









# REGIONAL POLARISATION AND UNEQUAL DEVELOPMENT IN CEE: CHALLENGES FOR INNOVATIVE PLACE-BASED POLICIES



# Regional Polarisation and Unequal Development in CEE: Challenges for Innovative Place-based Policies

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### **CONFERENCE ABSTRACTS**

# THE IMPACT OF THE TAX BURDEN ON MACRO-ECONOMIC PERFORMANCE: AN EU PANEL VAR ANALYSIS.

## **Kevin Albertson, MMU Business School, United Kingdom Richard Whittle, MMU Business School, United Kingdom**

The Laffer Curve analysis, that tax rates are generally above their optimal level, is taken for granted to motivate tax reduction policies in, for example, the UK media (Telegraph 2017)<sup>1</sup>, the UK government (Conservative Party 2017)<sup>2</sup> and the federal government of the USA (Cohn 2017)<sup>3</sup>. Yet the Laffer analysis (even if appropriate) misses an important point: government's democratically mandated role might not be to maximise the tax revenue, it might rather be to maximise some social goal such as, for example, employment or real GDP growth per capita. This is the issue we consider in the following analysis.

Using a VAR based on a panel of data describing the 28 nations of the EU we consider whether there is, or is not, any evidence that: the rate of growth of GDP per capita; employment; and the inactivity rate of young people are affected by such variables as: the tax burden or redistributive policies such as social transfers in kind and social benefits.

We show that there is no evidence that the tax burden in aggregate impacts on either employment or real per capita growth. There is, for some EU nations, evidence of the beneficial impacts of social investment expenditure.

# UNEQUAL MOBILITY IN PERIPHERAL AREAS: A STRUCTURAL APPROACH TO REDEFINE THE RELATION BETWEEN POLITICS AND A REGIONAL TRANSPORTATION GAP

### Luc Ampleman, Jan Kochanowski University, Poland

Do remote areas, peripheries and isolated places really share the same characteristics in term of mobility gap(s)? Are they all facing the same challenges in term of spatial inequities? These questions remain of importance since remote regions and peripheries sometimes appear sui generis as a research field within 'area studies'. Outcomes of this research usually guide practitioners in their attempts to plan, predict, provide and intervene in the regions concerned. The present paper argues that while transportation and its corollary notion of a transportation gap play a role in the shaping of our understanding of peripheries and other analogical concepts, they tend to hide a deeper dimension about 'remoteness', which is related to the 'political control of mobility'.

In the current paper, I first undertake a scoping review of the main assumptions and conceptualisations of the notions of periphery, hyper-periphery and remote (rural) areas in relation to mobility. Secondly, I expose how the concept of the 'control of mobility' diagnosed by structural and morpho-dynamic geography (Ritchot, Desmarais) can contribute to changing perceptions about the notion of peripheries and remoteness while revealing evidence about the structuration of space due to the political mobility of actors. Building on previous evidence, I illustrate how one can originally and efficiently redefine the notion of a territorial mobility gap to the benefit of policy makers and practitioners alike, notably in the CEE countries.

ESTIMATING PREFERENCES OF RESIDENTS ON PUBLIC TRANSPORTATION SERVICES IN RURAL AREA IN JAPAN – CONJOINT ANALYSIS FOR MEASURING THE DEMAND OF THE ELDERLY –

### Keita ARAI, Kindai University, Japan

This paper aims to research a better way of providing the transport services to the elderly people who do not drive their cars by themselves any longer. To achieve the goal, we made questionnaire surveys in rural areas in Osaka to measure the degree of demand of several services. In conclusion, we would like to state the following two points; 1) the demand for "semi-demand bus", a shared-ride taxi dropping in on the way at the house of the elderly, is the highest; and, 2) provision of information on the balance, local events, and recommendations of health care is highly required by local users.

# CHANGING THE DEVELOPMENTAL NARRATIVE OF CITY-REGIONS: FROM SPACES FOR GROWTH AND COMPETITION TO SPACES FOR WELLBEING

### Lorena Axinte, Cardiff University, United Kingdom

In an attempt to find the right level of policy intervention, cities and states all over Europe go through continuous processes of spatial reconfiguration. As such, city-regional arrangements become more and more common as local authorities join forces and collaborate on projects that surpass traditional local administrative boundaries. At the same time, the practice is matched by a growing body of academics who study and describe these establishments from various angles, forming a heterogeneous city-regionalist literature.

On the one hand, new regionalists consider city-regions to be 'motors of the global economy' (Scott, Agnew, Soja, & Storper, 2001) where development focuses on agglomeration logics, high technology and innovation driven industries. Social wellbeing is expected to follow because of trickle-down economics (Morgan, 2016) while environmental aspects are only lightly touched upon (González, 2006) — unless they represent a means for financial gains. On the other hand, reacting to this narrow analysis of city-regions, a more critical body of regionalist literature questions the usefulness of this administrative level (Etherington & Jones, 2009), as well as the automatic benefits of competitive policies (Frank & Morgan, 2012; Jones & MacLeod, 2004). Offering a middle ground, progressive regionalism, a direction which is still emerging, is explicitly concerned with issues of governance, equity and sustainability (Global Planning Educators Interest Group, as cited in Provo, 2009), searching for 'solutions that are networked, systems-oriented, globally-minded, ecologically sound and holistic' (Pezzoli, Williams, & Kriletich, 2011, p. 337).

In practice, this marks an important change not only in terms of development narratives and pathways chosen, but also in terms of indicators for measuring progress. By now, it is widely recognized that GDP (as measure for a nation's advance) can hide significant variation in terms of economic status and quality of life among citizens (McGregor, 2015). A growing economy is almost never experienced equitably by inhabitants and the wealth gap leads towards more polarisation instead of convergence. Thus, various initiatives around the world have tried to introduce the idea of wellbeing and policy and academic research has made progress in operationalising the concept (McGregor, 2015).

This presentation will explore how changing the narrative for city-region development is an important step because it allows to refocus efforts and policy agendas, possibly enlarging the aspirations and the

number of beneficiaries. Certainly, making these alterations in practice is much more difficult, especially at city-regional levels that often find themselves in between national directives and local decision-makers, having to comply with both. After discussing the theoretical and conceptual possibilities and barriers, Cardiff Capital Region will be referred to, as a Welsh city-region which despite being surrounded by developed areas, shares more traits with the less developed ones in the CEE. Despite its obvious economic problems, Wales has developed a progressive legislation centred on wellbeing which could serve as inspiration for CEE countries.

# USING GOOGLE MAPS DATA TO UNDERSTAND THE ROOTS AND CONSEQUENCES OF URBAN CONGESTION: A PILOT RESEARCH FROM BUDAPEST

### Peter Baji, Hungarian Academy of Sciences, Hungary

Over a decade, smart cities have become a fashionable subject of urban development conferences and urban research. Smart city planners highlight the importance of handling urban traffic congestions and providing sustainable urban environment for citizens. Smart mobility is a frequently defined subdomain in smart city literature, and it is strongly connected to ubiquitous sensors and big data processing and research. The main objective of this presentation is to emphasize the idea of usefulness of big data in examining and developing the urban transportation system. In 2011, Google Maps made its real-time traffic congestion data available in Hungary, and today they also have available traffic forecasts on certain roads where significant congestions can be measured. These data can provide lots of new insights for spatial researchers especially in Budapest, where vehicular traffic jams generates huge problems for citizens.

My pilot research on District III in Budapest consists of three main parts. Firstly, I have subdivided the measured roads of the whole district into about 1 km long sections and collected estimated travel time data from a specific week in the future. Secondly, I have estimated the number of vehicles that would be affected by congestion at a particular time and road section and I was able to estimate the complete extent of wasted time in traffic jams. Thirdly, I mapped and analyzed the volume of traffic at a sub-district spatial level and at a 20-minute temporal level within a day.

According to the results this source of 'big data' is a feasible way of conducting 'smart' scientific research on a city road system. The most relevant advantage of this database is that it is continually generated on a deep spatial and temporal level. The conclusion of this pilot research is that spatial and temporal inequalities are evincible from this database, and heretofore unrecognized processes can be analyzed in a deep way, which can help urban planners to smartly rethink their conceptions about the transport system. The research proved empirically that, on workdays, there is a second wave of peak traffic on many roads, and, within our chosen district, there are congestion hot spot times and places. As the last conclusion, it is important to see that Google Maps data has limits, but by understanding them this method is a brand new way for geographers to examine urban traffic congestion patterns in a deep spatial resolution.

# CLIMATE CHANGE IMPACTS ON THE PERFORMANCE OF PHOTOVOLTAIC PARKS IN EUROPE AND IN ROMANIA

### Blanka Bartok, Babes-Bolyai University, Romania

The European discourse on sustainable energy handles with priority solar energy applications for the sustainable and decentralized power generation. This long-term energy strategy is, however, tightly linked to the natural environment. The study evaluates the vulnerability of the solar photovoltaic energy (PV) production in Europe to the climate change projected for the XXI century. PV is one of the strategic renewable energy in Europe given the abundance of the solar resource, especially in Mediterranean countries. Its development is expected to be spectacular in the most ambitious sustainable development plans. As the results show climate change, even in the worst of the future scenarios being considered, would not affect significantly the European PV production; neither in terms of average production, nor in terms of its temporal variability (daily, intra-annual or interannual), which is crucial to ensure the stability of the supply (Jerez et al, 2015). This is the general conclusion of this study, but there exist worth mentioning nuances. For example, PV production in northern countries presents a reduction of up to 10% by the end of the century under the most extreme climate change scenarios. Contrary, in southern countries, the richest in terms of solar resource, the impact of climate change on the average production would be negligible and the temporal stability of the supply would increase, especially with regard to the daily variability. In case of the Romanian region this decrease is less than 2%.

# EVALUATION IOF RENEWABLE ENERGY SOURCES IN PERIPHERAL AREAS AND RENEWABLE ENERGY-BASED RURAL DEVELOPMENT

Blanka Bartok, Babes-Bolyai University, Romania Tihamér-Tibor Sebestyén, Babes-Bolyai University/Green Energy Romanian Innovative Biomass Cluster, Romania

Energy security enhancing and climate change mitigation call for a significant increase in use of renewable energies. This paper has two main objectives: first, to evaluate the renewable energy sources of a peripheral Romanian county (Covasna) situated in the Eastern Carpathians, and second, to formulate recommendations for the exploitation of renewable energies in the framework of the renewable energy-based rural development. Our major assumption is that — in accordance to the Europe 2020 strategy — the use of renewable energy should contribute to the mitigation of territorial disparities by accelerating investments into peripheral and rural regions. The main results of the paper consist the estimation of the main renewable energy sources in Covasna county (solar energy, wind energy and biomass energy); mapping the spatial disparities of RES availability; development of a rural space typology based on a database model for indicators at local-level, as a new approach to measure territorial cohesion and analyse local inequalities. The major outcome of this part is the identification of different municipalities where the use of renewable energy can significantly contribute to the strengthening territorial cohesion between core and peripheral areas.

# CHARACTERISTICS OF ECONOMIC RECOVERY AND CATCHING UP IN THE ROMANIAN REGIONS

# József Benedek, Universitatea Babes-Bolyai, Romania Alexander Lembcke, OECD, France

The main goal of the paper is to measure the economic recovery of the Romanian regions, seeking to answer two basic question: what was the regional impact of the crisis from 2008, and how have recovered the Romanian regions following the crisis? We focus our analysis on the region with the highest economic growth in the post-crisis period (Sud-Est) in order to find out the main drivers of economic recovery. We have extended our focus from economic indicators towards more an inclusive methodology related to the measurement of regional well-being. Our main finding is that productivity growth was a critical driver in economic recovery. It has a significant impact on income and jobs, influencing also non-material elements of the well-being.

### URBAN GROWTH POLE POLICY IN ROMANIA

József Benedek, Universitatea Babes-Bolyai, Romania Stefana Varvari, Babes-Bolyai University, Romania Cristian Litan, Babes-Bolyai University, Romania

The general guidelines and principles of the European spatial planning system was overtaken in the Romanian spatial planning system by the growth pole concept. This was used both in the selection process of the cities as growth poles and in the delimitation of the metropolitan areas. Urban growth poles were established as key elements of the regional policy in Romania in the Regional Operational Programme for the two programming periods 2007-2013 and 2014-2020, with a difference in the way growth poles were defined.

The paper aims at addressing the question whether the high prioritization of the urban growth poles development goals has reduced the level of regional disparities in Romania, or, on the contrary, it has rather contributed to the increase of the regional disparities in demographic and economic terms and highlights the failure of regional policy in achieving its essential objective, the reduction of regional disparities.

# GEOGRAPHICAL SCALE'S CHANGING CONCEPTUALISATION AND ACTOR-NETWORK THEORY: A VIEW FROM CENTRAL AND EASTERN EUROPE

### Marton Berki, Eötvös Loránd University (ELTE), Hungary

Even though there has been an undoubtedly growing scholarly interest towards the notion and nature of 'geographical scale(s)' in the Anglo-American geographical literature since the early 1980s, however, the concept remained largely under-theorised in Central and Eastern European academia. In order to fill this research gap, this paper demonstrates the changing conceptualisation of the 'conventional' (hierarchical) notion of geographical scales and, based on examples from Central and Eastern Europe, provides a concise overview of the main characteristics of actor-network theory (ANT), an alternative approach that might be useful to overcome our hierarchical understanding of scales.

Until the early 1980s, not unlike most of human geography's core concepts, geographical scale was just another Latourian 'black box' – unquestioned, taken-for-granted, and naturalised. It was first neo-Marxist geographers Peter Taylor and Neil Smith who comprehensively dealt with the notion; in their view, scales were real social products, materialised and formed by the dynamics of capital accumulation. In addition to this neo-Marxist line of thought, the debate of the 1990s brought remarkable new insights as well, since more and more authors started to focus on the discursive (re-)production of scales. In these works, geographical scales were considered as dynamically changing levels, constantly produced and reproduced via economic and political discourses. One step even further, in the debates of the 2000s the very notion of scale has been questioned. In order to look beyond its dominant 'productivist' understanding (taking into account only capitalist production [i.e. the 'economic side'] and/or its regulation [i.e. the 'political side']), it was articulated that social reproduction and consumption should not be neglected either. However, since non-capitalist social relations – such as patriarchy – cannot be detached from dominance/dependence either, there was a programmatic call to abandon the very notion of geographical scale, and replace it with a so-called flat ontology. In a somewhat similar vein, and also as a critique of the conventional (hierarchical) idea of scale, actor-network theory started to be widely used in the field of human geography from the 2000s as well. Based on examples drawn from the Central and Eastern European context, in my paper I argue that the theoretical framework (and methodological toolkit) of ANT might contribute to a more nuanced understanding of the current processes and power relations of our region.

The research was realised within the confines of the project entitled 'Contemporary theories of space and spatiality in the Central Eastern European context' (K 115870), funded by the National Research, Development and Innovation Office (NKFIH).

# HYDROLOGICAL REGIONALIZATION FOR RUNOFF ESTIMATION IN UNGAUGED BASINS. CASE STUDY SOMEŞEAN PLATEAU

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Hydrological regionalization represents the best water resources spatial variations analysis and also one of the most used tool for assessing the runoff in ungauged basins. The majority of streams in the world are ungauged or poorly gauged, one of the most important demand from hydrology is to asses runoff values in basins without measurements. Using hydrological regionalization, by identifying similitudes between various runoff factors, we predict and assess the runoff values in ungauged basins. As we know the reliable streamflow forecasting represents an important factor in catchment planning and long term sustainable water resource management, also it is absolutely necessary for recognizing and analyzing the flow variability in ungauged catchments.

In this paper regionalization refers to the process of transferring various hydrological data/information from gauged to ungauged catchment to estimate the runoff, this may be acceptable if the catchments are similar (in some sense), but the mechanism is error-prone if they are not. To identify the regions hydrological characteristics, we used GIS for the catchments hypsometric attributes (e.g. catchment area, elevation, slope of basins or channels), data series from five hydrometric station from the area and meteorological information from the nearby two stations and various climatic models.

In literature, we find several methods to regionalize high waters (floods), low waters and FDS (flow duration curves), the characteristic elements of the yearly hydrograph, in this case we will use a continuous streamflow regionalization method which helps in assessing all of the above.

The Someşean Plateau represent a hilly agricultural area, highly anthropized, typical for the Transylvanian Depression land use and morphometry. The growing population, also the increasing frequency and severity of floods and droughts events, due to climate change, and the various impact of human activities on the water resources, demand the best assessing and predicting of hydrological values, to establish a reliable water resources management which includes water allocation, long-term water planning, groundwater recharge, water supply and even hydropower production. For the area's future development, a correct local water resource assessment is needed which could only be fulfilled with a proper hydrological regionalization.

# SPATIAL DIFFERENCES IN THE DISTRIBUTION OF TRUST ACROSS EUROPE, BETWEEN URBAN AND RURAL AREAS

### Akos Bodor, HAS Centre for Economic and Regional Studies, Hungary

The present paper addresses one of the key features of social capital – trust. Based on data from freely available survey, it aims to analyse if there are differences among the rural and urban areas of Europe regarding to generalised trust. The importance of generalised trust is emphasised by various social 'grand' and 'mid-range' theories; among other concepts it is considered as a fundamental feature of social reciprocity, solidarity, collective actions, social inclusion, tolerance, confidence in institutions; it is understood, actually, as a condition for social integration and democracy. Studies addressing differences between rural and urban existence, investigating the social realm of these two relevant structures shaping the space have always attracted intense scientific interest. Trust is an often analysed issue of these works, yet it is hard to elaborate a clear argument on the specificities of trust in rural and urban areas, about the scales and especially about the causes of possible discrepancies.

# REHABILITATING COMMUNITY VALUES THROUGH CULTURAL TOURISM INTERVENTIONS AIMING A COMMUNITY BASED TOURISM IN RURAL ROMANIA

### Cristina Bolog, Babes-Bolyai University, Romania

The paper analyses the transformation and redefinition of local values and identity in rural Romania. Cultural heritage is a social construction and an important resource for local action. In a place where the community is the witness of a proud, well-known historical population (named "moti") who has worked hard in mining and who is currently facing depopulation and decline of population, the habitat has not a lot of damaging interventions that, in the majority of localities in Romania, have shattered local identity and specific.

These perspectives permit to analyse the regenerative valences of the cultural patrimony by the conservation in situ, generating the local rural tourism development. This article critically reviews the perception and the treatment of the rural unprotected patrimony in Romania and the community based tourism approach in the light of a fieldwork in the Apuseni Mountains tourism destination. It defines the criteria that outline a tourist destination based on the support and participation of local

people, the local economic benefit and the protection of local people's cultural identity and natural environment.

The purpose of the field study is protecting and promoting the cultural heritage of Bucium (30 villages and hamlets), in a multidisciplinary team research work organised by Rper NGO (architects, urbanists, landscape scientists, sociologists, anthropologists, tourism specialists), aiming to outline a tourism destination through community based tourism. It includes practical activities, as the study of traditional architecture in the context of the evolutionary and social cultural landscape, projects of restoration of historical monuments and rehabilitation of traditional houses, ateliers of (re)learning and transmission of traditional working techniques and various crafts, anthropological and tourism field studies based on interviews and questionnaires.

