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Abstracts

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The Impact of Balassa-Samuelson Effect: an Empirical Evidence from the Czech Republic

Emil Adámek^a

Abstract

Balassa-Samuelson (BS) effect is one of the theoretical approaches which try to explain the development of exchange rate and price level. It proposes that faster growth of productivity leads to appreciation of domestic currency and/or to growth of domestic price level. This effect is frequently associated to transition countries. The aim of this paper is to assess the impact of BS effect in the Czech Republic. Nevertheless, this approach includes some strong assumptions such as validity of Purchasing Power Parity Theory (PPP) for tradeable goods or, in the case of “domestic” BS effect, the assumption that wages tend to be equalized across sectors. In this paper, the significance of BS effect is tested even if some of these conditions are not valid. Quarterly data (2000Q1–2014Q2) are used in regression analysis. The relationship between productivity growth and inflation rate differential was found while assuming that wages are not equal in the tradable and non-tradable sector.

Key words

Balassa-Samuelson effect, price level, inflation rate, exchange rate, productivity, regression analysis, Czech Republic

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Methodology for Support of Virtualization Technology Selection

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Abstract

This work deals with virtualization and virtualization technologies that are currently available on the market. The first part is devoted to familiarization with virtualization and basic concepts. Other chapters then discuss various technologies as VMware ESX, Citrix Xen, Hyper-V, KVM and oVirt. The following chapter is a summary of characteristics of each technology and the output is then decision tree which is intended to help with selection of the appropriate virtualization technology.

Key words

virtualization, hypervisor, VMware ESX, Citrix Xen, Hyper-V, KVM, oVirt

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Feature Selection for Text Mining

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Abstract

Text mining has been employed in a wide range of applications such as text categorization and sentiment analysis. This paper gives a comparison of feature selection methods. There are performed experiments on classification task with feature selection methods. As a data set is used collection of hotel reviews. Performed experiments showed that the best performance is achieved with Multinomial Naive Bayes classifier in combination with Select FDR feature selection method.

Key words

classification, feature selection, text mining

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Technology competitiveness in the European Union: Trend to convergence?

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Abstract

The contribution verifies, whether the technology competitiveness of the European Union economies tends to converge or diverge. Technology competitiveness is evaluated with use of the composite indicator based on five variables, which are crucial for smart growth. It is gross domestic expenditure on research and development, number of patents and articles in scientific journals, number of fixed and mobile telephone subscriptions and internet users. All the variables are normalized and weighed with estimated weights first. Homogeneity of the European Union in area of these five indicators is evaluated with the method of cluster analysis, which is applied on data for the time period 2000–2012. We analyze results of cluster analysis and compare dissimilarities in individual years to assess the tendency to converge or diverge. The results shows, that there is no evidence about divergent trend. Although the majority of results confirms the opposite trend, the conclusions should be more careful. Heterogeneity of the EU is not increasing, it rather decreases slightly, but it seems, that the least competitive countries are catching up the most competitive economies just very slowly.

Key words

competitiveness, economy, European Union, convergence, homogeneity, dissimilarities, cluster analysis, maximum distance

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Topic Detection from Texts Written in Natural Language

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Abstract

Nowadays we have a lot of texts in an electronic format. These texts could be an interesting source of knowledge for certain domains. This paper aims for user generated data from the Internet and particularly from Amazon. The goal is to take products reviews from this server and describe, how some general knowledge can be gained. The research is aimed to discover groups of documents with similar content, determine which topics are included in these documents and also which terms are significant for each topic. The data pre-processing, the clustering methods and the feature selection methods are used.

Key words

text mining, clustering, feature selection, topic detection

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Solidarity and Community Work As a Partial Aspects of Migration Crisis Solution

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Abstract

The text deals with the migration crisis and to public discourse over its possible solution. Author sees by this social problem today not only a threat to European and national values, but rather sees it as an opportunity for their development. It deals with the possible use of community work with refugees as an aspect that can lead to local development and the development of civil society in the implementation of the principle of primary solidarity inherent in the Central European space that stands on the pillars of Christian culture and education.

Key words

migration, social work, community

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Sentiment of a Society and Large-Cap Stock Liquidity

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Abstract

The impact of sentiment in the sample of small and young companies due to higher transaction and information costs is a generally agreed notion. In contrary, such impact is less likely in the sample of large-cap stock companies. However, this paper goes beyond this notion and shows that we can study the influence of sentiment even at the level of large-cap companies due to the following reasons. Firstly, the paper is unique by employment of social media Facebook data as a proxy for the sentiment of a society related to the individual corporation. Such data have a potential to provide deeper insights in a society's behavior. Secondly, the author proposes the volume of trade or liquidity as a variable which incorporates sentiment in a society better than stock returns. Empirical results confirm this prediction. Overall, the paper shows the existence of the negative link between sentiment in the society and volume of trade at the level of large-cap corporations.

Key words

sentiment of a society, liquidity, Facebook activity, quantile regression

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Application of the Principle of Tax Equity in Terms of VAT

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Abstract

This article deals with the issue of tax equity of value added tax. Three different legal relations of value added tax were evaluated in terms of the principle of vertical equity and the rule of equal proportional sacrifice. The Evaluation was performed by solving a model example which was based on the data from Czech Statistical Office. The rule of equal proportional sacrifice has not been fulfilled in all the evaluated legal relations. The effective tax rate decreased with the growth of household wealth. This was due to the fact that the proportion of expenditures exempt from taxation increased and the proportion of expenditures subject to reduced tax rate decreased with the growth of household wealth.

Key words

principle of tax equity, principle of ability to pay, rule of equal proportional sacrifice, tax, effective tax rate, value added tax

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Travel Time Estimation for Variable Message Signs Based on Floating Car Data

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Abstract

The conference paper deals with current issues of processing and usage of Floating Car Data (FCD) in transportation. The aim of the paper is to study the feasibility and to work out a methodology for estimating the travel time from FCD with sequent model implementation of the entire process in a laboratory scale. Thereby the concept will be prepared and tested for deployment in real operation, which is only subject to the availability of FCD in real time.

