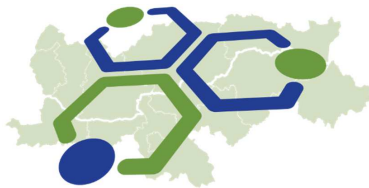




## Building Partnership

# SMART COMMUNITIES ACADEMY Proceeding of Abstracts



# SMART COMMUNITIES

VIRTUAL EDUCATION AND RESEARCH  
AND DEVELOPMENT AND INNOVATION NETWORK  
IN THE SLOVAKIAN - HUNGARIAN BORDER REGION

May 17 – 18, 2018

Herľany, Slovak Republic

Technical University of Košice, Faculty of Economics

2018

The project is supported by European Union, co-financed by the European  
Regional Development Fund

Editor: Nataša URBANČÍKOVÁ

*The project "Smart Communities" Virtual Education and Research and Development and Innovation Network in the Slovakian - Hungarian border region (No. SKHU/1601/4.1/210) is supported by European Union, co-financed by the European Regional Development Fund.*

The content of this Proceeding of Abstracts does not necessarily represent the official position of the European Union.

The Proceedings of Abstracts did not pass the language editing. All authors are responsible for the content and language level of their abstracts.

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**ISBN 978-80-553-2994-9**

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*The project is supported by European Union, co-financed by the European Regional Development Fund*

## Preface

Smart community is not a new concept in this century. It evolves in line with the development of smart city. The main idea of smart community is how cities and communities use information and communications technology (ICT) to support growth and enrich lives through enhanced and diversified economies, and solve social and infrastructure problems. In the Smart Communities Guidebook, developed by the State University of San Diego (1997), Smart community is described as a geographical area ranging in size from neighborhood to a multi-county region whose residents, organizations, and governing institutions are using information technology to transform their region in significant ways. Co-operation among government, industry, educators, and the citizenry, instead of individual groups acting in isolation, is preferred. The technological enhancements undertaken as part of this effort should result in fundamental, rather than incremental, changes. It means that Improving the ability of the community and its members to compete in today's world is a major goal of smart communities.

The Smart Communities Conference held in Herľany, Slovakia from May 17-18, 2018 was open for local and community development experts and practitioners, academics, PhD students, early career researchers, local leaders, social innovators, urban and regional planners from the Central-Eastern European countries, working within the fields of regional development, rural and urban development, economics, finance and business administration. It offered specific training and provided an opportunity for interaction amongst local and community development experts, practitioners, researchers and public administration.

The Proceeding of the Abstracts provides an opportunity for readers to engage with a presentation that were presented during the SMART Academy. The abstracts published here pick up on the multiply meaning of the term of smart community.

*Nataša URBANČÍKOVÁ*





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*The project is supported by European Union, co-financed by the European Regional Development Fund*

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## Does Size Matter? Different Paths of Hungarian Ethnoregional Parties in Neighbouring States

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### Abstract

As a result of the peace treaties closing the First and Second World War, a significant mass of Hungarians came under the sovereignty of neighbouring states. These ethnoregional communities had to face several actions hampering or even preventing their self-determination during the interwar and state socialist period. After the regime changes, contrary to majority political nationalism and integration processes ethnoregional movements and parties were formed based on these communities, which have followed different development paths and have set disparate goals by country in recent decades. Some of them are successful in terms of support and political representation, while others became fragmented or remained irrelevant at national level; some of them have territorial aspirations, but others aim to cultural autonomy only. The presentation analyses those country-specific characteristics and circumstances that could explain the differences in the development paths and political goals of Hungarian ethnoregional parties in Croatia, Romania, Serbia, Slovakia, Slovenia, and in the Ukraine.



## Perception of Social Entrepreneurship among Entrepreneurs in Slovakia

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### Abstract

The article deals with the issue of social entrepreneurship in the conditions of the Slovak Republic. The paper describes the theoretical approach to the topic, defines social entrepreneurship, benefits of social entrepreneurship to the society and refers to the importance of social entrepreneurship and the establishing of social enterprises. The main purpose is to analyze the position of social entrepreneurship in Slovakia and to evaluate how is it perceived by entrepreneurs in Slovakia. This has been done by analyzing the results of personal interviews conducted among a selected sample of Slovak entrepreneurs. Respondents assessed their overall perceptions of social entrepreneurship in Slovakia, along with the possible obstacles and constraints that social entrepreneurs can face.



