

Varazdin Development and Entrepreneurship Agency and University North
in cooperation with:
Croatian Chamber of Economy
University MB
Polytechnic "Nikola Tesla" in Gospic
Faculty of Management University of Warsaw
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Economic and Social Development

76th International Scientific Conference on Economic and Social Development –
"Building Resilient Society"

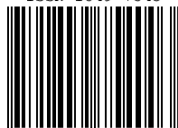
Book of Abstracts

Editors:

Petar Misevic, Ljiljana Kotic, Tomislav Galovic



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Zagreb, 17-18 December, 2021

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BUSINESS ECOSYSTEMS THAT STIMULATE ENTREPRENEURIAL EMPLOYEE ACTIVITY

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ABSTRACT

The measured above average rate of the Entrepreneurial Employee Activity (EEA) is a hidden and unused component of the entrepreneurial potential of Croatia. Since EEA refers to innovative activity aimed at development of new products/services or establishing new business units, it can be used to stimulate the necessary development of new products in corporate structures. EEA stimulates growth and profitability of companies and allows for positive macroeconomic outcomes. It has proven to be particularly favourable for the economic growth and development of countries in transition. The aim of this paper is to research impacts of macro and micro business ecosystems on EEA in order to stimulate it and in such a way contribute to innovation and sustainable competitiveness of Croatian economy. The interconnection of micro and macro business ecosystems and EEA was analysed in a qualitative research (interviews and focus groups) using a sample of sixteen businesses, eight of which from IT industry and eight from processing industry. It was established that business ecosystems differ depending on the type of industry and that they shape organisational factors which influence the EEA. Based on the research results it is assumed that businesses can stimulate entrepreneurial activity of employees by creating a suitable organisational structure and culture and implementing a business policy adapted to the macro ecosystem. Based on this assumption, micro level proposals for stimulating EEA are presented.

Keywords: *Entrepreneurial Employee Activity, business ecosystem, industry, innovation, competitiveness*

PERFORMANCE INDICATORS AS AN ELEMENT OF IMPROVING THE FINANCIAL PERFORMANCE OF GENERAL HOSPITALS IN THE REPUBLIC OF CROATIA

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ABSTRACT

The purpose of a healthcare system is to improve people's health by providing health services to the population. In order to fulfill this purpose, apart from healthcare workers, it is necessary to have a solid financial basis, i.e. a financial model. In the Republic of Croatia, the healthcare system functions as a combination of the so-called Bismarck and Beveridge financial models. The Bismarck Model is based on compulsory, universal social security and is characteristic of most countries of continental Europe. It was first introduced in 1883 in Prussia (present-day Germany). This model works on the principles of solidarity and reciprocity and health insurance contributions are paid on income basis. There is a health insurance fund that is an independent, non-profit, public or private organization whose activity is strictly regulated by state. In addition to the Bismarck Model, health care in the Republic of Croatia is also financed from budget revenues, which is the basis of the Beveridge Model. Given the continuing problem of insufficient funding of healthcare, additional sources of funding are needed. In that context, the subject of this paper is the performance indicators of general hospitals and the problem being studied is how performance indicators can influence the better performance of general hospitals. The hypothesis that is being confirmed is that better financial performance of a hospital contributes to meeting a number of performance indicators of general hospitals. The goal is to show that the hospital has a better financial result if a larger number of indicators are met. The goal will be achieved through research and analysis of performance indicators of

hospitals in the period 2015-2021 and quantitative analysis will be applied. At the beginning of the paper, performance indicators of general hospitals will be defined, followed by methods how they are measured, i.e. how it is determined whether they are met or not. The research will show, for each individual indicator, how it moved in the period 2015-2021. Finally, through a discussion related to the research results, certain conclusions will be drawn regarding performance indicators as an element of improving the financial performance of general hospitals in the Republic of Croatia.

Keywords: *financial operations, general hospitals, performance indicators*

THE IMPACT OF PUBLIC RELATIONS IN EDUCATIONAL INSTITUTIONS

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ABSTRACT

Planning good relations with the public and educational institutions is a significant prerequisite for the improvement and mutual establishment of good relations. This process requires a systematic approach and competent people who will implement the planned activities. It is necessary to identify a target audience and then to plan the activities strategically. These activities would contribute to the development of positive image and reputation of an educational institution (development of corporative identity, production of informative materials, organisation of special events, internal public relations and media relations). In order to gain public confidence, an educational institution needs to conduct a research that would help it meet public expectations.

Also, it is necessary to promptly inform the public about the activities and work programmes as well as positive and negative sides of the institution.

Keywords: *planning, public relations, educational institutions, communication, media, target audience*

THE IMPACT OF SOCIAL AND GOVERNANCE FACTORS ON GHG EMISSIONS: EVIDENCE FROM THE EUROPEAN ENERGY COMPANIES

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ABSTRACT

Ongoing climate change threatens sustainable development. The main cause of climate change is the greenhouse effect, which is caused by greenhouse gas (GHG) emissions. Companies, as emitters of greenhouse gases, also play an important role in reducing them. This is particularly important for the energy sector, which produces the most emissions worldwide. GHG emissions are part of the environmental, social and governance (ESG) framework. Companies report on ESG to measure their

contribution to sustainable business. To determine the relationship and impact of social and governance factors on GHG emissions, this paper presents the results of a study on the relationship between social and governance factors and GHG emissions using a sample of 38 European energy companies. Using a multiple regression analysis and data from the Refinitiv ESG database, a positive correlation is found between social factors and GHG emissions and between governance factors and GHG emissions. More precisely, the study found that workforce and corporate social responsibility (CSR) strategy have a significant impact on GHG emissions reduction. The findings suggest that companies that care about job satisfaction, a healthy and safe workplace, and maintaining diversity and equal opportunities for their workforce have an impact on reducing GHG emissions in their production and operations processes. Companies' practices to communicate sustainability dimensions into daily decision-making processes also have an impact on reducing GHG emissions.