Key words

floating car data, travel time, estimation, traffic control, transportation application

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The Analysis of Incomes and Expenditures of Households in the Slovak Republic

Ľudmila Dobošová^a, Jaroslav Kapusta^b

Abstract

The article is focused on analysis of incomes and expenditures of private households in Slovakia, on their prediction to the future and discerning the mutual dependability between the two variables. The basic source of information was data published on portal of Statistical Office of the Slovak Republic. Most of analysis were applied for the periods of years 2007–2014. We dealt with the development of gross cash income per person and month, development of minimum wages and analysis of its structure and the development of gross expenditures per month and person. Next we investigated the structure of net cash expenses of households. One of the partial goals was to compare net cash incomes and net cash expenditures of households as well as estimate of their trending functions. Our prediction we performed according to the trending functions and so as to discern the dependence of net cash expenditures per month upon the net cash income, we implemented the regress analysis.

Key words

household, households incomes, households expenditures

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Consumer Perception and Expectation for Buying Confectionery

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Abstract

This article describes the consumer's perception and expectation by buying packaging confectionery in stores in Czech Republic. The data about consumer's perception and expectation are collected by Focus Groups research. Four focus groups meetings ($n = 34$) were realized since October to December 2013. The results describe why and how consumers make their choice of store, which brands of confectionery prefer and which sales promotion has the most impact for them.

Key words

consumer perception, consumer expectation, focus groups, confectionery

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Using Non-Financial Measures in the Financial Management and Its Impact on Company Performance

Roman Dubový^a

Abstract

The issue of efficiency of financial management is still a hot topic, because good financial management enables business entity in the current turbulent times, not only survive, but also grow. This article aim is to quantify the impact of selected non-financial indicators on the final value of return on equity in the manufacture of other transport equipment, focusing on bicycles. The analysis will be carried out within companies operating in the Czech Republic and Germany.

Key words

non-financial indicators, financial management, return on equity

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Liquidity Effects of the Unconventional ECB's Monetary Policy

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Abstract

In this paper we examine the liquidity effects of the unconventional monetary policy of the ECB. We estimated cointegration vector to identify long-term causal effects of nonstandard measures of monetary policy on the long-term interest rates of sovereign bonds in the selected core euro-area member countries. The pass-through from the official open market operations to the long-term interest rates also depends on the risk premiums and economic activity expectations. Finally, we adopt the technique of error correction to understand the dynamics between the variables studied in the short and long term. The results are discussed in relation to the monetary policy efficiency at the zero lower bound.

Key words

financial crisis, deflation, credit easing, quantitative easing, euro area

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Formalization and Verification of Component-Based Systems in UML via Interface Automata

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Abstract

The basic idea of this paper consists in the replacing the components with I-automata and implementation of tasks over components in the system of I-automata. The paper shows that the implementation of these tasks in the I-automata is not only possible, but also feasible. Also tasks, which are difficult to implement in the component-based systems are carried out here. The core of the paper is in the appropriate formal definition of the component and its I-automaton. The knowledge obtained in the I-automata system, are then interpreted for the associated component system.

The aim of this paper is to design a platform for special tasks which could extend the functionality of Palladio Software Simulator. The target also includes transfers of the component-based system with UML notation to the system with I-automata. In the system of I-automata, we also consider the implementation of the known tasks for component systems, regardless of their static or dynamic character.

Key words

software components, component systems, CBD, component interface, interface automata, computability theory, Palladio

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Organic Food, Eco and Local Labelling

Jan Fiala^a, Anna Potůčková^b, Anna Havlíčková^c, Karel Barák^d,
Martin Souček^e

Abstract

The aim of this research is to reveal customers' perception of eco-labelling, describe their behaviour and to find the role of label itself. Objectives are to find out, if there is significant difference between men's and women's perception of eco-labelling and organic food and perception of these labels in general. Another aim is to identify factors having a significant impact on customer behaviour when purchasing eco or local products.

Key words

consumer behaviour, eye tracking, organic food, eco-labelling, local products

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The Influence of Political-Business Cycle on Individual Income Tax in the Czech Republic

Lucie Formanová^a, Milan Křápek^b

Abstract

The paper deals with the issue of effect of political-business cycle on the individual income tax policy setting in the Czech Republic in the time period 1993–2013. The individual income tax is represented by the employment income and the income from self-employed tax-payers. In the research the indicator of total tax collection and tax liability as a percentage of GDP were used. It was found that there were no significant changes in average values of these indicators prior and in election years in both cases. On the other hand, in post-election year the fulfilling pre-election promises of politicians were not confirmed, conversely in case of employment income the increase of analyzed indicators were identified.

Key words

individual income tax, tax collection, business-political cycle

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Cost and Technology Development in Long-term IT Operations

Florian Gotter^a, František Dařena^b

Abstract

When looking at long-term IT operations like for example, nuclear power station control, spacecraft operations or other mission critical long term IT operations, it becomes clearly visible that such ones have specific requirements, which can divert significantly from normal operational IT scenarios. In addition, it is also clearly visible that larger IT operation undertakings will cause significant cost. This paper gives an overview on technology development and will demonstrate market gaps arising during the specific long-term operational phase of IT infrastructure. Main focus of this paper is the analysis of core drivers on IT technology development such as chip complexity increase, efficiency of required energy per calculation as well as memory price development over long time periods. The research on this takes place with the aim to find the most significant and easiest ways to influence factors for overall cost reduction.

Key words

long-term IT operations, IT technology development, cost reduction, chip complexity increase, efficiency of computing, memory price development

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Organic Food, Consumer Behavior

Anna Havlíčková^a, Anna Potůčková^b, Jan Fiala^c, Karel Barák^d,
Martin Souček^e

Abstract

The aim of this article is to find answers to consumer behaviour during organic food buying process. We present research focused on consumer behaviour and their reactions on organic milk. Our goal was to determine elements of in-store marketing that can increase sales of stores. Results presented in the second part of this article confirm and expand information gained from literature review. Research is part of an IGA project, which is focused on consumer behaviour during regional and organic food buying process.

Key words

consumer behavior, organic food, eye tracker, merchandising, in-store marketing

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Sustainability of Primary Agricultural Production: Economic View

Mária Holienčinová^a, Dušan Dobák^b

Abstract

Farming systems are the start point of the food chain. The European Union (EU) food and drink industry purchases about 70% of EU agricultural produce. It is therefore crucial for the long-term health and prosperity of the food and drink industry that farming systems are sustainable. The industry promotes a holistic approach to sustainable agriculture aimed at securing safe food supplies, both in quality and quantity, protecting the natural environment and improving socio-economic conditions of local communities. Sustainable profitability of enterprises is the primary incentive to make the company managed to ensure other elements of sustainability. One of the important tools for ensuring economic sustainability of agriculture in the Slovak Republic conditions is the use of subsidies by the EU. The aim of this paper is economic evaluation of primary agricultural production in manufacturing and economic conditions in Slovak Republic and their alternative comparison with selected EU Member States.