# Key Factors of Silicon Valley Cluster's Success and Excellence

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## Abstract

Silicon Valley has been considered to be the most successful cluster in the world for a long period of time. A number of factors and causes lie behind it's hardly inimitable success, and one of them is it's constant openness to changes which results in an effective system of taking the opportunities from the very beginning of its existence. Moreover, the cluster composition is equally unique; it consists of top quality universities (Stanford University in Palo Alto and University of California at Berkeley), leading companies (Apple, HP, Intel, Google, Cisco), regional and local governments as well as industrial research centers and specialized service providers, which together have developed a unique ecosystem of healthy competition and cooperation that brings benefits to all involved actors. These facts, as well as many others, are the reasons why in Silicon Valley there are constantly being established more successful businesses, innovations, patents and even new industries than in any other equally large area in the world.



## Educational Effectiveness of Secondary Schools in Selected Countries

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### Abstract

The issue of educational effectiveness is remaining a widely debated topic in contemporary society. Leaving school with a good qualification is more important for the employment in knowledge-based economies than ever. Hence the secondary education attainment is recognized as an important stage in educational progressing across developed countries. After completing secondary education, the most of students are prepared to get into tertiary education or to begin a career path by entering a job market. The study provides an empirical evidence of secondary education effectiveness in selected countries with focus on the results of international PISA testing. The analysis is based on the assumption that there is a direct linking between government expenditures on secondary education and PISA-testing results.



## Issues of Porter's Competitive Advantage Model Form the Point of View of a South-Transdanubian Small Settlement

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### Abstract

What are the decisive factors of the competitiveness of a settlement? Its location in the region, its historical, economic, social situation in the region concerned or the activity of the local economic and social operators, or else the absorption capacity of the resources and capital. Local, micro-regional development factors such as infrastructure supply, the state of public utility networks, number of economic operators and their ability to enforce their interest are inevitable for quantitative and qualitative growth. Without them, growth is almost impossible. Where there is no stable economic, social basis for recovery, the opportunity to follow a solid pathway of developmental is unthinkable. Human factors of development such as the state, competitiveness of the local social care system, the primary and secondary education system, the level of development and quality of the health care system also have a major impact, and even determine the overall competitiveness of a micro region or a settlement. The above economic and human aspects together can define the state of a region. In the case where the local community, the local area correctly defines itself in the global competitive environment, it is possible to define adequate breakpoints and to start quantitative and qualitative developments along these core competencies.



## Smart Communities in a Global Context - Tendencies and Challenges

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### Abstract

The objective of the presentation is to give an overview about the most important global tendencies in the field of Smart Cities and Communities and to place Smart Communities project into an international context. Globalisation, climate change, demographic changes and digitalisation are tendencies shaping our present and future. Cities and communities - rural and urban alike - are part of a fierce international competition for resources and aim better living standards, increased happiness and well-being of the citizens in a sustainable way. Although ‘Smartening up’ could constitute a possible avenue, there are several predecessors of the process, such as the mindset change of local decision-makers from egoism to system-centered thinking (eco-system and helix models); the openness towards digitalisation and artificial intelligence; an integrated, holistic, yet tailor-made approach; the focus on social inclusion, trust and ethics during the developments; the involvement of citizens and the transparent disclosing of the collected and analysed data for them; the specification and harmonisation of the different layers of the city’s ecosystem (e.g.: human, transportation, information, energy); and finally, the shift from strategic programming and policy development to the introduction and completion of specific actions and interventions in the short term. We all learn from failures and international benchmark data shows that only one out of seven or ten initiatives survives. The Central and Eastern European region can exploit the latecomers’ advantage and the Smart Communities project





(SKHU/1601/4.1/210) has a good potential to significantly advance this objective. Contrary to mainstream thinking, but in line with the objectives of the Post-2020 Cohesion Policy, our concept hypothesizes that smartness is not the privilege of cities and small rural communities could also be smartened up through systematic development of citizens from early childhood. As a mid-term evaluation of the pilot, it can be stated that the project constitutes a sound proof of concept, and the proposed methodology with two main pillars (development of ‘soft’ elements and institutionalisation) could be rolled-out to the national scale and/or to other cross-border areas.



## Rural Innovation: Smart Ideas and Good Practices from Hungary

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### Abstract

Innovation not only means the technological, intense progression of metropolitan regions – on the contrary, it can also be assimilated in the context of rural communities. According to the definition, rural innovation is a novelty in the economic or social life of rural areas that is able to bring new added value to the rural quality of life. However, the innovation capacity of rural areas is not always favourable. The main reasons for that are the thin economic base, the missing (or weak) human capital, the low quality of infrastructure or the problems of availability. Despite the mostly disadvantageous environment, many rural communities successfully applied different solutions. They introduced a novelty at rural areas, aiming to maintain or increase the quality of life. These solutions can be understood as rural innovations. The presentation will focus on the nature of rural innovation in a general context, and give concrete examples from Hungary for smart ideas, that can serve as a good example for other communities as well.