Keywords: *sustainability, social factors, governance factors, GHG emissions, energy companies*

A RESEARCH ON EMIGRATION AS THE FUNDAMENTAL OBSTACLE TO CROATIAN ECONOMIC AND SOCIAL DEVELOPMENT

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ABSTRACT

In the focus of this paper is comprehensive statistical analysis of the public opinion survey on the intention and motives of emigration of young people aged 18 to 40 residing in Croatia and Bosnia and Herzegovina. The emphasis is on the »push« and »pull« emigration factors, dominant directions, contemporary goals of emigration and changes in the demographic structure of emigrants. Two – step stratified random sample was used for hypothesis testing considering the correlations between distributions according to the age of the respondents, their place of residence, level of education, current employment status, satisfaction with the salary of those employed as well as satisfaction with life in domicile state. The paper also intends to shed light on the demographic problem, and in particular the "brain drain" as the fundamental obstacle to Croatian socio-economic development. Namely, when highly educated young population emigrates into the more developed EU countries, in accordance with the European free labour market, less developed

EU countries have been left with their educational debts. Through their work in more developed EU countries they have unintentionally been contributing to the growing socio-economic development gap. Moreover, after Brexit, the more developed EU countries are in favour of a significant reduction of European cohesion funds which can and should depreciate the growing economic development gap in contemporary EU. All the more so as the Covid-19 pandemic has made that disparity worse many times over.

Keywords: *Public opinion survey, »Push« and »pull« emigration factors, Socio-economic development gap, Statistical analysis*

ARTIFICIAL NEURAL NETWORK ANALYSIS OF DOMESTIC TOURISM IN CROATIA

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ABSTRACT

The purpose of this paper is to investigate which variables have an impact on the arrivals and overnight stays of domestic tourists. The research question is how to effectively model time series that exhibit seasonal patterns. The number of tourist arrivals and overnight stays of domestic tourists from January 2005 to March 2020 is used to model an artificial neural network. A dataset with the following independent variables was attempted as model input: Consumer Price Index (previous month=100), Average Monthly Net Salary at Nominal Prices, Consumer Confidence Index, Consumer Sentiment Index and Consumer Expectation Index. Data were seasonally adjusted using the X-12 ARIMA seasonal adjustment procedure. The best-fitting model is the one

that achieved a mean absolute percentage error of 5.32%, which represents a high forecasting accuracy that is essential for further activities in the tourism sector and important for all those involved in the tourism process.

Keywords: *domestic tourists, artificial neural network, forecasting*

YOUTH UNEMPLOYMENT AND PROVIDING CONDITIONS FOR EMPLOYMENT AND ENTREPRENEURSHIP IN BULGARIA

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ABSTRACT

This research attempts to make a brief review and analysis of youth unemployment rate in the labour market in Bulgaria. It briefly describes programmes and measures existing at the Bulgarian labour market and implemented through Employment Promotion Act and National Employment Action Plan. It attempts to describe and provide a reasonable proposal for changes in order to increase the effectiveness of the applied tools concluding that the relative percentage of unemployed youth is the highest compared to other age groups.

Keywords: *Youth unemployment, Employment, Entrepreneurship, Bulgaria*

GDP AND REMUNERATION GROWTH: COMPARISON OF THE CREATIVE INDUSTRIES AND THE MANUFACTURING INDUSTRY

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ABSTRACT

This article aims to determine the relationship between the GDP growth time series of a particular sector of the economy and the average remuneration growth time series in that specific sector of the economy. More precisely, the article aims to determine whether the GDP growth time series can be used to forecast remuneration growth. Over the last three decades, the countries of Central Europe have undergone significant development. Historically, heavily industrialized countries are now converging at different speeds towards a knowledge-based economy. The article compares two vastly different sectors of the economy in the Czech Republic, namely, the manufacturing industry and the creative industries, which belong to the knowledge economy. The relationship analysis between the GDP growth time series and the average remuneration growth time series was achieved through the Granger causality test. Even though the statistical analysis did not confirm the possibility of predicting remuneration growth through GDP growth, findings from the

time series analysis confirmed multiple multinational trends in the Czech Republic. The first one is the more dynamic growth of the creative industries sector compared to the manufacturing industry. The second is slower average remuneration growth in the creative industries compared to the manufacturing industry, which suggests the questionable treatment of the creative labour.
Keywords: *Creative Industries, Manufacturing Industry, Economic Growth, Remuneration, Working Conditions*

