees, subsuppliers, and companies with a Six Sigma implementation in the last three years and the long-term whole supply chain process capability. Small companies within a three years' intervall from implementation of Six Sigma showed a higher inclination towards process instability. Bigger companies from OEM and Tier 1 with longer Six Sigma history assessed themselves as able to meet the even higher requirements ($p < 0.05$). Companies with less than 1000 employees, subsuppliers, and companies with a Six Sigma implementation in the last three years struggled to meet Six Sigma principles. The factors identify a risk in process stability for the whole supply chain in companies with the weakest requirements.

Keywords
six sigma, quality control, automotive industry, process capability, process stability, subsupplier risk

JEL Classification
L11, L16, L60, M11

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Operative Production Controlling in Production Companies in Industry 4.0

Marcel Rolf Pfeifer[a]

Abstract
The conception of industry 4.0 is changing today's companies and will do so in the recent future. The term of controlling 4.0 was minted in German literature to display the changes that also controlling will undergo during the transition towards industry 4.0. Through machine-to-machine communication digitization of production has already begun. While strategic controlling is waiting for more developed technologies, operative controlling already today has the tools available to independently manage production lines. Self-learning machines are able to provide a network of machines, IT-technologies and controlling functions that lead to the here-developed operative production controlling 4.0 (OPC 4.0). The OPC 4.0 provides an architecture based on existing components that relies on the fast provision of data and a processing of data with such speed. This independent concept is able to work without further human interaction after a period of learning. This period of learning is an investment required to set up the production line and to give it the initial information for decision-making. Overcoming this period, the OPC 4.0 shall provide higher product quality and higher productivity with stable processes.

Keywords
production controlling, industry 4.0, opc 4.0, machine learning, computer-aided standardisation, productivity increase

JEL Classification
L11, L16, L60, M11

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A Support Chatbot Providing Information from Normative Documents without Manual Training

Ivo Pisařovic[a], František Dařena[b], David Procházka[c] and Vít Janiš[d]

Abstract
A chatbot is a conversational agent that can be used as a first-level support in banks, insurance companies, universities etc. The key advantage in comparison to classic FAQ is interactivity. The user can ask any question and receives an answer, both in natural language. A problem may be solved in a multi-turn dialogue, not only in a single question-answer. However, such chatbots are usually built on a manually defined dataset of dialogues that is very costly. In this paper, we present a novel method for building a chatbot on normative documents (e.g. Study Rules or General Terms in a bank) which does not require any manual training. The success rate of our method is up to 81%. The user's question is not specific in many cases and there is no single answer. Therefore, our chatbot can automatically ask supplementary questions to clarify the user's question and limit the number of answers. To evaluate the chatbot performance, we created a new dataset for normative documents. No similar dataset was published before.

Keywords
question answering, interactive question answering, BERT, conversational agent, document search, chatbot, support

JEL Classification
C88

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Smart University: Learned Lessons

David Procházka[a], Vít Janiš[b], Jana Procházková[c], Jaromír Landa[b] and Ivo Pisařovic[b]

Abstract
Almost two years ago, we developed the first version of My MENDELU application based on principles of a smart city or more precisely a smart university. Like other similar projects, we faced technological challenges such as safe data storage, fast content delivery, design of the applications for mobile platforms etc. Even more challenging was the adjustment of internal processes that are behind the scenes: from development based primarily on students to content actualization by the university administration. In this article, we share our experience with the project and key principles that helped us overcome the vast majority of the problems.

Keywords
smart university, smart city, location-based service, user experience, design thinking

JEL Classification
C88

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Product Name Matching

Jan Přichystal[a]

Abstract
The problem of product name matching belongs to the area of entity matching which is one of the data integration tasks. It plays an important role in the analysis of data available on the internet and it combines various techniques and data preprocessing. Gathering and analyzing customer reviews about products published on the internet is challenging task, because particular e-shops offer the products under a bit different names and it could be complicated to match identical products. The article aims at selecting the identical products identified by their names and introduces methods for product name matching based on machine learning using the combination of token-based and character-based functions.