# The Comparison of Financial Behavior of University Students and their Skills in Terms of Financial Literacy Concept under the Slovak Condition

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## Abstract

In spite of high financial literacy of selected groups, majority of the world's population does not have any basic financial knowledge as well as no access to education. Due the fact that financial literacy of general population in many countries does not reach any proper level, the inability to make qualified financial decisions has a very negative impact on people's lives. The aim of this study is to compare the level of financial literacy of university students of the selected economic faculties in Slovakia and analyse financial behaviour of students and their skills in terms of financial literacy concept. We statistically processed primary data of university students which were collected through the survey. The research line was defined by a several hypotheses and we examined correlative data dependence of selected factors and their intensity by using Logit model. Our results confirmed significant gender differences at financial literacy level, with women achieving more financial skills than men. The level of financial literacy among students of the first year of the bachelor study was comparable to Master's study students and did not show any significant increase in financial skills obtained by completing a university study program at economic faculties. The purpose of the authors in this study is to emphasize the importance of the issue of financial education among the young generation and the need for its solution where the presented research may



provide important information for policy makers. Detailed examination requires access to more structured data, while providing such a platform for further research.



## Smart Cities and (Start-Up) Communities

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### Abstract

Smart cities are debated intensively and even ranked according to different indicators. There is no consensual definition of the notion yet, but surely the concept consists of smart communities and networks as related to human and social capital, innovative solutions in combining traditional transport/energy/social infrastructure with modern ICT communication tools, and social network and open data approaches supporting participatory governance. The interaction of three factors is believed to boost economic growth and to provide a high quality of life. New ideas require innovative technological solutions, but this is not possible without enablers and facilitators in the city society - social innovators. In the paper, the networks of social innovators are analyzed in the cities of Slovakia and particularly one the important smart communities within the cities – start-up ecosystems and their relationship to local universities. The main research question is which city factors are significant in process of creation, evolution and operation of start-up ecosystem and what attributes are specific for start-up ecosystems in post-communistic countries. The ecosystems are identified as firm-, institution- or personalities/networks-centric.



# Impact of Globalization Tendencies and Competitiveness Factors on Operating Surplus of Enterprises in Various Region Types

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## Abstract

Within European Union's internal regional structure, there are still some regional disparities due to the geographical location and economic characteristics of the regions, which to a certain extent determines some specific factors of their competitiveness, respectively competitiveness of regionally-established enterprises. That does ultimately reflect on the impact of globalization in the region. In the context of this paper, we deal with the impact of regions geographical location, which we categorize into four categories based on their geographic and economic characteristics (urban regions, rural regions, mountain regions, border regions) and the impact of resulting regional disparities to the competitiveness of enterprises in the given regions, within selected countries of the European Union. In this context, the term region is to be understood as the corresponding regional equivalent of the nomenclature unit of the European Union Territorial Statistics (NUTS) at level three. Our contribution aims at determining and characterizing the influence of selected factors of competitiveness and globalization trends, which at a different point of view can also be perceived as regional disparities (such as GDP per capita, investment volume directed into the region, or household consumption in the region), the competitiveness of regionally established businesses, depending on the specific type of the region. Impact intensity of selected indicators was



determined by generalized linear models (GLM) based on the assumptions of evaluated data. This contribution was created as part of the VEGA grant scheme, project number 1/0578/18 "Modification of Methodologies for Sustainable Development Assessment and Management". Also, the project of the KEGA grant scheme of the Ministry of Education, namely Project 038PU-4/2018 "Development of the study programme Environmental Management in second level of study".



## Education for Local Development of Rural Areas - ELDORA

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### Abstract

ELDORA project aims to increase the professional capacity of employees of the participating organisations to provide better (tailor-made) training modules and consultancy services for local leaders in rural areas in the field of social entrepreneurship. Another aim is to improve the employment of young people and the quality of life in rural areas through increased employment and economic development of rural areas. The project is realised in partnership of 5 subjects from 4 countries (Slovakia, Poland, Hungary, Italy).





## Regional Constructed Advantage as a New Tool for the Regional Policy

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### Abstract

The purpose of the paper is to give a theoretical view on the newly established concept of constructed regional advantage, which has become not only the means of understanding the noted change in economic growth activity, but has become a strategic policy perspective practically applicable for companies, academics and regional policy makers. In this regard, constructed regional advantage is considered as next evolutionary step for regional economic development that is designed to sustain the regional competitiveness in an increasingly globalizing economy. The paper theoretically presents and summarizes the three elements that constitute the backbone for constructing regional advantage. The first element refers to the knowledge bases that represent various combinations of tacit and codified knowledge, qualifications and skills embodied in people, companies, industries and regions. The second element stresses the importance of specialization in different but cognitively-related industries. The third element describes how knowledge networks are spread across a range of companies, i.e. how the internal knowledge base is distributed across a range of actors, industries and technologies.