Key words

agriculture, sustainability, subsidies, support, primary production

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Measuring the Development of Efficiency and Productivity of Banks in the Visegrad Group: An Application of Hicks-Moorsteen Total Factor Productivity Index

Lucie Chytilová^a

Abstract

The research on the banking efficiency all around the world has been one of the main topics for the international financial sectors over the last years. Special case is in Europe. Some of the countries are in the European Union, where the European Commission creates the rules for a safer and sounder financial sector in the region. These rules brought a lot of controversy whether they will help all countries in the European Union or just some. The purpose of this article is to determine the development of different types of efficiencies of the banking industry in the Visegrad Group as the weaker states of the European Union. Generally the development is measured by the Malmquist approach, but in this article there is used different type of index - the Hicks-Moorsteen Total Factor Productivity (TFP) index, as one of the alternative indexes. The results have showed that the model with the VRS assumption should be better for the use in banking resort in Visegrad Group, as this model is more precise about the results.

Key words

CCR model, VRS model, the Visegrad group, Hicks-Moorsteen TFP index, efficiency

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Impact of External and Internal Environment of the Agricultural Company on the Development of Business Activities

Silvia Jacková^a

Abstract

The article deals with topic oriented on the impact of external and internal environment of the agricultural company on the development of business activities. The evaluation of the results is stemming from the implemented questionnaire. Questionnaire was fulfilled by the employees of the company Agrodan Ltd., which was established 20 years ago and belongs among the most successful agricultural companies in the Slovak Republic. Business of the company is mainly focused on agricultural production such as cultivation of winter wheat, rape, corn and production of milk and beef meet. The questionnaire was conducted on a sample of 40 surveyed employees. The most significant achieved results are as follows: Slovak agriculture is underestimated, people should expect better state support and higher wages for their work in agriculture, and customers have interest about the Slovak brands of food production.

Key words

external and internal environment, agricultural, questionnaire

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Strategic Management in Dynamic Environment of the Czech E-Commerce – A Preliminary Research

Vít Janiš^a

Abstract

This paper is about a qualitative preliminary research conducted in order to fulfill aims and goals of a dissertation thesis of the author of the paper. The topic of the dissertation is Strategic management in dynamic environment of the e-commerce.

The aim of the preliminary research was to verify feasibility of a questionnaire survey in environment of the Czech e-commerce and validate clarity and appropriateness of questions of the questionnaire that will be used in the questionnaire survey. Importance of the preliminary research lay in the fact that its output has helped to find the optimal way of carrying out the subsequent questionnaire survey.

Results of the preliminary research have shown that a questionnaire survey in the environment of the Czech e-commerce is feasible under certain conditions.

The question of strategic management is generally not sensitive for respondents. Though, their motivation for participation in the survey is difficult. Questionnaire surveys in general are not popular among respondents. They do not see an added value for themselves. Conducted preliminary research was under the auspices of the APEK, which virtually all respondents (who were members of this association) reported as critical.

Key words

e-commerce, strategic management, qualitative research, grounded theory, preliminary research

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Application of Neural Networks Based on Adaptive Resonance Theory for Text Data Mining

Ondřej Janů^a

Abstract

The recent progress in information and communication technologies has enabled us to obtain and store very large amounts of data. The main problem is how to find and extract useful information contained in data. Extraction of this information from a text written in natural language can be very difficult. This study focuses on information extraction from natural language text data by using neural networks based on adaptive resonance theory (ART). Text data often has a very high volume so it is complicated to process them. Main advantage of ART neural networks is ability to learn each input separately so it is not necessary to keep all learning data in memory. This ability enables us to process high volume data in a very short time and we are able to repeat learning process multiple times. Several ART neural network models were applied to text dataset to study their properties, behavior and success rate. Obtained results were used to evaluate possibilities of using ART neural networks for clustering of text datasets.

Key words

neural networks, adaptive resonance theory, textmining

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Perception of Packaging of Organic Foods by Czech Consumers

Kamila Ježovičová^a, Martin Souček^b, Kristýna Kocourková^c

Abstract

The paper provides findings about perception of packaging of organic foods by young Czech consumers. Attention was focused on the perception of selected logos of organic foods (Czech, European, German and American logo). Primary data were collected via focus groups ($n = 24$) and by a questionnaire. Two questionnaire surveys were conducted in 2012 ($n_{2012} = 400$) and 2013 ($n_{2013} = 366$). The research showed that consumers of organic foods appreciate the greatest ease of packaging – simplicity in used materials. When identifying customers' attitudes to the individual logos, the Czech logo identifying organic foods was perceived negatively. Based on these results, recommendations for farmers and producers of organic foods were suggested.

Key words

organic foods, packaging, perception, Czech, young consumers

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The Impact of Labour Market Policy on Unemployment in the Slovak Republic

Jaroslav Kapusta^a, Ľudmila Dobošová^b

Abstract

Public expenditure on the labour market policy (LMP) is one of the tools to support employment and thereby reducing the unemployment rate. The expenditures are generally divided into two groups. The first group consists of expenditures on active labour market policies including the following categories: training, employment incentives, supported employment and rehabilitation, direct job creation, start-up incentives. The second group is represented by expenditures on passive labour market policy, where belong out of work income maintenances and support and early retirement. The expenditures on active and passive labour market measures are generally expressed as a percentage of GDP for better comparison among countries. Currently, it is necessary to set up expenditures properly, effectively and efficiently especially in case of high unemployment rate in Slovakia. This paper focuses on monitoring of annual development of expenditure on labour market policies during the period 1995–2013. Additionally, it compares the relationship between expenditure and unemployment rate in selected EU countries in 2012. The aim of this paper is to find a relationship between the unemployment rate and expenditure on LMP in SR from 1995 to 2013 by using linear regression.

Key words

active labour market policies, expenditure, unemployment

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Default Probability Prediction with Static Merton-D-Vine Copula Model

Václav Klepáč^a, Ondřej Novotný^b

Abstract

We apply standard Merton and enhanced Merton-D-Vine copula model for the measurement of credit risk on the basis of accounting and stock market data for 4 companies from Prague Stock Exchange, in the midterm horizon of 4 years. This basic structural credit model is based on assumption that firm equity is European option on company assets. From the results it is obvious that basic Merton model significantly underestimates actual level, i.e. offers low probabilities of default. Enhanced model support us with higher simulated probability rates which mean that capturing of market risk and transferring it to credit risk estimates is probably a good way or basic step in enhancing Merton methodology.

