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# Book of Abstracts of the 8th International Scientific Conference INPROFORUM 2014



České Budějovice | November 6 – 7, 2014



# Book of Abstracts of the 8th International Scientific Conference INPROFORUM 2014

Investment Decision-Making  
in the Period of Economic Recovery

2014



University of South Bohemia in České Budějovice  
Faculty of Economics

České Budějovice, November 6 - 7, 2014

**Book of Abstracts of the 8th International Scientific Conference INPROFORUM 2014**  
*Investment Decision-Making in the Period of Economic Recovery*

November 6 -7, 2014, České Budějovice

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# Regional Representation of Social Enterprises in the Czech Republic in the Context of a Comparison of Selected Indicators

Vojtěch Beck

**Abstract:** *The aim of this paper is to generally define the social economy, as a conceptual platform of opinion, which one of the tools applied in practice is just a social enterprise. The paper presents selected definitions of social enterprise and deals with the analysis of the representation of social enterprises in NUTS III regions of the Czech Republic. Identified regional representation of social enterprises compared with the regional average rate indicators recorded unemployment and demographic developments in the region in the years 2007 – 2012. In this paper, the initial determination is verified the hypothesis that the greater the number of social enterprises is represented in those regions which are characterized by high levels of unemployment. Also there is a contribution to the verification of the second set hypothesis that the number of social enterprises related to the demographic development in the regions. A greater number of social enterprises will be represented in the more populated regions of NUTS III in the Czech Republic.*

**Key words:** Demographic Trends · Unemployment Rate · Social Enterprise · Social Economy

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## Identification of Successful Sellers in Online Auction

Ladislav Beránek, Václav Nýdl, Radim Remeš

**Abstract:** *The design of efficient methods concerning prediction of preferences of sellers on online auctions is an important problem in the study of Internet auctions. In this paper, a new prediction method is proposed based on Dempster - Shafer theory of evidence. The proposed method is based on the approach used in complex networks when determining influential nodes using for example centrality measures. The suggested method takes into account the degree and strength of each node which is expressed as the number of positive evaluations (degree of reputation of a seller) and the price of sold goods (by certain seller). The effects of both reputation and price of each seller who sold certain goods are represented by basic belief assignments (BBAs). The proposed prediction of the choice of sellers on online auctions is then determined by a combination of these BBAs when so-called auction preference index is calculated. Experiments are used to illustrate the effectiveness of the proposed method.*

**Key words:** Dempster - Shafer Theory · Online Auction · Preference Prediction · Influential Sellers · Link Prediction

**JEL Classification:** D83 · C88

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/572>

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# Investor State Dispute Settlement in Free Trade Agreements: An Australian Perspective

Roberto Bergami

**Abstract:** *Investor State Dispute Settlement (ISDS) clauses in Free Trade Agreements (FTA) have gained increased prominence in response to recent activity from investors and governments alike. This has become a global issue given the number of new disputes and the explosion of FTA and regional trade agreements that have been spawned as a result of the stalled World Trade Organisation talks.*

*In 2013 alone 57 new ISDS cases were commenced, covering a wide variety of sectors, including: supply of electricity/gas; oil and mining; telecommunications; manufacturing; construction; tourism; banking; real estate services' retail; media; and advertising. Whilst these cases will typically require prolonged settlement periods as they weave their way through negotiation and litigation, this does not alleviate concerns about 'special' investor provisions and what they mean for the recipient investment nation.*

*There are two main perspectives on ISDS. The first is the government that is seeking to entice foreign investment in such a manner that makes it attractive to would-be investors, but at the same time retain the right to 'properly govern the nation, including making future changes for the benefit of the nation's citizens. The second perspective is that of the investor who, understandably, is looking to have their inputs protected from potentially unfavourable future government policy changes.*

*This article provides a summary of Australian FTA, highlighting ones with ISDS provisions, concluding there is no clear convergence on competing perspectives of governments and investors and a solution to please all is unlikely to be forthcoming in the near future.*

**Key words:** Foreign Direct Investment · International Economics · International Business · Free Trade Agreements

**JEL Classification:** F13 · F23

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/542>

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## Market Concentration as a Precondition for Higher Competitiveness of the Czech Food Industry

Ivana Blažková, Gabriela Chmelíková

**Abstract:** *The paper deals with the market concentration in the context of the development of market structure within the agribusiness commodity verticals. The aim of the paper is to evaluate the concentration on the Czech food processing market and to find the disparities among particular sectors of the food industry. Market concentration is calculated in the Czech food industry as a whole and within the particular food sectors. The general market concentration in the food industry in the period 2007-2012 grew. However, the number of companies, size structure of enterprises and the process of concentration are different in the particular food sectors in the Czech food industry. The concentration increased significantly in the sector of manufacture of vegetable and animal oils and fats and in the sector of manufacture of prepared animal feeds. The relatively high level of concentration is also in the sector of processing and preserving of fruit and vegetables, in the sector of manufacture of other food products and in the sector of manufacture of dairy products. Less concentrated sectors are manufacture of grain mill products and manufacture of bakery products, where there is a large number of very small enterprises of local significance. Increasing concentration in most sectors of the food*

industry can be considered as a prerequisite for higher competitiveness of the Czech food processors in relation to highly concentrated retail.

**Key words:** Market Concentration · Food Industry · Market Structure · Competitiveness

**JEL Classification:** D47 · L11 · L66

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/540>

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## **Expenditures and Financing of Social Security in the Czech Republic, Including Social and Legal Protection of Children**

Jana Borská, Renata Korcová

**Abstrakt:** *The aim of this paper is to provide a basic overview of social security in the Czech Republic, with an emphasis on its financing. The content of this article is to define the basic concept of social security. The social security system is further divided into sub-subsystems. An overview of spending on these systems from the state budget is provided in particular in the context of social insurance, i.e. pension and sickness insurance. For completeness, the health system and healthcare are also briefly described. The last part outlines the social and legal protection of children and the financing of this system.*

**Klíčová slova:** Social security · Social insurance · Social benefits · Expenditures

**JEL Classification:** H55 · K19 · K39

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## **How do Czech Rural Regions Cope with the Recent Economic Crisis? Evidence Derived from Unemployment Development**