Keywords
customer reviews, entity matching, machine learning, product name

JEL Classification
L86

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A Framework of E-Trust in Leader-Follower Constellations

Frauke Remmers[a]

Abstract
In Leader-Follower constellations, trust marks an essential success parameter which becomes more evident in the context of a digital work environment. Against this background it is becoming more and more important for companies to measure the level of digital trust in their own ranks and to record it as a concrete economic value. However, this goal is confronted with the difficulty that so far digital trust has only been identified as a general success factor and has not been transferred in a concrete, measurable framework. It is also questionable how digital trust or E-Trust can be precisely defined. For this reason, the purpose of the present study is to carry out a general literature analysis in order to obtain information as a first step as to whether and to what extent E-Trust has already been identified as a construct and which specific parameters are associated with the term. Therefore a comprehensive literature review was done which led to information symmetry and two special conditions of trust as the main findings. Nevertheless this result doesn't offer a concrete measurable framework which companies can use to identify their level of digital trust. But it offers a good base on which further research works in this context will be done.

Keywords
E-Trust, leader-follower constellation, digital work environment, E-Trust parameters, information symmetry, trustworthiness

JEL Classification
M5

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Analysis of Online Communication between Business Entities and Financial Administration in 2010–2020

Jiří Slezák[a] and Ivana Čermáková[b]

Abstract
The article focuses on the analysis of communication between business entities and financial authorities with a focus on tax returns and data boxes. The COVID–19 epidemic, which affected the world in early 2020, left behind both the health and economic impacts that the affected states had to deal with. In the Czech Republic, the financial office was closed from day to day or their opening hours were limited. This fact forced businesses to look for a different form of communication with the authorities than most of them were used to. The aim of the article is to analyze the possibilities of communication of business entities with financial authorities in electronic form and their evaluation.

Keywords
digitization, tax return, COVID–19

JEL Classification
K34, O31

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Bankruptcy Modelling: Factors Influencing Models Predictability

Martina Sponerová[a], Miroslav Sponer[b] and Miroslav Svoboda[c]

Abstract
The aim of this article is finding a direction on how to build bankruptcy prediction models. We want to see if the companies' segmentation according to different criteria and using so-called standard financial indicators means better explanatory power while predicting bankruptcy. Considering the research objective, the following hypotheses were set: H1: The usually used financial indicators in financial analysis are the most important for bankruptcy prediction.; H2: The application of a model based on different segmentation criteria improves the reliability of bankruptcy prediction. It is the ongoing research about the value of several popular bankruptcy models that are often applied, namely the Altman Z-score, the Ohlson O-score, the Zmijewski's model, the Taffler's model, and the IN05 model. We have used logistic regression and investigated around 2 800 companies, of which 642 failed during 2010–2017. Our findings confirm hypothesis H2 and reject hypothesis H1. Some suggestion arises from it. When we develop a bankruptcy model, it is necessary to sort companies according to different criteria. It also confirms findings of the last years literature review the closer the similarity of businesses, the greater accuracy of bankruptcy models. Further, it is required to exploit common used financial indicators with a combination of modified indicators to assess the probability of bankruptcy precisely.

Keywords
bankruptcy prediction, SME, financial indicator, segmentation

JEL Classification
G32, G33, C53

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The Perception of the Importance of Basic and Specific Quality Factors by Spa Destination Visitors

Šárka Stojarová[a] and Ondřej Melichar[b]

Abstract
The article deals with the perception of destination quality. The thesis is a follow-up to previous researches, which concerned the determination of significant quality factors of the destination from a general perspective. The thesis analyzes the view of destination visitors on individual attributes of quality for spa destinations. Furthermore, the thesis compares and finds differences from the views of service providers in the destination. After finding important quality factors for spa destinations, their importance for spa visitors is examined. The contribution of this work is to find out dependencies in relation to age, gender, education, and type of occupation for spa destination customers. Testing was performed by Kruskal-Wallis test. Based on proven dependencies, it is possible to adjust business strategies for target groups to increase spa destination competitiveness. The article also takes into account the changes in the spa industry.