All these activities are revealed in the light of tourism capitalization by promoting the identified values during an eight years' summer university project (2010-2017) which materializes by the initiation of tourism routes and networks of tourist services offered by locals. The rural conservation is not only about saving physical artefacts, but also about continuing social patterns, about how to keep cultural traditions alive, and how to help them to flourish under changing circumstances and in the respect of the spirit of place. The current interest consists in a vivid cultural rural patrimony that, in fact, is a part of a general desire for authentic experiences in a community which understand that its social capital is a basis for innovation and sustainability. The saving of abandoned and ruined properties in Bucium area and their cultural and tourist capitalization is part of the scenario proposed as a driver of social and economic development of villages in Romania. One of the main conclusions that came out is how the regenerative valences of the cultural patrimony generates the shaking in the local community concepts and creates a new hierarchy in the society, overturned than the established one, which imposes the values as old and authentic, which, well-managed through internal resources, could become an economic engine.

IMPORTING SMART SPECIALISATION PRINCIPLES TO DESIGN ENTREPRENEURIAL INITIATIVES FOR ECONOMIC GROWTH OF TRADITIONAL RURAL SETTLEMENTS IN LAGGING-BEHIND REGIONS

### Stelian Brad, Cluj IT Cluster, Romania

Traditional rural settlements in lagging-behind regions are formed from small communities and are characterised by low density of population, homogeneity of people, and major focus on agricultural activities. Most of the people involved in the local economy of such rural settlements usually have lower levels of education. Commuting to towns or cities for jobs is common to some people living in such areas. However, most of these jobs are low-skilled, with relative low wages; and still many of the residents in rural settlements are captive in the local agricultural ecosystems. These characteristics indicate that traditional rural settlements face many challenges from the perspective of economic growth. This paper promotes the thesis that just this lagging behind is an opportunity to generate higher value added economic activities if local endowments and human resources are smart activated and integrated into innovative business models. The paradigm of smart specialisation is investigated in this research to tackle smart growth of rural settlements that face with social and structural difficulties. Smart specialisation promotes specialised innovations to produce structural transformations of economic activities towards higher value added outputs and bases this effort of key vectors such as embeddedness, critical mass, collaborative leadership, clustering, relatedness, and connectivity. These key vectors have been considered to formulate four generic categories of

entrepreneurial models that enable activation of local passive resources, integration of local endowments into value chains, and creation of high value added businesses in peripheral rural spaces. The first category includes economic activities whose value chains require local resources and involvement of many people from the local community. The second category is about interlinked businesses whose value chains involve local resources and more entrepreneurs. The third category is about value chains that require external entrepreneurs, local intrapreneurs and various local resources. The fourth category requires many local resources and integration of local economic activities into extended, more sophisticated value chains. In all cases, connectivity with knowledge hubs is necessary to bring entrepreneurial initiatives, special know-how and create markets. These entrepreneurial models are exemplified with suggestive cases from Romania. They demonstrate that smart specialisation is an effective concept that can be adapted and deployed with success even in lagging-behind rural communities to support their economic growth and prosperity. Based on these findings, a methodological framework is proposed to systematically analyse a given rural space and select the appropriate entrepreneurial model or models to be applied. Structured problem solving methods are further considered to ideate business ideas around the selected entrepreneurial models. They are seen as windows of opportunity within the entrepreneurial discovery process. Theory is applied for the case of a small village from Transylvania, Romania. Results show the effectiveness of the proposed methodology. It can be also integrated into conventional frameworks dealing with elaboration of smart specialisation strategies. The generic entrepreneurial models proposed in the paper are not limited to rural spaces. They could be taken into account within entrepreneurial discovery processes at regional levels, too. Future researches envisage optimisation of value chains, study of evolutionary resources for enhancing resilience and agility of business models to tackle risk, uncertainty, diversification and deeper differentiation.

# WHEN ROMANIA MET THE COHESION POLICY: UNDERSTANDING PRACTICES OF 'REGIONAL' GOVERNANCE

### Alexandru Brad, Leibniz-Institut für Länderkunde, Germany

My presentation will engage with the practices of governance that emerge at the junction of European Union-sanctioned norms and Romanian development planning traditions. This nexus is placed in a post-socialist economic restructuring context where growth-inducing development has been increasingly polarised in, and around large urban centres. Practiced under various market-centred policy regimes, the region has become a well established scale for implementing solutions that stimulate the economic development of structurally weak areas. However, the persisting centralised workings of most Central and Eastern European countries significantly alter the substantial and procedural scope of such regional interventions. In my presentation I aim two things. First, I provide a theoretical base for a practice-centred approach to governance, as a means of highlighting the interaction between people's situated actions, and wider systems of belief. Second, using Romania's regional policy context as an example, I will show how partnership and competitive practices emerge in regional interactions, in a context of ongoing territorial polarisation. I conclude by emphasising the need for a more flexible regional policy that more prominently features a clearer intra-regional redistributive component. Within the current organisational setting, this should enable and assist noncore localities to access capacities for defining and implementing development projects.

### REGIONAL STRATEGIZING AS A MECHANISM OF TERRITORIAL GOVERNANCE IN RUSSIA

### Kseniya Budaeva, Institute for Public Finance Reform, Russia

The most important feature of regional development in Russia is that a value of regional disparities is huge and considerably higher than not only in developed countries but also in EU between countries. Moreover, such issues of territorial organization of economy as an uneven distribution of natural resources, low population density, sparsity of the cities, and the increased costs of overcoming long distances lead to the widening of the gap between regions.

In Russia, regional strategy of economic and social development as a tool of territorial governance is the main document of strategic planning system at subnational level. It determines priorities, goals and objectives of territory development.

The aim of current study is to form a full picture of the strategic planning state at the regional level and to identify the main trends in territorial governance. We used our own methodology based on structural and content analysis of strategies' contents in 2007 and 2016. Several basic elements of regional strategies were chosen for review: analysis of economic and social development, SWOT of a region, objectives, choice of strategic alternatives, financial resources for strategy realization and other issues. As a result of the study, were revealed some features of the strategic planning, typical for countries with significant regional disparities.

At the present stage strategic planning is still based on the experience of Soviet planning and has a number of features related to the legislative framework, a federal system with the prevailing control of the federal government, and high turbulence of the Russian economy. In spite of this, the analysis indicates a positive progressive development of strategizing in the contemporary Russia.

The priorities of the socio-economic development of regions used in the practice of regional strategic planning in Russia were classified into two groups: permanent (constantly present in the majority of strategies) and temporary (emerging in the strategies of individual regions and / or in many strategies in a particular period).

In all documents there is an analysis of economic and social situation including strengths and weaknesses of development, geographical and historical features. The majority of documents contains analysis of region's economic relations with other regions. However, general vectors of regional interaction are only given without mechanisms for its implementation.

In accordance with the principles of strategic planning and the current Russian legislation, building long-term development objectives should take into account their resource provision, and the strategy should include an assessment of financial resources necessary for its implementation. Currently, strategies of Russia regions mostly are not supported by specific sources of funding. In the most of documents it is not an assessment of financial resources but a listing of real and hypothetical options for financial resources.

These factors indicate the need for methodological update of regional strategic planning in terms of systematization of tools and mechanisms used to ensure a balanced development of the Russian regions and effectiveness of territorial governance.

# INVESTIGATING THE ROLE OF TRAFFIC IN THE ACCIDENTS ON NATIONAL ROADS: A CASE STUDY IN ROMANIA

Rodica Dorina Cadar, UTCN, Romania Melania Rozalia Boitor, UTCN, Romania Mara Dumitrescu, UTCN, Romania

Based on a quote from the early 1990's: "Every accident is a notice that something is wrong with men, methods, or materials – investigate – than act", we decided, that in this paper, we will try to identify areas with high risk of accident in order to come up with viable solutions.

Starting with this purpose, we centralized information obtained by the Traffic Department of the General Inspectorate of Romanian Police (GIRPTD, about the accidents in Romania, in 2015. The next step was to create a database, using the traffic information.

Using this database, in the first part of the paper, where we have related information abaout accident – vehicle – patricipants, we have simplified the method used for obtaining the necessary data analysis. The study was performed using Geographic Information System (GIS) software. For exemple, we can view the accidents map for a country, a village, an intersection, even for a road sector or we can use different sorting filters like main cause of the accident, the hour of the accident, etc.

For more detailed analyzes, in the second part of the paper, we may correlate this information with the traffic information. The simple linear regression and the Pearson corelation coefficient are used to determine the corelation between traffic accident and main road traffic.

This study may provide a starting point for future strategy on traffic safety, in order to reduce the number of accidents and their victims.

# RENEWABLE ENERGY PROJECT AS A SOURCE OF INNOVATION IN RURAL COMMUNITIES. LESSONS FROM THE PERIPHERY

### Sorin Cebotari, Babes-Bolyai University Cluj-Napoca, Romania Jozsef Benedek, Babes-Bolyai University, Romania

Renewable energy projects (REP) are viewed as a resource for the development of rural, peripheral communities. Going beyond the simplistic understanding of the renewable energy technology as an independent variable, current study looks into what does the interaction between renewables and host communities bring in terms of innovation and development. Relying on a combination of primary and secondary data, both qualitative and quantitative we observed that for the case of North-West Romania the fast development of REP had no impact on classic economic indicators, such as employment or revenues to the local budget. Looking closely to the impact on innovation as an important explanatory factor of peripheralization, in majority of researched cases we saw no technical nor policy related innovation associated with the REP. The presence of a privately owned project on the territory of the community acted as a possible catalyst for considering developing own REP however. Owning a renewable energy project at the same time proved to have positive impact on policy related innovation. Moreover, communities that developed and manage their own REP seem also to be more interested in changing the existing technological arrangements as well.

# STUDENTS' EXPENDITURE AND WHAT DOES IT TEACH US ABOUT UNDERFUNDING UNIVERSITY EDUCATION. EVIDENCE FROM AN UPPER-MIDDLE-INCOME COUNTRY

Andrei Chirca, Babeş-Bolyai University, Romania Dan Tudor Lazăr, Babeş-Bolyai University, Romania Cristian Marius Litan, Babeş-Bolyai University, Romania

Based on survey data we estimate the expenditures of the students from the largest university in Romania. We describe expenditures' structure and main factors of influence. Our results reveal that students' financial expenditures are the most significant part of the direct impact of the university to the city economy. Moreover, students' total spending amounts to almost double relatively to the total university spending in one year. The findings align with the concern on the severe underfunding of the higher education in Romania. The scarcity of such studies in Romania and Eastern Europe may only hide a possible problem of unbalanced financial effort between the state and those households which carry educational burden.

# DOES IT MATTER? CITIZENS' SUPPORT FOR THE EU AND PARTIES' EMPHASIS OF EUROPEAN ISSUES

Mihail Chiru, Central European University, Hungary Dragos Adascalitei, Central European University, Hungary Martin Gross, Mannheim Centre for European Social Research (MZES), Germany

One key element of political representation in democratic political systems is that political actors make pledges about policy issues that are important to citizens and voters. This is especially the case in election years. Prior to the elections, parties are drafting manifestos to communicate their main policy messages to citizens, voters, and party supporters, and these policy documents are the basis of parties' election campaigns. Yet, even though election manifestos tend to get longer over time, the space parties can devote to specific policy issues is limited. Hence, parties have to decide on which issues they will focus more in their election campaigns and which issues will only play a minor role. On the national level, parties not only have to deal with domestic issues, but also with international issues. In the last years, particularly European issues gained more and more importance in election campaigns in Western and Eastern European democracies. Recent research shows descriptively that parties' emphasis of European issues in their election manifestos varies to a great deal both between parties and between countries. Yet, we lack an empirical answer to the question why this is the case. In this paper, we first argue that overall national parties' devotion to European issues in their election manifestos is correlated with citizens' support for the EU. The more citizens are in favour of the EU, the more parties emphasise European issues. Secondly, we argue that this correlation is conditioned by different party types and the polarisation of the party system. Eurosceptic parties should devote more space to European issues because being against the EU is a key feature of their brand and one of the main reasons why they attract voters and party supporters. Voters and party supporters of Eurosceptic parties expect their parties to (negatively) address European issues in their election manifestos. In many European countries, we see these parties successfully politicising EU-related issues in domestic politics, thus challenging other parties' pro-EU policy stances and potentially forcing these parties also to address European issues more in their manifestos. Hence, we expect that the more polarized the national party system is regarding European issues, the more parties emphasise European issues in their election manifestos. We test these expectations by combining data from the

Chapel Hill Expert Survey (CHES) on national parties' orientations towards European integration with Eurobarometer data on citizens' support for the EU and with a newly created data set on national parties' emphasis of European issues in their election manifestos in seven Western and Eastern European countries between 2007 and 2016. This original data set includes both a measure for the amount of space devoted to EU in general and to EU funding programmes.

# IDENTIFICATION OF THE TRAFFIC ACCIDENTS HOTSPOTS DURING NIGHT AND DAY IN ROMANIA

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Traffic accidents in Romania are a topical issue, they increase from one year to the next due to the increase of road traffic and the increase of the population density in urban areas. In this paper we have been following the trafic accidents in two moments of time, day and night. Thus, accidents were divided into these two categories and filtered with the help of a PostGIS script using sunrise and sunset data. The analysis was carried out on 314312 accidents occurred in the period 2005-2016 in Romania. Subsequently the relationship between night traffic accident and night-time light was analyzed at local level in Romania. This analysis allowed us to identify the hotspots of traffic accidents occurred during daytime respectively at night and to identify causal relationship with night-time lights in Romania.

### LINKS SOCIETY-ENVIRONMENT IN FOREST ECOSYTEMS. AN ECONOMIC ANALYSIS

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The article presents the vulnerabilities in forest ecosystems, in a society where the main human economic needs are in a continuous growth.

In order to quantify the links between society and environment in forest areas, we conducted a quantitative economic analysis using the database of NACE Codes, at four digit level, from all economic and forestry activities in Romania.

While the article focuses specifically on the situation in Suceava County, where human interactions on the environment are consistently strong, the article presents also a clear situation of human interactions in forest ecosystems through deforestation in Romania.

The article presents the existing situation in deforestation process in forest ecosystems in Romania. It then describes the particular changes in Suceava County from economic activities (illegal logging, forest exploitation and timber production). The data were extracted from satelitary images provided from the Maryland University (Global Forest Change, 2000-2014).

The main result of the study consists on establishing links between society and environment, related to the forest changes. Some graphs (box-plots, correlation graphs) and econometric analyses (panel analysis) will also be done.

Affecting the environment and society by disturbing forest ecosystems leads to imbalances within territorial systems. Taken together, the results obtained indicate the distribution of the balance between the components of local territorial systems.

### REPULSIVE CULTURAL LANDSCAPES AS AREAS OF RISK AND VULNERABILITY

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Repulsive landscapes, such as brownfields or friche, are a distinct category of cultural landscapes due to the negative features they present on structural, physiognomic and functional levels (physical liability and instability, ruiniform physiognomy, lack of use values, random and unpredictable dynamics, etc.). They result either from anthropogenic abusive and unrestrained actions with an impact upon the environment, either from the abandonment of elements of the industrial, agricultural, touristic and habitational landscape. In general, most of the repulsive landscapes go back to the decline of cultural landscapes as their conversion is delayed or lacking. The main categories of risks and vulnerabilities related to the existence of repulsive landscapes are: chemical and radioactive pollution of the terrain on which they are located and the adjacent lands; sources of pollutants and solid particles leading to air pollution; olfactory pollution specific to some landfills; geomorphologic processes of mass movement (landslides, collapses), torrential processes or accelerated erosion; contamination of surface and groundwater; the profound damage to the quality of natural and cultural heritage; insecurity of the access; economic and social inefficiency; topophobia etc.

Thus, the enforced industrialization policy specific of the old regime in Romania offers several examples of repulsive landscapes resulting from interventions above the ecosystems' tolerance limit. The exploitation of the poor sulfur deposits in the Călimani Mountains turned out as both an economically unprofitable action as well as a source of massive pollution. It has generated, through the quarry in Negoiu Românesc massif and its associated waste dumps with an area of over 200 hectares, an illustrative example of a repulsive landscape where the chemical pollution inside the exploitation area and the geomorphological processes affecting the dumps generate specific risks and vulnerabilities. Likewise, the gold and silver mining in Roşia Montană, copper mining in Roşia Poieni and coal mining in the Rovinari Basin generated the same kind of landscape.

In the period of transition to the free market economy, repulsive landscapes have multiplied and expanded in Romania due to deindustrialization and the disorganization of agriculture. The cutback or complete shutdown of the old industrial enterprises generated numerous brownfields covering large areas. In the agricultural field, the abandonement of old orchards, vineyards and livestock farms and the extended areas of unused land produced specific repulsive landscapes. Forest areas, due to massive deforestation, a phenomenon associated with the increase of geomorphological and hidrological risks (erosion, torrentiality and flooding), often display their own specific repulsive landscapes. The abandonement and degradation of touristic accomodation facilities and other infrastructures has brought this type of cultural landscapes in several Romanian resorts.

# REDUCING TERRITORIAL DISPARITIES: THE GAP BETWEEN STRATEGIC PLANNING AND IMPLEMENTATION RESULTS IN THE CLUJ-NAPOCA METROPOLITAN AREA

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The case of post-communist Central and Eastern European countries has been widely discussed in recent literature, with special attention being given to the impact of EU policies in these countries. Aimed at reducing the development gaps between European states and regions, the cohesion policy has proved to be a great catalyst for the development of infrastructure and economy in Romania, as showcased by the investments realized in the 2007-2013 period.

In its first programming period as a member state (2007-2013), the Romanian government designed a specific policy aiming to distribute a large portion of its EU urban development funds to seven Growth Poles, with EU financing conditioned in these Growth Poles by the approval of Integrated Development Plans (IDP). For the current programming period, the Growth Poles policy was abandoned, with the Romanian government opting to share the largest portion of the EU urban development funds to all 40 county capitals in the country, under the condition of the approval of Integrated Development Strategies (IDS).

The aim of this paper is to assess the impact of EU funds and strategic framework changes in the previous and current programming periods within the largest metropolitan area of Romania – Cluj. As the Growth Pole with the highest economic and demographic growth since 2007, our interest was to analyse how territorial disparities in the entire metropolitan area have evolved since 2013 and the influence of the compulsory strategic plans developed in 2010 and 2015 in this evolution.

To accomplish this, we realized a comparative analysis of indicators related to demography, provision of infrastructure and public services, economy, tourism and housing in the years 1992, 2007 and 2015, highlighting the trends identified for all 19 LAU2 units in the Cluj metropolitan area. We also analysed the strategic planning framework in the two programming periods, the implementation status and identified barriers, with the aim to assess the contribution of the strategic plans in the reduction of territorial disparities and overall development of the Cluj metropolitan area.

The results showcase that, while the trend for most of the analysed indicators (especially technical infrastructure development) is positive, the relation with the 2007-2013 strategic planning framework is poor, with most of the projects in the IDP focusing on the city of Cluj-Napoca and neglecting the neighboring rural LAU2 units. Moreover, some of the most important projects in the 2007-2013 period failed to be implemented because of systemic procurement and monitoring issues.

While the 2014-2020 IDS intended to be a change of paradigm in metropolitan strategic planning, through the proposal of innovative governance structures and tools, successive changes in the national framework regarding EU funds have postponed its approval. Consequently, the current development of the Cluj metropolitan area can be attributed more to exogenous factors than to the result of planning. Framework changes, lack of implementation instruments and legislative gaps remain one of the biggest challenges for strategic planning in Romania and its ability to influence development paths.

### **MOVING TO CLUJ**

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Under what circumstances is internal migration a sustainable source of demographic growth for metropolitan areas? How can the urban core adapt its strategies to the inherent risk of draining its main migration sources? These questions are the starting point for our endeavour to systematically analyse urban demographic growth through rearrangements within the regional or national population.