## A Technology Context for Resilient City - Case of Košice on the Tourism Map

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### Abstract

Urban and suburban areas are developing in many ways, particularly by means of new technologies that allow new context for city to become resilient. A global trend in tourism is obvious in territorial marketing. This global trend is collecting data for marketing research between supply and demand sides. Having a proper balance on the market can enhance resilient strategies for future of many areas, be it urban, suburban or even rural. Preferences attribute is multi-criteria in its substance. This substance can be influenced, however there is a core that is persisting in a long-run. This core criterion is to be uncovered in datamining from existing sources. The existence of such data source is seen as double-edge sword; i.e. misuse of data and on the other side a practical tool for coordination on the market within the geographic area of city. This paper will take advantage of pre-search by mobile phone applications representing a technology context. Tourism map was sketched for Košice city based on data retrieved from volunteers. This rather trial version shall point out another context for resilient city.



## Cross-Border Cooperation Programme - Analysis of the ENPI CBC HU-SK-RO-UA 2007-2013

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Oradea, Romania

### Abstract

Cross-border co-operation is one of the development tools for near to border regions, one of these is Košice Self-governing Region. The presentation consists of three basic parts. First part is dedicated to the cross-border co-operation, especially to the ENPI CBC Hungary-Slovakia-Romania-Ukraine Programme. The second part of presentation is dedicated to the analysis of ENPI CBC HU-SK-RO-UA program focusing mainly on accepted and approved projects, actual disbursement and implementation time, partnerships and organizations involved. The design part of the presentation uses the information obtained through interviews with the representatives of the Joint Technical Secretariat (STS) of the program, the Contact Point (KB) within the Košice Self-Governing Region as well as the Project Managers (PM) of the selected projects. Based on the interview research, consisting of opinions from different actors, their evaluation of the program and ideas for improvement in the new programming period, we were able to design the recommendations on the ongoing ENI CBC HU-SK-RO-UA program.



## Migration and Diversity

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### Abstract

Migration is a challenge for private and public sector which, if managed well, can provide significant opportunities and contribute to economic growth and employment. The European Union agenda on migration is included among the widely discussed topics not only at the European Union level, but also in the Member states. The evidence of the economic benefits migrants can make to the host communities is not well understood and accepted. This is a particular situation in countries without experience with large-scale migration. This paper examines the ways in which Slovakia reflects and controls migration and the flow of migrants. New legislative rules have been introduced. The findings demonstrate which public interventions and positions were adopted mainly from the central tier of public administration in Slovakia. The paper also outlines future perspectives towards migration in the regions of Slovakia.



# Empirical Analysis of Intangible Assets as Determinants of Firm Performance: Evidence from Western and Northern Europe

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## Abstract

The topic of intangible assets is extensively discussed, especially in the recent age of knowledge economics. Human capital is becoming more and more important and knowledge anchored in firm's employees is an important source of potential innovations and further economic development. In this paper, we perform a panel data regression analysis of Western and Northern European firms in the context of their intangible intensity. We estimate an effect of three intangible asset proxies on firm value expressed as a ratio of market and book value of the firm. Additionally, we apply an instrumental variable approach to account for the endogeneity of R&D expenses. We show that different accounting treatment may cause different results and found that R&D activities have a statistically significant positive effect on firm value, whereas negative or no effect of other intangible proxies was found.



## Smart City Solutions in the Capitals of the EU Countries

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### Abstract

Innovative technologies are increasingly important in the development of cities, regardless of whether they are used by local governments or the private sector. Innovations are emerging in more and more areas that contribute more to efficient and sustainable cities, improving the quality of life of the locals. As the volume of available data is constantly increasing, new technologies and a different way of thinking are needed. In addition to technology, there is a need for city dwellers or the active participation of NGOs. In the first part of our study we will review the definitions of the smart city with the help of Hungarian and international literature. We will then examine the level of capital cities of the European Union for the achievement of smart urban programs. We summarize what kind of improvements are being implemented today and what improvements are expected in the future in the cities examined. We also strive to show projects that are less suited to current trends but they may be worthy of wider audience due to their innovative nature.