Keywords
travel tourism, destination, destination quality, quality factors, service quality, spa destination, consumer's perception, visitor's perception, coronavirus

JEL Classification
L83, L84, Z30, Z31, Z32

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Investment Intensity as an Influencing Factor of Sustainable Development of Food Manufacturers in the Czech Republic

Veronika Svobodová[a] and Jan Vavřina[b]

Abstract
Economic efficiency and overall financial performance of food manufacturers can be discussed as a crucial factor of competitiveness on the common EU market. Meeting of developing demand for food that is driven both by changing consumers' preferences mainly in the area of food quality, further utility aspects from consumers' side and also by interrelated requirements of EU law and order for foodstuffs force businesses to be active in the investment development area. These investments positively influence quality of production and also the economic efficiency of production processes. This paper aims to provide an exploratory insight into development of investments and related economic efficiency in milk processing industry by identification of similarities and dissimilarities in financial performance among a sample of manufacturers by methods of a multivariate-scaling. The data sample consists of different size categories of food manufacturers active in the selected industry branch EU NACE 10.5 – Manufacturing of milk products, which were active in the period of years 2007–2017. The source of corporate financial data was the database ORBIS of Bureau Van Dijk.

Keywords
food manufacturers, investment intensiveness, financial performance management

JEL Classification
Q19, D22

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Multicriterial Text Analysis Software

Roman Valovič[a], Tomáš Jakúbek[b], Jan Přichystal[c] and Jiří Fuchs[d]

Abstract
Analysis of texts published on the Internet is nowadays a valuable tool for companies to obtain feedback from their customers. Various techniques and tools are used for their acquisition and processing, including machine learning algorithms and natural language processing. This article describes the tools and applications that address these issues and enable the implementation of partial or complex analysis of texts in natural language. The described system contains an application focused on obtaining, analyzing and displaying customer opinions of selected product categories, so that they have a simpler decision-making process. The selection process is also simplified by the chatbot, which conducts a natural conversation with the user. These tools and applications focus mainly on the acquisition and analysis of texts in the Czech language, for which there are now significantly fewer solutions available, but there are still companies that are interested in such information.

Keywords
machine learning, MTA Software, natural language processing, web application

JEL Classification
L86

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The Significance of Presentation Form and its Effect on Consumers' Decisions

Jan Vrána[a] and Stanislav Mokrý[b]

Abstract
The aim of this study is to discover whether product presentation form (electronic and physical) is significant in consumer decision-making process. Eye-tracking with emphasis on tracking pupil size changes is used to fulfill this aim alongside with a questionnaire. The results show the presentation form does not influence the product attractivity perception, however in some cases, the presentation form is significant and affects the interest to buy and product certainty. The effect of extremely positive and negative emotional stimuli on pupil size was not confirmed, although it was confirmed for the presentation form. The main contribution of this study is discovering the problematics of presentation form using methods which are in the field of marketing rarely used, namely Eye-tracking with emphasis on pupil size change.

Keywords
product presentation, touch, eye-tracking, pupillometry, consumer decision making

JEL Classification
M300, M310

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The Economic Benefits of Smart City – EU Lighthouse Projects

Aik Wirsbinna[a]

Abstract
Nowadays, cities across the world are one after another trying to become so called Smart Cities. The purpose of this paper is to investigate the economic benefits smart cities initiatives. The EU promoted Lighthouse Projects were analyzed. The research of the Smart City Initiatives (SCI) shows the lack of importance which is being given to this topic. Because of that, I inspired to introduce my own categories of economic benefits of SCI. These were analyzed with EU Smart City Programs. The range of economic benefits is shown and evaluated.

Keywords
smart city, economic benefits, smart cities, economic development, urban studies, sustainability, lighthouse projects

JEL Classification
H41, H40, O18, O33

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Requirements for Assuming a Permanent Establishment under Art. 5 OECD Model Tax Convention in Accordance with the German Federal Fiscal Court's Considering a Locker as a Fixed Place of Business

Mandy Witt[a]

Abstract
In January 2019, the German Federal Finance Court defined the legally binding requirements with respect to a fixed place of business being a matter of a permanent establishment according to German law, thus the revenue generated being subject to the German taxation. As to the question whether one can refer to a fixed place of business as a permanent establishment, they use to differentiate between Civil Jurisdiction and Common Law. For the sake of clarity, they coined the article 5 of the OECD Model Tax Convention. In accordance to the abovementioned Model Tax Convention, binding provisions were defined on the international level for both, countries using the Common Law as well as for those using the Civil Law, with respect to the requirements as to a permanent establishment and the resulting country of taxation to be applied. In doing so, the question arose whether for instance a lockbox would represent a permanent establishment or not. However, the contracting states did not succeed in determining clear requirements as to the existence of the establishment in question. In fact, they left it to the state in question to define their respective double-tax agreements according to their own needs.