Key words

Merton model, default risk, D-Vine copula, probability, ARMA-GARCH

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Barriers to Employment of People Aged 50+

Ivana Kolářová^a

Abstract

One of the global issues that nowadays affect (whether to a greater or lesser extent) all countries in the world is ageing. Currently, the demographically oldest region in the world is Europe. The effect of ageing begins to appear on the Labour Market and along with it occurs the necessity to tackle the obstacles arising from employment of older workers. This paper is focused on the current situation in terms of population ageing in the Czech Republic and on obstacles associated with finding new jobs by people of age group 50+. In March 2013, research was conducted by the students of the Lifelong Learning Institute of the Brno University of Technology. The purpose of the study was to find out what myths and images are linked to the employment of older workers. A sample of 140 respondents divided into four age groups took part in the research. The respondents are divided only into two groups for the purposes of this paper. Implication of results is discussed.

Key words

demographic ageing of society, the employment of 50+ workers, stereotypes

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Assessment of the Agriculture Efficiency Improvement in Slovakia

Bohuš Kollár^a, Zlata Sojková^b

Abstract

The expansion of the European Union's (EU) size has led to phases of both reduction and accelerated growth of the EU budget. The EU Common Agricultural Policy (CAP) has been reformed on many occasions. Expansion of the EU changed the situation in the CAP and created differences in the CAP subsidies. The CAP should help to diminish differences among member states' agriculture efficiency. This paper analyses the presence of agricultural efficiency improvement of the Slovak agriculture in the period 2004-2012. Efficiency of agriculture is measured using the output-oriented data envelopment analysis (DEA). Data is drawn from the Farm Accountancy Data Network (FADN) in the aggregated form for the EU countries. Results of two different output-oriented DEA models suggest that there is improvement in the Slovak agriculture efficiency.

Key words

agriculture, DEA, efficiency, FADN, improvement, Slovakia

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The Overview of Nowadays Approaches on the Automatic Roof Plane Detection and Analysis for Photovoltaic Deployment

Jiří Kratochvíl^a

Abstract

This contribution is a brief overview of research papers focusing on the automated roof detection and analysis in point clouds for solar panel deployment. The European Union tends to increase the use of a renewal energy, which leads to further development in this industry. In this paper we are overviewing several approaches on the roof detection: (i) threshold principles, (ii) rooftop contouring to the cadastral images, (iii) scale grid and then the ideas of determining the solar potential.

Key words

LiDAR, ALS, point cloud, rooftop, solar panel, solar potential analysis, segmentation, DSM, airborne laser scanning

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The Tax Base Sharing in the CCCTB System

Kateřina Krchniva^a

Abstract

The Common Consolidated Corporate Tax Base constitutes the long term target of the European Commission with the ambitious objective to harmonize the rules for the determination of the tax base of companies operating in the European Union. The relaunch of the debate on the Common Consolidated Corporate Tax Base (hereinafter CCCTB) on 17 June 2015 provides the evidence that the European Commission still believes in its implementation in the near future. The implementation of the CCCTB system into national tax systems will have an impact on the tax administration, moreover the systems will affect the national tax revenues. The paper deals with the evidence on the distribution of the consolidated tax base of group companies with any link to the Czech Republic. Only qualified group companies with all available required values for the sharing out of the consolidated tax base are employed in the paper. The possible changes in the distribution of the tax base in the CCCTB system are compared with the distribution of the tax base in the current system of separate accounting. Based on the analysis in the paper the Czech Republic would receive a loss of 0.45% on overall tax base from the implementation of the CCCTB system.

Key words

common consolidated corporate tax base, formula apportionment, tax base, tax harmonization, consolidation

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Communication Trends of Poultry Sellers in Slovak Republic

Andrea Kubelaková^a

Abstract

The primary problem of poultry farming in Slovak Republic is the low self-sufficiency in meat production. This is, why meat is imported from different countries and it is possible, that quality of meat is bad. Due to continuous food scandals affecting the imported poultry meat, consumers are beginning to care more about the country of origin of poultry meat. The use of marketing in today's society has become an important prerequisite for successful business. The aim of the present paper was to examine the situation in Slovak Republic poultry sellers and evaluate their using of marketing. Slovak Republic poultry sellers are on one hand using the marketing methods and communication with their consumers and on other hand, marketing gives them the competitive advantage for many reasons.

Key words

marketing, poultry, Slovak Republic, country of origin

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ROS Simulation of Line Follower

Tomáš Kubín^a

Abstract

This paper deals with the issue of ROS and its use in the development of robotic applications in a simulated environment. Initially, this paper offers explanation of the robotic simulator Gazebo and the robotic Framework ROS. Furthermore, the simulation of robotic applications Line following follows.

Key words

ROS, Gazebo, Simulation

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The Internal Liquidity Factors of Bank Size Groups in the Slovenian Banking Sector

Jana Laštůvková^a

Abstract

The article focuses on the internal factors affecting the liquidity of bank size groups in the Slovenian banking sector. To achieve the goal, panel regression analyses are performed using multiple dependent variables: liquidity creation, outflow, net change and total reallocation. The values are calculated based on a specific method of liquidity risk measurement – gross liquidity flows. The results indicate both multiple effects of some factors on the given variables as well as isolated influence of factors on a single liquidity form. The results also point to the differing behaviours of the size groups; the small bank group has proven to be the greatest liquidity creator and has shown the highest activity in the system.

Key words

internal liquidity factors, bank size groups, Slovenian banking sector

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Total Cost of Ownership Application in Public Procurement of Information Systems

Petr Lidinský^a

Abstract

Paper focuses on public procurement of information systems in the Czech Republic. It describes the lifecycle of the information system and its technological layers. Author accents the importance of total cost of ownership concept for effective procurement. Since there is no systematical approach applied to follow this concept author proposes his own methodology. The methodology is based on the best practice and is customized for the specific environment of the Czech public sector.

Key words

total cost of ownership, public procurement, Czech Republic, information system

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Productive and Unproductive Activities in the EU

Marek Litzman^a

Abstract

Inspired by Willam Baumol thesis on unproductive entrepreneurship, this paper discusses three topics that may lead to Baumolian unproductive zone. Baumol expects that overexpansion of unproductive activities can lead to the decline of certain civilization. Rather than decline, this paper focuses on possible reasons of economic slowdown in the European Union. In our view based on Baumol ideas, among them may be expanding legislation, patent law or European funding system.