EFFECTS OF STUDENT GENDER AND STUDY YEAR ON DIGITAL LEARNING PERFORMANCE IN KOSOVO HIGHER EDUCATION DURING COVID-19

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ABSTRACT

The spread of the covid-19 pandemic and government measures aimed at limiting the extent of the risks it carries have greatly affected the normal development of the educational process. Depending on the countries and their flexibility in adapting

quickly to change, education is said to have suffered consequences of different degrees. In the case of Kosovo, the development of the educational process has been hit relatively hard by the spread of this pandemic and since the government and the competent bodies for education were focused on pre-university education, HEIs had to rely on their own forces and individually fight against this pandemic to maintain the continuity of the learning process. Thus, HEIs in Kosovo have adopted different forms to compensate for the impossibility of classroom teaching. Through this research we aim to study the reactions of students to these forms based on their gender and study year. We conducted a quantitative study focusing on Universum College, a private HEI in Kosovo which started implementing the entire educational process on online platforms immediately after the total lockdown ordered by the Government of Kosovo on March 13, 2020. The study included 141 students who were randomly selected from all the enrolled students at this HE. The results show that surveyed students prefer the in-class learning method above all other methods and formats and there are no statistically significant gender or study year differences in these preferences. This suggests that HEIs and all relevant stakeholders should take into account the aspect of socialization and interactivity when designing future education programs and platforms that include the electronic component.

Keywords: *E-learning, education process, training, digital platforms*

THE ROLE OF ONLINE MEDIA CHANNELS IN PORTRAYING THE EFFECTS OF THE COVID- 19 PANDEMIC ON VULNERABLE GROUPS

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ABSTRACT

The COVID-19 pandemic has drastically changed people's way of life and severely affected the lifestyles and daily routines of vulnerable groups. In this context, mass – media channels have an essential role in portraying the way certain groups of people managed to cope with the pandemic. In this regard, the purpose of our paper was to analyze the way online media channels present how the life of vulnerable groups was affected by the pandemic, in order to raise awareness about the challenges such groups had to face in this time of crisis. In order to conduct the research we used content analysis as method, while having as a research instrument a content analysis grid which comprises several categories referring to the context and the topics of the news: difficulties of the elderly, pisho-social effects of the pandemic on the elderly. Thus, we conducted a comprative and thematic analysis and we assesed the news presented online during the period March 2020- September 2021, by Romanian

and foreign media channels, such as: Digi 24, Antena 3, Realitatea TV, BBC, CNN, ABC. The main findings of our research revealed that both groups of media channels focused more on describing the experiences of the elderly during the pandemic. Hence, the online media presented the elderly as the main vulnerable and at risk group, highlighting the negative effects of the pandemic on their psycho – social and physical health. Moreover, the results of our research also revealed that the online media reported on sensational, special situations of older people contracting the virus and healing from the disease. Therefore, our research provides relevant information on the difficulties encountered by the elderly in the context of the pandemic, and such information could be further taken into account in the process of improving the life of vulnerable groups.
Keywords: Covid 19, Effects, Elderly, Online media, Vulnerable groups

TRANSFORMATION OF BUSINESS PROCESS MANAGEMENT THROUGH DIGITALIZATION

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ABSTRACT

Without digitalization, today's world could hardly function. Digitalization together with business process management can bring great success to companies. The aims of this paper are to: clearly define business processes, describe how they are

managed, give an answer to how digitalization helps processes and show how digital transformation is interconnected with business process management. It also presents a business process example in one Croatian company that was changed and improved through digitalization. It is stated and proven in this paper that business process management and digital transformation complement each other.

Keywords: *business process management, digital strategy, digital technologies, digital transformation*

THE MULTILATERAL METHODS FOR THE CONSUMER PRICE INDEX MEASUREMENT USING SCANNER DATA IN THE CONDITIONS OF THE SLOVAK REPUBLIC

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ABSTRACT

The consumer price index (CPI) is the best-known indicator that measures inflation. Slovakia, like many other countries has CPI production based on a fixed consumer basket of goods and services that consumers normally buy and data collection is carried out directly in shop premises and outlets where inhabitants usually do shopping. The current method of calculating CPI, as well as the method of obtaining input data, are insufficient in terms of increasing demands on quality and performance towards products of the official statistics. The transition from survey data to scanner data, means, in general, the transition from a fixed consumer basket to a dynamic world that contains all the goods sold. There are currently a number of approaches available to construct price indices using scanner

data but the choice of formula and method can have a significant effect on the results obtained. Multilateral methods are a specific type of index compilation methods that can be applied to scanner data .The paper presents selected findings of the experimental study focused on the use of multilateral methods for the compilation of elementary price indices, performed on real data of five retail chains for the "Food and non-alcoholic beverages" division.

Keywords: *Consumer Price Index, Multilateral Index Formula, Scanner Data*

COVID 19 - INFLUENCE FACTOR OF ALTERNATIVE WORKPLACE

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ABSTRACT

Given the characteristics of today's labor market and the impact of the COVID 19 pandemic, the question needs to be asked: Is an alternative workplace a perspective or a pure necessity? Changes are already affecting and will affect the way business is organized. The COVID 19 pandemic is accelerating and has a significant impact on business transformations in terms of job and workplace perceptions. An alternative workplace is a substitute for the current definition of a classic workplace consisting of a worker, a secured job and, the necessary resources for work. The increasing use of the alternative workplace brings with it certain advantages and disadvantages. This paper analyzes and critically examines previous research on the application of alternative workplaces. Some of the practical goals are also to present the

current perspective of an alternative place of work in the Republic of Croatia in comparison to other countries. Special emphasis is placed on the fact that in today's uncertain and high-tech world, it is the pandemic that significantly affects the behavior of employees and employers and creates new attitudes about the application of alternative workplaces.