Andrea Čapkovičová

**Abstract:** *The outbreak of the recent economic crisis and the following economic recovery stimulate questions of existing resistance and endogenous capacity on national as well as regional level to cope with such an external shock. In our example, we specifically focus on rural LAU 1 regions as those that are traditionally considered to be more vulnerable to such events. For the purpose of provided analyses, we operate with variables describing the development of unemployment within the period 2008-2013. The results do not support the existence of significantly more vulnerable rural areas as a category of regions whereas they refer to heterogeneous endogenous capacity on the level of individual rural regions that affects their resistance to the crisis.*

**Key words:** Rural Regions · Unemployment · Economic Crisis · Czech Republic

**JEL Classification:** R11 · J69

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/567>

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# Functionality and Importance of Processes of Small and Medium-sized Enterprises

Vlasta Doležalová, Petr Řehoř

**Abstract:** *The process management is an important part for enterprises, therefore, it is very promoted and referred in the business management. Essential part of the process management is the human resource management process, therefore, this paper focuses on this important area. The aim of this paper is to analyse the process management in small and medium-sized enterprises in the South Bohemian Region of the Czech Republic. The paper is focused on basic characteristics of sample of enterprises, further functionality and importance of processes in microenterprises, small enterprises and medium-sized enterprises. Followed by a focus on Human resource management process, its functionality and importance according to the categorisation the same enterprises. Data were collected by using a questionnaire and interviews with representatives (owners and manager)s of enterprises in the South Bohemian Region during 2013, with the support of the GAJU 039/2013/S grant project, entitled: „Human Resource Management of Small and Medium-sized Enterprises.“*

**Key words:** Processes · Human Resource Management · Functionality · Importance · Small and Medium-Sized Enterprises

**JEL Classification:** O15 · J24 · L2

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/550>

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# Possibilities of Identifying Manipulated Financial Statements

Zita Drábková

**Abstract:** *The paper deals with the possibilities of using different techniques and tools to identify potential risks of manipulated financial statements beyond true and fair view of accounting. Current research has verified the hypotheses of identifying the risks of financial statement manipulation in a case study of five accounting periods using the CFEBT model within the Czech Accounting Standards for different options of using creative accounting methods. Furthermore, the results CFEBT models in each case study are compared with results of the Beneish mode. The model of CFEBT confirmed positive results of the Beneish model for the used technique of windows dressing in terms of the Czech Accounting Standards.*

*The following paper further analyzes and evaluates techniques and tools to identify risks of manipulated financial statements using the most important methods of creative accounting and accounting fraud in the CFEBT mode, the Beneish model, the Jones model of Nondiscretionary Accruals in comparison with the results of the Altman's model of financial health.*

**Key words:** Fair and true view · Creative accounting · Fraud · Detection of financial statements manipulation

**JEL Classification:** M4 · M1 · G3

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/529>

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# Performance of Micro and Small Agricultural Businesses in the Czech Republic and Selected EU Member Countries

Roman Dubový, Veronika Svitáková, Jan Vavřina

**Abstract:** *Agricultural business in new EU member states faced after finishing the accession process the need to revise or change the structure and scope of their production while respecting the restrictions and quotas of EU Common Agricultural Policy (CAP). Contrarily, there was opened opportunities for utilising operating subsidies mainly as both the single area payment schemes and investment subsidies for development of capital assets. Despite the stated facts regarding the volume of operational subsidies there still the need to manage the economic performance of agricultural businesses.*

*There was analysed the time period of years 2004 – 2011 regarding the accessible accountancy data and the findings proved that the observed micro and small businesses declare within all observed new member countries positive value of Farm Net Income that represents remuneration for using the factors of production under the entrepreneurial risk. The results of conducted analysis proved the dependence of Farm Net Income on disbursed operational subsidies. Subsequently, the results of the correlation analysis of dependence of Farm Net Income on Total Agricultural Output proved that the profitability of micro and small businesses is coherent with the ability to efficiently run the agricultural business.*

**Key words:** Agricultural Businesses • Economic Performance • EU Common Agricultural Policy • New EU Member Countries

**JEL Classification:** O13

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## Use of Simulation Techniques for Optimization in Animal Farming

Ludvík Friebeľ, Jana Friebeľová

**Abstract:** *This study deals with the economy of agricultural production, specifically in animal farming. The main goal of this paper is to find and apply an efficient simulation model of pig breeding process at a particular agricultural company. Costs at particular parts of the breeding process were used as the main simulation inputs, together with number of parities, length of farrowing interval, number of weaned piglets depending on a parity number, lactation length, and the gestation length of sows. Additional inputs were price of produced piglets, price of insemination doses etc. Statistical distributions for the simulations of the inputs were obtained using theoretical curve fitting of observed data sample. There was also obtained the empirical curve of sow's profitability depending on number of parities which can help to decide about the culling of sows from the herd. A simulation was performed using the program @RISK.*

**Key words:** Simulation • Pig Breeding • Probability Distribution • Weaning of Piglets • Culling of Sows

**JEL Classification:** C13 • C15 • P4

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# Data of ERP Systems in Regional Statistics

Petr Hanzal

**Abstract:** *This work is seen as a contribution to the field of ERP- enterprise resource planning systems, business entities and their application in regional science. The main objective is to demonstrate the possibility of using accounting data of information systems of firms for regional evaluation, such as regional statistics, through a series of accounting data obtained from business entities. It indicates the interpretation of the statistical methods that were subsequently used in the practical part.*

**Key words:** Cluster Analysis · Regional Science · Business Information Systems · Regional Statistics

**JEL Classification:** C01 · C40 · R12

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# The Implementation of the Mobile Sales Force Automation

Dita Hommerová, Kateřina Vondrová

**Abstract:** *The topic of this paper is one part of the operational CRM – “sales force automation”, which is a system used by the sales force in a company to facilitate the flow of information from the end customer to the company. The purpose of this paper is to confirm or disprove the presumption that the implementation of the sales force automation has a positive effect on the company’s results. Various international research studies are analyzed to accomplish this. In addition the paper discusses the most frequent issues while implementing the system and suggests factors ensuring successful implementation.*

**Key words:** Sales force automation · Operational CRM · Sales Force · Implementation Efficiency

**JEL Classification:** M31 · M15

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/518>

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# Probabilistic Optimization in Environmental Politics

Michal Houda

**Abstract:** *In this paper we provide an optimization methodology to deal with problems of incorporating ecological arrangements to new big industrial or transport constructions. The methodology relies on stochastic optimization, namely optimization with probabilistic (chance) constraints. We describe main features of the model, identify an uncertainty factors, and formulate the problem as a problem with stochastic constraints. To illustrate the introduced methodology we provide a simple example involving indicators of ecological stability.*