Key words

Baumol, legislation, funds, patents, entrepreneurship

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Trends in Virtualization Technologies

Gabriela Macáková^a

Abstract

This article deals with virtualization technologies and trends that dominate in this area. The reader will learn what virtualization is and what are the basic types of virtualization at the beginning of this article. Then the reader will learn which trends were affecting this area in the past and presence in the next chapter. Finally, the reader will become familiar with the chosen representative of virtualization technology, specifically with Microsoft Hyper-V.

Key words

virtualization, virtualization technology, hyper-v, trends, microsoft, research, virtual machine

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Diversity of Capitalism in the European Post-Socialist Economies: the Balkan States at a Crossroads

Michal Mádr^a

Abstract

The main aim of the paper is to classify types of capitalism in the Balkan states in the context of the European post-socialist countries and identify the principal strengths and weaknesses of institutional organization in these countries. The paper uses Amable's approach, which is supplemented by the influence of the political environment. The paper identifies two different capitalist clusters in the Balkan area, market economies (Bulgaria, Croatia, Montenegro and Romania) and hybrid economies (Albania, Bosnia and Herzegovina, Macedonia and Serbia). The Balkan countries are compared with the other post-socialist economies, the EU-8 and post-soviet countries. Within the Balkan states, only Croatia and Montenegro are approximating to the EU-8 economies, whilst on the other hand Albania has some characteristic in common with the Caucasian republics. In general, the Balkan states achieve better results than the post-soviets, however, there are two common weaknesses: quality of educational system and inefficient financial system, and rigid labour market in Albania, Croatia and Romania and underdeveloped political system in Bosnia and Herzegovina.

Key words

diversity of capitalism, post-socialist countries, Balkan

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The Monte Carlo Simulation of Financial Time Series

Michaela Mináriková^a

Abstract

Computer simulations are used mainly in industry, but also in Econometrics, where allow to examine the impact of random values. Random Values have the great influence on the overall model, but random values is difficult to estimate. Nowadays is more and more popular process automation and Econometrics is not a exception. The aim of article is definition and simulation of The Monte Carlo Method in Econometrics for testing of Financial Time Series. For the explanation of the method are used mathematical and theoretical approaches of simulation and generation of random values. The application of process solves real model – dependency of closed prices of shares from their traded quantity, where are used real data. In conclusion are compared real average values of original model and generated model after 10,000 iterations with using of the Monte Carlo Method.

Key words

the Monte Carlo, simulation, normal distribution, econometrics, eViews

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Cross-Border M&As and Eco-Environmental Performance of European Energy Utilities

Evgenii Monastyrenko^a

Abstract

European electricity industry has recently come through liberalization. Surge of intakes with high share of cross-border deals was market players' response. Measuring of post-merger performance alterations is a central question of M&A literature. EU energy sector is responsible for significant part of global greenhouse gas emissions. Therefore, its efficiency should be regarded with respect to ecological dimension. This study addresses combined economic and environmental performance of 15 biggest European energy producers in 2005–2013. I exploit Data envelopment analysis (DEA) with CO₂ as an undesirable output. Panel fractional regression model with financial controls is used to isolate effects of completed mergers. Results suggest that in short term firms profit from selling their subsidiaries to foreign counterparties. This effect turns to be not significant the next year and negative two years later. Same-type domestic deals shrink efficiency in two-year horizon. Domestic and cross-border acquisitions damage performance in short run. Later ones continue to do so one year after their completion.

Key words

mergers and acquisitions, firm performance, data envelopment analysis

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Informality, Tax Evasion and the Quality of Business Environment: Evidence from South Caucasian Countries

Orkhan Nadirov^a, Khatai Aliyev^b

Abstract

In many transition countries, a considerable part of economic activity takes place in the informal sector. On the other hand, tax evasion constitutes a major problem and causes improvements to all levels of the informal sector in which the volume of the informal sector in transition countries is much higher than in developed countries. Previous works have examined separately both the determinants of the size of the informal sector and the determinants of tax evasion for transition countries. But, this paper complements these significant works by examining cross sectional analysis based on firm-level data for South Caucasian countries. In addition, our paper has a new contribution to previous works by providing some empirical evidence for informality and tax evasion with the quality of business environment. Building on a simple analytical framework, we test the channels affecting the degree of informality in South Caucasian countries and vice versa, the channels affecting the degree of tax evasion. We use instrumental variable OLS and find that the extent of informality is determined by tax evasion, as well as the extent of tax evasion is determined by the informality for these countries. In addition, we find that the business environment has implications for both informal economy and tax evasion. These results suggest generally ameliorating the business environment in South Caucasian countries, while strengthening an access to land and financial sources, adequate provision of public capital such as telecommunication, transport and electricity infrastructure will reduce informality, reigning the corruption, tax administration and labor regulation will reduce tax evasion and ultimately lead to increasing government revenue collections.

Key words

tax evasion, informality, the quality of business environment, South Caucasian countries

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Massive Semantic Analysis of On-Line Texts

Pavel Netolický^a

Abstract

This paper deals with a comparison of algorithms used for semantic analysis of on-line texts. It compares a traditional decision tree – J48 classifier, which uses incremental learning, with a special modification of a decision tree – Hoeffding tree classifier, which uses batch learning for classification of massive datasets (data streams). These classifiers are compared from various aspects and tested with respect to how their performance changes depending on the amount of processed data. It was found out that Hoeffding tree performs very well for massive data sets. It has a sufficient level of accuracy (80-85%) while being much faster than J48. Although accuracy of J48 improves with a growing volume of data, its evaluation time dramatically increases.

Key words

text mining, Hoeffding tree, J48, data stream

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Stability of Money Demand in Ghana

Denis Nchor^a, Václav Adamec^b

Abstract

The study examined the demand for broad money and its stability in Ghana. Johansen's cointegration approach reveals that the variables are non stationary and cointegrated, therefore, an error correction model, ECM is used to determine the factors that influence real money aggregate in Ghana from 1990 to 2014. The study estimated the results using two set of variables for real demand for money: M1 and M2+. This was done given the assumption that the demand for money was equal to the supply of money. The results show that, GDP affects the level of demand for money in the long run while the interest rate affects it in the short run. The error correction term in each of the cases shows that, 18% of deviations in the real demand for money is corrected annually. The CUSUM tests of parameter stability shows that, the money demand function is stable over the period.