Keywords: *alternative workplace, COVID 19 pandemic, labor market*

APPLICATION OF LOGISTIC MODELS IN ANALYSIS OF VERY LOW WORK INTENSITY OF SLOVAK HOUSEHOLDS

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The main aim of the article is to quantify the effect of relevant factors on the very low work intensity of Slovak households in 2020. The analysis included data from the statistical survey EU SILC 2020 and we used the logistic models applied in the statistical software SAS Enterprise Guide to perform the analysis. The results presented in the article mainly provide an overview of the socio-economic situation of Slovak households, but also a procedure for analysis of least squares means using the LSMEANS, CONTRAST and ESTIMATE statements in the PROC LOGISTIC procedure.

Keywords: *least squares means, logistic regression, very low work intensity*

SUCCESSION PLANNING IN FAMILY BUSINESSES: THE ROLE OF LONG-TERM PLANS

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ABSTRACT

Today, many of the oldest businesses in Europe and around the world are family-owned and their survival is the result of their ability to change over time. The key objective of a family business is to keep the firm in the family by passing it on to the next generation. The transfer of a business (the succession process) is considered an extremely difficult part of the business life cycle. A lack of planning can be one of the main reasons why business transfers fail, because it is only during the planning process that participants usually realise how complex the succession process actually is. We assume that the formulation of a strategic plan can play an important role in the transfer of a business. At the same time, however, its benefits are determined by whether the family accepts the plan, implements it, and involves the next generation. The objective of this paper is to analyse whether family businesses have strategic plans and which factors influence their formulation. The assumptions have been verified in a questionnaire survey among 212 family business owners in the Czech Republic. We used frequency analysis and a Chi-square test to evaluate the responses. Person's adjusted residuals were used to describe the links between the answers. The owners'

responses indicate that strategic planning is not typical for Czech family businesses. However, if we consider long-term planning as an intention to keep the business family-owned in future generations, then this can be confirmed in the data. The majority (84 %) of owners plan to hand the business over to the next generation. Planning in family businesses is correlated with a larger number of employees – both the total number of company employees and a larger number of family employees. The previous experience of the founder or a family member also proved to be an important factor in the making of plans.

Keywords: *Czech Republic, frequency analysis, family business, strategic planning, succession process*

SOCIALLY RESPONSIBLE BUSINESS AS A GLOBAL SECURITY STRATEGY

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ABSTRACT

Coronavirus has taught us that we must respond to the crisis together and that only with joint efforts will we be able to respond quickly and effectively to the challenges ahead. Socially responsible business is the only possible business if we as a species want to survive. In addition to the introduction and conclusion, the paper deals with the concept of socially responsible business (CSR), the development of the concept of CSR. Also, the paper deals with the development of socially responsible business in the Republic of Croatia. As the third

chapter, the paper deals with global goals, ie goals of sustainable development – what those goals are and what is the connection between goals and socially responsible business. Bearing in mind the current situation and the uncertainty in which the whole world finds itself, one chapter of the paper will be dedicated to the coronavirus, which the authors consider to be a global security challenge for socially responsible business and the fulfillment of global goals. Through numerous examples, the authors will prove how the crisis caused by the coronavirus has strengthened the activities of socially responsible business despite the economic crisis and the uncertainty arising from the crisis and point out the importance and necessity of changing the behavior of company management. The time for change is now.

Keywords: *coronavirus, global security strategy, goals of sustainable development, socially responsible business*

IMMIGRANTS IN THE CROATIAN LABOR MARKET: DO THEY SUBSTITUTE NATIVES?

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ABSTRACT

In order to theoretically assess the potential impact of immigrants on different labor market outcomes in Croatia, it is important to compare the labor market profile of the natives and immigrants. The profile of immigrants will be analyzed by taking into account several possible definitions of immigrants that are addressed in the literature of migration economics. These definitions are based on different elements i.e. place of birth, citizenship and length of stay in the country. We give an additional insight into the labor

market profiles of immigrants and investigate the possibility of “displacement effect”, in which immigrants substitute natives on the labor market. Given the results, the existence of composition effect in Croatia regarding the labor market status between natives and immigrants cannot be expected although some differences are visible, mainly in the area of income distribution and the distribution of observed groups of population among different activities.

Keywords: *immigrants, natives, labor market, Croatia*

THE IMPACT OF THE COVID 19 PANDEMIC AND GOVERNMENT MEASURES ON THE EMPLOYEES OF THE SERVICE SECTOR IN THE REPUBLIC OF CROATIA

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ABSTRACT

This paper aimed to determine the influence of the COVID-19 pandemic on the employees in the service sector in Croatia. Ever since the pandemic started, employees in the service sector struggled with great uncertainty and imposed business restrictions, resulting in significant financial and job losses. In addition, employees of this sector are affected by the physical and

psychological consequences of the crisis. In order to determine the impact of the pandemic on the service sector, a survey was conducted. The results showed the attitude of employees in the service sector on government measures to combat the spread of viruses and employees and their jobs. According to the survey results, the respondents do not have confidence in the Government response to the crisis. The majority of respondents stated that the Government did not provide them with all the necessary assistance during the crisis to meet their basic living needs, nor did they agree that the Government provided them with full access to health services during the pandemic. The survey showed that the impact of the pandemic affected not only the material and physical condition of the respondents but also the psychological.