**Key words:** Indicators of Ecological Stability · Uncertainty · Stochastic Optimization · Probabilistic Constraints

**JEL Classification:** C44 · C61

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/556>

# Food and Nutrient Security: Model of Decision Making under Information Uncertainty

Renata Hrubá

**Abstract:** *Decision-making under uncertainty continues to be an active area for research, with political implications within the food industry, particularly in the EU. However, these attitudes and behavior patterns are not specific to the current situation. Following the integration of attitudes into a model, more rational decision-making has been increasingly used. The aim of this study was to survey: How attitudes toward food and nutrient security influence decision making under unclear information. A questionnaire collected data from 910 students in the Czech Republic. An ordered regression model was developed for ordinal dependencies as well as independent variables. The model used for this survey estimated the attitude spillover-effect on behavior under information uncertainty. It is evident from the survey that clear information and awareness of global issues related to food are needed. Changing human behavior is not about knowledge, but rather about the opportunity to make significant alterations in human thinking. This data may guide the critical issues concerning clear information on food origin within the Czech Republic for a project from the European Union.*

**Key words:** Perceived Uncertainty · Decision-Making · Attitudes · Spillovers Effect

**JEL Classification:** D12 · D71 · D81

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/546>

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# Economic Effects in Slovakia within Integration in the European Union

Amir Imeri, Zuzana Bajusová

**Abstract:** *The wide interest, application and membership of Slovakia in European Union enable to study the economic effects in general terms. In our study we are going to analyze the economic cooperation of Slovakia before and after membership in EU. We will discuss whether economic cooperation between Slovakia and EU members increased or decreased after EU membership. This article provides a comprehensive and contemporary comparative analysis of the economic performance, the economic structure and the trade relations between Slovakia and EU countries, allowing us to detect basic trends and developments. We will compare the economic performance of Slovakia and other EU members (including Czech Republic and Slovenia), looking at aggregate figures from integration in EU such as foreign trade, FDI, GDP and its structure, level of structural unemployment and employment, inflation and level of income.*

**Key words:** EU Membership · Foreign Trade · FDI · GDP · Unemployment · Inflation

**JEL Classification:** F4 · F14

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/553>

# Generalization of the Notion of Point Elasticity for Functions of Multiple Variables

Miloš Kaňka

**Abstract:** *One of the important economic notions is the so-called elasticity of functions. The study of different types of elasticity is absolutely essential for the solution to many problems in economic and business practice, for example, information about income elasticity of import, income elasticity of export etc. The issue of flexibility has engaged economists such as J. S. Mill or A. Marshall since the 19th century.*

*Most often functions of one real variable have been studied. However, the fact is that economic functions are mostly functions of multiple real variables. The interest in functions of one real variable lies in the simplification of the studied problem. So it seems to be very useful to analyze the elasticity of functions of multiple variables, which is the main aim of this paper. After summarizing the properties of elasticity of real functions of multiple variables, the author illustrates its basic properties on some examples.*

*The elaboration of this topic is carried out with the use of the tools of modern functional analysis and differential calculus.*

**Key words:** Point Elasticity · Functions of Multiple Variables · Scalar Product · Differential Calculus

**JEL Classification:** C65

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/534>

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## A Note on U-statistics

Jana Klicnarová

**Abstract:** *In economic applications, we very often need to use any statistical test. Large area of the test statistics can be viewed as so-called U-statistics. The aim of this paper is to introduce the U-statistics and to study asymptotics of these statistics. The classical results on asymptotics for U-statistics usually suppose an independent sample. In fact, the condition of independence is very often violated in economic applications, so in the paper, we are interested in asymptotics both in case of independent and non-independent observations.*

**Key words:** U-statistics · Dependent Observations

**JEL Classification:** C13 · C14

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/562>

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# The Use of Quantitative Methods for Evaluating the Effectiveness of Public Expenditure

Hana Kočková

**Abstract:** *This paper deals with the efficient provision of public services and the use of quantitative methods to assess the effectiveness of this provision. The aim of this paper is to propose a suitable method to assess whether services are provided efficiently. This assessment is in the paper using the methods of quantitative analysis, as already monocriterial and multicriterial. The paper analyzed the provision of public services in the field of waste management. The main task of the municipalities is the provision of public services to its Citizen. The municipality should ensure that public services are provided at the highest quality and at the lowest possible cost. In the analysis of municipal municipalities with extended powers.*

**Key words:** Public Services · Efficiency · Quantitative Methods

**JEL Classification:** C1 · H4

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# Preferential Votes in Municipal Elections and the Possibility of their Analytical Use in the Study of Voting Behaviour

Radek Kopřiva, Sylvie Kotásková

**Abstract:** *The article deals with the appointment of municipal councils in the Czech Republic as one of the key elements of endogenous regional development. The electoral system applied in municipal elections has a number of internal elements that lead to a relatively high degree of disproportionality between votes expressing the interests of voters and the elected representative body, and they also prevent easy detection of the nature of the voting behaviour of the electorate. One of the few ways to assess electoral behaviour is to analyse the variance of electoral votes needed in order to understand how the vote takes place. In the case of the administrative district of Vodňany, the purpose is to find out what the prevailing method of voting is in the electoral behaviour, and how important are the deformation effects of the applied electoral system in comparison with the interests of the voters.*

**Key words:** Electoral System · Municipal Board · Municipal Elections · Electoral Behavior · Preferential Vote · Vodňany

**JEL Classification:** D72 · H83 · J18

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/564>

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# Participation of Citizens in Public Life in Nové Hradý

Sylvie Kotásková, Renata Korcová

**Abstract:** *This case study is focused on the issue of participatory activities of citizens in the local political environment in the municipality of Nové Hradý. The aim of the study is to clarify the functioning of public administration in the selected town in terms of the participation of local citizens in public life activities. In particular, this means political participation at the local level, as well as the involvement of citizens in community life in the town. This paper deals with the activities of citizens during elections, their involvement in municipal bodies and participation in public affairs through political parties and independent associations. The paper further focuses on non-political forms of participation through civic associations and interest groups.*

**Key words:** Municipality · Citizen · Participation · Public Life · Voter Participation · Municipal Elections

**JEL Classification:** D72 · H83 · J18

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/557>

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# Model Q-DMFCA Using Environmental Costs to Identify Faults in Accounting of the Farm and FADN