## Development of Smart Traffic Evaluation- and Influence-Modules Based on Non-Declarative Rules of Artificial Intelligence

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### Abstract

The paper delivers a mid-term report about a Hungarian GINOP-project, where the objectives are: development of a new methodology for evaluation and smart influence of traffic based on artificial intelligence. The basic pillars of the project are from KNUTH (1992: Science is what we understand well enough to explain to a computer. Art is everything else we do.), and from BOSTROM (2015: ...we should work out a solution to the control problem in advance...). The online engine for artificial intelligence is a product of a Hungarian INNOCSEKK project (2006-2009) – prized two times (2012ITBN, 2014HUNINNO) in frame of its applications. The similarity analysis as such in the background of artificial intelligence is capable



to support lateral thinking. Therefore the problems of evaluation and influence of traffic can be handled without classic physics – based on the behaviour patterns of moving objects. Similarities make it possible to derive non-declarative rules like strategical directions for smart influence of traffic constellations. And also similarities ensure an anti-discriminative, multi-layered evaluation in an automated way, where evaluation is the input for control simulations about traffic alternatives. The first results show, that the anti-discriminative evaluation can involve arbitrary components like moving, stopping, accelerating, and/or environmental variables incl. emissions, noises, etc. The aggregated evaluation can be derived for the entire traffic system and/or also for its parts. The smart influence of traffic aiming a better evaluation value in the future involves the time series of the evaluation module and it derives parallel models being able to estimate the next aggregated evaluation value of traffic. The staircase functions of the models make it possible to derive effective and efficient strategies in form of preferred direction of traffic lights. The results can be checked concerning their consistence (logical connections). The next challenges in the project will be the estimation of the consistence of traffic to explore the most instable variables and the development of models being capable of deriving connection (production functions) between variables. The project involves researchers from the disciplines of social sciences in order to add multidisciplinary approach and a high level of socio-economical view to the goals and also to the execution of the project. It is nice to percept their affection on the set of goals, and on the more abstract ideas to be achieved with the mathematical an AI model like competitive advantage, added value or the phenomenon of smart products. It is revelation to be able to observe the way how an R+D project fits to the Industry 4.0 paradigm and the Smart City, Smart Transportation, Smart Metering ideas from a helicopter view. Our paper will reflect on both the mathematical and the socio-economical approach highlighting the result of their symbiosis.





## The Relationship between Public Transport and Tourism in Budapest

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### Abstract

In 1999, the MONITOR Institute for Social Research and Methodology Center commissioned a survey by the Hungarian Tourist Board with the name "The opinion of foreign tourists on public transport in Budapest". Compared to the situation experienced by us, the survey has set the relationship system of public transport and tourism in Budapest very positively. According to our investigations, there have been positive changes in public transport, as in the area of information, the acquisition of information via the internet has become a major factor by 2017. Furthermore, based on the feedback, it can be said today that the established transport network can be considered good, orientation is easy, connections are good. We also discovered similarities between the two analyzes, with the use of the means of transport used, the bus, the metro and trams were used by most. As a motivation for use, price and speed also showed the same result. The purchase of discount cards or even weekly tickets was not particularly significant in 1999 or now, the use of the Budapest Card has increased only in the case of organized trips. The number of negative reviews has increased considerably, and by 2017 it has become visible to customers as well that the Budapest Transport Center (BKK) faces significant financial shortages. There is still a problem for tourists in terms of the employees' low level of foreign language proficiency and lack of information in foreign



language. From the point of view of service, serial failures and low number of ticket vending machines, the age of vehicles, crowd and ticket controllers' behavior caused negative feelings from respondents. Among the students studying here, the extension and compression of night traffic was also showing bigger demand. In our research, we are going to analyze the results of previous and current surveys, as well as the differences between them and their causes, and aim to present the actual changes and tendencies.



## Urban Development in the Light of Climate Change

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### Abstract

Cities and urban areas are increasingly worldwide recognized as strategic arenas for climate change action. Processes of urban governance addressing climate change should also reconfigure other urban development policies. The majority of Slovak cities have already witnessed anomalies of “traditional” weather like heatwaves, torrential rains, thunderstorms or droughts. There were significant negative consequences of these events on human health, infrastructure, and services and last but not least on their development plans. It is expected that climate change impacts will worsen. Despite of this fact the vast majority of the Slovak cities are only waking up in this field and only few of them have started systematic climate adaptive steps. The paper, based on long-term research and experiences of the Carpathian Development Institute, not only names causes of this adverse state, but also points out how to change it. It touches on low awareness of risks resulting from climate change for urban development, some uncertainty in prediction when, were and in what degree of intensity the given climate change impact happens, absence of comprehensive climate policies but also lack of applicable methodologies and examples how to address climate change impacts. There is the CDI effort to incorporate and institutionalize climate change governance in urban areas reflecting conditions of specific contexts such as heterogeneous forms of governance, climate rationalities as well as other sectoral development policies.