Keywords: *Pandemic, COVID–19, Crisis, Service Sector*

A SOCIOLOGICAL RESEARCH OF THE ATTORNEY'S PROFESSION IN THE CONTEXT OF THE MOBILIZATION OF LAW, LEGAL RISKS AND TRUST

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ABSTRACT

This research is oriented at studying the attorneys community. The success of entrepreneur's activities is often predetermined not only by their efficiency in business, but also by the quality of

attorney's work. They mobilize the law in relation to entrepreneurs due to the fact that they have a higher professional status. The need to turn to attorneys is also connected with the fact that entrepreneurs face legal risks throughout their activities. Methods/Statistical analysis: The methodological basis of the study is the theory of structural functionalism, the theory of everyday life and the theory of trust. Overcoming risks from the standpoint of the theory of structural functionalism is possible only with the help of professionals, including lawyers. From the standpoint of the theory of everyday life in the process of overcoming risk, the involvement of the professional community is based on trust. A focused interview with entrepreneurs (30 people) in June 2021 was used as an empirical study. Conducted an expert survey of 15 attorneys. Within the framework of the presented article, the attorneys community was analyzed as having characteristics - indicators of the «true profession», which act as the basis of trust. Research of entrepreneurs has shown that, in general, their trust is based on the professionalism of attorneys, on their ministry to society, sometimes even altruistic. It is worth considering that the attorneys community itself is quite strict about the «purity» of professional identity. The novelty of the research is the use of a sociological approach to the profession of a attorney, which allows us to say that attorneys are the group that successfully mobilizes the law in relation to entrepreneurs, participates in the process of reducing or eliminating legal risks, causes trust as a basis for cooperation. The results obtained in the study allow us to supplement the ideas about the legal community. The results of the research can be used in further work on the sociology of law, legal sociology, sociology of professions.

Keywords: *attorneys, attorneys community, mobilization of law, legal risks, trust, professional identity, entrepreneurship*

RESPONSIBILITY OF THE CONTROL FUNCTION AS A COMPANIES PERFORMANCE AND ECONOMIC VALUE ADDED FACTOR

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ABSTRACT

The global business environment in which a company operates requires constant involvement and adjustment of management in running business processes in order to maintain its competitive position in the market. Rapid technological advancement requires the controlling function to adapt quickly and responsibly, leading to great pressure on competitiveness. The controlling function deals with the fundamental problems of the company's business in practice and is therefore considered a powerful and effective management model. Therefore, this paper aims to investigate the organization and development of the controlling function in Croatian companies and prove the extreme importance of the development of the controlling function in order to achieve long-term competitiveness of companies. Empirical testing on a sample of 125 companies will seek to demonstrate the extent to which the development of the controlling function contributes to business success and the creation of economic added value of the companies.

Keywords: *Controlling, development of controlling function, business success, economic added value*

THE IMPACT OF COVID-19 ON UNEMPLOYMENT LEVEL IN EUROPEAN UNION

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ABSTRACT

Covid-19 has negatively affected the economies of almost all countries around the world including the impact on their main economic indicators such as GDP, unemployment level, inflation rate etc. The purpose of this article is to investigate the impact of Covid-19 on unemployment level in European Union. In the article, firstly the impact of Covid-19 on general unemployment level in European Union and its impact on unemployment level by sex and age have been revealed based on statistical data by years. Moreover, the impact of the pandemic on people's unemployment expectations over the next 12 months, labor market transition from unemployment to inactivity and the number of persons available to work but not seeking have been mentioned. Then the factors that can cause the unemployment level to be increased during the pandemic have been determined in order to define the particular reasons of unemployment in European Union. Based on multiple regression analysis, it is justified that unemployment level is positively related with the number of active covid cases and the number of business closures, but negatively related with the households' major purchases which represent consumer demand.

Keywords: *Covid-19 pandemic, European Union, labor market, unemployment level*

EXPLORING THE RELATIONSHIP BETWEEN TOURISM COMPETITIVENESS AND TOURISM CONTRIBUTION TO ECONOMY: GLOBAL PERSPECTIVE

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The aim of this paper is to explore the relationship between tourism competitiveness and significance of tourism to national economy. Building on the recent body of work that aims to explore relationship of tourism competitiveness with strictly economic (overall GDP and GDP growth) and other country level measurements (human development index, cultural dimensions), this paper closely examines relationship of tourism competitiveness with tourism performance in economic sense. For the purposes of measuring tourism competitiveness, World Economic Forum's Travel and Tourism Competitiveness Index (TTCI) report for 140 countries worldwide for 2019 has been used, while significance of tourism to national economy has been determined as a share of direct tourism related economy to GDP. Share of tourism related economy in overall GDP is then analysed against overall travel and tourism competitiveness index and each of its pillars as provided in TTCI report for 2019.

Results show that share of tourism related economy to GDP can significantly be predicted by only a limited number of TTCI pillars, excluding the overall TTCI. GDP per capita seems to negatively predict the share of tourism related in overall economy, i.e. richer the countries are, they are generally less economically driven by tourism. Prioritization of T&T industry and tourist service infrastructure seem to be the best positive predictors of the of share of tourism related economy to GDP, followed by pillars related to transport infrastructure, ICT readiness and human resource and labour market. Network analysis shows that ICT readiness, transport related pillars and human resource and labour market are also the best predictors of the all the other pillars. Practical contribution of the paper is in identification of the elements (pillars) of competitiveness that predict tourism related economic effects, as well as in identifying other variables that influence competitiveness and performance relationship.