Jindřiška Kouřilová, Kristýna Dvořáková

**Abstract:** *Increasingly frequent torque risk for management are becoming accounting data and manipulation of them. Data manipulation is not always easy to detect. To identify creative accounting is used many tools and methods. One option may be a model Q- DMFCA (Quick Detection Model Material Flow (Fraud) Cost Accounting). Using environmental costs in relation to the FADN (Farm Accounting Data Network, European Accountancy Data Network farms EU) seems to be useful. That model can monitor a material balances incl. waste as environmental indicators Q DMFCA presents the other balances: financial, legislative and energy. This contribution submits a discussion on the possible use of the model in a agriculture. The proposed model has been applied so far in the terms of one manufacturing enterprise and one enterprise with trade activities. There were assessed strengths and weaknesses of this model as well.*

**Key word:** Fraud in accounting · Creative accounting · FADN · Environmental costs · Q-DMFCA model

**JEL Classification:** G31 · M · M41

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# Logistic Structures in Enterprises

Stanislav Koutný, Drahoř Vaněček

**Abstract:** *Logistic structure is a set of logistic elements [machines, workers, information] with defined relations among them. The kind and number of these elements is derived from necessary logistic processes or operations, which must be accomplished. The authors proposed a method of classification logistic processes or operations and clustering necessary logistic elements into various formations. Proposed classification makes possible to*

*compare results of investigation from different authors, concerning comparison of different logistic operations and logistic structures in enterprises.*

**Key words:** Logistic Processes · Logistic Operations · Logistic System · Logistic Structure · Classification

**JEL Classification:** L22 · L23

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## **Institutionalized Values and Cultural Dimensions in Development of Societies**

Růžena Krninská, Markéta Adamová

**Abstract:** *This article aims to find shared values in communities, which may manifest as institutionalized features of societies associated with „rules of the game” existing within these communities and try to define them by means of cultural dimensions and to analyse their significance from the point of view of the know of the knowledge economy.*

*This paper presents one of possible approaches to cultural dimensions of Geert Hofstede (1999, pp. 34 - 44) and directs their application to determine the state of societies and their shared values to shift to the knowledge economy at both surveyed villages, as well as in small and medium-sized enterprises of the South Bohemian Region. Finding the shared values in enterprises is associated with the detection of the state of corporate culture.*

*In the South Bohemian Region there were selected two villages with similar fundamentals of cultural traditions, but with different socioeconomic characteristics. They differed significantly in the state of material security and municipal infrastructure. In both villages a quantitative research was conducted by means of a questionnaire method to determine a state of the local communities. In addition a qualitative research using the Test for colour semantic differential (TBSD) was conducted. It can be modified to reveal shared values in the community. For the purpose of this research the Hofstede VSM 94 questionnaire was used.*

*The development of societies (communities) at any level - business, community, region - is linked to their quality and their development depends on the values shared in these communities. The shared values also indicate the cultural dimensions and are embodied in institutions - the "rules of the game" existing in a particular society (community).*

*The article is based on research conducted within the research project Socioekonomický vývoj českého venkova a zemědělství registered with the Ministry of Labour and Social Affairs under registration number 1J016/0-DP2 in relation to particular aspects of the project Studium ekonomiky rozvoje venkova na JU v Českých Budějovicích registered with the Ministry of Education under registration number CZ.1.07/2.2.00/07.0178 and research project funded by the Grant Agency of the University of South Bohemia in České Budějovice called “GAJU 039/2013/S – Human resource management of small and medium-sized enterprises”.*

**Key words:** Institutionalized Values · Shared Values · Cultural Dimensions · Corporate Culture · Small and Medium-Sized Enterprises · Rural Communities

**JEL Classification:** R19

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/573>

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# The Aspects of Investments in the Food Industry

Josef Mezera, Roman Němec, Jindřich Špička

**Abstract:** *The aim of the paper is to compare gross investments into the food industry in the Czech Republic and neighbour states. After the crisis of the euro zone and economy of the European Union and during beginning of economic growth at the macroeconomic level in the Czech Republic has become the hot topic theme - investment activities. The investing relates of various sectors of the national economy, especially the key sectors. These include the food sector in the manufacturing industry. This will be also devoted this paper. This is paper about foreign direct investments, but also about other ways of investment and public funding of the Czech food industry. The analysis showed that there should be massive current investments in the examined sectors. Therefore it is important to investment activity in this sector to support from public funds, and that of the European and national sources. The aim will be the application of modern technologies that will improve the industry in product quality, productivity, efficiency and thus competitiveness, not only of food producers, but the whole food chain.*

**Key words:** Investments · Food Sector · Support · Technology · Competitiveness

**JEL Classification:** G32 · L66 · O31

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/525>

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# Impact of Cash Conversion Cycle on Sales of Enterprises Manufacturing Machinery and Equipment in the Czech Republic

Zdeněk Motlíček, Pavlína Pinková, Dana Martinovičová

**Abstract:** *The way of working capital management may have a significant impact on companies' performance and their strategic plan. This is caused by an unambiguous effect of the size of working capital both on companies' costs and companies' sales. The impact on strategic planning emerges from the fact that setting up the structure of working capital determines the required size of storage and production capacities. However, working capital management options are determined by the impact of individual interest groups. With respect to a relationship between working capital and sales, the customers are a decisive interest group. This fact stems from the pressure of customers on time availability of required products and on payment terms that are associated with product delivery. The failure to comply the requirements may lead to fluctuation of customers and subsequently to fluctuation of sales.*

*The paper presents an empirical research on the extent of influence of the fulfilling customers' needs on the size of sales. These variables have been quantified using the inventory turnover, which represents the availability of particular products for customers, and the average collection period, which represents the payment terms via provided maturity of receivables. The results presented in the paper quantify the degree of these impacts and thereby enable to the managers to quantify the impacts of individual optimization decisions on the size of sales in the following period. It allows the businesses to set such a level of working capital that maximizes the company's performances.*

**Key words:** Working Capital · Sales · Aggressive Management Policy · Conservative Management Policy · Inventory Turnover · Average Collection Period