## Smart Governance and Participatory Citizenship

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### Abstract

Cities are often described as living organisms that are adapting to changes (e.c. economic, political, or environmental) and the policy makers (local governance) make decisions to enforce these changes. Therefore city as the object of the research has been attractive topic for scholars from different perspectives: „creative city“ and “creative class” (Landry, 2012; Florida, 2003), “governance of commons“ (Ostrom,1990), „globalization of cities“ (Sassen, 1999), “urban complexity“ (Batty, 2005) “smart city” (Caragliu et. al.,2009) and many others. The concepts of so-called Smart city has been promoted by national governments and international organizations to promote the digital era and the new approaches to help the world to deal with challenges that the humanity is currently facing (e.g. climate change, overpopulation, rich-poor gap). The concept has generated other similar approaches to the city: “intelligent city“, “digital city“, “eco-city“ and others. It is hardly possible to find one universal definition of what smart city represents. The most common approach describes smart city by a six-dimension model: (1) Smart economy (2) Smart people (3) Smart mobility (4) Smart environment (5) Smart living and (6) Smart governance. The dimension of governance is the main object of this research. In recent years, the voice of citizens began to resonate. The proof of such statement is also depicted by Oxford dictionary that has chosen the word for 2017 - „youthquake“. Policy makers have realized that well-being of cities can be better achieved through active involvement of citizens into the decision-making process, and such approach is known as participatory. The challenge in the concept



of participation is how to find a balance in between the views of citizens, experts and policy makers. Benefits of active participatory citizenships are on both sides, citizens get involve into the decision-making process and become aware of the issue the city is dealing. On the other hand, the local government receive support and legitimacy from citizens for their actions. (Irvin, Stansbury, 2004) The research question is whether the role of political parties in local government is decreasing its power and the youth on the other hand is gaining recognition. The main aim of this article is to analyse the achievements of existing participatory governance cases in Slovakia.



# Theoretical Background and Problems of Health Care Efficiency with DEA Models

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## Abstract

In our paper we present the basic theoretical background of our research problems. The theoretical overview was supported by analysis in this area. In our work, we focus on examining efficiency in the service sector with the primary aim of further analyzing the health sector. In recent years, the service sector has been one of the fastest growing sectors of the economy. In the field of health care, there is still place for improvement and health care provision is a highly sensitive and up-to-date topic, we are trying to look at the efficiency of health systems in the selected OECD countries, including the partial results of our analysis. Health and education can be quantified by a number of methods and the results are known as determinants of health and education. The level of education and the adequate health status of the population, have an impact on the development of country. In most countries, we still see areas and regions that have a poor health infrastructure. Often these problems are associated with inefficient financing in the country. In recent years, health and education are areas where countries have invested a significant percentage of their budgets. In the paper we present the first results of our analysis and we also want to point out the basic assumptions of further activity in this area. The efficiency of health care systems we try to analyze with Data envelopment analysis (DEA). DEA is the approach to assessing the efficiency of individual and homogenous production units. The aim of our paper is to analyze the relative



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efficiency results of health care sector in selected OECD countries using DEA models.



## Resilient Small Towns in Hungary

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### Abstract

After the political, social and economic transition there are new challenges for Hungarian settlements. In our paper we analyze the resilience of Hungarian small towns. In Hungary there are 3155 settlements: 346 towns and 2809 villages (with local governments), and the population of 100 smallest towns are below 5000 inhabitants. We have grouped them based on different data, and the quarter of them, which are heads of administrative districts, were analysed in detail. The main problems of the local governments are the decreasing of population, the lack of qualified people, the unfavorable or changeable (often one-sided) local financial conditions (an uncertain budget), and the variable Hungarian legal environment (changing regulations). In the case of small towns, some problems derive from the contradiction between the social, economic weight and the expected functions of the centers (undersized, oversized services). Some of the problems can afflict the settlements in a short time, and the solutions have to arrive quickly, also, but they often do not have appropriate local tools, and the external help and supports (mainly EU supports) are only partly applicable tools to solve problems, thus the degree of resilience is not appropriate. In this situation one of the possibilities is to strengthen self-sufficiency of the settlement.