Keywords: *tourism competitiveness, tourism contribution to economy, travel and tourism competitiveness index (TTCI)*

AUSTERITY POLICY AND ITS APPLICATION IN SELECTED EU COUNTRIES

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ABSTRACT

The global financial crisis that erupted in 2007 exposed the inefficiency of the markets and economic policy makers for preventive crisis management. However, it later served as an excuse for cutting of public spending. Given the current state of global economy after recent lock down, we are now in a position to prepare an adequate response for another possible future crisis. This paper presents the idea of austerity, examples that have supported such a way of fiscal policy throughout history and a review of their results. The Keynesian school (fiscalists) argues that fiscal policy has a strong impact on aggregate demand, production, and employment when the economy produces significantly less than potential national income. Then it is necessary to provide demand stimuli. Keynesians believe in the undoubted role of government, which must actively use fiscal policy measures to increase aggregate demand. Monetarists, on the other hand, believe that budget spending and tax changes can only affect aggregate demand, production, and employment in the short term. Monetary policy, according to them, has much more powerful instruments in controlling demand and inflation. However, it is generally accepted that fiscal policy (public spending and taxation) has a significant allocation, distribution

and stabilization role, especially if the monetary policy is previously restricted by being member or aspiring member of monetary union. In this paper we present the measures that were undertaken by selected EU member states during the recent crisis, as well as their results eg. the consequences.

Keywords: *austerity, expansionary fiscal consolidation, public spending, recession*

ENTREPRENEURIAL CAPACITY OF HIGHER EDUCATION INSTITUTIONS AS A PREREQUISITE FOR ECONOMIC GROWTH

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ABSTRACT

At a time when enterprises operate in an environment characterised by fast-occurring changes and unpredictable challenges, knowledge and the ability to learn become the only way of efficiently adapting to new business conditions. In this context, higher education institutions play an important role by providing intellectual services and raising the level of knowledge

in the society, thus shortening the gap between the economy and the scientific community, and contributing to their stronger interaction. This said, higher education institutions are faced with ever greater challenges in fulfilling the demands of the users of their services. The position and role of higher education institutions is gradually changing, as is their modus operandi. New solutions are sought, those focused more on the entrepreneurial component as the key factor in sustainable development of higher education institutions. Investing in research and development contributes to creating added value and impacts economic development. Spin-off companies are established, with a potential to become the initiators of economic growth. By presenting selected cases, this paper demonstrates successful examples of the functioning of higher education institutions in Croatia moving toward a technology transfer in accordance with the triple helix principle. In conclusion, in order to achieve economic growth, fast and urgent adaptation of infrastructure is necessary, along with implementation of structural reforms connected with investments in research and development in the public and private sector.

Keywords: *higher education, entrepreneurship, technology transfer, research and development, economic growth, triple helix*

CORONA VIRUS - SECURITY THREAT OR EPIDEMIOLOGICAL CRISIS?

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ABSTRACT

COVID - 19 pandemic prompted a change in the security paradigm and challenged the scientific community to define new approaches and new methods of researching security phenomena posing a threat that will "reshape our world". The aim of this research was to contribute to the understanding of the "new safety paradigm" created by the COVID-19 pandemic, and to analyze the development potential of crisis transformation of influenza (Coronavirus Diseases) in relation to the age of the population exposed population of the Republic of Croatia. Research results have shown that there has been a significant change in the degree of exposure of certain age groups in the population of the Republic of Croatia, that the most vulnerable age group is the age group from 0 to 30 years, and in this group the greatest risk is borne by high school and university students in the first years of higher education. It has also shown that the level of exposure no longer follows the age structure and that only one measure, no matter how "ideal", does not solve the problem when the crisis has a strong potential to transform its effects on the population. The Government of the Republic of Croatia considers the epidemic (pandemic) COVID-19 a "developed crisis" and not a "security threat" which results show to be completely correct by confirming the research hypothesis that COVID - 19 can be reshaped according to the age of the population.

Keywords: *COVID-19, population, age, security, crisis*

PRODUCTIVITY CONVERGENCE OF POST-TRANSITION COUNTRIES AFTER EUROPEAN UNION ACCESSION

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ABSTRACT

After post-transition countries entered the European Union, the effect of convergence has been highly disproportionate if looking at share of gross salary in the final product per capita. The goal of this paper is to point out the different level of economic development of post-transition countries, which shifted from socialist-communist economy in 1980s to the capitalist economy after the 1990s. Moreover, authors will analyze the level of real economic development, comparing the real productivity with nominal productivity from 2000 to 2020. The ratio between gross salaries in real GDP per capita and export of goods per capita is representing the real economic productivity, while nominal productivity will be represented through the level of purchasing power measured by gross salaries among the observed countries. Observed countries are post-transition countries, which all became European Union members, namely: Slovenia, Poland, Czech Republic, Slovakia, Hungary, Romania, Bulgaria and Croatia. This paper will compare which of named countries have

higher living standard measured by the level of gross salary, while on the other hand, the living standard will be also shown in the real terms, expressing the paradox of economic development.