**JEL Classification:** G32

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/528>

# Visitor Export in Relation to Economic Impacts of Travel and Tourism in the Capital Bratislava

Ludmila Novacká

**Abstract:** *The aim of this article is to present the results of economic impacts by the way of visitor exports, it means by expenditure of tourists in Bratislava, the capital of the Slovak republic. The success to achieve the main aim depends on the survey. In present conditions (by available data) is possible to express the total economic impact of direct incomes in the named destination Bratislava. In present circumstances it is necessary to calculate the leakage. In our conditions is possible to count out the value of VAT and local tax. Other leakages related to import of the goods is not possible to calculate because of absence the necessary data. The same problem effects in relation to the savings of the business and the state taxes. The first step presents the survey. By results the total visitor export is in Bratislava average approximately 110 EUR per day/per person. The survey refers high difference of expenditure amount by individual source market. Visitor export survey presents the first step in the process of economic impacts evaluation.*

*In generally it is possible to make conclusion and to suggest the hypothesis, that multiplier coefficient of economic impacts could reach value more than 1.*

**Key words:** Travel and Tourism · Economic Impacts · Multiplier · Leakage · Tourist Expenditure · Visitor Export

**JEL Classification:** D11 · F4 · R10

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/571>

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# The Impact of Price Changes on the Results of Agricultural Enterprises

Martina Novotná, Jaroslav Svoboda

**Abstract:** *Agriculture is one of the traditional sectors of the economy. Agriculture today is not only to produce food but takes on itself and other functions, such as community, social or environmental ones. Agricultural activity is also an integral part of the rural area. The performance of these production functions is supported by many farmers' subsidy instruments (national or European). The Czech agrarian sector has undergone significant changes in the last few decades.*

*The aim of this paper is to analyse revenues, costs and profit/loss of farms in current prices and in comparable prices. The data base consists of a sample of about thousand observations from 2005 to 2013. The result was an established fact, when using the deflated costs and revenues items, there was a significant drop in profit/loss. At current prices entities realized gain (except in 2009), but the conversion was getting into losses. The economics of agricultural enterprises is, therefore, in addition to climatic conditions significantly affected by price fluctuations, which clearly demonstrated the contribution.*

**Key words:** Agriculture · Common Agricultural Policy · Cost · Revenues · Profit/Loss · Prices · Farms

**JEL Classification:** M41 · Q14

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/541>

# Investment Activity and Labour Productivity of Small and Medium-sized Enterprises in the Food Industry

Martina Novotná, Tomáš Volek, Jana Fučíková

**Abstract:** *The paper dealt with the link between the growth of fixed assets and labour productivity in small and medium-sized enterprises in the food industry. The analysis was focused on 423 enterprises classified according to the European Commission as micro, small and medium enterprises. It was found that enterprises with long-term growth of fixed assets are characteristic by good profitability (ROA, ROE). The growth of fixed assets in these enterprises is financed from own resources. On the other hand, enterprises with decreasing size of the fixed assets are characteristic by lower profitability. Correlation analysis did not prove linear link between the change in fixed assets and changes in labour productivity in any of group of enterprises. On the contrary, correlation analysis have proved positive link between the change in capital-labour ratio and growth in the amount of fixed capital. Conclusion is that change of fixed assets has positive affect on capital labour ratio but this positive effect not significant effect on labour productivity in enterprises.*

**Key words:** Investment · Labour Productivity · SME · Food Industry

**JEL Classification:** M21 · D24 · J24

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/548>

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# Analysis of CSR Reporting Practices of the Largest Companies Domiciled in the Czech Republic

Petr Petera, Jaroslav Wagner, Markéta Boučková

**Abstract:** *In this paper we analyze external corporate social responsibility (CSR) reporting by companies falling among the 50 largest (by sales volume) corporations domiciled in the Czech Republic and belonging to the selected industrial sectors. The findings show that only 7 of these 50 companies published a standalone CSR report with indicators computed primarily for their operations within the Czech Republic. Because we already published analysis of these standalone reports, in this paper we extend our analysis to the annual reports. The amount of CSR-relevant information provided in annual reports varies greatly. We found reports that do not contain nearly any CSR-relevant information as well as reports, which provide really comprehensive information. Nevertheless vast majority of annual reports does not provide much numeric CSR-relevant information as can be seen from our analysis of numeric indicators. The situation in the area of disclosure of non-numeric (narrative) information about sustainability issues in annual reports is much better - companies report about their initiatives in the areas of environment, social responsibility, and human resources management practices and also about received certificates, awards and codes of conduct.*

**Key words:** Corporate Social Responsibility Reporting · Corporate Sustainability Reporting · Environmental Accounting · Environmental Reporting · Global Reporting Initiative (GRI)

**JEL Classification:** M41

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/558>

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## Transport as a Key Factor of Competitiveness in Selected Regions

Filip Petrách, Jiří Alina

**Abstract:** *Due to worldwide economic crisis the flow of passengers and goods have dropped down significantly all around the world. Moreover it has caused and placed severe constraints for number of manufactures, transport operators and facilities. Besides this, we can observe consequences for the many workers in the transport sector. The transport sector has been suffering heavily as a result of the global economic crisis. Connection with other sectors, GDP at level of country and regions is obvious. With ailing global financial markets, several panelists noted that credit is lacking for maintenance and for the development of new infrastructure and equipment in all modes of transport. This paper focuses on the period in which they are captured all phases of economic growth in the time interval between years 2005 – 2012. The aim of this thesis is to analyze the dependencies between trends in economic development in the Czech Republic (with a focus on South Bohemia and South Moravia Region) and trends in the overall performance of the transport companies and the volume of goods transported within the region.*

**Key words:** Rural Road Transport · Economic Crisis · Region

**JEL Classification:** O18

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/555>

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## Financial Characteristics and Classification of Production Companies Grouped by Relevance of the Logistic Metric

Jaroslava Pražáková, Martin Pech, Petra Kosíková

**Abstract:** *The main aim of the paper is to present the classification of production companies created on the basis of the logistic metric. Companies are grouped into clusters by (with) relevance of the logistic metric dimensions. In the paper two of the most popular clustering techniques are presented in the framework of the data recovery approach (agglomerative hierarchical clustering and k-means for partitioning). The basic characteristics of explored companies are used for juxtaposition of the separated clusters. In results four clusters of production companies are presented: Cluster of up and down stream cooperation companies, Cluster with Companies focused on down-stream cooperation, Cluster with companies focused on reporting by indicators and Cluster of companies which consider indicators are not important. Results bring new questions and direction for further research on demonstration of the dependence between logistic indicators monitoring, information sharing and financial performance of the companies.*

**Key words:** Supply Network · Information Flow · Finance Indicators · Cluster Analysis · Logistic Metrics

**JEL Classification:** L60 · L14 · M21

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/575>

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# The Intensity of Agriculture Production of Organic Farms