Hence, the study tries to determine an immigration threshold below which demographic growth cannot occur within the urban core. It thereafter identifies the settlements that provide enough migrants to be taken into consideration. Out of this list, we filter out settlements that are exposed to the risk of population drain. Should the remaining settlements not be capable to meet the migration threshold, then the urban core essentially has two options: It can either find new sources of migration, should they exist within reach, or it needs to reconsider its growth strategies. At the same time, demographic regeneration strategies should be considered for the affected migration sources.

Between 2002 and 2011, the population of the Metropolitan Area of Cluj-Napoca increased by 6 percent. This growth occurred against the background of demographic stagnation or even shrinkage in most Romanian cities. Moreover, within the metropolitan area, this increase in population was unevenly distributed, mainly across the urban core and some of its suburban satellites, while more distant municipalities have recorded population losses.

By applying the described methods to available data sets, we analyse the entire Metropolitan Area of Cluj, in order to find out whether it can carry on fuelling Cluj-Napoca's demographic growth on the long run. We also aim to identify settlements in need to recover after population drain towards Cluj-Napoca and possible strategic solutions.

# LEADER ACTION GROUPS IN THE VISEGRAD COUNTRIES FROM A GOVERNANCE POINT OF VIEW

### Patkós Csaba, Eszterházy Károly University, Hungary

From an experimental tool LEADER approach has become one of the main columns of the European rural development policy in the last 25 years. For Central and Eastern European Countries it seemed to be a key method of progress even before their EU access. For the last 13 years since their joining this advanced optimism has been met only partially. Local action groups (LAGs) were generated in the Visegrad Countries (V4) as well, at the same time their activities call for manifold comments according to literature.

Our research is aiming to introduce the evolution of the LEADER programs countries concerned. Additionally, the main geographical character of different generations (since 2004 the third LEADER cycle is in function) of LAGs will be provided. The elaboration is framed by the popular theory of the institutionalization of regions by Anssi Paasi. Accordingly, beyond spatial, symbolic and institutional shapes of action groups, their established role is examined too. In our understanding, this latter phase beyond the future-making (planning) and financial allocation (decision making on local applications) processes contain the issues of governance as well.

Our method is based on the creation and analysis of a detailed LEADER LAG database. As available EU data sources are incomplete, this step needs a time-consuming desktop research through the dissection of local integrated development plans of LAGs. A supplementary questionnaire research based on the methodology of Robert Lukesch is purposing to highlight the governance characteristics of LAGs in different countries. In order to compare local communities of the V4 countries with those of the rest of Europe, the questionnaire was sent to a sample of LAGs of other EU countries.

We aim to highlight national/regional specialties of local action groups in the realm of governance. Our results may help future LEADER/CLLD groups to implement their plans more successfully.

### SPATIALITY AND THE CENTRAL AND EASTERN EUROPEAN WORKFARE STATE

### Márton Czirfusz, Hungarian Academy Of Sciences, Hungary

State formation and its spatialities have become one of the focal topics in recent political-economy-inspired regional studies. This growing interest has been triggered by the fact how post-Fordism and a new round of globalisation reconfigured capital-labour relations and scales of state formations spatially unevenly.

Central and Eastern European states (and scholars), however, have remained largely outside of this debate. Although regulation theory and the varieties of capitalism literature indicated differences of the nation-state in post-socialist countries vis-à-vis Western Europe, these often fell short of explaining these differences or the multi-scalar character of these state formations. There are only few accounts which aimed at understanding how the differences of Central and Eastern European states are determined by the different structural positions of these countries in geographically uneven political-economies of global capitalism. The theoretical contribution of this paper is to bring forward this latter approach.

Empirically the paper is considering the post-2008 workfare states in Central and Eastern Europe, with a specific focus on Hungary. Although many countries in the region introduced new labour policies following the 2008 economic crisis, the Hungarian reform – with a rapid and broad roll-out of the workfare state – is largely unprecedented.

First, the paper argues that the geographically uneven integration of Central and Eastern European countries into global capitalism resulted in the fact that several parts of these countries have had to face serious and long-term unemployment, with more severe outcomes following the 2008 crisis. The nation states in many cases opted for policies either explicitly directed to these parts of the respective countries (as some kind of regional policy), or for an aspatial workfare policy with spatially variegated effects.

Second, processes of state rescaling are taking place connected to the previously mentioned policies. These involve a reconfiguration of the competencies of the local, the regional and the national level. In the case of Hungary, the processes are often referred to (in an oversimplifying way) as a growing power of the (nation) state.

The paper foresees to further theoretical debate about inherent spatialities of states – by taking into account the specificities of Central and Eastern Europe –, and calls for a broader acknowledgement and usage of the political-economic approach in Central and Eastern European regional studies.

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# THE ROLE OF THE SMART SPECIALISATION IN PERIPEHRAL REGIONS IN POLAND – A FAD OR A NECESSITY, A CURSE OR A CHANCE TO CHANGE THE CURRENT PATH OF DEVELOPMENT?

### Anna Dabrowska, University of Warsaw, Poland

The main aim of the article is to evaluate the importance of the concept of the smart specialization for the development of peripheral regions in Poland. In particular, there will be made an attempt to answer the question, whether intelligent specializations can provide a sufficiently strong impulse (Pendall, Foster & Cowell 2010), to divert the region from its current development model (Martin 2011; Sydow, Schreyoegg & Koch 2009).

Case studies of three peripheral voivodeships in Poland – Warminsko-Mazurskie, Podlaskie and Podkarpackie – is used for a detailed analysis of this problem. Although the empirical study concentrates on Polish regions, it may have a wider significance for other less developed regions in other countries in the European Union.

The idea of smart specialization (Foray 2009, 2015) implemented in all regions of the EU in the form of RIS3, implies high expectations for a development model based on a business-science cooperation. The idea of "entrepreneurial discovery process", which can be considered as the "principle of creating" smart specialization, has been applied in regions for a discussion of a endogenous potential (Leydesdorf 2012).

The development of less developed regions is often based on traditional economic sectors driven by endogenous resources, in particular natural and environmental resources (Kudełko 2013). Nowadays abandoning the narrow understanding of innovation and opting for an inclusive definition of smart specialization is observed. It means in case of less developed regions giving evey sector a chance to be present in the strategy through a good project (Foray and Goenega 2013) and applies also to sectors which are not traditionally considered to be innovative.

Consequently, it seems reasonable to believe that this new approach to development may be an opportunity for the less developed regions to divert from their current path of development. The concept of smart specialization implemented in developed regions is clearly perceived as an opportunity to strengthen their competitive advantages. However, in case of less developed regions (with lower level of economic development, innovation potential and poor experience in science-business cooperation as well) the role of smart specialization is definitely more questionable. There are some doubts if the low-innovation regions will not treat the process of identifying smart specialization merely as a formal requirement for EU funding?

The analysed polish regions differ significantly in economic potential and experience gained in business-science relations and are characterized not only by different identified smart specializations but also by a slightly different approach to the RIS3 building proces. On the one hand – Podkarpackie Voivodeship with high level of business enterprise expenditure on R&D (due to the dynamic development of the aerospace industry and significant foreign capital involved), great potential of science in the area of aviation and main smart specialisation in Aeronautics and Space Technology. On the other hand – Warmińsko-Mazurskie with all three smart specializations based on natural resources

and traditional sectors: production of high quality food, wood and furniture sector and water economy.

# ECONOMIC RECONVERSION OF MINING SITES IN BRAD DEPRESSION DURING THE TRANSITION PERIOD (1990-2017)

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The localities belonging to Brad, Baia de Criş, Buceş, Bucureşci and Crişcior administrative territorial units, located in Brad Depression, have developed a predominantly mining economic profile due to the exploitation of the gold-silver deposits in the "golden quadrilateral" of the Apuseni Mountains. Restriction of mining activity begins in the early years of the transition period, by the closure of some mines such as Ruda Brad, Curechiu, Rovina, Arsului Valley and also by the closure of ore mining activity taking place at the Criscior Station. Mining activity practically ceases in the region in 2006 when all mines are closed, going into conservation. Thus, a consistent number of jobs disappear, compensatory wages granted to former miners, including their professional reconversion and employment in other economic or social fields, proved to be a failure. The redundant labor force has increased the number of unemployed and social assistants, a small number of them being engaged in trade, services or agriculture. From its pronounced economic mining profile before 1989, Brad City is then emphasizing its commercial and service function. The tourist function is also enhanced by the diversification of accommodation units (hotels, pensions) and public catering. For rural settlements corresponding to the analysed geographic area, economic reconversion is slow and precarious, mining activities are only partially substituted by agricultural or forestry, with a limited development potential due to the relatively low quality and quantity of soil and timber resources. There are also features specific to commercial and service functions. The tourist function is at an early stage of affirmation, marked by the appearance of the first profile accommodation facilities (hostels, cottages) and information points.

# RESILIENCE, CONTAGION, AND VULNERABILITY TO EXTERNAL FINANCIAL CRISIS IN CEE COUNTRIES

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The global ...nancial crisis had a serious impact onmature and emerging economies. The consequences were not uniform. Europe was characterized by strong cross-country dixerences in the resistance and recovery capacities. The economic decline was more intense in the countries at the periphery of the European Union and in those with fragile public ...nances. Initially, the crisis only marginally axected the Central and Eastern European (CEE) region, which had previously observed high growth rates. The past good performance and the initial resilience led to claims that the region had "decoupled" from development in advanced economies. However, the decoupling hypothesis was illusory and the crisis

spread to the CEE region just with a lag. After the Lehman Brothers crack, in fact, the CEE region was suddenly placed at the epicenter of the emerging market crisis (Roaf et al., 2014).

Our aim is to analyze and disentangle the resilience to the financial crisis within the CEE region. The impact of the crisis on economic activity has widely varied across countries, re‡ecting di¤erences in exposure and vulnerability to the ...nancial shocks as well as heterogeneity in policy responses. We plan to measure and explain the dissimilarities in the resistance and recovery capacities of CEE economies by estimating and simulating medium-scale DSGE models. Specifically, our objective is to measure two dimensions of regional resilience, namely resistance and recovery. The former is the vulnerability or sensitivity of a regional economy to disturbances and disruptions. The latter is the speed and extent of recovery from such a disruption or recession (Martin, 2012). We built a smallopen economy for CEE economies and estimated it by Bayesian techniques. The model features standard nominal wage and price rigidities, and financial frictions. Financial frictions assume the forms of liquidity-constrained households and limited access to the deposits from the bank system. The financial accelerator of external shocks operates on the relationships between savers and banks featured by asymmetric information. An agency problem introduces endogenous constraints on the leverage ratios. Then, credit ‡ows are tied to the equity capital of intermediaries. A financial crisis deteriorates intermediary capital and raises credit costs, lowering lending and borrowing (Gertler and Karadi, 2011).

Once estimated, we investigate the exects of the ...nancial crisis by looking at the variance decomposition of CEE countries. Then we use the model to compute two measures of resilience to financial frictions. First, we look at the dixerent stochastic structure estimated, the estimated standard deviations of the financial shocks and their auto-correlation give us a measure of the dixerent vulnerability (or sensitivity) of CEE emerging markets. Second, we impose to all the countries within the CEE region a common stochastic structure and use simulations to derive a measure of their dixerent recovery capacities. Our paper is related to research that studies the resilience of regional economies and the recent strand of DSGE model that introduces financial frictions into a New Keynesian framework. Concerning the first strand of literature, notwithstanding the growing inter- est among macro-economists, regional analysts, spatial economists, and economic geographers, the idea of resilience is still associated to some ambiguities. Ambi- guities are related to the dixerent uses and interpretations of the term. A useful taxonomy of resilience is provided by Martin (2012). He summarizes resilience in four dimensions. i) Resistance as the degree of sensitivity or depth of reaction of regional economy to a recessionary shock. ii) Recovery as the speed and degree of recovery of regional economy from a recessionary shock. iii) Renewal as the extent to which regional economy renews its growth path: resumption of pre-recessionary path or hysteric shift to new growth trend. iv) Re-orientation as the extent of re- orientation and adaptation of regional economy in response to recessionary shock. Our paper matches the first two dimensions, whereas it is only indirectly related to the others. An alternative related definition of resilient society is provided by Manca et al. (2017: 5). "A resilient society is able to cope with and react to shocks or persistent structural changes by either resisting to it (absorptive capacity) or by adopting a degree of ‡exibility and making small changes to the system (adaptive capacity). At the limit, when disturbances are not manageable anymore, the system needs to engineer bigger changes, which in extreme cases will lead to a transformation (transformative capacity)."We evaluate the absorptive and adaptive capacities of the CEE region and, somehow, its ex post transformative capacity, i.e., the capacity of CEE economies to have implemented during past crises changes that permit them to cope with recent global turmoils. Regarding the developments of DSGE literature in the direction of financial fric- tions, we borrow the specification of the banking sector from Gertler and Karadi (2011) and Gertler and Kiyotaki (2011), and explicit financial intermediation mod- eling. An agency problem introduces endogenous constraints

on the leverage ratios of intermediaries. As a result, in the financial sector, credit ‡ows are tied to the equity capital of intermediaries. A deterioration of intermediary capital raises credit costs, lowering lending and borrowing. Their approach to model credit frictions has become quite popular (e.g., Lendvai et al., 2013; Andreasen et al., 2013; Beqiraj el al., 2016; Rannenberg, 2016), especially to study the exectiveness of unconventional monetary policy in financial crisis (e.g., Dedola et al., 2013; Gertler and Karadi, 2013, 2015).

# GLOBAL INTEGRATION VERSUS POLYCENTRIC APPROACH IN THE CENTRAL EUROPEAN URBAN STRUCTURE

### Katalin Döbrönte, Eötvös Loránd University, Hungary

The paper focuses on the urban hierarchy of Central European cities with a twofold approach: it compares the urban hierarchy based on the concentration impacts of global economic development (taking advanced producer services as indicator) and the urban hierarchy based on the polycentric approach.

According to the Urban Agenda of the EU, large cities, capitals and other metropole cities are able to join the global economic structures, other cities, mainly small and medium sized cities are excluded from these networks. However, as small and medium sized cities represent a large proportion from urban population, particularly in Central Europe, the focus on their development with a polycentric approach is crucial. Without the inspiration of polycentric approach, the tendency of concentration continues. Permanent competitiveness advantages concentrate in the metropole cities, which further accelerates their development. The growing scope of globalization took place at the same time as the regime change in the Central European countries. On the one hand they started the 1990s with a significant economic lagging behind compared to the Western European economies. On the other hand the transition process to market economy, modernization of society took place in the framework of globalization. The development and spread of the information - communication technologies enabled the advanced producer services to organize their activities in a worldwide framework. The more and more diverse spread of production activities made central strategic functions more and more complex, and made multinationals outsource these functions to specialized service companies. Thus the advanced producer services gained a key role, and they can be identified as an indicator for global economy (Sassen, 1991).

The paper studies how the cities of Central Europe can be integrated into the global networks of advanced producer services, what kind of spatial structural impacts they have, and how it affects the position of the cities in the region. Hundred advanced producer services working in the field of management consultancy and accountancy identify seventy-nine cities in sixteen countries of Central-Europe as an empirical base for the study. The APS indicator is developed according to their locational status, nodal value, and relational matrice (Taylor, 2001). On the other hand I study the same sample of cities according to polycentric indices, and identify the urban hierarchy accordingly.

The paper discusses – based on the empirical evidences – what are the implications of global economic and polycentric development approaches in the sixteen countries identified as examination area for the purposes of this study, where are the centres identified by the different approaches, and what are the underlying factors. The paper also offers answer if the region stayed homogenous, if certain cities could close the gap with Western European cities, and if certain cities form new peripheries as a consequence of being unable to get integrated to the global processes.

# SIMILARITY AND COMPLEMENTARITY IN TOURISM DEVELOPMENT IN A CROSS-BORDER REGION. THE CASE OF BIHOR – HAJDU BIHAR

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The present paper aims to investigate the complementarity and similarity in tourism development in a cross-border region based on the Bihor (Romania) – Hajdu-Bihar (Hungary) case study. The paper is structured in two parts, one theoretical and one practical. The theoretical part proposes a literature review on the issue of tourism development in a cross-border region. Based on literature review, the second part of the paper shows the picture of tourism sector in Bihor – Hajdu Bihar and provides a comparative analysis of these counties' tourism sector based on territorial statistics, County Councils data, regional and local development strategies, available dataset for tourism sector. Than, the paper analyzes the cross-border cooperation impact on tourism development and shows that the opportunity to benefit of funding from EU through Cross-border Cooperation (CBC) Programmes creates competitive advantages for tourism development in both counties. The theoretical evaluation is completed with a qualitative research conceiving and applying a semi-structured interview to the representatives of local authorities responsible for tourism development in Bihor and Hajdu-Bihar in order to distinguish more clearly the similarity and complementarity in tourism development in a cross-border region. The paper concludes with policy recommendation for local authorities in order to impact sustainable development of tourism.

### REGIONAL DYNAMICS AND NEW POLARIZED DEVELOPMENTS IN CENTRAL AND SOUTH-EASTERN EUROPE

### Alexandru Dragan, West University of Timisoara, Romania Nicolae POPA, West University of Timisoara, Romania

The article argues the recent differences between the regional urban poles in Central and South-Eastern Europe at the supranational and sub-national level and the consequences on their polarization areas. Diagnostic indicators according to current polarization factors are analyzed, explaining their relevance to the dynamics of central and secondary urban poles and the regions they control. The indicators highlight the decisive role of connectivity, university concentration and quality of life offered by large urban agglomerations in attracting investment and young labor. The high impact of the international opening of each national space, especially of European integration, is underlined by the differences in the various regional poles that have seen the mutations considered as obvious signs of the modernity of the economy and society. The inaugural dynamics of the urban poles of the Czech Republic, Slovenia or Hungary, today very moderate, is followed by the recent upsurge of the poles in Romania, Bulgaria and, selectively, in the Western Balkan countries. In this context, one can notice the continuous evolution of the Polish space, whose large cities are increasingly influential in Europe. At the level of each country, there are also different pace of modernization and social-economic growth. Some of the secondary cities tend to capitalize resources at rhythms, quantities and qualities that compete with capital cities, favored, among other things, by their geographic position - closer or farther from the economic and relational command centers of the continent - and Infrastructure (accessibility, connectivity). These mutations highlight the role of open vision and sustainable choices in promoting local / national interests in the context of cross-border openness and global connectivity.

# DRIVERS OF CHANGE IN THE POST-COMMUNIST AGRICULTURE IN THE APUSENI MOUNTAINS

### Magdalena Drăgan, Romanian Academy, Cluj-Napoca Branch, Romania Gabriela Cocean, Romanian Academy, Cluj-Napoca Section, Romania

After 1990, the agricultural activity in the Apuseni Mountains (Romania) has recorded a significant decrease reflected in the descending evolution of farmland and of livestock, and in the shift towards a more extensive use of the lands. This situation is the result of several factors acting on different spatial and temporal scales often interacting in various patterns.

The dismantling of the old (communist) agricultural system was an important driver of change, determining a two-sided evolution of the agricultural sector in the analyzed region, due to the fact that only parts of the territory were involved in the collectivized agriculture. These parts underwent radical transformations, unlike the non-collectivized areas, where agricultural practices had a more linear evolution. Structural changes in the Romanian economy also meant changes in the region due to deindustrialization and the shutdown of mining activities in several locations in the Apuseni Mountains where mining had been an important activity. Thus, a significant number of workers employed by these activities found themselves in the position to return to the rural areas and to subsistence farming. The hesitant agricultural policies of the last 25 years were not very helpful either. Land retrocessions and other measures in the beginning of the 90s set back agriculture development causing new productivity issues due to the out-of-date technologies available to farmers. With the beginning of negotiations for the accession to the European Union, agricultural policies in Romania have assumed the general objectives of the Common Agricultural Policy aiming at the efficiency of the agriculture and the promotion of a multifunctional agriculture. The changes in the policies have meant financial support for many households in the Apuseni Mountains and development opportunities for those farmers with a more entrepreneurial spirit. Besides, the more recent policies define communes located above 600m as mountain disadvantaged areas and contain dedicated measures aiming to compensate the specific low productivity.