Keywords: *GDP per capita, gross salary, external trade coverage ratio, export of goods, productivity*

PREDICTION OF NATURAL GAS CONSUMPTION BY NEURAL NETWORKS

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ABSTRACT

Due to its environmental benefits, natural gas has become one of the most popular energy sources. Natural gas is the third largest energy source in 2020, after oil and coal, accounting for nearly 25%. The consumption of natural gas has been increasing in recent years, except for last year when consumption decreased by 2.3%. The aim of this paper is to present a neural network model

(using Multilayer Perceptron algorithm) that could predict natural gas consumption on an hourly basis. The dataset consists of hourly natural gas consumption data obtained from natural gas supplier and distributor, and meteorological data. There have been many studies in which researchers have attempted to predict gas consumption, and the accuracy of these models is important for decision making, especially for gas nominations (gas orders). The results show that the statistical correlation between the actual and predicted values is very high, but the relative absolute error and root relative squared error are about 25% which cannot be considered satisfactory for this type of prediction. The comparison between the actual and predicted values shows that the model appears to be good at predicting gas consumption in the winter months, but predicts lower values than actual ones for the summer months.

Keywords: *Algorithms, Energy, Natural gas, Multilayer Perceptron, Machine learning*

EFFECTS OF THE COVID-19 PANDEMIC ON THE REPUBLIC OF CROATIA'S TRADE SECTOR IN 2020

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ABSTRACT

Trade, as an important economic activity, is an intermediary in the added-value chain and it strongly influences production and consumption. The COVID-19 pandemic has caused grave economic consequences worldwide. The Republic of Croatia is not an exception. However, not all Croatian economic sectors have suffered equal damage in 2020 (the pandemic year). On the contrary, many businesses ran smoothly due to their rapid adjustments, such as implementing the "remote work", changing the product range, introducing innovations, e-Economy, home delivery, etc. The businesses of the primary and secondary economic sectors have felt less impact, while the tertiary sector businesses, i.e. tourism, catering, transport and trade, have suffered the most severe damage. Due to social and physical distancing measures, the tertiary sector of the economy, i.e. the service sector has suffered the most damage. The new data on fiscal and monetary policy measures used in response to the crisis shows that these policy measures were effective in mitigating

some of the emerging economic costs. It was also detected that job closures and stay-at-home restrictions had been effective in fighting infections, but they were also associated with significant economic costs. Furthermore, according to the Croatian Central Bureau of Statistics data for 2020, the share of trade in gross added value was 19.6%, and trade participated with 18.6% of the total number of employees. This paper's research focuses on the effects of the COVID-19 pandemic on the trade sector in the Republic of Croatia. Consequently, in the spring of 2021, the authors conducted empirical research of business entities from the trade sector on the territory of the Republic of Croatia that were directly experiencing the effects of the pandemic. The subject of the research were business entities in the trade sector, which were asked to state the severity of the effects on the business elements. Respondents were directors, sales directors, finance directors and spokespersons of the trade sector business entities. The results of the survey were processed by a computer program, presented in tables and charts, followed by interpretation of the results. The general conclusion is that there was a significant revenue decline and that the Croatian Government's measures had strongly supported the trade sector. Those measures were welcomed by the trade sector since without them many business entities would have been faced with survival.

Keywords: COVID-19, trade sector, economy, Republic of Croatia

COMPARISON OF THE LIFE CYCLE COSTS OF A NEARLY ZERO ENERGY BUILDING AND A PASSIVE HOUSE

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ABSTRACT

This article deals with the comparison of the life cycle costs of a nearly zero energy building and a passive house. Life cycle costs are addressed from the pre-investment phase to the liquidation phase of the building. The costs of acquisition, operation, maintenance and repair and subsequently of the building liquidation itself are dealt with within the total life cycle costs. Inflation, which normally ranges around 2% per year in the Czech Republic, also plays a very important role in the operational life cycle of the building. However, current inflation in 2021 has exceeded 4%, therefore, it is very important to take inflation into account in the calculation within the life cycle itself.

Keywords: *Building life cycle, nearly zero energy building (NZEB), passive house, item budget, costs, inflation*

NON-PRICE FACTORS OF RETAIL PRICE IMAGE

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ABSTRACT

With the strengthening of competition in contemporary retail, companies are competing with price and quality elements. Therefore, creating a price image and managing it is becoming increasingly important. The paper deals with grocery retail, in whose stores consumers very often make purchase. Nevertheless, consumers are more often guided by price perception than actual prices. Price provides information to consumers, but price itself has no meaning. It is understandable to consumers only in a certain context that includes other information such as product, brand, and/or store. Following this logic, the price image is formed not only based on prices themselves but also based on different price dimensions and non-price factors. Non-price factors can improve the understanding of how consumers evaluate prices. This paper aims to conduct a literature review on non-price factors of retail price image – product range, private label product range, design and atmosphere of the store, service level, and location, and to conclude about their role in price image perception.

Keywords: *Location, Price image, Private label, Product range, Retail store, Service level, Store design, Store atmosphere*

MONITORING AGRICULTURAL POLICY USING DRONES - COMPARATIVE METHOD: SATELLITES VERSUS AGRICULTURAL DRONES

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ABSTRACT

The European Commission adopted new rules during the period 2020, which allow for the first time the use of satellite images in carrying out controls with farmers, without which they cannot collect EU subsidies, against the background of achieving the specific objectives of the Common Agricultural Policy. The satellites used shall obtain crop observation data and information that can be used as evidence when farmers verify and meet the requirements of the common agricultural policy. In this Article, using the comparative method, satellites versus agricultural drones, we will be able to obtain sufficient and conclusive information about farmers' crops and activities using data provided by satellites versus agricultural drones on the same types of land use categories.