Radka Redlichová, Karel Vinohradský

**Abstract:** *The content of the contribution is aimed to the evaluation of agriculture production intensity of the organic farms comparing to the one under conventional system of production. The analysis has been done using the agriculture production evaluation indicators in relationship to the total costs modified by the evaluation of unpaid labour force. These indicators were assessed in relation to the harvested area (for one hectare of the agriculture land) and to the volume of production (for one production unit). Moreover, the differences in the organic and conventional farming are evaluated under the different agro-ecological conditions locations (LFA, non-LFA). The conclusions indicate, that the organic farming is less material and labour consuming than the conventional one when evaluated for one hectare, however, more input consuming for one unit of production. These facts should be taken into the consideration when the agrarian policy measures having impact on the future organic farming development will be defined.*

**Key words:** Organic Agriculture · Intensity of Agriculture Production · Input Productivity

**JEL Classification:** Q15 · Q18 · Q12

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/531>

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## Application of Classification Trees during Credit Applicant Assessment

Michael Rost, Renata Klufová, Pavel Tlustý

**Abstract:** *The risk managements of banks often use various classification methods during the process of credit applicant assessment. For this purpose is traditionally used some forms of discriminant analysis. In this contribution we considered a nonparametric approach. More concretely we used CART methodology on some simple example from this area. For numeric evaluation we used a programming language R version 2.6.0.*

**Key words:** Classification · CART · Credit · Applicant assessment · R

**JEL Classification:** C38 · G21 · C32

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## Some Evidence on Continuing Integration in the European Union from the Perspective of Trade and Factor Mobility Measures: a Cluster Analysis Approach

Petr Rozmahel, Ladislava Issever Grochová, Luděk Kouba

**Abstract:** *The paper aims at providing some evidence at current level of homogeneity and convergence among the EU states from the perspective of trade and factor mobility measures. In particular, the paper examines whether the EU countries make internally homogenous clusters and to what extent they differ. Also the*



*convergence or divergence tendencies among pre-determined clusters of the EU core, periphery and new EU countries comprising of the CEE countries are analysed and assessed. Finally, the paper intends to shed some light on contribution of the periphery and CEE countries to rising or decreasing heterogeneity in the European Union from the perspective of selected trade and factor mobility measures comprised in the dimension of Single market and openness. The cluster analysis, particularly the agglomerative Ward method with squared Eukclidean distance, is the main research method. The results show that the EU countries differ to a small extent and disparities among them have been diminishing from the perspective of trade and factor mobility over the integration period.*

**Key words:** European Integration · Convergence · Cluster Analysis · Foreign Direct Investment Intra-Industry Trade · Labour Mobility

**JEL Classification:** F14 · F15 · F22

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/574>

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## **For a Discussion of the Economic Recession: Does the Tax Revenue from Excise Taxes Change During Economic Recession?**

Jarmila Rybová

**Abstract:** *The article is focused on the revenue from excises taxes in the Czech Republic and the countries immediately bordering with the Czech Republic. Excise taxes are examined through economic indicators, the share of excises taxes to GDP, the share of excises duties and taxes on the total of tax revenues and revenues from excises taxes in millions of euros. These economic indicators are compared to the indicator of GDP at current prices, expressed in purchasing power standards (PPS) and the compound tax quota. The data source of economic indicators is Eurostat. The European System of Accounts ESA 95 forms the methodological framework. The article contains annual data observed for the period 2000 to 2012.*

*The aim of this paper is to determine changes in tax revenue from excises taxes in periods of slowing economic growth and how these changes are reflected in the consumption expenditure of households. On the basis of these data it is estimated whether excise duties and taxes fulfil economic generally attributed functions in selected countries. It is not only about the fiscal, allocation and redistribution functions, but also whether these taxes stimulate consumers to engage in particular behaviour in the conditions of economic recession. The results show that excise taxes can be used as controlled or automatic stabilisers in public budgets with other economic instruments. Their incidence can be described as gentle and desirable in years the 2008 to 2009.*

**Key words:** Excise Taxes · Tax Revenues · Taxation Quote · Consumer · Gross Domestic Product

**JEL Classification:** H21 · H31 · M48

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/566>

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# The Human Development Index in Global Context

Maria Ramona Sârbu

**Abstract:** *The Human Development Index (HDI) shows a global measurement that compares the progress of human development both temporally and spatially depending on three essential components – health, education and living standard. This index provides an overall evaluation of the progress made by countries and, in the context of sustainability, HDI delivers important information on one of the main prerequisites of sustainable development, which is ensuring human welfare on the long term. The purpose of the paper is to make an analysis of human capital development in Romania and to rank Romania within the general hierarchy and within the averages of both the Central and Eastern Europe (CEE) countries and countries around the world. For this purpose, the Human Development Index (HDI) was used and analyzed. Data analysis shows that in recent years the HDI of Romania increased from year to year, reaching a HDI value of 0.785 in 2013, according to the Human Development Report 2014. Thus, Romania ranks 54th out of 187 countries worldwide and is categorized as a country with a high level of human development.*

**Key words:** Human Development · HDI · Human Capital

**JEL Classification:** I15 · I25

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/561>

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## Application of the Standard Cost Model

Alena Srbová

**Abstract:** *Entrepreneurs always have to fulfil their duty of providing information to public sector (e.g. supervisory authorities) or to other participants of economic process. They cannot be exempt of duties, because these are based on requirements of legislation. This paper is focused on duty of providing information in the field of HACCP (Hazard Analysis and Critical Control Points). In this safety system, entrepreneurs are forced to apply the system of critical control points into the manufacturing process, to follow the requirements of HACCP and to archive the results. All these activities lead to extra costs. The amount of extra costs is necessary to quantify, therefore the Standard Cost Model is introduced and presented in this paper.*

**Key words:** Hazard Analysis Critical Control Point · Entrepreneurs · Standard Cost Model

**JEL Classification:** G32

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# Development of Total Own Costs and Total Labor Costs for Livestock Products and Their Dependencies Classified by Years in the Slovak Republic

Lucia Svoradová, Lucia Palkechová, Roderik Virágh

**Abstract:** *In the paper, based on the analysis of statistical data of the Research Institute of Agricultural and Food Economics, we will evaluate the total own costs of livestock products and their dependencies classified by years in the Slovak Republic, the growth index, year on year increase/decrease and absolute annual increase/decrease which were compared with the growth of the total labor costs. The time horizon of research falls within the period from 1998 to 2012 (15 years).*