Key words

money demand, stability, error correction model, cointegration, interest rate, income, money supply

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The Underground Economy of Czech Republic and Tax Evasion: The Currency Demand Approach

Denis Nchor^a, Tomáš Konderla^b

Abstract

This study investigates the underground economy of Czech Republic and the associated losses in tax revenue. The presence of an underground economy may not necessarily be bad for the economies in which they prevail but they could cause huge losses to government revenue and could also constitute serious violation of labour regulations. The study uses the Currency Demand Approach. It measures the size of the underground economy in two stages: a) the econometric estimation of an aggregate money demand equation b) the calculation of the value of the underground economy through the quantity theory of money. The key variables in the study include: the total currency held outside the banking system, the number of automatic teller machines, the deposit interest rate, GDP deflator, the average tax rate, the velocity of money, nominal GDP and nominal money supply.

The results from the study show that the underground economy of Czech Republic on the average is about 20.9% as at the end of 2013 and the country loses an average tax revenue of about 7.2% of GDP yearly. The data was obtained from the World Bank country indicators and the International Financial Statistics.

Key words

underground economy, currency demand, quantity theory of money, tax evasion

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Company Succession at SMEs: Status Quo and Problematic Areas

Ivica Ivo Odak^a

Abstract

A secured company succession of SMEs is essential for the continued existence of the main driver of the German economy – the “medium-sized sector”. After examining the relevant literature, a structured process of company succession has not been established so far. However, some models of company succession offer valuable indications how succession processes can be organized, but most of them have a very narrow focus on specific issues, e.g. taxation aspects. Examinations that consider personal relationships between entrepreneur and successor have been in the minority. But especially these “soft factors” are often substantial for the success of a succession. The Principal-Agent-Theory considers these aspects and is the theoretical basis for the present research project.

Key words

SME, company succession, principal-agent theory

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The Impact of Institutions on Firm Performance

Vojtěch Olbrecht^a

Abstract

The paper contributes to Growth Theories by using specific methodological approach while researching common topic among the institutional economists. The paper focuses on the impact of selected aspects of company's external environment on their performance. By using TFP approach, specific period of economic cycle and microeconomic evidence it concludes on the specific factors of institutional framework. It finds out that the legal and political framework is increasing the performance in less developed countries but the effect is negative in more developed ones. The openness of the economy usually stimulates the performance as well as the government expenses. The macroeconomic performance is negatively correlated with the microeconomic performance due to the manager's perception.

Key words

microeconomics, institutions, performance

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Design, Construction and Implementation of Autonomous Outdoor Robotic Platform

František Ostrřížek^a, Robert Čížek^b, Martin Pánek^c

Abstract

In the field of mobile robotics the AiStorm team concern is to implement platforms for testing new approaches and algorithms. The purpose of this paper is to introduce functional robotic platform named BuggyMan to the reader. As the title suggests it is an autonomous wheeled vehicle designed to move on paved roads of city parks. The article describes algorithms that serve to control the robot movement along those roads. It will introduce universal robotic control framework software. Main contribution of this paper is the presentation of the results obtained during testing in parks and demonstration of functional architecture with necessary parts for robot control and movement.

Key words

robot, autonomy, algorithm, computer vision, sensors, data, outdoor

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Globalization to Re-Localization: Enhancing the Competitiveness of SMEs in Nigeria

Cathy-Austin Otekhile^a, Milan Zelený^b

Abstract

The SMEs play a vital role in the economy of developing countries like Nigeria in terms of its contribution to the GDP and creation of employment. The problematic economic and political environment in which SMEs operate poses a huge threat to the striving of the SME and hinders its global competitiveness. However, the competitiveness of the SMEs can be enhanced given the right environment and conditions. This paper aims to examine how the competitiveness of the SMEs can be improved to give them comparative advantage in the global market place.

Key words

globalization, re-localization, SMEs, Nigeria, competitiveness, global market place

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Acquiring and Analyzing Text Data for Stock Market Modelling

Jonáš Petrovský^a

Abstract

The work deals with a problem of finding out, if and how the information contained in texts (internet news articles and posts - especially their sentiment) influence stock prices. Its main goal is to acquire and prepare data for the following research. Firstly, the examined companies are selected and data sources are defined - Yahoo Finance, Facebook and Twitter. Then some relevant concepts of machine learning and text mining are presented. Secondly, a data storage model (MySQL database) and a module (in Python) for downloading the data are described (including problems encountered while creating the module). Thirdly, an overall model for stock price movement is proposed and some text preprocessing steps are thoroughly described. In conclusion, there are 784 companies in the database. Every day are downloaded approximately 260 Facebook posts, 6,200 Facebook comments, 260 Yahoo articles and 16,200 Twitter statuses.

Key words

text mining, sentiment, stock market, stock price, social media, web-scraping

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User Styles Designer in Application T_EXonWeb

Pavel Potáček^a, Jan Přichystal^b

Abstract

The article is dedicated to the description of analysis and development of user styles designer as a component of the web application T_EXonWeb. The main purpose of such designer is to facilitate the creation of custom styles mainly for novice users who could use similar graphical interface, which offers text processor Microsoft Word. The designer is created in JavaScript programming language and uses the jQuery library. The article includes a procedure of creating graphical user interface of designer and T_EX/L^AT_EX code parser.

Key words

T_EXonWeb, JavaScript, jQuery, web application, T_EX/L^AT_EX code parser

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Optimal Representation of Products in the E-Grocery

Anna Potůčková^a, Anna Havlíčková^b, Jan Fiala^c, Martin Souček^d

Abstract

This article aims to determinate the best way of illustration of the product in e-shop with organic food. The results are part of the IGA project The shopping behavior of consumers in the market of regional foods and organic foods. The first part of the article describes external researches and their results. At the forefront are the results of research focused on online sales. It also contains a passage where the chosen research methods are described. Special attention is given to eye-tracking supplemented by in-depth interview. The second part of the article is devoted to the research and evaluation of the results. It contains a description of research process, graphical reporting and evaluation. It also deals with comparing the differences between the way of men and women focus on the graphic representation of products in the e-shop.

Key words

eye-tracking, organic food, online shopping, product illustration, differences between man and woman focus, e-grocery

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Women Start-Up Entrepreneurs in and the Influence on Work-Life Balance

Kateřina Rampulova^a

Abstract

The purpose of this study was to analyze the situation of women who want to start running their own businesses without any previous business experience. The women come from Brno region and all the respondents were participating in special one year course for women starting entrepreneurs. The research focuses mostly on work-life balance problem. The research was based on qualitative research approach. The research sample consists of six women start-up entrepreneurs. These women are from different age groups they have different education and want to work in different business areas. The link between gender and the difficulty of establishing first own business was proved. Also the difficulty of running successful entrepreneurship and keep balanced work and private life is considerable. The findings are discussed in the paper. Several ways how to balance private life and run own business are discussed below.