Keywords: *sensor, unmanned aerial vehicle (UAV), precision agriculture, normalized difference vegetation index (NDVI)*

THE IMPORTANCE OF INFORMATION AND DATA LITERACY OF LEADERS IN A TURBULENT ENVIRONMENT OF DIGITAL BUSINESS TRANSFORMATION

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ABSTRACT

The Council of Europe's "Digital Competence Framework for Citizens DigComp 2.1" defines the development of digital competences in five areas: information and data literacy, communication and collaboration, content creation, security and problem solving. The subject of this paper is information and data literacy of school principals, where, starting from the assumption that information and data literacy is extremely important in the leadership process, the aim of the research is to determine how it affects leadership processes during the COVID-19 pandemic. The research was conducted on a sample of primary school principals from three geographically and economically related counties - Varaždin, Međimurje and Koprivnica-Križevci counties, using a questionnaire containing original metrics of influential factors of information and data literacy, which examined the knowledge, skills and attitudes of principals about the importance of information and data literacy in the decision-making process. The analysis and interpretation of the results confirmed the hypothesis that information and data literacy significantly influences school management processes during COVID-19 pandemic and concludes that it, as one of the five areas of digital literacy, is extremely important for decision-

makers , while the specific parameters obtained by the research are applied to the reference framework of information and data literacy in the school management process, which suggests the need for sequential and specific education of school principals in the field of information and data literacy.

Keywords: *Data literacy, Digital business transformation, Information literacy, Leaders*

ECONOMIC EVALUATION OF FORMER CHEMICAL INDUSTRIAL SCHOOL REVITALIZATION FOR CREATIVE AND ARTISTIC STUDIOS

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ABSTRACT

The paper is focused on the issue of the economic evaluation of former chemical industrial school revitalization. Buildings located in Bratislava, the capital of Slovakia, were abandoned and was considered as a brownfield, so it was decided to revitalize the area. One of the key motivations was the desire to recover the abandoned area and bring new functions to the surrounding area together with the creation of a cultural program for the public. Revitalization started at 2016 and by 2017, building has been used by 120 creative and artistic studios and non-profit organisations, which makes it the largest creative

centre in Slovakia. Since the launch of the cultural program by the end of 2019, it managed to hold more than 430 events with the participation of more than 80 000 people, while the program also includes various educational and awareness-raising activities, primarily focused for youth. This new area is called "Nová Cvernovka" and has become a successful example of a community-led project, which was made possible by the use of unnecessary self-government property and can serve as inspiration for similarly oriented projects and initiatives. Revitalisation was financed by the European Investment Fund, The Bratislava City and by private companies, which provided gross value of costs. Against this value of costs, the value of profit benefit and socio-economic benefits associated with revitalization is compared, so for the overall evaluation can be used the CBA analyse. Also lot of benefits are unable to analyse, because the project is still very young, so even greater benefits are expected in the future.

Keywords: *Brownfield, CBA Analyse, Economic evaluation, Former chemical industrial school, Nová Cvernovka*

MODEL OF OVERCOMING THE CRISIS IN BULGARIA CAUSED BY THE PANDEMIC

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ABSTRACT

This article considers a possibility of creating a sustainable model that would help overcome the specific crisis caused by the COVID-19 pandemic. It attempts to analyse these processes while taking into consideration their unpredictable nature. Analysing the available statistical and operational data the author looks for an opportunity to create a relatively accurate model for overcoming the crisis resulting from the pandemic. The possible solutions are divided into three groups: political, social and economic.

Keywords: *Pandemic, Crisis, Pandemic, COVID-19, Bulgaria*

IN-STORE ENVIRONMENTALLY RESPONSIBLE ACTIVITIES OF FOOD RETAILERS

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ABSTRACT

The paper aims to provide an overview of in-store environmentally responsible activities of food retailers based on the secondary data search. The study identified main key dimensions when reporting about retail in-store environmental practices, which are energy use, waste management and product range. The review of previous literature and positioning of the research stream can further help in the development of framework for in-store environmentally responsible activities of food retailers. In addition, results may serve as a benchmark for smaller food retailers in pursuing their internal supply chain environmental behaviour.

Keywords: *environmentally responsible activities, grocery, retailing, food retailing*

ROAD FREIGHT MARKET IN THE EUROPEAN UNION WITH SPECIAL EMPHASIS ON THE COVID-19 PANDEMIC

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ABSTRACT

Modern society could be difficult to imagine without a proper transportation industry. The development of economy worldwide depends on the efficiency of freight operators, mostly road transport companies. In the European Union, road freight transport is also dominant in the transport of goods, and its importance has been highlighted in these pandemic times in particular. Transportation activities cannot simply stop because of the pandemic. Many essential products need to be delivered, especially pharmaceuticals, food and sanitary products. On the road freight transport market in the European Union there are many small firms that are currently forced to follow the changes more than ever due to the pandemic in order to react to them and ensure the survival on the market. While this market has been recording slight fall in demand in 2020, considering the entire EU, the situation is quite the opposite when observing the national markets. Certain markets have been facing considerable fall in demand and some have recoded a positive impact on demand. Some firms will have no choice but to close, and some will try to find a lifeline through consolidation, mergers and acquisition and/or implementation of innovations.

Keywords: *road freight market, European Union, COVID-19 pandemic*



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