Other drivers of change are acting on a local level, such as demographic evolution, landscape features, accessibility to the market and/or to the territorial offices of institutions managing rural development funds, and complementarity with other economic activities etc. Different trajectories for the development of the local agriculture have thus resulted, ranging from degraded agricultural landscapes and aging communities disconnected from current positive developments to agribusinesses managing hundreds of hectares of land, successful conjunction of farming and tourism and massive applications to access to European funds.

# FROM RESILIENCE TO HYBRIDIZATION OF DEVELOPMENT – REFLECTIONS ON THE CENTRAL EUROPEAN REGIONS (CER)

### Adam Drobniak, University of Economics in Katowice, Poland

Linking businesses with new technologies leads to unbalanced growth due to the different types and usefulness of location advantages. In the case of regions, there is a parallel occurrence of the stages of growth and stagnation resulting in multiple trajectories of change.

Building, in such conditions, the ability to territorial resilience, is striving to achieve functional diversity, creating solutions that have flexibility in relation to changing needs. The increase in density of functions can be likened to hybrid or patchwork transformations in space. Hybridization is a way out of stereotype. It is alternative to the paradigm of polarized development, but also for homogenous or sustainable development.

The attempts to develop such issues were divided into the following problems: (1) What is the hybridization of development as a result of building resilience of regions? (2) How are modern economic development processes evolving, creating a hybrid character of change manifesting itself in the heterogeneous dynamics of the regions? (3) How does the hybridization of regions manifest itself in the Central European regions? The main objective is to try to define the concept of hybridization of development and capture the hybrid effects of regions' development in the CER.

The presentation/paper was divided into three parts. The initial concept of hybridization of development was outlined in the first. The second shows the determinants of contemporary processes of economic development which shape the hybrid nature of the changes. The third presents empirical research on the economic development effects of the hybrid development of the CER.

### TERRITORIAL GOVERNANCE VIA THE EGTC: ITS IMPACT ON INTERREGIONAL COOPERATION IN CROSS-BORDER REGIONS

### Martina Eckardt, Andrassy Universität Budapest, Hungary Stefan Okruch, Andrassy Universität Budapest, Hungary

Cross-border and interregional cooperation in Europe has been important ever since the very start of European integration after World War II. Already in the 1950's different forms of territorial cooperation evolved, such as transnational (e.g. the Nordic Council), interregional (e.g. twin cities), or cross-border (Euregios). But despite all efforts, widespread regional imbalances persisted. As a consequence, in the 1990s the EU has started to promote territorial cooperation by means of massive financial support (INTERREG). This instrument has become the more important following the Eastern enlargement of the EU. However, the management of INTERREG funds even more strongly provoked the need for an appropriate legal form that should be flexible and reliable, and allows public entities to engage in transnational cooperation. Since border regions across CEE countries are those most severely affected by spatial imbalances, a legal form to effectively use INTERREG resources is of utmost importance.

In 2006, following some minor initiatives, the EU implemented the legal innovation of the European Grouping of Territorial Cooperation (EGTC), which has been substantially modified and relaunched in 2013. The EGTC is a European legal instrument designed to facilitate and promote cross-border, transnational and interregional cooperation. It is a legal entity and is meant to enable regional and local authorities and other public bodies from different member states, to set up cooperation groupings with a legal personality. Members of an EGTC can be Member States, regional or local authorities, associations or any other public body. The EGTC is unique in the sense that it enables public authorities of various Member States to team up and produce joint services, without requiring a prior international agreement to be signed and ratified by national parliaments. Member States must however agree to the participation of potential members in their respective countries. The law applicable for the interpretation and application of the convention is that of the Member State in which the official EGTC headquarter is located.

In this paper, we ask to the impact of the EGTC on territorial governance by improving cross-border cooperation, thus laying the foundation for innovative interregional policies, with a special focus on CEE After firstly presenting the evolution of the EGTC as a kind of top-down legal innovation, secondly, we discuss the conditions which promote the adoption of innovative policies and how the EGTC relates to them. Thirdly, we analyse how the EGTC works under different forms of inter-jurisdictional competition, which is of utmost importance for disseminating successful policy innovations. We distinguish between four different types of inter-jurisdictional competition depending on the main factors that are mobile between different jurisdictions: 1) information and knowledge (yardstick competition), 2) goods and services (regulatory competition), 3) mobiles factors of production (locational competition), legal arrangements (free choice of law). By applying these four notions of inter-jurisdictional competition, we find that the EGTC as a legal innovation may improve both yardstick and locational competition by advancing innovative regional policies. In contrast to that, there is no clear evidence that it also impacts regulatory competition or competition among different legal arrangements so far.

# MARGINALIZED ELEMENTS AND ALL-ENCOMPASSING STRUCTURES: THEORETICAL CONTRIBUTIONS TO THE NOTIONS OF LIVED SPACE AND THE EVERYDAY LIFE

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Post-World War II functionalist urban planning was subject to severe criticism on behalf of spatial theorists related to the "spatial turn" in social sciences in France. Urban philosopher Henri Lefebvre, a fervent critique of technocratic urbanism and the ideology of spatialism (Bousquet 2012) characterizing the Trentes Glorieuses proclaimed what he called the annihilation of the city by the urban and the simultaneous advent of an urban revolution giving birth to a new, collectively reappropriated urban space where freedom and creativity might become possible. Not everyone was equally optimistic: Jean Baudrillard viewed existential territories jeopardized by hyperspace lacking atmosphere, while powerful private actors were granted immense power from the state to shape urban life according to their vision (e.g. Disney's Val d'Europe).

Social status is a non-negligible factor in determining to what extent social actors guided by their heterogeneous perceptions of space may participate in the production of space. Rationalized structures reflecting the spatial representations of dominant groups (planners, architects, urbanists, the state) in control of space increasingly dominate lived spaces where spontaneous phenomena such as unanticipated encounters, sensual and tactile experiences, disruptive spatial events may occur. However, existential territories corresponding to individualized approaches to the construction of space might provide a chance to experience urban life in non-alienated forms. Despite the various determinisms (spatial, social, cultural) constraining action, there is always a certain realm for personal liberty: a "residuum" Lefebvre equates with the notion of everyday life. The uniformization of everyday life is what repressive powers seek in order to eliminate "other spaces", the possible loci of bottom-up forms of resistance. Lived space in its particularity centered around subjective experience (pertaining to the individual's lifeworld) assumes a marginal position in relation to the uniform/abstract, which implies that the appropriation of space is highly unequal between developers (planners) and users of space. Whilst acknowledging the overwhelming role abstract power (embodied by the state, capital, etc.) plays in shaping the individual's lifeworld, a number of approaches in the field of social sciences focus rather on human (subjective) experiences of space. Existential and phenomenological approaches map the neglected realm of (dynamic) lived spaces which represent the multilayered different worlds constituted by heterogeneous actors. In the closing part of the presentation, the mutations of the spatial experiences of inhabitants of anthropological spaces, new town developments, and users of emerging spaces (cities without qualities, non-places, simulacra, hyperreal space, etc.) will be illustrated by practical examples.

# THE ROLE OF SMALL TOWNS IN STRENGTHENING RURAL DEVELOPMENT. CASE STUDY: OLTENIA PLAIN

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Small towns (with population under 20,000 inhabitants) represent a distinctive category of the Romanian urban system, having, theoretically, the role of a liaison between rural settlements and the urban ones at a superior hierarchical level. In Romania, on the background of a decreasing economic activity, after the year of 1990, and the subsequently socioeconomic changes, many of these current small towns gained similar characteristics to the ones of the rural settlements. Oltenia Plain is located in the South-Western Romania, the local economy having a strong agricultural feature. In this plain, there are nine small towns in three counties (Mehedinți, Dolj, Olt). The objective of this paper is to investigate the characteristics of these small towns in Oltenia Plain from the perspective of the polarizing potential of rural settlements and their capacity to generate a territorial development. The methodology used includes the following phases: (a) the analysis of the characteristics of small towns by calculating certain representative indicators; (b) identifying the rural degree of the urban settlements, including the comparison with the development level of the adjacent rural settlements; (c) identifying the polarizing potential of the rural settlements; (d) individualization of the development perspectives of the small towns as a consequence of the national policies and strategies. The results highlight differences as regards the development level of small towns in Oltenia Plain. Moreover, some of them no longer reflect the minimal indicators corresponding to the town status, in accordance with the legislation in force. In this context, there is much talk of a tendency of small towns' 'ruralisation', meaning that they are not capable of keeping their population. Consequently, the small towns present a reduced polarizing potential of the nearby rural settlements. The situation is all the more alarming as there are many demographic and socio-economic vulnerabilities in the respective rural area that will increase if the current situation does not suffer any changes. In this context, it is necessary to implement certain policies and strategies focused on small towns both for their recovery and increase the capacity to induce development in the adjacent territory.

# MATERIALITY AND SPATIALITY: CHANGING SPACES OF ELECTRICITY PROVISION IN HUNGARY

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The recent 'material turn' in spatial theories has been hardly followed by empirical studies. Simultaneously, the ongoing uptake in social science interest in infrastructures breaks with the view that those just provide passive backgrounds of social life. Infrastructures are sociomaterial entanglements. Infrastructure studies often focus on either globalised infrastructures, such as IT networks, or the urban infrastructures constituting cities. This presentation, however, puts spatiality

and geographic scale in the centre of understanding infrastructures. In other words, the aim of the paper is to illustrate how sociomaterial infrastructures are integral to the spatial organisation of socioeconomic life. To substantiate this claim, I use the long-term historical transformation of electricity provision in Hungary as an empirical case study.

The history of providing electricity in Hungary is profoundly connected to spatial questions. How did the first (electric) public lighting schemes reorganise urban (and later rural) spaces from the late 19th century on? How was a national electricity network formed together with the socialist state after WW2? How did different electricity systems facilitate spatial integration as well as differentiation, both on the macro and micro levels, through subtle patterns of access, pricing, and organisation? How is the electricity system stretched currently in the wake of both Europeanisation and decentralisation?

All in all, electricity provision in Hungary offers an intriguing case study of the various ways of how historical changes in material infrastructure are connected to spatial transformations, from household levels to supranational networks. In return, the empirical case informs our conceptual thinking of how (social) space and materiality are intertwined.

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# THE CONCEPT OF AUTOPOIETIC CLOSED SYSTEMS AND THE FUNCTIONING OF THE SPACES OF THE EUROPEAN UNION

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Space is not an autonomous container in which things merely exist, but the concrete manifestation and order of co-existing things. Our choices and actions are not determined by an absolute space or an autonomous superstructure, but by those existing or imagined structures which underlie our ideas and discourses. Each idea (phenomenon, representation) about space is a social construct.

The openness of space implies that relations (configurations, linkages) can be created in a variety of ways and are subject to constant change. Space as a condition of possibility is open, while concrete spatial units are closed entities. The closure of space is explained by the cohesion, interrelatedness and cooperation between its components. Autopoietic systems establish a delicate balance between closure and structural coupling that ensures their self-construction and self-development. Endogenous self-referential spatial and territorial units are self-constructed entities with their own "genetic structure" and logic defining their functioning and guaranteeing their distinction from the environment. Their operation, mainly targeting dynamic self-preservation and self-development is organised in function of the desirable outcome which is also influenced by their capacity to mobilise territorial capital. Self-referential autonomous functioning is a necessary condition for the survival of bottom-up constructed "natural" spatial units.

How can we describe the functioning of the European Union in light of the concept of autopoietic closed spaces? The EU is a federation of relatively autonomous (sovereign, autopoietic, resilient) states whose main interest lies in promoting their proper development. The Eastern enlargement of 2004 was instrumental in serving the interests of the Fifteen. From their perspective, the accession of new members contributed to an enhanced reproduction of the existing system, territorial expansion ("empire building"), without impacting the essence of the Union or their self-identity. The communication of Brussels institutions testifies of this neo-colonising perspective. Since the

"developed West" "redrew the map", it has assisted Eastern member states on their road towards Europeanisation and democratization, through transferring western institutions and interfering into their political and economic affairs. The core area aims to integrate new member states by relegating them to a peripheral position. The current conflicts partially revolve around the diverging ideas of some new member states which regard "reunification" as the integration of Central and Eastern European member states among the European Union's key economic, political and cultural constituents also seeking to ameliorate their peripheral position. Significant economic and cultural disparities characterising EU member states pose significant obstacles to deepening integration. The less developed member states strive to use Cohesion Policy funding to promote their functioning and development based on their own self-referential logic. In line with their needs and objectives, they filter and adapt EU expectations in ways that nonetheless remain compatible with the fundamental essence of the EU.

### **CROSS-BORDER CO-OPERATIONS IN V4 COUNTRIES**

#### Zsuzsanna FEJES, University of Szeged Faculty of Law, Hungary

The aim of my presentation is to examine cross-border co-operations in the Visegrad Countries, their institutional forms and legal frameworks. My paper focuses on the legal conditions of cross-border relations, I analyse the regulatory-administrative frameworks that impede cooperation and the legal-administrative models of multi-level cross-border governance as well. It has relevance on both international and European levels and gained even more importance in recent years in both EU policies and regional research. Through the permeability of the Union's internal borders they also create new spatial structures and new forms of governance across the existing administrative borders in accordance with subsidiarity and multi-level governance policies.

In the cohesion policy of the European Union horizontal dimension is getting more and more emphasis. The macro-regional co-operations will react to the interests and challenges of the Member States that the European Union will only ensure a complementary, supporting and coordinating role.

My presentation analyses the Central-European regional Visegrád Cooperation created a new form of co-operation both in the political, economic and cultural spheres in order to focus on transition to democracy, to promote the modern market economy and to implement the Euro-Atlantic integration. Later, the four countries reaffirmed their determination to continue mutual co-operation aimed at achieving a strong, stable, and democratic Europe. In addition, they intended to form a common position on a global level concerning the issue of peace and sustainable development. The V4 Group's renewed co-operation is thus intended to safeguard their common historical and economic interests; i.e. that the V4 group will be able to effectively represent the interests of Central Europe in the future and the four countries together can constructively contribute to the success of the European Union. By now all V4 countries have reached the Council of the European Union's rotating presidency, and no one can question the added value of its members and the community in this region of Europe. And even though the success of our region is our primary common interest, this can only be reached by maintaining good relations with the Western European Member States.

In this respect, the aim of my presentation is to reveal the legal barriers blocking everyday life which barriers significantly restrict cross-border development organisations' capacity to act. First, the goal is not only to process these but also to formulate proposals to a comforting settlement of questions of sovereignty and competences. Second, the institutionalisation level of the co-operations will be

analysed in the light of the constitutional system of the individual states and the regional distribution of the state structure on the basis of the available body of law and the documents and project activity of the co-operations. Finally, through the analysis of these structures I examine the co-operation agreements, statutes of these structures and through the comparative analysis of these I present the operation mechanisms of these institutionalising relationships and facilitate a deeper exploration and understanding of problems appearing in practice, how to contribute to the European discourse on territorial governance.

### REGIONALIZATION IN EU MEMBER STATES OF CENTRAL AND EASTERN EUROPE.

#### Anastasia Fomchenko Leonova, University of Valencia, Spain

Territory is one of the main attributes of the state. For enhanced control and administration, any State needs to institutionalize authority and "divide" its territory in the most resourceful way. In the case of the EU, the task becomes even more difficult with countries that have political and territorial heterogeneity. Thus, one of the objectives of the EU is to promote regional governance in the context of EU enlargement. The question is how. Regionalization is one of the ways to achieve this goal, moreover in the case of EU member states from Central and Eastern Europe. Carrying out regionalization is a current problem for the EU posing many questions, including controversies about its efficacy.

Regionalization is linked to democratization and Europeanization processes. EU enlargement is moving to the East. Mainly, we are talking about the centralist countries, which passed through several reforms and processes before and after accession, among which is regionalization. This mechanism was seen as an effective tool for improving regional, economic, institutional and political development.

The aim of this research is to analyze regionalization in Poland, Czech Republic, Slovenia, Hungary, Romania, Bulgaria, Latvia, Estonia, Lithuania, Croatia and Slovakia in the context of the EU enlargement, as well as to establish its effectiveness and risks in achieving these objectives of the EU. The methodology of this study is an analysis of EU regulation and some scientific studies of different researchers and experts. I carried out my research based on descriptive, historical and contrastive analysis.

The process of regionalization in member states of Central and Eastern Europe was aimed at the development of regional governance, including local level. In all countries, local government reforms have been undertaken as a rejection of a centralized system of government.

In the context of decentralization, democratization and carrying out of administrative reforms in these CEE countries, the processes of Europeanization and regionalization have become an important factor in the decision-making procedure and strategy adaption.

Despite this, in some countries of the region, the process of regionalization has faced resistance, as national political elites and governments have feared losing their power, as well as the possibility of a state breakup and political conflicts. In a number of cases, the process of regionalization has led to the strengthening of regions (for example, in Poland, where the process of regionalization was very successful). However, in some countries (e.g. Czech Republic and Hungary), the implementation of regional reforms was more complicated. The authorities of these countries explained the regionalization as a way of better managing the Structural Funds.

Within the EU member states of Central and Eastern Europe, regionalization takes place at different rates, taking into account the interrelations of different actors at the local, national and European levels. It also takes into account historical development and institutional factors, as well as European Union regulation. Therefore, Europeanization and EU accession became an accelerator of regionalization in these countries.

### DETERMINANTS AND EFFECTS OF FIRM ENTRY IN THE POLISH REGIONS

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This paper investigates short and long-run determinants of firm entry in the Polish regions, as well as macroeconomic consequences of shocks to firm entry. Estimating a panel error-correction model via the PMG method we confirm the usual finding that demand conditions strongly influence the creation of start-ups, especially in the short-run. Additionally, we show that unemployment positively affects firm creation, which indicates that start-ups are sometimes forced by the inability to find a paid job. Finally, we provide evidence for the long-run relationship between firm creation and regional economic structures.

In the second part of the paper, we employ the Local Projections Method and show that shocks to firm entry exert a significant and positive impact on regional GDP, but their role for raising employment is less clear. This could be associated with start-ups primarily improving labor efficiency, the conclusion which is further supported by the signs of strong creative destruction, which we find in our analyses.

# THE POLICIES AND MEASURES FOR SELF-EMPLOYMENT AND ENTREPRENEURSHIP IN MACEDONIA AMONG THE ROMA COMMUNITY

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Roma community are vulnerable to both the economic and social shocks which hamper their participation within the policies and measures for subsided employment, self-employment and entrepreneurship. There is a limited inclusion of Roma ethnic community within the policies and measures for development of entrepreneurship in Macedonia. Relatively few Roma use the state's programs and measures for employment and entrepreneurship enhancement, compared to the number of Roma who applied for using the same. The formal and informal Roma entrepreneurs have access and want to be involved in the utilization of the active measures and programs for self-employment and entrepreneurial development. The perception among a significant number of the Roma entrepreneurs (both formal and informal) is that the offered programs and measures will significantly help in the development of their business. This research will review and analyze the policies for socio-economic inclusion of Roma in Macedonia within the context of entrepreneurship. The research will cover entrepreneurs who have a formal business (registered legal entity) and informal business (without registered legal entity). Also, research will cover entrepreneurs who are members of the Roma ethnic community (Roma entrepreneurs) and entrepreneurs from other ethnic

communities in Macedonia (non-Roma entrepreneurs), as well as the gender perspective, and regional variation of the usage of the policy measures, in the regions where there are majority of Roma population in Macedonia.