*In the evaluating of the differences between the total own costs and total labor costs we will examine the dependencies of one variable quantities of the other variables. We will research how the values of the total own costs changes at changing of the total labor costs assessed for agricultural commodities in animal production (dairy cows and cattle fattening).*

*In the evaluating of the differences between the total own costs and total labor costs we will examine the dependencies of one variable quantities of the other variables. We will research how the values of the total own costs changes at changing of the total labor costs assessed for agricultural commodities in animal production.*

*Using time series analyzes we will predict the future expected development of the total own costs and total labor costs for us rated categories of livestock. We will also identify casual relationships between the total own costs and total labor costs in each category of livestock (dairy cows and cattle fattening).*

**Key words:** Total own costs · Dairy cows · Cattle fattening · Total labor costs

**JEL Classification:** Q19 · Other

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## Fairtrade and its Application in the academic Sphere; the Case of the University of South Bohemia, Faculty of Economics

Jan Šalamoun, Hana Volfová

**Abstract:** *Fair trade is a concept of social responsibility, which helps more than seven million people in Africa, Asia and Latin America to work and live in decent conditions. The University of South Bohemia, Faculty of Economics, engaged itself in support of the concept in 2010 and gained the status of being a “fairtrade faculty” in 2013.*

*This paper is a part of research activities in this field - the main goal is focused on assessing consumers' views on fair trade coffee, and on defining the preliminary input data to be able to profile the typical fair trade coffee consumer at the University of South Bohemia, as one of the long-term fairtrade activities.*

**Key words:** Consumer · Fairtrade · coffee · marketing research · sustainable development

**JEL Classification:** M31

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/554>

# Strategic Vision of Sustainable Tourism Development: Municipality of Strážný 2020

Petr Štumpf

**Abstract:** *Strážný is a small town, which is situated directly on the border between the Czech Republic and Germany. The image and the public perception of the town are strongly influenced by factors connected with negative sociopathological phenomena such as criminality or prostitution. On the other hand, Strážný is surrounded by unique landscape and nature of the National park Bohemian Forest (Šumava). The competitive advantage in terms of Strážný as a potential tourism destination, lies in the strategic position and good accessibility on the main road between South Bohemia and Lower Bavaria. It is necessary to plan the future development of the town as a sustainable tourism destination. The area of National Park Bohemian Forest is one of the most popular tourist region in the Czech Republic, but the town of Strážný is not a favourite place for visitors in this time. Due to this fact, and thereby also due to the lack of the data about visitors from the past, the Delphi technique was chosen as a method for forecasting the future of the town as a tourism destination to propose the strategic vision, mission statement and strategic objectives. This method helped to find a consensus among stakeholders in the town and to discover common aims of all participants of the future development of Strážný as a tourism destination.*

**Key words:** Tourism · Local Development · Strategic Vision · Delphi Method

**JEL Classification:** L83

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/515>

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## Marketing and Communication – Marketing communication

Marie Švarcová, Helena Horáková, Hana Romová

**Abstrakt:** *Correct understanding of the term marketing communication is very important for entrepreneurs (businesses, firms, organizations). With Czech entrepreneurs this term has been confused with the term propagation, in some cases with the term advertising. The problem of the confusion of the given terms causes great difficulties for businesses, organizations from the point of view of competitiveness.*

**Klíčová slova:** Marketing · communication · marketing communication

**JEL Classification:** M 310 · M370 · M390

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# Electronic Signature and its Principles and Applications

Pavel Tlustý, Lenka Činčurová

**Abstract:** *These days electronic signature is commonly used within electronic communication with authorities and many other institutions. It is a specific form of encryption, so called public key encryption. The question is whether we can consider the electronic signature to be a sufficient way of data protection due to the rapid expansion of information technology. The article introduces the basic principles of RSA algorithm (which is used to create an electronic signature in the Czech Republic) on a simplified example and clarifies a safety of this kind of communication.*

**Key words:** Electronic signature · RSA algorithm · Encryption

**JEL Classification:** C00

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## Utilizing Financial Means of Public Budgets and EU Funds Means for the Construction of Flood-Protection Means in the South Bohemian Region

Michaela Vančurová, Radka Prokešová, Aleš Kudlák

**Abstract:** *The floods having occurred on the territory of the Czech Republic in the last 15 years caused the damage of more than 170 bil. CZK; due to these consequences, they became a significant economic phenomenon. To eliminate or to mitigate the consequences of floods, flood-protection measures began to be implemented in the Czech Republic, the financing of which takes place through public budgets. The analysis of use of financial means of public budgets and means from EU funds for the construction of flood-protection measures in the South-Bohemian Region was the target of this paper. The research implemented from April to August 2014 was of qualitative nature: secondary data analysis, cluster analysis and non-standardized talks were applied. The source of data for the research implementation were flood-protection measures implemented in the South-Bohemian Region and the data to municipalities affected by floods in the individual years from 2002 to the year 2013. In the last 11 years, more than 500 flood-protection measures for almost 4 bil. CZK were installed in the South-Bohemian Region. Up to the year 2008, the financing of flood-protection measures through the grant program of the South Bohemian Region prevailed; since 2008, the Operational Programme Environment had the leading position in providing financial support followed by the program Support of renewal, removal of mud and reconstruction of ponds. The programs implemented up to 2007 were of smaller scope and less financially demanding in spite of the fact that destructive flood in 2002 preceded. Since 2007, after the flood in 2006, there was investment boom and implementation of larger flood-protection constructions. The most financial means were invested into the flood-protection measures in 2009; since 2011, the volume of invested financial means into the flood-protection measures decreased considerably. The research has shown that smaller municipalities have a real problem with drawing subsidies. The cause of this problem is first of all the lack of qualified employees and the lack of financial means in the budget of the municipality. The most suitable solution would be the transformation of the present grant of the South-Bohemian Region to one global grant, which would concentrate financial means for financing flood-protection measures coming from all the grants and operational programs existing at present. The number of municipalities being repeatedly struck by flood and having no protective measures could decrease.*