Keywords
OECD, place of business, permanent establishment

JEL Classification
A2, G1, H3

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Does E-Government Reduce Corruption? Evidence from U.S. States

Steven Yamarik[a]

Abstract
This paper investigates the impact of e-government on corruption in the U.S. Our state-level analysis benefits from corruption convictions data along with common institutional and history background along with corruption convictions data. Unlike cross-country analysis, we find that e-government raises corruption. Our results suggest that besides bringing transparency e-government can create new rent-seeking opportunities for corrupt officials.

Keywords
corruption, e-government, US states

JEL Classification
D72, D73, H79, R53

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Effect of COVID-19 on Consumers: Preparation for Online Sales

Giorgi Zarnadze[a]

Abstract
COVID-19 affects everyone's everyday lives. Millions of people around the planet have been told to sit at home. In this respect, businesses have been vulnerable to significant transformations. Workplace activities in a variety of companies have become automated. The impact of digital modernisation on efficiency and business culture has been extensively researched. Meanwhile, the effect of COVID-19 on customers and the nature of consumption has earned relatively little coverage. Managers often adopt a wait-and-see attitude on the impact of COVID-19 on revenues. Consumers are going through the pandemic, so specific improvements will remain long-lasting well though the crisis has eased. They are investigating the pandemic as a catalyst of systemic transition in demand and economic development in the marketplace. Managers can respond to the digital transformation of the economy to recover or even further improve sales after COVID-19. The new infection made our lives different and transferred many kinds of sales in the digital field. In this paper, we will explore how pandemic accelerated the growth of e-commerce. This study is mostly concentrated on a systematic inquiry of past papers, journal articles and conference proceedings, books and book chapters as well, which are primarily indexed in the reputable databases. We encourage managers to develop innovative digital-sales initiatives to prepare for the digital transformations of the market.

Keywords
COVID-19, e-commerce, digital marketing

JEL Classification
M21, M31

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User-friendly Interior Design Application for Augmented Reality Glasses

Martin Zejda[a] and David Procházka[b]

Abstract
Common augmented reality applications for mobile devices are usually focused on visualization of a single piece of furniture in the real-world scene. However, for complex design tasks such as designing whole rooms or for instance production areas with machines, the user must deal with multiple objects and precise positioning of the virtual models. Overlapping of the models, gaps between objects or walls etc. can lead to unsatisfactory results. An important issue is also the cognitive load necessary for precise positioning. The designer should focus on the design itself, not the selection or positioning of objects. In this article, we propose a method for user-friendly positioning of virtual objects in augmented reality applications using the HoloLens 1 and 2 glasses. The proof-of-concept application deals with the design of the menu for providing the key functions, positioning of the virtual models next to each other, translations, rotations and other necessary actions. The application also incorporates the voice assistant for more natural interaction.

Keywords
augmented reality, Microsoft HoloLens, Unreal Engine, user interfaces, user experience

JEL Classification
C88, C91

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Information Interface Approach: Czech Public Administration and e-Government

Tereza Zichová[a]

Abstract
The paper discusses the possibility of applying selected information interface approach to e-government of public administration in the Czech Republic in the context of the development and current state of the domestic system, primarily state administration bodies related to self-employment or liberal professions. More than CZK 17.9 billion has been invested in information and communication technologies for the development of the digitalization of the Czech public administration in the previous 8 years. However, many taxpayers still must perform several tasks with the same purpose in different offices in person or on paper instead of a single place to send all the data simply online. The biggest issue of the ongoing electronic system in relation to citizens is the fragmentation of information into several different websites. It is important that the information system is constantly evolving and adapting to the environment in which future generations are growing up. The result of the study is an applicable example of a segmentation model of the information interface of a unified e-government based on user-centric transformation and user-friendly principles.