# SPATIAL/TERRITORIAL DATA AGGREGATION AND TRENDS OF REGIONAL ECONOMIC CONVERGENCE IN EASTERN AND CENTRAL EUROPE. A GEO-STATISTICAL ANALYSIS FOR THE PERIOD 2001-2013

### Octavian Groza, Universitatea "Alexandru Ioan Cuza" din Iasi, Romania Alexandru Rusu, Universitatea "Alexandru Ioan Cuza" din Iași, Romania

As the majority of studies and reports highlights, during the 2001-2013 period of time, the Eastern European states show accelerated rhythms of economic convergence. Generally, these trends of growth are measured using the beta-convergence model in a large territorial context, at continental scale. The use of time series for economic indicators also allows the implementation of the sigma convergence model, a method that measures the increase of economic disparities between the NUTS2 or the NUTSO composing the area of research. The general conclusion stays that, as level the economic performance of the Eastern European countries approaches those of the Western states of the EU, the level of internal disparities increases too, indicating that the trends of convergence might be biased by the territorial context of data aggregation and specific processes of economic accumulation, at NUTS2 and NUTS3 scale. In this paper, we analyze how the territorial scale of data aggregation can explain different intensities of the economic convergence, in a flexible multi-scalar approach of the indicators. A top-down descriptive approach is implemented, starting with the national level and hierarchically, continuing to the NUTS3 spatial frame of data modeling, estimating how the trends of the convergence process are shifting when the scale of analysis is modified. Based on the multi-scalar evaluation, a generalized coefficient of territorial autocorrelation of the economic convergence will be elaborated. This coefficient will explain how much of these trends are explained by the level of data aggregation. In order to implement the analysis, an intensive use of GIS tools and techniques will be needed. The general technical solution will be provided separately as a re-usable script. As the worldwide financial crisis is also encompassed in our analysis, we intend to better understand how the inherent economic decline affected the local, regional or national process of convergence, together with a local zoom-in on the causes of this decline.

# POPULATION MOBILITY ACCORDING TO THE DIRECTION OF TRAVEL. CASE STUDY: CLUJ-NAPOCA CITY

#### Iulia Hărănguş, Babes-Bolyai University, Romania

Urban mobility has an increased concern among the researchers all over the world, because the mobility of masses enhanced together with the expansive cities during the last century. The development of the cities and the transport infrastructure are in complementary connection. The development potential of a city grows when it is sustained by a developed transportation system. The public transportation network has to satisfy the needs of population for mobility. Cities around the world have extended a lot, and their rapid evolution wasn't based on a well-planned urban development and caused various problems: economic (congestion, low accessibility etc.), social (low quality of life, social exclusion, lack of road safety etc.) and environmental issues (pollution, irrational

consumption of resources etc.). Cluj-Napoca City is not an exception; it experienced some transformation along the time, becoming gradually a motorized city.

Sustainability is the aim of the modern society, maintaining equilibrium between the economic, social and environmental domains. One of the most important criteria to maintain the quality of life in a city is the population mobility.

In our days, we focus more on how much time we spend traveling, and not to how far we go. Lately, I have seen a significant increased number of cars in the cities. The main cause for the situation represents the increasing number of commuters from neighboring localities that come to Cluj-Napoca with personal cars.

This study presents the population mobility depending on the travel direction in Cluj-Napoca, using a database which contains the speed of vehicles in different moments of the day, the speed of public transportation in different moments of the day and the pedestrian speed.

The objective of this study is to emphasize the characteristics of transportation in the city taking into consideration the direction of the travelers. So, I focused on four traveling possibilities:

- Central (inside central zone)
- Intern (the starting point and the destination are in the same sector, excluding central zone)
- Radial (the starting point or the destination in the central sector: center-periphery, periphery-center)
- Peripheral/tangential (the starting point and the destination outside the central sector)

In this approach we present the alarming situation of time spent by traveling for certain time intervals in Cluj-Napoca. The study succeeded to bring both the positive and the negative aspects of the city that refers to population mobility, revealing information intended to provide equitable mobility for all people. The results are a starting point for sustainable urban mobility studies and, more important, for some better planning transportation networks.

# ASSESSMENT OF SOCIAL ACCEPTANCE OF RENEWABLE ENERGIES AND THEIR USE IN CENTRAL DEVELOPMENT REGION (ROMANIA)

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The Renewable Energy Directive of the EU establishes a general policy for the production and promotion of energy from renewable sources. It requires the EU to cover at least 27% of its total energy needs with renewable energy by 2030. The member states have to align their energy sector legislation and implement policies to increase the share of renewable energy sources (RES) in their energy mix. Yet there are major differences among the member states and currently RES do not represent a high percentage of the energy mix, mainly because conventional energy sources cost less. However, their exploitation tackles environmental concerns, improves security and reliability of the energy supply to the grid, and contributes to the economic development through the creation of new jobs (Stigka et. al. 2014).

Besides several other factors (e.g. costs) it has been increasingly recognized that social acceptance can potentially be a powerful impediment to the achievement of renewable energy targets (Würstenhagene et al. 2007; Süsser 2017).

This paper assess the social acceptance of renewable energy projects based on its four dimensions (1) energy consuption behaviours and expectations, (2) social awareness about renewables, (3) community acceptance of renewable projects (4) market acceptance. We focus on the Central Development Region (NUTS2) of Romania, a particular underdeveloped region in terms not only of insufficient energy production, but also in terms of the novelty of the topic.

The research rely mainly on a complex questionnaire survey carried out recently to find out the actual characteristics of social awareness related to renewable energy use in a certain region, while the national energy policy is in a stage of redesign and definition. Considering the actual legislative framework, the technical potential of renewable energy sources and the social acceptance of them the future development possibilities have been also estimated using different types of approaches. The study emphasises the differences of social awareness regarding renewable energy sources and technologies at rural and urban level, and analyses various socio-demographic backgrounds to reveal attitude disparities. The research also addresses the existing opportunities for renewable energy projects, and clearly demonstrates the necessity of investment in social awareness campaigns and the requirement of a legislative support.

# GOLD MINING BANNED. WHAT NEXT? ACTIVISM AND ALTERNATIVE LOCAL DEVELOPMENT IN ROŞIA MONTANĂ/ROMANIA

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After 20 years of civic activism and protest against what could have become Europes largest open pit gold mine in Roşia Montană/Romania, the project seems to have come to a halt. Similar to other conflicts around mining, which have been studied from approaches in political ecology and contentious politics, the movement against this proposed cyanide-based mine has involved actors and strategies on different scales with the participation of international NGOs and activists. Furthermore, it ignited a larger civic movement within Romania, e.g. with repeated demonstrations of thousands of people in several cities against the so-called mining law. A radical change in the Romanian governments approach to the situation in Roşia Montană has been marked by the recent submission of a proposal to include the site in the UNESCO World heritage list. Yet the village is suffering from the major social and economic shifts caused by the long period of uncertainty, the social conflict between different actor groups and from the relocation efforts conducted by the mining company. This, in combination with a situation marked by scarce opportunities to secure livelihoods – affecting also many other rural areas in Romania – and the lack of concepts for development by local and regional authorities have left the village in a liminal state.

Against this background, the contribution departs from perspectives on political ecology of the subsoil (Bebbington 2012) in order to study the current dynamics of alternative local entrepreneurship as one form of resistance against mining, sparked by locally-based and external actors of the social protest movement. This approach is combined with a perspective on symbolic meanings of place (Dietz & Engels forthcoming) in order to study how activist entrepreneurs engage in attempts to redefine local meanings and narratives of place in the former traditional mining village.

The paper draws from preliminary results of a conjoint qualitative research project started in 2017, based on numerous visits of both authors to Roşia Montană since 2010 and on interviews conducted with several entrepreneurs.

### SOCIAL CAPITAL IS THE HIDDEN RESERVE FOR SMALL TOWNS?

#### Réka Horeczki, CERS HAS, Hungary

All-important socio-economic changes have impacted on every city as such changes may in fact begin in an emerging economy and are not necessarily limited to the most developed contexts. At the same time, small towns play a more important role than ever in local development. Most of the city researchers favour to analyzing big cities and agglomerations due to the accessibility and multitude of information. In correspondence with that, the studying of small towns can have a supplementary function among the other theories. The study aims to present the long-term developmental laws and characteristic features of small towns which entities strongly influence the economic, social and political life of Eastern and Central-Europe. The number of small towns in this area has permanently changed during the last centuries (market town development, urban laws of 1871), yet their portion increased mainly after the regime change in the early 1990s and the millennium in 2000. My paper applies the methodology of comparison; it investigates primarily the development and opportunities of countries with a significant small town network disposing of similar assets and structures. The factors which have relevant impacts on small town development potentials are: the geographic position, the historical development, and the emergence of civil society. Beside these aspects, local traditions, practices, special age-long agricultural activities, specialized knowledge or economic attitude (small firm production possibilities, special horticultural activities) are also relevant features. One solution for the small towns the social capital, which can use to improve the quality of life.

# REGIONS AND MULTINATIONAL COMPANIES. EN EXERCISE OF HYPOTHESIS CONSTRUCTION.

### Réka Horváth, Babes-Bolyai University, Romania

In this paper I change the perspective in which traditionally the scientific literature analysis the MNC's locational decisions. Academics are mostly interested in the determinants of the location's decision, while for policy makers the most important are the effects of the plant's presence for the regions. In my opinion, if we analyze the regions in which the MNC are located, we could add a new perspective to the location theories. Therefore I analyze the regions and countries in which the biggest part of the European automotive industry (Volkswagen, BMW, Daimler-Benz, Renault and PSA) has its plants, trying to construct a hypothesis regarding the regions common characteristic.

### PERI-URBANISATION – EVIDENCE FROM SELECTED POLISH METROPOLITAN AREAS

#### Piotr Idczak, Poznan University of Economics, Poland

One of the major current problems of large cities in Poland is a lack of capabilities to create a living environment in a sensible way making possible to eliminate such negative effects as an inappropriate stock of real estate or urban building structures. This in turn leads to progressing suburbanization process and spontaneous urban sprawl which also affect peri-urban areas. These areas are located outside the urban cores but within rural areas with city influence. The rapid development of peri-urban areas occurs, in particular, in second tier cities, i.e. those cities outside the capital whose economic and social performance have an important impacts on the potential performance of the national economy. Rivalry over different resources and the distribution of functions will become particularly visible in those areas. Therefore public authorities should promote balanced development and avoid uncoordinated investment in order to make possible to derive specific advantages of peri-urban areas. The paper is set to investigate the nature of the relationships between selected second tier cities in Poland and peri-urban areas surrounding them. The examination procedure will be generally conducted with the use of the taxonomic methods. The research has practical implications for policy-makers and can be a valuable case-study also for other cities.

# DOES MIGRATION LEAD TO REGIONAL CONVERGENCE IN ROMANIA? A SPATIAL ANALYSIS BETWEEN 1997 AND 2014 AT NUTS3 LEVEL

#### Cristian Incaltarau, Alexandru Ioan Cuza University of Iasi, Romania

Literature evidenced different results regarding the capacity of migration to support convergence. The different mechanisms involved can emphasise both convergence and divergence effects and make the net effect to be variate. One the one hand, migration can act as an adjustment mechanism by lowering capital intensity and per capita income in destination areas and increasing productivity and wealth in origin areas thus reducing development gaps. On the other, the disequilibrium approach argues that migration is selective, so it enacts a process of cumulative causation as the high skilled inflows raises productivity and wages and fosters the attractiveness of destination areas thus increasing disparities even more. This paper focuses on the Romanian case and uses a spatial panel data analysis over the economic transition period (1997-2014). The System-GMM estimation method was preferred as it accounts for potentially endogeneity of explanatory variables, regional heterogeneity, but also econometric problems such as measurement errors. Furthermore, including a spatially lagged dependent will allow controlling for spatial autocorrelation and spill-over effects between regions. In order to avoid any aggregation issues, considering the heterogeneity of Romanian countries in terms of size and development, the analysis is carried out at county level (NUTS-3).

### CHALLENGES FOR THE RESILIENCE CAPACITY OF ROMANIAN SHRINKING CITIES

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Resilience capacity is not focused on the performance in facing a certain disaster, but on the general ability to resist shocks, on the structural preparedness and the general capacity to bounce back in the wake of any stress or pressure. Assessing urban resilience is not only relevant to after natural hazards progresses but also to other growing concerns, such as demographic changes and their impact on critical infrastructure, general services or transportation, which also influence urban vitality and livability. Romanian cities confront issues related to natural demographic decline and out-migration, in the context of deindustrialization and deurbanisation, inducing apparently opposite, but complementary, phenomena: slow-burn shrinkage and urban sprawl, which create peripheralisation processes both inside and outside the cites. There are many studies discussing Romanian urban sprawl, but fewer related to the actual consequences of shrinkage. Current approach acknowledges urban shrinkage within the context of post-communist transformations, but also as a natural process in the (adaptive) life cycle of cities. In this context, the study aims to explore the inter-dependencies between causes and the effects of shrinkage and the operating feedback mechanisms which might lead to adaptation. It highlights the changes incurred by the territorial (in)balance combining the multi-scale analysis of urban shrinkage in relation to the diffused structures imposed by suburbanization or metropolisation processes. Using multi-criteria analysis methods, the aim of the assessment is to capture trends and correlations between relevant demographic, social-economic, infrastructure and environmental indicators in order to describe typologies of urban shrinkage in Romania. The results are interpreted in relation to on the (lack of) plans and strategies to tackle this issue in Romania, but also in connection to current needs for community resilience and urban regeneration. Therefore conclusions can be drawn to support territorial governance and resilient urban development policies.

CONVERGENCE OR DIVERGENCE? MULTIDIMENSIONAL ANALYSIS OF REGIONAL DEVELOPMENT IN THE NEW EU MEMBER STATES WITH PARTICULAR FOCUS ON BORDER REGIONS

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One of the main objectives of the European Union is to strengthen economic, social and territorial cohesion by supporting measures to reduce regional disparities. Special emphasis is placed on supporting the development processes of the least-favoured regions, which may include cross-border areas, including those located at the external border of the EU. The proximity of the border characterised by a high degree of tightness and low permeability is an important barrier to development processes, giving the areas situated alongside the peripheries also in the socio-economic sense.

In practice, regional development (in the context of the effects of cohesion policy) is monitored by one indicator – GDP per capita. Despite the numerous advantages (universality, relative ease of interpretation, relative comparability in time and space), this measure does not comprehensively reflect the complex nature of cohesion policy-driven development processes, referring in reality only to its economic dimension. While attempts are being made to construct synthetic indicators that take

into account the multifaceted nature of regional development, attention is directed to the readability of composition and the selection of variables. In addition, because of its structure, synthetic indicators only allow for the identification of development disparities between objects (regions) and their ranking according to a given day/year, but they are rarely used to study the dynamics of development processes and thus the convergence and/or divergence processes within a certain period of time.

The main aim of the paper is the multidimensional analysis of regional development in the EU New Member States in the years 2004-2015, with particular emphasis on the border areas and the characterization of the differences in the dynamics using the synthetic measure, covering three dimensions of cohesion policy, namely: economic, social and territorial.

For this purpose, a synthetic measure of regional development (taking into account the three dimensions of cohesion policy, i.e. economic, social and territorial) has been developed, tested and implemented. Implemented measure is based on Z. Hellwig's modified linear alignment method (so-called development measure), which was adapted for the purpose of the dynamic development processes analysis.

The application of the aforementioned method allowed for a multifaceted examination of the variation in the pace of development processes of regions of the so-called new EU Member States in Central and Eastern Europe in terms of convergence and / or divergence. Particular attention has been paid to the issue of development of the regions located at the external border of the EU in order to investigate to what extent the factor of the proximity of the border influences the nature and dynamics of the phenomenon under investigation. The results obtained were compared with the value of projects co-financed by EU funds to determine the impact of cohesion policy on development processes in the regions covered by the analysis.

# NEW MUSEOLOGY AND TOURIST EXPERIENCE IN CULTURAL TOURISM THE CASE STUDY OF A MUSEUM IN BUDAPEST

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The museums as cultural tourist attractions play an important role in city tourism, as more and more tourist come to a destination with cultural motivation. Therefore the museums must follow the trends of the demand side as new tourists' needs. They have to create their supply elements that could be the primary motivations of experience-desired consumers when visiting the attraction.

New museology is a new paradigm which draws attention to the fact that it is not enough to make high culture available not only to certain privileged people. To socialize the culture is necessary so the whole society could experience the museum visit.

In our study we examined our main research question in the case of the Hungarian National Gallery, so what type of experiences foreign tourist, as experience-desired consumers experience in a museum. Supply side was studied by seconder research. Students from the Corvinus University of Budapest made observation and interviews in 20 museums in Budapest. Among the 20 analysed museums, the subject of our research was the Hungarian National Gallery, because its location makes it possible to differentiate tourists with different cultural motivations from the travel decision, which is an essential element of our research. From the results of the student research, we highlight the

important elements of the present research from the point of view of tourism experience on which we also build our primary research. The demand side was analysed by qualitative content analysis. The analysis of the consumers' opinions was made with closed codes. The analytical framework for the study was the four experience categories. We studied the type of experience and what kind of cultural experience meant for the visitor. We also evaluated the responses that visiting the museum itself as a cultural attraction meant primary or secondary role during the travel decision or simply walked into the museum. We also examined whether the consumer recommended the museums to others or not.

The aim of our study is to explore the experience creating tools of a museum on the supply side through the example of the Hungarian National Gallery and compare them the experiences on the demand side.

Base on consumer feedback, we can say that in the Hungarian National Gallery the consumer experience is mostly characterized by educational and aesthetic experience, which is complemented by the entertainment experience, but the escapist one is completely absent. We also formulate conclusions from the results and proposals to improve the customer experiences.

### THE IMPACTS OF CORPORATE EMBEDDEDNESS ON REGIONAL POLARISATION

#### Viktória Józsa, Szent István University György Enyedi, Hungary

The spatiality of economy, especially that of transnational companies as main actors of the globalised economy, has been an important research topic in the last decades (eg.: new economic geography). On the other hand, the explicit contribution of economic actors to local and regional processes, through for example corporate embeddedness, has received less research attention, especially in the Central and Eastern European region. With the decreasing role of national states and economies occurring in parallel with the increased importance of sub- and supranational levels, processes at the local level also deserve research interest. I agree with Enyedi (2012, 32) that the 'market economy's natural characteristic is the reproduction of inequalities', but I argue that economic actors - especially large companies - operating in second-tier cities could be key actors in the resolution of this paradox. My basic hypothesis is that corporate embedding is a local level phenomenon, that could directly interconnect transnational companies and their local host environment (settlements). Thus, it could contribute to further territorial polarisation and/or local and regional convergence and resilience. Foreign direct investment has been a decisive factor in the evolution of national economies in the CEE from the 1990s. With the examination of specific case studies on corporate embedding from Hungary - one of the 'Detroit East' countries - with a process-based, qualitative methodology, we can explore the role and contribution of transnational companies to sustainable local economic development and city success. As a result, we can identify and model recent tendencies and predict potential problems in the future, together with suitable place-based policy interventions to handle them.

# DOES LOCATION MATTER? EDUCATIONAL OPPORTUNITIES IN RURAL AREAS OF DIFFERENT REMOTENESS LEVELS

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Well-trained workforce is the basis of a knowledge-based, innovative economy and thus the access to quality education has to be ensured for all children, including those from remote rural areas. The aim of this paper is to compare the educational opportunities of young people living in rural settlements of different remoteness levels. Empirical data was collected through three surveys (in 2007, 2011 and in 2015) in secondary schools from 20 communes from Cluj County, Romania. Based on these empirical data we analyse the influence of remoteness on the access to quality education and we study whether young people from less remote rural areas continue their education in a higher share or have better success rates at the baccalaureate exam than those from more remote areas.