**Key words:** flood · flood-protection measures · drawing from public budget · operational program

**JEL Classification:** R11

# How to Undermine Ideas of Green Growth: Case of Photovoltaic Electricity Production in the Czech Republic

Jan Vávra

**Abstract:** *This paper focuses on the boom of photovoltaic electricity sector in the Czech Republic in years 2007–2010. According to the 2001 EU directive, a legislation supporting the renewable electricity production passed through the Czech parliament in 2005. It was not flexible enough to allow responsible institutions to change the guaranteed subsidies (feed-in-tariffs) significantly to react to the 2007–2009 fall of investment costs of the photovoltaic industry. As a result of this the installed output of photovoltaic power stations rose from 0,01 % of overall installed output in 2007 to 9,7 % in 2010. Legislation cut the feed-in-tariffs for new power stations strictly in 2010 and a retroactive tax was put on some of those already built.*

*Implementation of the photovoltaics resulted in various problems, including the legal and socio-political issues. Its economic effectiveness is also questionable. Moreover, the problematic case led to the decrease of subsidies to other renewable sources of energy and to some extent also to the negative perception of renewables as whole. Using the data from governmental agencies and public sources of information (laws, reports, statistical sources and media) this paper aims to describe the implementation process and discuss some potential consequences of the problematic realization of the subsidies. Though the Czech case was not intentionally labelled as “green growth” policy, it is framed as a part of green growth, due to being in accordance with its strong focus on the renewable sources of energy.*

**Key words:** Photovoltaics · Electricity · Solar · Green Growth · Green Economy · Czech Republic

**JEL Classification:** Q42 · Q48 · Q55

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/543>

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## A Survey Quality of Management Accounting in the Czech Companies

Miroslava Vlčková

**Abstract:** *The article primarily deals with the analysis of using managerial accounting by companies in the Czech Republic. There are evaluated criteria that negatively affect the quality of management accounting. Based on the investigation is then examined the extent to which this criterion in the business exist, which area of managerial accounting cover and what methods are used. The research is focused on methods of conducting managerial accounting, methods of product costs, budgets, variance analysis methods, the influence of the conditions of production to manage management accounting and segmentation of the production process, value concepts of cost and other tools of management accounting. The survey is conducted on a sample of Czech firms. It is also analyzed the extent to which Czech companies use management accounting and what knowledge have managers of enterprises in this area. The purpose is to determine the level of knowledge of management accounting for business managers or employees of controlling and compare it with the knowledge of students on Economic Faculty, University of South Bohemia in the České Budejovice, branch of study accounting and financial management.*

**Key words:** Managerial Accounting · Criteria Quality of Accounting Data · Costs · T-test

**JEL Classification:** M41

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/539>

# International Road Cargo Transports Risks – The Czech Transporters' Perspective

Viktor Vojtko, Lucie Tichá

**Abstract:** *Cargo transport is one of the crucial parts of modern supply chains. It is possible to choose amongst different means of transport but the road transport is being chosen in majority of cases within continental Europe mainly due its speed, flexibility and reliability.*

*From the perspective of the Czech Republic as a heavily used transit country for such a road transport, further analysis of international cargo transport risks might be beneficial, both from the supply chain management and government regulation point of view.*

*This paper deals in detail with data collected from an online survey which was distributed to all ČESMAD BOHEMIA members' email addresses during October and November 2013. The returned questionnaires are covering the whole range of cargo transport providers according to their size.*

*The questions were focused mainly on risk issues – types, causes and frequency of occurrences of damages happened during transport, trends and experience with insurance companies, e.g. the proportion of damages paid.*

*The results may be used mainly for supply chain management risk management policies development and benchmarking between road cargo transport providers.*

**Key words:** Transport · Road Cargo Transport · Supply chain · Risk Management · Transport Insurance

**JEL Classification:** M10 · M16 · N70

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/568>

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## Land Rent Development in the Period 2011 – 2013

Radek Zdeněk, Jana Lososová, Daniel Kopta

**Abstract:** *The article deals with the growth of land rent in the period 2011 – 2013 of the selected farms. The growth rate of land rent is compared with the growth rates of other economic indicators and evaluates the influence of hectare land rent, the share of rented land and production on the change of land rent costs. There was found, by testing the statistical influences of 22 factors, that the fertility expressed in official prices, the proportion of land in Less Favoured Areas (LFA) and the associated altitude, the share of agricultural land in a municipality, the share of arable land of a farm and the share of rented land have had the largest effect on the price of land rent. This amount in the basic period affects most significantly the land rent growth within the period 2011 – 2013.*

**Key words:** Land Rent · Price of Land · Agricultural Land · Land Rent/Revenues Ratio

**JEL Classification:** Q14 · Q15

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/523>

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# Methodology of Theoretical Physics in Economics: Examining Price Jounce and Price Crackle

Tomáš R. Zeithamer

**Abstract:** *This paper is part of research examining the systematic application of methods used in theoretical physics in economics. One aspect of this research is the comparison of linear and non-linear analytical structures of physics with analytical structures of economics.*

*Methodological approaches of theoretical physics are used to derive the first step for constructing a principle of correspondence between economic variables and kinematic variables of non-relativistic mechanics: the path corresponds to the instantaneous commodity price; the jerk in mechanics corresponds to the price jerk. Assuming that the market value of the commodity is fully determined exclusively by the value of the instantaneous commodity price, the price jerk equation acquires the form that corresponds to the non-relativistic equation for jerk in mechanics, following from Newton's second law of motion. In this paper price jounce and price crackle are defined.*

*The paper also focuses on factual research in bibliographic and biographical databases showing that representatives of the Czech School of Economics took a leading role in the methodological use of applied and theoretical physics in the basic economic research, especially in the second half of the twentieth century.*

**Key words:** Differential Equation · Instantaneous Commodity Price · Instantaneous Relative Depreciation · Motion Equation · Correspondence Principle · Price Jerk · Price Jounce · Price Crackle

**JEL Classification:** A12 · C65

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/510>

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## Current Conditions of Labor Market in South Bohemian Region and Niederbayern

Jana Žlábková, Dagmar Škodová Parmová

**Abstract:** *The paper is focused on unemployment development. It shows two neighboring regions of South Bohemia and Niederbayern in the context of the analysis of unemployment in the Czech Republic and Bayern. Selected regions are very similar in size, structure and climatic conditions. The unemployment rate has developed in both regions in a different way. Observation period was chosen from 2004 till 2012. There are different systemic measures to reduce the unemployment rate in both regions. Their impacts on the development of unemployment are also very different.*

**Key words:** Labor Market · Unemployment · Regional Employment · Bavaria

**JEL Classification:** O15

**URL:** <http://inproforum.ef.jcu.cz/INP2014/paper/view/544>



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