Keywords
e-government, e-taxation, information interface, public e-services

JEL Classification
H110

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Credit Risk Adjustments under the New IFRS 9 – Impact Study

Maroš Zruban[a]

Abstract
The capital requirement is one of the significant costs of each commercial bank. A certain amount of their money must be deposited and cannot be used for business purposes. This money does not make any profit and it is not possible to use them as dividends to shareholders. Since the end of the crisis, the European institutions have brought many changes in banking regulation which the regulator perceives as necessary for the stability of the financial sector, but the market itself rather than another restriction on their business. Therefore, it is very important to monitor the balance of banking regulation that has a direct impact on the profitability of the banking sector on the one hand and the stability of the entire financial market on the other. This paper discusses the latest developments in banking regulation and shows the impact on the calculation of credit risk adjustments and expected credit losses under the new IFRS 9 standard on a particular Slovak commercial bank in detail and with real data as well as whole banking sector in Slovakia and Czech republic. These impacts are compared with expectations of European Bank Authority. Several unexpected conclusions have been made which re-open the discussion of how difficult is to set one general position for whole European banking system and also how important is to provide evidence about the impact of all changes in this diversified community.

Keywords
bank capital, RWA, IFRS 9, impact of IFRS 9

JEL Classification
G2

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Understanding Customer's Preferences by Using Eye Tracking Instead of Questionnaire – a Contribution to the Debate on Eye-based Human Computer Interaction for Mobile Devices

Pavel Žiaran[a]

Abstract
The use of mobile devices and scope of applications growths rapidly growing, what evokes the need to search for new approaches in the field of the human computer/mobile interactions. The objective of the paper is to contribute to the research on the eye-based human computer interaction, with the regard of the mobile devices. In the research we study the opportunity to answer the screen-based questionnaire simply by looking at the question items as compared to the classical questionnaire. We compared the data from the eye-tracking (implicit questionnaire – question items are simply placed on the screen without scale) and the classical screen-based questionnaire with the continuous scale (explicit questionnaire). Data were processed on the iMotions.com software platform. Results based on the correlational and regression analysis showed strong connection between the values chosen in the explicit questionnaire and the eye-tracking data for the particular questionnaire items (as the time the eyes spent at the particular item, fixation counts, number of revisits). Hence, it is empirically demonstrated that it is possible to predict the response to the questionnaire simply by visually observing the questions. Finding bring a strong support to the idea of eye-based human computer/mobile interaction, which could serve to measure and understand sub-conscious preferences of the users/customers.

Keywords
eye tracking, questionnaire, decision making, human–computer/mobile interaction

JEL Classification
M31

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New Questionnaire Determining Primary Representational System According to the NLP Theory as a Predictor of Advertising Text Evaluation

Pavel Žiaran[a], Zuzana Birknerová[b] and Ivana Ondrijová[c]

Abstract
Neurolinguistic programming (NLP) is an empirical field, applied in sales, personal development, etc. NLP includes the thesis of the primary/preferred representation system (PRS): visual, auditory, kinesthetic/feelings (VAK). If the communication is in accordance with the recipient's PRS, its effectiveness and impact increases. In this paper, we propose a questionnaire for measuring PRS. In the first step, we test the inner quality of the PRS questionnaire (factor analysis and item reliability analysis). Subsequently, we test whether the PRS questionnaire predicts the evaluation of advertising texts (using correlation and graphical analysis). Advertising texts are compiled on the basis of verbal predicates evoking the relevant representational system (VAK). There were 167 respondents (63% women) in the sample, undergraduate students of management, using online form questionnaires. The PRS questionnaire contains four categories for each VAK channel (capacity/difficulty to generate ideas in the respective PRS, preferred type of work/learning channel in relation to PRS). Results are favorable. The PRS questionnaire predicts the evaluation of advertising texts, correspondingly with the verbal predicates (VAK). Validity and reliability of the PRS questionnaire also confirms the objectivity and relevance of the empirical NLP thesis on the preferred/primary representational systems; what brings interesting implications for communication in sales and marketing.

Keywords
neurolinguistic programming (NLP), primary/preferred representation systems (PRS) advertising, marketing

JEL Classification
M39, D83, D91

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