### COMPARISON OF CHANGES IN URBANIZED AREA IN POLAND AND ROMANIA

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The dynamics and directions of urban growth have to be investigated in relation to both urban sprawl and inner-city development. Analyses of urban growth have to rely on certain paradigms. The growth process has to be closely correlated with living standards in the urban center. The concept of development is strongly linked with the quality of life, the residents' expectations and aspirations, their level of cultural and technological development and the fulfillment of their needs. How to compare the speed of development of urbanized urban areas? There is no doubt that the population may be a determinant of the size of the urbanized area, but as mentioned earlier other factors are also important.

The main subject of the paper is a proposal presenting the co-existing dynamic phenomena occurring in an urbanised area. The proposed method is based on an analysis of the trend and the intensity of changes concerning geolocation data. The input data were obtained from state statistical registers kept for administrative units (communes).

The data selected for the analysis include total population (demographic data) and residential floor space per person. The research assumes that the analysis of the dynamics of changes in the residential floor space per person provides the best indicator of changes occurring in the urbanised area. On the other hand, the population supplements information concerning changes in the urbanised area. In practice, a given area might become depopulated, and an increase in residential floor space per person will be observed. The growth of residential floor space per person can be also accompanied by an increase in population. Because of such complex dependencies, indicators have been proposed to visualise the dynamic changes occurring on the map and innych autorskich diagramach.

The method was verified for a group of communes, creating a uniform urbanized area (a city and neighbouring communes). This study compare the dynamics of changes in two states (four cities in eastern Poland: Olsztyn, Białystok, Kielce, Lublin and five cities in the Transylvanian region in Romania: Cluj-Napoca, Brasov, Tirgu Mures, Sibiu). The studied areas comprise the territory situated within the cities' administrative boundaries and the neighboring municipalities in years 1992 - 2016. The surveyed objects were characterized by similar area, population and residential area.

The analysis was based on the assumption that dwellings constitute the largest part of a city, and that they are most susceptible to change. An observer examining the city from within will note that a critical level has been reached (an observer positioned in a rural area will report a decrease in the surface tension of the urban/rural boundary). In consequence, progressing residential development in areas adjacent to the city contributes to urban sprawl. In view of the above, a research hypothesis was proposed that residential area per capita is the most robust indicator of economic and spatial changes in an urban area.

# FROM LAGGING TO CATCH-UP: LEARNING FROM SUCCESS IN EUROPEAN REGIONAL DEVELOPMENT

Austin Kilroy, World Bank Group, Croatia Anwar Aridi, World Bank, United States Todor Milchevski, World Bank, Croatia

We calculate several conventional metrics of inequalities at the national and NUTS3 levels in EU member states, and find that income inequalities are increasingly within countries rather than between them. Further, mobility in the regional hierarchy has been much greater amongst the richest regions than the poorest ones: between 2004 and 2014, 20% of the top quintile of NUTS3 regions were replaced by other regions, but only 9% of the bottom quintile of NUTS3 regions were replaced by other regions. These two trends suggest a 'lagging regions trap'. In this paper, we make three contributions, focusing on understanding the correlates of success in regional development. First, we document the exceptions to this rule: fast-growing poor regions ('catch-up regions') which graduated from the lagging regions trap between 2004 and 2014. Second, we describe the correlates of growth in those regions focusing on the degree of sector specialization, competiveness, and the dynamics of enterprise innovation (new firms, SMEs, large firms, and FDI). Third, we develop a typology and match these 'catch-up regions' to the other 91% of lagging regions which have not managed to graduate, in order to identify the regions for which insights are most likely to be relevant. In the next phases of this work, we would like to reveal more about causality that explains 'catch-up'. We plan to quantify the causal links between several regional economic variables, and to use qualitative research to build a more detailed picture of the key causal mechanisms that have played a role in the catch-up process.

### REGIONAL POLARIZATION AND EVOLUTION OF REGIONAL POLICY IN RUSSIA

#### Vladimir Klimanov, Institute for Public Finance Reform, Russia

Russia consists of 85 regions (the constitutional entities) located in ten time zones and various climatic areas. In this regard, the crucial specificity of regional development in Russia is that a value of regional disparities is enormous. The scale of that differentiation is accounted by dozens for regions and hundreds for municipalities. Moreover, such issues of territorial organization of economy as an uneven distribution of natural resources, low population density, sparsity of the cities, and the increased costs of overcoming long distances lead to the widening the gap between regions. Reducing these disparities was the main aim of regional policy in Russia during last two decades. However, there are not any special federal laws devoted to the regional policy itself.

We studied a pool of federal legal normative acts on it using comparative analysis. We analyze aims, institutions, mechanisms and results of regional policy in the end of 1990s, in the middle of 2000s, in the end of 2000s and in 2017.

During last two decades, there were some attempts to regulate regional policy in Russia. In 1996, the President's Decree on the bases of regional policy determined the directions of development. Later, the special federal ministry on regional policy and federal relations was twice founded and abolished. The federal programs aimed to the reducing of regional disparities realized in the late 1990s and in 2000s.

The new system of intergovernmental fiscal relations became act since early 2000s after the Budget Code adoption. Intergovernmental grants in the form of unmatched 'dotations', targeted 'subsidies' started to arrive to regions. Less than 15 regions have not received unmatched grants during the last ten years. Federal government uses more than 100 types of target subsidies to regions.

Besides, the Russian Federation was carried out large redistribution of powers between levels of government. Main federal laws on regional and municipal responsibilities were adopted and all subfederal liabilities were mentioned in the legislation and new forms of intergovernmental fiscal transfers were set even in the middle of 2000s. Later, there were introduced more than 100 amendments in the list of regional and municipal responsibilities. However, most of regions have very weak own tax base. Fiscal autonomy of Russia's regions has decreased last years. As a result, more than seventy percent of total revenues go to the federal level, and only one third goes to regional and local budgets. Therefore, the regions do not have enough revenues for cover them. There will be many new tasks for regions, e.g. in increasing state employees' salaries, in future.

Since 2014, Russia expressed a new stage of regional strategic planning after the adoption of the federal law on it. Many new or amended regional strategies started to realize.

Now, there are some renewed and emergent principles on regional policy mentioned in the President's Decree on it adopted in January, 2017.

# RURAL AREAS DURING THE PERIOD OF ECONOMIC SLOWDOWN — BOROUGHS UNDER PRESSURE AND SKILFUL FREE RIDERS. EVIDENCE FROM POLAND.

### Krzysztof Kluza, Warsaw School of Economics, Poland Wojciech Rafał, Getin Noble Bank, Poland

Local governments (LGs) play an important role in national economies, providing public services and carrying out investment, especially in infrastructure. In the European Union (EU) countries, LG revenue amounted to 13.7% of GDP in 2015, remaining at a stable level of 13-14% of GDP over the last ten years. The sector was a noticeable player in the stimulation of domestic demand during the 2008 post-crisis period. Its share in total investment in the EU grew from 7.0% in 2006-2007 to 9.2% in 2010. In 2014-2015 it stabilized at a relatively high level of 8.3%. The unchanged revenue base combined with increased investment efforts resulted in a lasting adverse impact on the finances of LGs across the EU. Their average debt/GDP ratio grew significantly, from less than 5% in 2007 to 7.5% in 2015.

Similar processes took place in the LG sector in Poland. The crisis resulted in increased LG indebtedness and raised concerns over the sector's debt repayment capacity. The operating surplus dropped from 13% of revenue in 2007-2008 to 6% in the 2010-2011 period and debt to revenue ratio grew from 20.2% in 2008 to 38.4% in 2011, eventually dropping to 36.0% in 2015. The crisis also had an adverse impact on the LGs from a demographic and social perspective.

The differentiation between the LG categories proved to be large. In addition, contrary to some common views, the research showed that adverse impact of economic downturn on the rural areas was relatively limited. On average, the rural boroughs emerged from the crisis with the most favourable financial standing among all LG categories in Poland, with an average net debt/revenue ratio of 17.1% and EBITDA/gross interest ratio of 14.6 in 2015. The worst situation was experienced by large towns (i.e. towns with county rights), whose average net debt/revenue ratio reached 37.2% and EBITDA/gross interest ratio was significantly lower: 7.43 in 2015. The stronger financial standing of rural borough was possible, among others, due to the EU structural funds directed to underdeveloped areas as well as the specific statutory debt limit formula in Poland, which favoured debt driven investment in large municipalities.

Further research on demographic and wellbeing indicators (such as the data on housing) revealed that there was no uniform pattern of change in the rural areas. Two main groups emerged from the analysis – systematically depopulated peripheral boroughs and rural boroughs adjacent to large municipalities. The former turned out to be the relative winner of the economic slowdown period. These rural boroughs undertook skilful free rider strategies, limiting their own provision of public goods such as healthcare, education, and cultural activities on the one hand and, on the other, attracted residents from the municipalities. Such a situation indicates the need for reconsideration of the criteria for structural and cohesion policies, specifically in order to better promote municipal areas which are exposed to this kind of unexpected competition from the adjacent rural boroughs.

### MANAGEMENT CHARACTERISTICS OF THE SOCIAL INNOVATION NETWORKS

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The performance of social enterprises which were created through the social innovation activity is only sustainable with the help of successful networking. Hence it is a collective task to generate social innovation, and to operate the created enterprises on a sustainable way.

The authors analyse in their research the following questions:

- how the potential actors find the optimal cooperation form and partner group which is adequate to space and time conditions and also to their objectives. Both alternatives of the value-driven strategy can be a network-building philosophy. On the one hand the network structure of a social innovation activity can be created through the cooperation of stakeholders, suppliers, customers and implementers; or on the other hand it can be created also from organizations acting in different geographical locations which are implementing social innovation in a strong connection with each other.
- the social and economic risks of the social innovation process (human, liquidity, partner, product, cooperation and conflict management, etc.) starting from the innovation idea to the realization.
- the conditions (quantity and tools of state engagement, social acceptance, knowledge capital, etc.) motivations (necessity, asymmetry, reciprocity, efficiency, stability, legitimacy) and control connections (horizontal and vertical cooperation, competence management) of social innovation.

These social innovation networks can give opportunity for the economic convergence of a given territory. The successful leadership of the networks contribute to the competence-based management of the social innovation implementing organizations, to enhancing flexibility and to use synergies.

### COOPERATION, SELFISHNESS AND JOINT RISKS IN INDUSTRIAL CLUSTERS

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Industrial clusters are seen as key drivers for economic and technological development especially in the SME segment. We study cluster cooperations using game- and network theoretic ideas. Our goal is to diagnose and advise clusters of their cooperation problems.

Our approach looks at three levels of cooperation: (1) Intensity: what is the overall effort and value of cooperation, (2) Structure: what is the structure of cooperation, who are the key players, and (3) Balance: how are the benefits shared, what are cooperation prospects in- and outside of the cluster.

The intensity of cooperation depends on the realisable benefits, the probability of realising these benefits, and the associated costs. Keeping the costs fixed, a cluster is, \emph{ceteris paribus}, more successful if it is larger, more specialised, members form partnerships with each other, and if there is a culture of cooperation within the cluster. The latter is modelled using a stag hunt game.

The cooperation structure is described using one of four characteristic network structures, for each of these we present the strengths, weaknesses, opportunities and threats. In a star structure the cluster is driven by a central players. A snowflake has a group of leaders with most firms connected to more than one of these. A circle is a de-centralised network with several hubs that are not connected to each other. Finally, our benchmark is the haystack, a random network.

Cooperative game theory presents models, such as the core, to see if all of the claims can be satisfied at the same time. Unfortunately, large cooperative games are difficult to study, so we focus on positional power in the network and the balance of competencies.

Originally we have used these points to evaluate two European (a Central-European and a Scandinavian) clusters that are considered to be success stories in their respective countries. We have used questionnaires and interviews to collect data and to identify the most relevant indicators. Our improved questionnaire we still use today does not any more require interviews allowing us to work with clusters in multiple countries.

# THE IMPACT OF TRANSNATIONAL INFRASTRUCTURES ON REGIONAL DEVELOPMENT – RISKS OF OBOR OBJECTIVES

#### Attila Korompai, Corvinus University of Budapest, Hungary

In the frame of OBOR, the Chinese initiation to support the creation of economic zones connecting China and Europe, one of the key priorities is the development of transcontinental infrastructural network between China and Europe. In this network the high speed railway lines represent the main axes. "High speed" means in this sense railway line of minimum 100 km/hour transport capability for passenger and goods transport. There are great expectations along the outlined potential lines but these concentrate mainly to national levels, though in several cases the economic development of the crossed regions is also mentioned. This aspect could become highly critical both during the realisation and in the operation of the project.

The economic efficiency and political requirements considering the great – over 7000 km – distance between East Asia and Europe, and the sensibility of crossed regions suppose very attending selection of tracks and stop stations. The role of transit and the involvement opportunities of resources and capabilities of the potentially crossed regions into the stream between China and Europe are not necessarily favourable for these areas. The accessibility is not a one-way process. Comparative studies of Chinese and European experiences on the regional impact of high-speed railways result in contradictory outcomes. The risks are not only economic risks but social and political, too. These are discussed in the presentation and the paper.

# GEOGRAPIC CHARACTERISTICS OF THE HUNGARIAN COOPERATIVE BANKING SECTOR - RURAL EXCLUSION?

### Sandor Zsolt Kovacs, Hungarian Academy of Sciences, University of Pécs, Hungary

Traditional cooperative banks are considered as locally and socially embedded, lending to local clients from locally collected deposits and financing the local economy. To offset their disadvantage due to

their insufficient size, they exploit the information advantage deriving from their geographical proximity to their clients and the advantages of their peculiar corporate governance deriving from the member-ownership. This paper examines the relevant theories on cooperative finance, while examining the underlying geographical and corporate governance aspects in a less advanced transition economy environment. Governments' preference towards commercial banking and at the same time their negligence towards the cooperatives in general led to a loose financial regulation of the sector. The limits of cooperatives' corporate governance and demutualization intensify when loosing social/local embeddedness.

I collected the data of bank branches such as geographic location, accessibility and analysed these information with some indicators. I calculated the bank density indicator (inhabitants per branch) in all territorial level (from settlements to NUTS-2 regions). I saw, that bank branches are not in very much settlement, so used the accessibility indicator with geolocation techniques. This shows, that how far is the nearest bank from a settlement. Helps of these indicators, we can see a realisation of centre-periphery dual in the Hungarian economy.

Second part of this paper examines the economic development role of the financial institutions in the peripheral areas. Among the competitive advantages of local banks the low level of information asymmetry with clients' proximity to local decision-making level, the member ownership of the bank and close links to their clients (which is an advantage for customer selection and the debtor rating), the more powerful regional embeddedness in local decision-making and national affiliation are to be mentioned. Studies have shown that the locally embedded and relationship banking is an effective means of information asymmetry reduction, and the proximity to customers has a positive effect on the bank's loan allocation willingness. The cooperative banks build on their existing local knowledge and relationships, creating opportunities for "home banking" functions. I used some datebase and simple model in the Hungarian examination.

#### ANALYSIS OF THE STRUCTURE OF PARCELS IN THE VICINITY OF THE MOTORWAY

### Cezary Kowalczky, University of Warmia and Mazury in Olsztyn, Poland Jacek Kil, University of Warmia and Mazury in Olsztyn, Poland

Poland is a country situated in Central Europe. Due to its special position, it is a transport junction on routes from Eastern and Western Europe and an important logistical node in the flow of goods. A consequence of Poland being a part of the Soviet bloc during the period between 1945 and 1989 is the poor development of its road network, especially motorways and expressways. After Poland's accession to the European Union, the number of cars on Polish roads grew rapidly. Construction of motorways and ring roads is a serious planning challenge. By their expansive nature, such investments have a great impact on the environment, landscape as well as on the land use planning process. Their planning and construction frequently cause social and spatial conflicts in the areas through which they run. With modern GIS techniques it is possible to conduct analyses of the impact of such roads on the spatial structure of rural areas and to quickly review different variants of the course of a road.

This article evaluates the change in the spatial structure of parcels caused by motorway construction. At the first stage, information was gathered and analysed on the current state. Next, the surface and spatial impact of the new motorway was evaluated. Finally, the evaluation results were used to determine the extent of morphological structure changes to the plots. The results were presented on maps and graphs.

Employing GIS tools allows to unify procedures, to reduce the time needed for the planning and design process and to analyse different locations of the road in order to minimise the negative spatial effects.

The morphological analysis of the spatial structure, changed as a result of a motorway construction, provided grounds for determining:

- the relationship between the location of the motorway and a change of the plot size;
- typical shape of plots situated in the area. The analysis revealed that, statistically, the plots situated farther from the motorway are more elongated rectangles than those situated closer to the motorway.

The relatively small length of the motorway section under analysis prevents one from being able to formulate any general hypotheses regarding changes in the agricultural land morphology. However, the structure of the analysed areas was considerably regular. Therefore, it may be supposed that these findings have universal value, which will be confirmed in other studies of areas affected by motorways.

#### SOCIAL INNOVATION AND COMPETITIVENESS

### Varga Krisztina, University of Miskolc, Hungary Károly Balaton, University of Miskolc, Hungary

Competitiveness has become a major topic of economic and business studies over the last 20 years. The phenomenon has been studied at differenct levels: the competitiveness of nations is evaluation in each year by international organizations. Mezo-level studies concentrate on regional or branch level competitiveness issues. There is and understanding however that either national or industry/regional competitiveness in determined by the level of competitiveness of enterprises.

To acquire and maintain competitiveness is strongly dependent today on innovation. Innovation focused strategies are becoming today more important as opposed to cost-cutting strategies. For many years innovation related studies concentrated on technological innovation. Although Schumpeter has defined innovation in a broader sence, including market and organizational innovations as well, studies mainly have left out of consideration the economic, managerial and social elements of innovation.

During the last 15 to 20 years social innovation has emerged as a major area of studies in innovation. Competitiveness studies are connected to analysis of living standards. New and up-to-date solutions are necessary for smaller communities (regions, settlements) and social innovation can provide means for improving their conditions. The role of social innovation has increased due to two reasons:

- shift from industrial society toward knowledge and service based society,
- the natural needs of periferial settlements to cach up (local initiatives as possible solutions).

Social innovation may contribute to improvement of competitiveness and through that to increasing of living standards and quality of life.

The paper provides examples on the above issues based on empirical studies in North-Eastern Hungary.

# PERIPHERIZATION IN EAST CENTRAL EUROPE AND THE ROLE OF SOCIAL AND SOLIDARITY ECONOMY

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The sectoral and spatial concentration of economic activities, moreover the uneven distribution of wealth are evidences in the modern world. Central and East Europe (CEE) is not exception either.

The eight years of economic prosperity (2000-2007) and the following eight years of downturn (2008) have contributed to a more fragmented, imbalanced socio-economic structure in CEE. While the most advanced urban, core regions exceeded far above the EU average (measured e.g. by GDP per capita), until then the peripheral rural regions converged barely. Accordingly the central-periphery relation represents significant development gaps and unfavourable flows of production factors in our days.

" How to improve the living standards (income and labour market conditions) in these disadvantageous areas? " sounds frequently the question addressed to the politicians and professionals.

The actors of the so-called non-profit or third sector offer unique approach and method for development. The social and solidarity economy (SSE) represents an interesting and informative segment. Currently the members of the sector (such mutual societies, cooperatives, foundations, associations and social enterprises) operate a large number of economic activities; provide a great variety of products and services in the common market. Even in the CEE regions successful enterprises could be found and discovered.