## Unconventional Monetary Policy Impact on Foreign Exchange - Evidence from EU

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### Abstract

In our work we examine effects of Unconventional Monetary Policy (UMP) related statements made by European Central Bank (ECB) on major currency crosses with common Eurozone's currency (Euro). Considering announcements days (AD) as events, we adopt event-study approach to calculate excess changes on particular announcement day for main currencies inside and outside the EU against the Euro. Realising complexity of statements provided by ECB, and difficulty to isolate effects linked only to UMP related information, for purposes of our work, we studied every announcement individually, therefore we were able to define deviations. Results indicate, that statements containing information about prolonging or excessing UMP, especially Quantitative Easing (QE), or initial information about UMP or QE cause depreciation of euro, while information about tapering UMP programmes, or normalization of excessively accommodative monetary policy initiate appreciation of euro. Our results seem to be in line with results of Sosvilla-Rivero & Fernández-Fernández (2016), while as further contribution, our results provide solid evidence, that currency pairs inside the EU react less volatile compared to currency pairs consisting of Euro and currency outside the EU. Results could provide a contribution from trading perspective, while also policy makers same as governments could use these information to estimate effects of such policies in future.



## Measuring the Potential of Green City: Case Study from Slovakia

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### Abstract

Cities play central role in the transition to more sustainable development. Good governed cities use synergies between environmental, economic and social inclusion policies in transition to low carbon economies. The progress in the transition need be measured and evaluated at the local level. The paper presents the local green index based on the available quantitative and qualitative indicators about cities in Slovakia. It assess the "green" strategies in 8 biggest Slovak cities and rank them according the results of the constructed green index.



## Socio-Economic Resilience Capacity and Vulnerability

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### Abstract

The term resilience is used in many scientific researches or discussions, mainly in relation to external shocks due to their critical consequences. Resilience capacity is a derived concept which reflects an assumed ability of a region to react on a shock based on three dimensions; economic, socio-demographic and community connectivity (measured by Resilience Capacity Index - RCI). The RCI describes an initial state of a region before a strike of an external shock. Its ability to describe the state should be verifiable with a particular situation (e.i. economic crisis 2008). For this purpose, indicators of economic resilience and vulnerability, which measure a real reaction of regions, can be used. Vulnerability is about a susceptibility of a system or its parts to harmful consequences of external shocks. In this report, a relationship between various RCI indicators and economic vulnerability (based on unemployment rates) in Slovak regions during the economic crisis 2007-2008, is analyzed. The analysis shows that the highest RCI values are in big economic centers and that there are significant differences between west and east regions of Slovakia. On the other side, urban economic centers, which are export orientated, are more vulnerable to external shocks. This approach, which links resilience capacity and economic vulnerability, brings a different new perspective in comparison to economic vulnerability.



## The Importance of Regional Development in the Office of Košice Self-Governing Region

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### Abstract

Smart organisations and social systems are dynamically adaptive to new circumstances, innovative and knowledge-driven, strategically minded, internetworked, learning as well as agile in their ability to create and effectively exploit the opportunities offered by the new trends in order to responsibly achieve the preferred development objectives. Smart public governance is defined as governance that enables a social system and its subjects to operate effectively in a fast changing and complex environment rationally utilizing its internal and external resources, making pragmatic and advanced decisions relevant to specific circumstances in order to create shared public value. Key principles of smart development include employing uncommon sense for discovering the approaches, methods and resources for the development; creation of ecosystem favourable for creativity, innovations and entrepreneurship; employing the philosophy of shared value creation; intelligence; strategies targeted to achieve ambitious developmental goals; creation of co-operative community culture; decision making is grounded on scientific knowledge and rethinking of best practices; extensive use of ICT in all spheres of social system; empowering of individual and organisational learning; networking and sustainable development. Paper deals with importance of smart strategy for regional development. The case study of joint vision of smart Kosice self-governing region is presented.



# Cross Border Cluster Initiatives for Economic Development Support

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## Abstract

The growth of competitiveness of regions depends on their capacity to innovate. With increasing degree of understanding of clusters, clusters are becoming an important component of national and regional economic program. Peripheral regions are disadvantaged and because of their localization they have only few links with international networks in science, technology and innovation. Innovations are increasingly based upon a “Triple Helix” of university-industry-government interactions. The Triple helix approach depends on the building of partnerships between various regional, local governments, universities, private sector and NGOs and is a key issue at both national and regional level, although it is not easy to manage the process. There are the difficulties during the triple helix approach implementation in the former post-communist countries, including Slovakia and Ukraine. The paper is focused on two cross border peripheral regions (Košice Region in Slovakia and Zakarpatska region of Ukraine). These regions need to seek opportunities for economic development which are not based only on the foreign capital attraction. The innovative potential of two converging and cross-border regions is examined and possibilities of cross-border clusters and cluster initiatives creation discussed. The paper presents key factors for cross border clusters and cluster initiatives enhancement and is based on the primary research undertaken for ICT and Food Industry sector in both targeted regions. The role of social capital for cluster initiatives support is discussed as well.