Key words

female entrepreneur, start-up, work-life balance, global and regional economics, businesswoman

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Selected Personality Characteristics As Predictors of Emotional Consumer Behaviour

Jana Rybanská^a

Abstract

Many consumers believe that choices they make result from rational analysis of available alternatives. In reality, however, emotions greatly influence and determine our behaviour and decision-making also on the market of products and services. The main aim of this paper is to show the relationship between selected personality traits and emotional consumer behaviour. We used two psychological tests (Eysenck personality questionnaire and author's scale of emotionality) and tested several factors that might have influenced emotional consumer reactions. We found out that two of three tested personality predictors are significant – extroversion and neuroticism. The higher the score that respondents reach in the scales of extroversion and neuroticism was, the more emotional was their behaviour and decision making. In that connection, there are also differences between individual temperaments. Choleric and melancholics react more emotionally than other two temperaments.

Key words

personality of consumer, personality characteristics, personality traits, consumer behaviour, emotional consumer behaviour, emotions, temperament

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Text Mining with Latent Semantic Analysis

Pavel Řezníček^a, František Dařena^b

Abstract

Latent semantic analysis is presented as an advanced model for representing text data used in order to eliminate problems with processing large amount of text documents. The paper describes information retrieval, classification, and clustering experiments with real world document collections in four different natural languages. Different preprocessing techniques are applied to the data and the experiments are carried out with the original data and the data projected to a reduced dimensionality space after singular value decomposition. The results show that preprocessing influenced the results differently according to the language of the documents and that singular value decomposition has a positive impact mainly on the computational aspects of the text mining processes.

Key words

text mining, latent semantic analysis, singular value decomposition, information retrieval, document classification, document clustering

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Running Virtual Machine inside Created RAM Drive

Jaromír Salák^a

Abstract

This article deals with an introduction of Virtual machine term in kernel based virtual machine architecture. In text is also described creation of linux RAM drive and KVM virtual machine inside RAM drive. Purpose of article is to find out read/write speeds of virtual machine running inside RAM drive. If RAM drives are faster than SSD or HDD, it may be possible to use them as temporary storage to reach higher I/O performance. It has been managed to find out, that Virtual machine running inside RAM drive has not faster read/writes speeds, than virtual machine, running on HW RAID 5 storage. RAM drive created inside guest virtual machine is as fast as RAM drive created on host OS.

Key words

cloud computing, virtualization, KVM, RAM drive, linux, ramfs, tmpfs

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Use CSS Preprocessors in Creating Web Applications

David Schubert^a

Abstract

The paper describes the CSS preprocessor, compiled languages built over Cascading Style Sheets, using in professional web design. The work shows why to use CSS preprocessors in practice, both on small and on large and complex projects. It deals with the most important technical characteristics of preprocessors in connection with their closely related impact on the efficiency, quality and speed workflow in producing cascading style sheets during the development of Web applications. The last part deals with the practical benefits, the use and characteristics of the best known and most used CSS preprocessors and these are compared.

Key words

Cascading Style Sheets, preprocessors, LESS, SASS, Stylus

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A New Approach to Model and Optimize the Order Sequence of a Two-Stage Storage and Order Picking System with Particular Attention to Restrictions of the Material Flow

Jens Schweitzer^a

Abstract

This paper discusses the fundamental research concerning the modelling and optimizing a two-stage storage and order picking system. Based on the modelling, different optimization methods are developed. As a suitable type of modelling flexible flowshop problems are elected and as a practical kind of optimizing method in the area of Operations Research there are tools as constraint logic programming. For example, it is detected that the sequencing of picking is a major influencing factor in order to increase the picking performance while minimizing the processing times of jobs.

Key words

constraint logic programming, modelling and optimizing the order sequence

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Main Motivators of Wine Enterprises for Entering into Wine Tourism Business

Eva Skálová^a

Abstract

Wine enterprises in the Czech Republic are (from the long term perspective) forced to focus their attention also to a production and provision of related goods and services. Among one of the most common activities in this regard is wine tourism in all its kinds and forms. An objective of this paper is to identify main reasons why wine enterprises join wine tourism business. This study describes key motives of wineries and wine makers towards provision of wine tourism services in wine region South Moravia. the study is a summary of research results conducted among wine enterprises and wine tourism players in the first half of this year (2015). The research comprised of interviews and was followed by questionnaire distributed over selected group of wineries and winemakers. This paper is a part of an ongoing research on topic quality in wine tourism services.

Key words

wine tourism, wine distribution, customer relations

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The Influence of Product Placement on the Czech Audience

Tereza Slováčková^a, Martin Souček^b

Abstract

This post focuses on the influence of product placement on viewers in the environment of Czech cinematography. The research was conducted using methods of objective character in the form of eye-tracking, as well as subjective methods in the form of in-depth interviews. Results of the research show which aspects act on the viewer when watching the show and how they influence the viewer's behaviour subsequently. Especially it was examined what is the effect of prominent and subtle product placement on viewer's memory and attitude to this placement. Effects of connection with storyline were examined there too. Also differences between women and men were described. The conclusions of the research can serve as recommendations saying what is good to focus on and what is better to avoid intended for makers of Czech TV series and films and also for companies.

Key words

eye-tracking, in-depth interviews, Czech cinematography, product placement, prominent product placement, subtle product placement, audio placement, visual placement

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Building Renovation, But Makes Sense: Critical Review of Economic and Environmental Aspects

Mario Sobolewski^a

Abstract

This work is an attempt to work out a principle and factual argument, when it is not just about the savings in the management of an existing residential building, but also a holistic and critical view of today's technologies and possibilities in building renovation.

Possible results are sensible approaches may be presented, which are used as a guide and in practice are easy to implement. It will be occupied, among other things, that, for example, a simple façade renovation is mostly very absurd and ecologically and economically very questionable. Small and independent measures are tested and examined critically on their economy and on their ecology back.

It is in this work not being researched for the highest energy savings or to the latest materials, but according to a meaningful composition of the general possibilities, which currently have to offer the economy and general knowledge. The quality of life, the ecology as a whole and the economy should be at the forefront.