The prospective paper comprises two parts; one is the revision of a former PhD thesis, which dealt with the regional development and polarisation in CEE. The other is a research project, which contains analysis and observation of the conditions and development of SSE in five Post-Socialist countries (Czech Republic, Hungary, Lithuania, Poland, and Slovenia). During the site visits in the mentioned states different entrepreneurs and researchers have been interviewed about their opinion, practice and experience. Based on these primary data and information a broad, state-of-the-art international comparison could be created.

The main aim is to help the understanding of the characteristics, mechanisms of regional development and the social-solidarity economy in CEE. Thus the performance of SEE is likely to determine the prospective growth of both the rural and the urban areas as well. The social enterprises can create a more resilient ecosystem; and their role is more essential in such areas where the society is more vulnerable and the economy is more fragile.

With reference to the related research project: "Social and Solidarity Economics in Post-Socialist Peripherals" (K112928. - OTKA Hungarian Scientific Research Fund)

# A GLOBAL ECONOMY WITH VARIOUS HOTSPOTS. POSSIBLE WINNERS FOR THE XXITH CENTURY

#### Arthur Lakatos, Babes-Bolyai University, Romania

At the end of the XXth century, the global status quo was clear: the world's economic poles are concentrated in North America, especially in the USA, seconded by Canada, in Western Europe, with a growing Germany and a continuously deepening integration process, with a pleasant Mediterranean and ultra-rich and egalitarian Scandinavia, and the Far East, having Japan, the Big Tiger in a leading role. In only two decades, the situation changed: the West got struck by a global economic crisis, whose side effects are felt even nowadays, and new poles for power are rising, similar to the last decades of the XIX century. The main difference is that back then the rivalry was manifested in an imperialist race for territories, leading to World War I., while in the XXI century, due to the very advanced development of weapons for mass destruction and global economic interdependencies, violence on large scale is not simply counterproductive, but could bring the complete and final destruction of all parts involved. As a consequence, the rivalry will manifest in an economic competition, involved parts trying to secure their own interests and to impose them on the rest. In this paper, scenarios will be set, the analysis being focused in its first phase, on the three traditional poles. The second group of scenarios will be set based on alternative cooperation models, like the BRICS, the MINT, CIVETS, and categories like Basic, VISTA, 3G and NACAr. At the end, a compared analysis of development built on a principal product – oil – will be performed in the mirror of the Dubai and Norwegian model. The main question, which is bounding all these together, is: who will be the winners of the economic competition for the XXI century? Till the end of the presentation, we will be closer to answer the question like we were before.

# MACROECONOMIC FRAMEWORK CONDITIONS AND STRUCTURAL REFORMS TO PROMOTE REGIONS' CATCHING UP

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Despite continued policy efforts to bring about economic convergence, regional disparities in Europe are still stark. The original urban-rural divide between the economic core of the EU located in dense, urbanized regions and the economic periphery formed by poor, remote rural areas has deepened after the enlargements of 2004 and 2007. Regional policy has taken a new dimension with the inclusion of a large number of less economically developed regions that were lagging behind the EU average in terms of GDP per capita, employment levels and other socio-economic indicators. In order to better target regional policy in this new context, the EU tends to categorize 47 lagging regions into low-growth regions and low-income regions. In this paper, a regional growth model is estimated whilst identifying the effects of country-level macroeconomic imbalance indicators such as inflation, government debt and the real effective exchange rate (REER) as well as structural policies such as labour market reforms and product market deregulation on the productivity growth of regions. The results show that policies indeed have very different effects on lagging regions compared to base regions and that the impact differs by indicator and between low-growth and low-income regions.

# JOB PROTECTION'S SECTORAL AND LOCAL ADJUSTMENTS — INSTRUMENT IN VIEW TO ACCELERATING ECO-INNOVATION IMPLEMENTATION

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Krugman, Venables and Fujita (1999) in New Economy of Geography explains how the production is heterogeneously distributed in space. Morreti (2012) that high skilled agglomerations are the main factor of the "great divergence in the USA. Differences in development are explained in Evolutionary Economic Geography literature in relation to the degree of "novelty" to the region. Following the crises, recovery starts but with "fragile growth and structural weaknesses" [COM(2016) 812 final]. Dauderstädt et al. (2016) point that there is No Progress on Social Cohesion in Europe but more "Rising Inequality at National Level."

Capello et. al, (2013) Eastern regions have moved from an exogenously driven phenomenon, mostly based on FDI attractiveness, to a more endogenous pattern of growth, led by local, intangible structural assets, like (formal and informal) knowledge. The knowledge economy is shaping a new structure and launched the new protectionism announced by Druker since 2001. Eco-innovation [EcoAP- COM (2011) 899] works as a double positive externality instrument (Rennings, 1998) strongly differentiate by industry (OECD, 2012) and its technological wave, the process to increase the local resilience and competitivity in the global framework.

On this new background, the content of work is changing: learning is work – ILO (ILO, 2013a, and ICLS-Resolution-I, 2013), coupled with increasing underutilization of labour (WEF, 2016), ageing population and deficit of specialised skills. Sustainable growth pattern pathway demands Job Protection (Employment Protection Legislation)'s sectoral and local adjustments – instrument in view to accelerating eco-innovation implementation.

# SOCIO-ECONOMIC ENVIRONMENT IN A REGION AND TYPES OF INNOVATION ACTIVITY OF ENTERPRISES

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The scientific aim of a project is to describe types of innovation activates undertaken by innovative enterprises in the Polish regions, and analyse if a particular type of innovation activity is related to economic and social features in a particular region. By innovation activity are understood "all scientific, technological, organisational, financial and commercial steps which actually, or are intended to, lead to the implementation of innovations" (OECD, 2005, p. 47). The question which rise is, if choice of innovation activity is related to a socio-economic environment in which enterprise operates. There is assumption that choice of the type of innovation activity can be related to following economic and social features in a region: human capital, social capital, level of economic development, existence of FDI, sectoral/ industrial structure of a region. Theoretical base of research is a concept of regional innovation systems (RIS) (eg. Weresa, 2012; Świadek, 2011; Todtling, Trippl 2011; Innmarino, 2005; Evangelista et al., 2002; Deloreux, Parto, 2005; Deloreux, 2002; Howells 1999; Autio 1998; Asheim, Isaksen, 1997; Cooke et al., 1997; Wiig, Wood 1995). As a base to this concept, lied an assumption,

that innovation activity is non-linear and strongly interactive process, and innovative firms do not operate in isolation. In the concept, there is under-lined importance of communication and cooperation between different actors as enterprises, universities, educational unites, financial units, firms associations, and governmental agencies. Innovative processes are geograph-ically localised, and territorial features are reflected among other in technological systems, production processes, manufacturing organisation, social and political surrounding. Also some of factors of innovation, as tacit knowledge or institutions, are to some extent immobile (Todtling, Trippl, 2011; Nauwelaers, 2011; Cook, Morgan, 1998).Institutional dimension in the research project is reflected in the analysis of informal institutions covered by social capital concept, i.e. norms, values, social trust (Putnam, 1995, 1993). Features of the economic and social environment in region are analysed based on indicators concerning, among other: a level and field of education, human resources in science and technology, taking part in life-long learning, general trust, engagement in social networks, values, a level of GDP, FDI stock. As the first stage of the project, analysis of the socio-economic environment is conducted, and differences among regions are described. The object of research are 16 Polish regions, and their development in years 2004-2014.

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# THE IMPACT OF THE URBAN DEVELOPMENT AND URBAN SPRAWL ON THE TRANSPORT PERIPHERALITY. CLUJ METROPOLITAN AREA (ROMANIA)

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The road network is essential for the connectivity of communities to large urban areas, especially where there are few other transport alternatives. The development of a metropolitan area is usually closely related to the state of transport infrastructure.

The core-periphery relations, urban growth, sustainability, cohesion and decentralization are among the most-mentioned elements that heavily rely on the relationship between transport networks, urban structures and accessibility.

This study does not intend to examine the driving forces that lead to new metropolitan structures but to understand the influence of transport system (public and private) in facilitating urban development in metropolitan area. The aim of this research is to determine to what extent road accessibility analyses are appropriate to create scenarios for further evolution (spatial, social and economic) of these areas.

There are many types of accessibility (travel cost, daily-accessibility and potential accessibility). Potential accessibility was chosen in this study since it seems most promising for calculating peripherality indicators. In this context peripherality is an inverse function of accessibility – "lack of accessibility" - to social and economic opportunities

Metropolitan areas in Romania are rather recent and their impact in the urban system is yet to be assessed. The analyses carried-out in this study is developed for Cluj Metropolitan Area (Romania), which has developed very fast, showing a spatial expansion in the last few years, but still being a monocentric area without visible emerging polycentric urban structures. Cluj Metropolitan Area has

been set up in 2009 and includes the city of Cluj-Napoca and 19 neighbouring communes. Despite their inclusion in Cluj Metropolitan Area, several settlements are still in a state of isolation due to their lack of accessibility to the road network, the poor quality of the road infrastructure, the low number of bus connections. These areas face several economic and demographic threats: poor economic performance, high emigration rates, demographic ageing. Jobs are usually available only in Cluj-Napoca and therefore the connection to the city is vital for these communities. The lack of accessibility during the peak-hours extend the peripheral areas due to the cumulative effect of travel time.

The database compiled for this study comprises the following geodata: region boundaries with administrative divisions (communes and settlements); road-network infrastructure (existing and planned); socio-economic data on total and employed population used as the mass terms for commuters directions; additional parameters and data for travel time estimations

This study focuses on the road network as a facilitator of metropolitan evolution and identifies the key elements in the transportation system that can be improved in order to reduce the peripherality effect, as a prerequisite for prospective social and economic development.

# SPATIAL INTERACTIONS ON THE ROMANIAN LIFE INSURANCE MARKET – THE IMPACT OF INSURANCE LITERACY

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In a previous study we have demonstrated that convergence exists at the level of the European Union in terms of the development of the life insurance market. As spatial interdependences were validated, we went further and constructed the present research in order to test these relationships on the Romanian market. The analysis is based on two major working hypotheses.

The first is that spatial interactions should exist between Romanian counties in what regards the development of the life insurance market. These interactions would take the form of contagion or diffusion processes, influenced mostly by commuting and internal migration. We presume that young persons travelling away from home in university centers (students) and educated people migrating for work, will increase their level of knowledge in respect to life insurance issues and, consequently, will lead to the development of the market. This development can be influenced in two ways – either these persons return to their original home and subscribe there to such policies, or they remain (students) in the new location, leading to center – periphery relationships between the university center and the origin location. Commuters, on the other hand, usually contribute to the intensification of the diffusion process. They come into contact with new information when going to work and then they transfer this information back home.

The second presumption, derived from the first, is that spatial interactions are significantly influenced by the level of knowledge in the insurance field. That is why we have conducted a survey on a representative sample of the Romanian population – 1579 respondents. Based on the information obtained, we have constructed a new Insurance Literacy Index (ILI), employing the methodology of structural equation modelling with all the required validation procedures. The next step was to compute the ILI at county level, as the average value for the respondents in a specific county. Spatial econometrics procedures were employed to test both working hypotheses on the 42 Romanian

counties. For our sample of data, the queen contiguity weights matrix proved to be the most efficient. The spatial regression analysis was run between the life insurance density, as a proxy for the life insurance market, and the ILI who proved to be a highly significant factor. Spatial diagnostic tests emphasized the need for spatial models to be specified in the form of spatial error correction model. Consequently, both of our hypotheses were validated – spatial diffusion exists and it is influenced by the level of knowledge in the field. To test for the robustness of the relationship we have also considered a series of control variables.

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# REGIONAL DISTRIBUTION OF THE MOTORIZATION LEVEL AND ITS EFFECT ON THE MOBILITY IN ROMANIA

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At the turn of the millennium, the motorization level of Romania was significantly lagging behind the more developed European Union member states, which directly affected the population's locomotion habits and locomotion frequency alike. Nevertheless, Romania underwent a major economic development right after its accession to the European Union, resulting a clear-cut increasing tendency of its past decade's vehicle fleet history. This expansion of the vehicle fleet was first and foremost due to the en masse importation and registration of used cars brought from abroad. From an environmental perspective, the average age of the vehicle fleet is of paramount importance with a view to preventing air quality deterioration and curbing traffic-generated CO2 emissions. The regional distribution regarding the population's motorization rate at NUTS III level shows a substantial disparity owing to the higher motorization rate of economically more developed administrative units. Looking into this phenomenon at the settlement level, the situation of the economically developed large cities has a primary importance, as there we can encounter values catching up with Western European motorization levels. Considering the day-to-day large-scale commuting taking place in the urban agglomerations between the core and peripheral areas, we may safely state that the road network of our large cities is heavily overloaded. In conclusion, it can be said that the development of road infrastructure must be a priority for Romania not only because of its economic stimulus effects but with a view to improving traffic safety and a smooth management of traffic flow.

# DIVERGING CEE: TAKEN AND MISSED OPPORTUNITIES IN THE USE OF COHESION POLICY FOR METROPOLITAN DEVELOPMENT

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There are a number of commonalities in the urban systems of CEE countries, namely the size and economic power of second tier cities, poor interconnectedness, lack of cooperation within and among functional geographies and weak civic engagement. These factors inhibit the development of endogenous potential and economies of scale needed to build competitive local economies able to benefit their wider region.

Through its strengthened urban and territorial dimension, cohesion policy in the 2014-2020 programming period provides an enabling framework for a more polycentric, place-based, integrated and bottom-up territorial development. The provisions on sustainable urban development facilitate the strengthening of growth poles through requesting integrated strategies in exchange for guaranteed support and encouraging urban-rural cooperation and local capacity building through devolution of responsibilities.

Being the major beneficiaries of cohesion policy, it is interesting to examine to what extent the CEE countries made use of the incentives for integrated, sustainable urban development to build the development potential of their non-capital cities to create and spread wealth to their wider regions.

I believe the following criteria are essential to maximise the impact of support on creating conditions for endogenous development:

- 1. Concentrating support to a limited number of cities
- 2. Providing flexibility in setting local strategic priorities
- 3. Supporting an integrated approach by providing match funding
- 4. Encouraging metropolitan cooperation
- 5. Allowing ample time and technical support to build capacity, develop cooperation and devise strategy

In terms of concentrating the support, CEE countries targeted NUTS3 or NUTS2 capitals, many of them dispersing the funding and inhibiting the creation of critical size budgets for impact and integrated planning. Poland (24 urban areas) and the Czech Republic (8) have achieved the highest concentration while Slovenia (11), Latvia (9), Romania (39), Bulgaria (39) and Hungary (22) to the least extent.

As regards matching local priorities with integrated match funding, the Czech Republic supports urban strategies from several sectoral opearational programmes apart from the territorial one. Poland and Hungary provided a wide range of funding through multi-fund ERDF-ESF programmes. Most of the countries offered only a number of ERDF thematic objectives for the cities to choose from.

Metropolitan scale planning is a precondition in Poland and the Czech Republic and to a certain extent in Romania and Croatia. In the rest of the CEE urban development strategies are restricted to administrative city boundaries.

The biggest shortfall throughout the CEE was providing ample time and technical or procedural support to cities for the development of strategies, the few exceptions being Poland and Hungary. Support for capacity building at urban level was not supported in any of the countries.

Altogether, the Czech and Polish model seems very promising in terms of concentrating the funding on potential growth poles, providing a substantial amount and variety of funding and triggering metropolitan cooperation. The rest of the countries seem to have missed opportunities provided by the current cohesion policy framework.

# DECENTRALIZATION, FRAGMENTATION, AND URBAN GOVERNANCE IN TIRANA CITY-REGION, ALBANIA

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In the former socialist and communist states of Eastern and Southern Europe, territorial fragmentation and urban development were often regarded as constraints on national economic development but, now are actively pursued by such states. Yet, it is claimed that small local governments have higher unit costs in service delivery and are too weak to implement urban development policies. Despite facing many challenges and conflicts around urban growth, the Tirana city-region is lacking strong and territorially inclusive forms of city-regional governance. A reason for this could be the state's need to address ongoing demands in the urban living place. Corruption, bribery, and public distrust in local and national elections are further constraints on collective action in the form of an organized urban growth coalition. Over the past twenty years, the political, social, and economic issues emerging in the Tirana city region reflect a highly "particular" and localised neoliberalism and its own way of adjusting to post-socialism urbanism. Drawing on semi-structured interviews and ethnographic work, the dynamics of struggles around the changing structure of land use around the suburban Tirana city region from former agricultural land to a new informal urban settlement has led to urban political pressure.

# AN INTUITIVE SCIENTIFIC WORKFLOW SYSTEM FOR SPATIAL PLANNING: A PROOF OF CONCEPT

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Spatial planning is a highly complex discipline. Thus, working on spatial planning projects from start to finish usually requires diverse inter-disciplinary knowledge and know-how for a range of tools and technologies. This is nothing new, as most planners and researchers would agree.

What is completely new, however, is this: We are witnessing a rapid increase in freely available data, while at the same time, dedicated technology is developing at an alarming rate. Such structural changes provide for an unusually fertile ground for rethinking current academic and professional approaches to spatial planning.

Hence, when working with large amounts of data, special attention needs to be paid to the management and sharing of data, information and knowledge, as well as to matters of replicability, teamwork and workflows. We believe that using a Scientific Workflow System, a workflow management system designed specifically to compose and execute a series of computational or data manipulation steps, is the best option to toil within this new and highly volatile field.

Tools for handling such specialised tasks are readily available. Unfortunately, this plethora of tools is characterised by extreme specialisation and fragmentation, thereby forcing researchers into strenuous learning curves. Furthermore, some of the issues mentioned above, such as replicability, teamwork and knowledge sharing are not even addressed by most applications.

We therefore need a general-purpose instrument to address procedural spatial planning problems. We strive for a common platform that houses all the necessary tools, as well as providing the missing links within an integrated research process.

Our vision is to provide an instrument that acts an instantiation of the Scientific Workflow System, with a homogenous browser interface (OS-independent), yet composed of many individual self-sufficient components, or modules. Depending on the project at hand, the user can choose any combination of these modules, which are, in fact, self-sufficient applications that act as services encapsulated in containers, connected via a private local network.

This solution gives great flexibility to what a researcher can do, since each service can be written in a different programming language and have different dependencies. Services such as storage and computational databases, routing engine, web server, etc. could be loaded as standard on the platform, while other services can be implemented or imported by users, according to their specific needs. In addition, the platform is intended for remote access and shared computing, so that researchers can use more than one computer when resolving intensive computational tasks.

Apart from its obvious benefits for the work of regional scientists and spatial planners, we seek to address two deeper questions by way of this intuitive scientific workflow system. First, we aim to bridge the gap between current developments in research technologies and the somewhat outdated research practices that still pervade the discipline of spatial planning. And second, we strive to delve into a more probabilistic type of research, which is still uncommon within the discipline.

### THE IMPACT OF PERCEIVED LIFE QUALITY ON URBAN RESIDENTS' PLACE ATTACHMENT

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Research problem. Especially during the last two decades, many skilled and relatively young and dynamic persons have left CEE to look for a better life and more professional opportunities in the developed countries of the EU. Moreover, many cities face the problem of internal emigration, feeding nearby metropolises with skilled workforce and new residents, this mobility having a severe negative effect on this cities' capacity to develop socially and economically in a sustainable manner. Considering all these arguments, it can be stated that it is extremely important to identify those city attributes which represent key antecedents of residents' place attachment, and to quantify their particular impact. By doing so, specific public policies can be established and implemented in order to improve the urban environment and to increase the retention rate of current residents.