## **European Higher Education in the World: Case Study of Reforming Master Programmes in Finance in Armenia and Moldova**

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Košice, Slovak Republic

### **Abstract**

Globalisation and technological development are radically changing the landscape of higher education. Over the next twenty years the demand for higher education is expected to grow exponentially, from the current 99 million students worldwide to 414 million by 2030, with China showing by far the highest increase in recent years followed by Brazil and India. The thirst for knowledge and social mobility in emerging economies will place higher education within the reach of hundreds of millions of citizens around the world. Europe remains an attractive destination for mobile learners with a stable share of around 45% of the internationally mobile student population, a population expected to grow from around 4 million today to 7 million by the end of the decade. Nevertheless, if European HEIs want to continue to be the number one destination against a background of increasing competition from Asia, the Middle East and Latin America, they must act strategically to capitalise on Europe's reputation for top quality higher education. The EU cooperation outside EU is described as case study of an Erasmus+ Capacity Building Project: The Reforming Master Programmes in Finance in Armenia and Moldova (Project No: 585784-EPP-1-AT-EPPKA2-CBHE-JP).



# Hungarian - Slovak Cross-Border Research on the Labour Market Opportunities of Disadvantaged Job Seekers

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## Abstract

The purpose of our labour market research is to obtain data on the employment status of the two countries in the economically less developed border regions (Hungary: Salgótarján, Balassagyarmat, Slovakia: Losonc, Rimaszombat). As the method, we work with a quantitative, online questionnaire survey. In our research we focus on the employment opportunities of disadvantaged job seekers (long term unemployed, poorly educated population, career starters) in the designated areas. There are a large number of arguments related to the research, as the local labour market faces many difficulties (high number of poorly educated job seekers, high unemployment rate, low employment rate) from year to year. By interpreting local employers (at least 25-30 per region, SME's and multinational companies), we compare the characteristics of the two geographical areas, the possible similarities and differences related to the demand of the employers, and explore ways and special active labour tools to improve the labor force of the Hungarian and Slovakian regions. Beyond summarising datas of the online survey, by presenting good practices and joint programs, previous cross border actions we draw attention to the potential of the cooperation between border communities and the opportunities offered by NGOs in employment and adult training programs. As a resoult of the research, other project ideas may appear in the context of our proposal, as in the form of a joint civil partnership our research may highlight that



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innovative, individual services are needed to improve the economic situation of the region and to reduce the effects of social exclusion.





# Head in the Clouds: Digital Learning to Overcome School Failure

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## Abstract

Educational disadvantages and exclusion lead to lacking integration in the labour market and exclusion from society in general. The aim of this talk is to present a project aimed at preventing early school leaving, the development of basic and transversal skills and the enhancement of digital education in the context of minorities, mainly Roma, by implementing an innovative educational approach. The approach used within this project is based on SOLE (Self-organized Learning Environments), a widely recognized alternative educational method that supports an individual learning process according to students' abilities, needs and interests. Within the project, learning materials have been designed to engage students and youth in their own learning process. Six learning modules have been created: Basics of Video-making; Basics of English Language; Introduction to IT; Simple Programming; Ekopolis; Real-life Situations. The materials can be used as complex units, or alternatively, teachers/educators can choose selected parts and implement them within standard classes/courses. The project has been implemented in three locations (Slovakia, Romania and Kosovo), in afterschool and youth programmes.



# On the Transmission of Community Norms: The Case of Segregated Roma

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## Abstract

We use an experimental approach to assess the degree to which beliefs about social norms are clustered within families and across different communities. The study is undertaken in the context of segregated Roma communities, which offers a unique environment for study of the topic. We show that children living in poor segregated settlements are significantly more likely to coordinate with their community peers than with their parents. With respect to the transmission of norms perceptions, this suggests a stronger influence of peers than parents. We further show that increase in age is associated with increased likelihood of having the same norm perceptions as parents, until the age of 12-13. Consequently, this indirectly suggests a stronger role of school environment and peers (although we are unable to separate one from another) than the role of family. This study sheds new light on how norms are acquired by children living in communities with a high concentration of poverty. This research contributes to the literature on intergenerational transmission of disadvantages, and provides insights into norms transmission mechanisms among the poor. The knowledge of such mechanisms may be useful in the processes of improving the efficiency of anti-poverty social policies.



**Name:** Smart Communities Academy – The Proceeding of Abstracts

Edited by: doc. Ing. Nataša URBANČÍKOVÁ, PhD.

Publisher: Technical University of Košice, Letná 9, 040 01 Košice,  
Slovak Republic

Edition: First

Number of Copies: 55

Year of Publication: 2018

Pages: 51

**ISBN 978-80-553-2994-9**

© 2018 Technical University of Košice, Letná 9, 040 01 Košice, Slovak Republic



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**ISBN 978-80-553-2994-9**