Key words

ecological building renovation, economic building modernization, critical considerations and possibilities, rebound effect, prebound effect, weakness human, risk and opportunity, cycles

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The Concept of the Local Multiplier for the Evaluation of SMEs' Importance for Local Economy

Zuzana Svobodová^a, Iva Živělová^b

Abstract

Small and medium enterprises create the important part of the national economy. They have crucial impact on regional development and local economy. Local economy based on tight economic relations has got increasing role in the globalizing world. As an implication of these relations, the multiplier effect occurs. This effect could be presented in a form of local multiplier. This indicator is used in the process of local economic activities evaluation.

The paper presents the theoretical background of the local multiplier conception and its application possibilities. This methodological approach could be used for following research focused on the evaluation of SMEs importance for local economy.

Key words

local multiplier, SMEs economic location

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Impact of Automated Translation on Mining Knowledge from Text Data

Luděk Svozil^a

Abstract

With a growth of amounts of stored text data all over the world comes desire to effectively mine information from them. This paper examined one possible pre-processing method - an automated machine translation. The main benefit found was it simplified dictionary of words and made classification much faster - without any error penalty. Possible repercussions are discussed.

Key words

text-mining, translation

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Banking Factors Affecting the Supply of Loans to Businesses in the Czech Republic

Markéta Šeligová^a

Abstract

The aim of this paper is to identify which banking factors affecting the supply and availability of loans for Czech corporate sector in the period 2000–2014. There was tested the effect of variables such as the return on assets, return on equity, capital adequacy, interest margin, liquidity measured by the share of liquid assets to assets, share of provisions for loans, share of impaired loans to total loans and indicator of interbank position. The first chapter is devoted to the introduction. The second chapter includes a literature review. The third part is devoted to the methodology and characteristics of the used data. The following section includes the results and discussion. The fifth chapter is dedicated to a conclusion. Using panel regression analysis there was recorded a positive influence of the net interest margin and indicator of interbank position at supply of loans to non-financial companies. There was recorded a negative influence of the capital adequacy, share of impaired loans to total loans and liquidity measured by the share of liquid assets to assets at supply of loans to non-financial companies.

Key words

capital adequacy, impaired loans, interbank positions, interest margin, liquid assets, return on assets, return on equity, supply of loans

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Planning Route Mobile Robot

Kryštof Štekovič^a

Abstract

This article is dealing with the competition of the autonomous mobile indoor robots called Micromouse, especially with mapping problem. The implementation and comparison of mapping algorithms using the software simulation is under discussion. Several modifications of the well-known algorithms are introduced to decrease a consumption of time. Simulation tests of mapping are performed on various mazes with different size and complexity.

Key words

mapping, planning, robot, simulation

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The Design of Semiautonomous Grasping Algorithm

Ondřej Švehla^a, Vít Ondroušek^b

Abstract

This contribution is focused on the design and implementation of the semiautonomous algorithm intended for grasping various objects by the robotic arm Katana 300s equipped with the gripper. This gripper has a built-in sensory system which consists of proximity and tactile pressure sensors. Information from these sensors is used for optimization of the grasp. The main idea of this algorithm is using the proximity sensors for an accurate positioning of the object between the jaws of the gripper and also using the tactile pressure sensors for controlling the contact forces. Correctness of the designed algorithm is verified using several laboratory tests.

Key words

grasping, robotic arm, sensory system

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The Tax Policy of Georgia and the Possible Ways for Its Improvement

Tamta Turashvili^a

Abstract

Correctly chosen tax policy is very important to solve the main tasks of the state and promote its economic growth. Recently, due to the current situation, we believe that Georgian tax policy needs to be reformed and based on foreign experience.

In order to achieve the main goals of the state, we should determine the optimal ratio between tax policy functions. In Georgia, where the taxes mostly have fiscal function, state budget income increases on the base of indirect taxes. It is risky when the budget depends on import, since the world politics and international economic relations are unstable. In our opinion, in Georgia, where the majority of population is under the poverty level, indirect taxes lowers the living standards even more.

Indirect taxes will play a big role in forming the state budget revenues until it is replaced by direct taxes.

From our point of view, the problem might be solved by the following ways: change the ratio between direct and indirect taxes in order to increase the direct taxes share and implement the fiscal decentralization. Local budgets should have independent sources of income, equity income from general state taxes, which will contribute to the region's social-economic development.

Besides, we strongly believe that one of the ways to improve the tax policy is tax differentiation: to have the multi-level value added tax, profit tax, income tax and other taxes. This approach will stimulate the priority sectors of economy, encourage local manufacture and export sectors, improve the investment environment in the country and etc. This will help the country to overcome the social-economic development problems.

Key words

tax, direct tax, indirect tax, tax policy, budget revenues, decentralization, tax differentiation

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Information and Communication Technology Sector in Czech Regions in Years 2008–2012

Kamila Turečková^a

Abstract

The present article is focused on analysis of 10 selected indicators which characterize information and communication technology sector on regional levels in the Czech Republic between years 2008 and 2012. The aim of this paper is to evaluate by point method regional divergences in area of economic branch of information and communication technology through performance of 10 assessable indicators characterizing ICT sector. These analysed factors are added with other responsible and available factor: number of sectoral coalitions (clusters, business innovation centres, science and technology parks and others). Quest is to find regions where information and communication technology is developing and define an order (ranking) of regions in succeeds in ICT sector. Analysis of information and communication sector which is defined by NACE Rev. 2, in section J, is based mostly on empirical data from Czech Statistical Office on regional level NUTS3.

Key words

information and communication technology sector, point method, regional analysis

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Reconstruction of an Object Shape Using the Laser

Marcel Vytečka^a

Abstract

The paper deals with the issue of shape reconstruction of an object using the laser. In the first chapter there are described different approaches to this problem, stereo-vision, structured light and their combination. Next, the simple method for shape reconstruction using the laser is introduced. There are shown results of this method and its complexity and robustness is discussed. In the future work more testing needs to be performed so that exact computer load of this method could be determined.

Key words

shape reconstruction, laser, structured light

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The Process of Testing a User Interface

Karel Zídek^a

Abstract

The software industry is rapidly evolving in the past decade. The improvements are not only within the field of technology but also within the design and user experience areas. There are many software companies that were successful in the past through providing comprehensive applications. Now, these companies are facing a loss of customers, because they evolved a wide range of technical features of their applications, but the user experience stagnated. Therefore, the competition is currently not targeted on the software features, but on the obvious weakness of these applications - the user experience. This article is focused on the process of testing, design and user experience improvement of a complex feature solution where the user experience did not evolve into the standard of provided features.

Key words

user interface, user experience, usability testing, design

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