Research objective. The goal of the research is to explain the attitude of residents towards the cities they currently live in, taking into consideration several aspects related to their perceptions regarding the local quality of life, as essential factor/antecedent of a city brand attitude. This research focuses on place attachment as the main facet of residents' attitudes towards their current city. In the context of this research, place attachment is defined as a positive affective bond between an individual and the place in which he/she resides, the main characteristic of which is the desire of the individual to maintain closeness to that place. Considering this approach, the objective of the research is to analyze the impact of the perceived life quality on urban citizens' place attachment.

Methodology. A survey was conducted among a sample of residents from nine of the most important cities from Transylvania, a historical region of Romania. The questionnaire included several items intended to measure the most important dimensions of perceptual quality of life, as well as the degree

of residents' attachment to their cities. The items were grouped into several reflective variables: place attachment, costs of living, variety of local supply of products & services, characteristics of residents, road traffic aspects, professional opportunities, outdoor scenery & facilities, and natural environment. Consequently, a regression model was proposed and tested, with place attachment as dependent variable, and the other variables as factors.

Results and implications. By identifying essential determinants of residents' place attachment, this research allows a better understanding of how city branding works for the particular target market including the residents, and provides a framework to be used by local authorities in order to manage and modify the attitudes of their citizens, to make them more attached to the place and to make them partners in the local sustainable development process.

# SOCIO-SPATIAL POLARIZATION: DRIVING FORCE AND OUTCOME OF TERRITORIAL MOBILITY IN POSTSOCIALIST ROMANIA

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Over the past two and a half decades, the transition from a centralized to a market economy has affected the spatial configuration of Central and Eastern European countries by re-widening the gap between cores and peripheries at a regional scale. Using the case of the Romanian North-West Region (NUTS2) as an example, our contribution focuses on one of the mechanisms of core-periphery relations, that of territorial mobility in light of increasing socio-spatial polarisation. The aim is twofold. First, to show how core-periphery disparities influence mobility flows by offering different levels of structural advantages. Second, to exemplify how various social groups can add to these advantages by choosing their place of residence and work, through internal migration and commuting.

Through a descriptive census data analysis, we map internal migration over the past two decades, as well as present day commuter flows, categorizing the places of origin and destination in terms of cores and peripheries. As the data shows, in this time territorial mobility has both followed and influenced the changes in the core-periphery structure, with flows increasingly directed towards urban centres and their metropolitan regions. Additionally, a comparison between mobile and total populations shows that the former is better educated and better employed, as the most visible migration flows consist of young well-educated adults moving to urban centres. This confirms the deepening divide between cores and peripheries at a small spatial scale, and helps understand the impact that the population can have on the development of settlements.

The analysis shows that in the Romanian North-West Region centres are reaping the cumulating benefits set off by higher capital investment (jobs creation, infrastructure improvement, political and innovation networks engagement etc.), attracting human resources through internal migration and commuting, and consequently utilising this incoming mobile population as a driving force for further economic development. Meanwhile, starting from a position of disadvantage and dependency in relation to cores (struggling with limited access to desirable resources, low levels of income, lack of investments, lack of services, deindustrialization, etc.), peripheries are shrinking in terms of demography and experiencing the smallest average growth in development. Because of the lack of equal access to occupational, educational and financial opportunities, peripherality becomes a driving force for territorial mobility, seen by the individual as a strategy to adapt to or overcome peripheralization. As those with the possibility to migrate might leave, the available human capital

diminishes. Consequently, the highly differentiated life chances between residents of cores and peripheries support the reproduction and enhancement of socio-spatial inequalities.

### EU STRUCTURAL FUNDS FOR SMART GROWTH IN POLAND

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The importance of knowledge and innovation in the explanation of regional economic performance has progressively gained attention in both the scientific and the policy domains. Significant advances in economics in the last three decades (mainly the new growth theory) have highlighted that creativity and innovation are very important to achieving lasting economic growth. The Europe 2020 strategy move precisely in this direction by putting investments in knowledge creation at the core of a smart growth strategy. Smart growth means enhancing the role of knowledge and innovation as a driving force for economic development. Cohesion Policy, as the EU's main investment policy, is one of the most important tools to achieve the Europe 2020 goals, and Poland is by far the largest beneficiary of Cohesion Policy funding among member states and the vast majority of the country's regional development funding comes from EU budget. European Cohesion Policy is likely the largest of all development programmes whose objective is to promote the development of lagging regions and, hence, long-run convergence. Its effectiveness, however, has been scrutinized by scholars who have questioned its impact on growth.

The aim of this paper is to achieve two objectives. Firstly, it examines the smart growth concept and explains the challenges involved in applying this concept in less developed regions. Secondly, it aims to make a contribution to the debate on public intervention in this regard by analysing, at the regional level, the impact of EU structural funds on the smart growth in Poland. On that instance, the research questions, explored in this paper are as follows: "Is the concept of smart growth postulated by the European Union adapted to the less developed regions?", "Whether and to what extent EU funds contribute to achieving smart growth in Poland".

From a methodological point of view, the role of the EU funds is estimated using statistical analysis, mainly on the basis of a flexible regression discontinuity design (RDD), which allows for a fixed but arbitrary number of variables with which treatment interacts, thus determining its heterogeneity.

# DIVERGENCE TRENDS IN SPACE AND TIME: RURAL REAL ESTATE MARKETS BEFORE, UNDER AND AFTER ECONOMIC CRISIS IN HUNGARY

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Real estate markets has crucial role in everyday life of Hungarian families. 9 of 10 families own their falts/houses and the major part of families' assets laying in them.

The real estate markets in a peripheral economy develop under the influence of West Euroean processes im terms of financialisation, economic prosperity/crisis.

In country level, the geographical inequalities in real estate markets were strict before the global economic crisis (2008), however some index suggest, there were active and more prosperous areas in rural Hungary, as well. The direct effect of crisis result a "frozen" market including housing, real estate transactions and emergence of passive and less prosperous markets, in paralel the shrinking number

of active ones. While the role of rural areaswere moderately decreased under the period of crisis (2008-2013), the new emerging period of real estate markets (2014-2016) resulted new level of inequalities, with increasing share of the capital city and second tier cities.

Our research tried to find the basic elements of the 'pre-crisis' high speed development period, and the roots of the new emerging 'post-crisis' years. Our investigation was highly concentrate on the role of the state in these two decades (1997-2016), the steps of the process leading to the sectoral crisis, the actions solving the problems of certain social groups, and the new policies supporting a new, dynamic period in real estate markets.

# GEOPOLITICAL ASPECTS OF THE EUROPEAN PIPLINE NETWORK AND OF THE SUPPLY WITH FOSSIL ENERGY SOURCES

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The energy supply is a delicate issue of nowadays because it implies aspects of geopolitical, environmental and economic questions. Europe still not managed to reduce its dependency of fossil energy though the financing of the renewable energy sources is increasing. This fact still provides Russia a considerable political influence in Europe, but this power is shrinking because the modified European energy policy targeted a larger self-sufficiency. In the present two competing pipelines are in debate, which can play a considerable role in Europe` supply – namely the North Stream, and the South Stream. The North Stream is already working but is planned to be doubled. The Southern Stream had good chances since the Nabucco was abandoned, but the geopolitical insecurity in the Middle East and in the Black Sea region, the Russo-Ukrainian dispute and the clashing interests of the big energy companies hindered the construction of this pipeline. A special emphasis will be given to the interests of great powers and international corporations.

# TOWARDS A BALANCED METROPOLITAN GOVERNANCE: COMBATING THE "BACK DOOR" STATUS OF PERIPHERAL RURAL AREAS

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With urbanization cities become spatially, functionally but also economically interdependent with their surrounding rural areas. Even if the urban centres provide better job opportunities and good service delivery, their rapid expansion faces spatial limitations. Therefore, cities become reliant not only on the land but also the human as well as environmental resources of their surrounding rural territories. As a consequence, these spatial and sectoral flows result in linkages between the rural and urban territories, a process which requires a balanced and integrative approach in order to exploit the strengths and opportunities that rural-urban linkages can offer. Nevertheless, their interdependent relationship and synergistic effect (Andersson et al., 2015; Hamilton, 2014) are repeatedly neglected by their governance systems which constantly fail to involve local stakeholders from peripheral rural areas in the planning and development process of the metropolitan area. As a consequence, the periurban interface becomes the scene of marginalized local authorities which only function as a "back door" for the urban centre, serving this with various resources and space without benefiting from infrastructure developments, service delivery financial mechanisms or even active involvement in

decision making process as members of the metropolitan area. Therefore, in order to achieve territorial cohesion and eliminate marginalization of peripheral actors, an integrative metropolitan governance is crucial. Therefore, the question the papers addresses is to what extent does integrative governance eliminate the marginalization of peripheral rural actors of the metropolitan area? The efficiency or viability of an integrated governance approach is analysed through the case of Cluj Metropolitan Area. The investigation is based on interviews with decision makers and territorial planners from the urban core and its surrounding rural authorities. Next to this, the objectives set out in the integrated metropolitan development strategy are set against the accomplished developments in the peripheral rural areas and the sources of these developments are also examined. Based on the experiences of Cluj Metropolitan Area the results show that there are continuous efforts made towards a balanced metropolitan development. Nevertheless, in several cases the effects of marginalization do exist and are felt especially by the peripheral rural areas with lack of resources, capacity and interaction. Yet, in some cases actors from a regional level prove to be defining sources that address the question of and contribute to a balanced metropolitan development.

### MACEDONIAN DECENTRALIZATION CASE

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The evolution of decentralisation in Macedonia in the post-independence period has involved a mixture of political inefficiency and ethnic disputes. Since its independence in 1991, Macedonia has experienced three distinct periods of decentralisation. In the first period, since independence and the start of transition, power has been concentrated and centralised to keep the macroeconomic stability during transition from command to market economy. The only competencies municipalities had were in the area of communal services. This paper presents the process of urban change and the territorial organisation in Macedonia during the period of transition 1991-2015, as well as the trends and developments of the revenues, expenditures and the horizontal equalisation design in the period. With the Data Envelopment Analysis-Variable Returns to Scale and the Stochastic Frontier Analysis we find a robust estimate that the most efficient municipalities in Macedonia are the ones with around 10,000 inhabitants. The paper will also present how the expensive preferential policies adopted during decentralisation in post OFA Macedonia might not be matched with the level of development of the social capital in the country. Thus, The Data Envelopment Analysis and the Stochastic Frontier Analysis show robust results in estimating with statistical significance that the ethnic fragmentation has a negative impact on the efficiency in the provision of public services in the ethnically fragmented Macedonian municipalities.

# TERRITORIAL GOVERNANCE VIA THE EGTC: ITS IMPACT ON INTERREGIONAL COOPERATION IN CROSS-BORDER REGIONS

## Stefan Okruch, Andrássy University Budapest, Hungary Martina Eckardt, Andrássy University Budapest, Hungary

Cross-border and interregional cooperation in Europe has been important ever since the very start of European integration after World War II. Already in the 1950's different forms of territorial cooperation evolved, such as transnational (e.g. the Nordic Council), interregional (e.g. twin cities), or cross-border (Euregios). But despite all efforts, widespread regional imbalances persisted. As a

consequence, in the 1990s the EU has started to promote territorial cooperation by means of massive financial support (INTERREG). This instrument has become the more important following the Eastern enlargement of the EU. However, the management of INTERREG funds even more strongly provoked the need for an appropriate legal form that should be flexible and reliable, and allows public entities to engage in transnational cooperation. Since border regions across CEE countries are those most severely affected by spatial imbalances, a legal form to effectively use INTERREG resources is of utmost importance.

In 2006, following some minor initiatives, the EU implemented the legal innovation of the European Grouping of Territorial Cooperation (EGTC), which has been substantially modified and relaunched in 2013. The EGTC is a European legal instrument designed to facilitate and promote cross-border, transnational and interregional cooperation. It is a legal entity and is meant to enable regional and local authorities and other public bodies from different member states, to set up cooperation groupings with a legal personality. Members of an EGTC can be Member States, regional or local authorities, associations or any other public body. The EGTC is unique in the sense that it enables public authorities of various Member States to team up and produce joint services, without requiring a prior international agreement to be signed and ratified by national parliaments. Member States must however agree to the participation of potential members in their respective countries. The law applicable for the interpretation and application of the convention is that of the Member State in which the official EGTC headquarter is located.

In this paper, we ask to the impact of the EGTC on territorial governance by improving cross-border cooperation, thus laying the foundation for innovative interregional policies, with a special focus on CEE After firstly presenting the evolution of the EGTC as a kind of top-down legal innovation, secondly, we discuss the conditions which promote the adoption of innovative policies and how the EGTC relates to them. Thirdly, we analyse how the EGTC works under different forms of inter-jurisdictional competition, which is of utmost importance for disseminating successful policy innovations. We distinguish between four different types of inter-jurisdictional competition depending on the main factors that are mobile between different jurisdictions: 1) information and knowledge (yardstick competition), 2) goods and services (regulatory competition), 3) mobiles factors of production (locational competition), legal arrangements (free choice of law). By applying these four notions of inter-jurisdictional competition, we find that the EGTC as a legal innovation may improve both yardstick and locational competition by advancing innovative regional policies. In contrast to that, there is no clear evidence that it also impacts regulatory competition or competition among different legal arrangements so far.

# CONSEQUENCE-BASED RISK ANALYSIS OF ANHYDROUS AMMONIA TRANSPORT ACCIDENTS ON CROSS-BORDER CRITICAL INFRASTRUCTURE

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Certain sectors and parts of the Romanian national critical infrastructure have the potential, in case of destruction or disruption in the usual activity, to generate a significant impact on another Member State. Taking into account the provisions of the Council Directive 2008/114/EC, we can state that the infrastructure mentioned above can be considered European Critical Infrastructure. Identification,

evaluation and protection of such infrastructures are basic responsibilities of the owners and operators in order to ensure their functionality, continuity and integrity. Certain types of analyses have to be conducted in order to properly assess the potential impact of different threats on critical infrastructures relevant at European level. Generally speaking, transport infrastructures located in the cross border vicinity (like highways, European roads, bridges, etc.) are considered critical infrastructure on both national and European level but conventional assessment methodologies rarely take into account the full-range strategic implication of possible outcomes of an accident. A previous risk assessment study conducted at national level for multiple hazards (RO-RISK) reveals the existence of several routes for the transport of hazardous materials, from and to neighbor countries. Most of the routes for import or export of such dangerous goods get through the Romanian-Hungarian crossborder, the main border cross points being located in Borş and Nădlac area. The present study focuses on a consequence based risk analysis of possible accidents, involving anhydrous ammonia, produced on the European road E60 and other alternative transport routes in the region of Oradea Municipality, accidents that can produce major dysfunctions on traffic and other utilities (electricity, gas, water, etc.). Specific modeling software was used to calculate the physical effects and consequences of such accidents. Based on the modeling results and a preliminary exposure assessment, digital maps were created using GIS technology to find the lowest risk route.

# IT WAS JUST A DREAM REGIONALIZED DEVELOPMENT POLICY IN HUNGARY

### Ilona Pálné Kovács, Centre for Regional Studies of the Hungarian Academy Of Sciences, Hungary

The paper aims to connect the general governance system and the design of regional development policy in Hungary.

As it is almost commonplace, Hungary started to go on the way of illiberal, centralised governance system which has crucial consequences both on the domestic development and European cohesion policy design and content.

The paper introduces the recentralisation process of territorial governance and the main management system of implementation of Partnership Agreement. The abolition of regional bodies and narrowing the scope of local (urban) governments' power are big risks, at least according to the author, primarily with regard to the efficient absorbing of EU and domestic money. The completely changed narrative on the EU and the role of the "good" state, however, is the opposite. The time will answer the dilemma.

# THE ROLE OF MIDDLE-SIZE AND SMALL TOWNS IN EU'S CROSS-BORDER COOPERATION INSTRUMENTS IN CENTRAL EUROPE

#### **Zoltan Pamer, Hungarian Academy of Sciences, Hungary**

Cross-border cooperation — as Objective 3 of Cohesion Policy since the 2007-2013 programming period — plays a key role in promoting Europeanisation, which is especially important in case of Central Europe that is dominated by small national states. Target areas of cross-border cooperation are the NUTS 3 units located along the state borders, hence project generation, decision making and

implementation is overwhelmingly done on regional level, often in undeveloped and peripheral areas, with weak urban areas.

The paper focuses on two programmes – the Slovenia-Austria and the Hungary-Croatia – whose target areas are lacking large urban centres, middle-size and small towns make up the backbone of the settlement network. The involved countries area very diverse in regional governance structures. Austria is a federal state with strong regional governments. Croatia and Hungary are unitary states with limited capacities on regional level. Slovenia is a centralised state with lacking regional level. Aim of the paper is to identify how the different levels of the settlement network contribute to the overall activity and absorption of funding under these circumstances.

After presenting the premises of cross-border cooperation since and brief outline of the two programmes a quantified analysis will be presented based on primary ex-post programme data of the 2007-2013 Slovenia-Austria and Hungary-Croatia Cross-border Cooperation Programmes. Methodology-wise it focuses on descriptive statistics, how population, economic activity, proximity to the border, role in the urban structure and their development index affects activity, committed and absorbed funding, what are the similarities and differences between the four states, what organisational forms played the key roles in the different countries and on the various levels of governance.

# FROM INDUSTRIAL ACTIVITIES AND COMMUNITY PRIDE TO NO MAN'S VILLAGE - SHRINKING VILLAGES IN THE POIANA RUSCĂ MOUNTAINS

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Europe's rural areas have undergone significant demographic, social, economic, environmental and institutional transformations, mostly in recent decades. Nevertheless, while some areas have developed into highly livable and dynamic rural areas, others have experienced decline resulting in increased territorial disparities both at European and at national or regional level. Mountain rural areas are not an exception. Included in the category of regions with specific geographical features, mountain areas are paradoxical. Most of them are rich in natural and cultural resources, yet they face difficulties in diversifying their economic activities, in providing facilities and, most of all, in retaining the human resources. The Poiana Ruscă Mountains are exemplary in this respect. Located in the west of Romania, they are part of the Western Carpathians. Their geological composition is relatively simple; however, the presence of various metallic and non-metallic mineral resources (iron ore, nonferrous metals, marble, talc, dolomite, quartz sand, coal) as well as wood resources have been driving factors for the economic development of both the mountain area and the proximate surrounding area. Exploitation and processing of iron ore since the ancient period, with a climax between the 1970s and the 1980s, and the exploitation of high quality marble since the 19th century have not only led to a gradual increase in the number of population, especially in the urban centres nearby, but also to a certain regional pride generated by their industrial heritage, vernacular architecture or worldwide famous places their industrial products were used for. Industrial decline and closures in the area after 1990, together with a general negative natural population change, a negative net migration rate, population aging and the lack of an integrated territorial approach to support economic diversification and locally based entrepreneurial activities resulted in an accelerated population decline. Our

previous research indicates increasingly more shrinking villages and five more deserted villages recorded in 2011 compared to the 1992 census; and the process is ongoing. Gradually, nature is reclaiming buildings, yards, gardens, entire villages. This paper aims to contribute to understanding shrinkage-related processes in the Poiana Ruscă Mountains. The research is focused on 46 very small rural settlements, with less than 100 inhabitants, out of the total of 110 settlements in the entire study area. Analysis and interpretation of selected demographic indicators, information on the physiognomic and functional transformation of villages collected through field observation sheets, semi-structured interviews conducted with local people, old maps and satellite imagery, and also GIS-based analysis and representation using ArcGIS 10.3 software allow for a classification of villages according to their present status of conservation. The resulted typology reflects the current stages of transition villages are passing through and it provides the necessary basis for identifying villages with a large share of well-preserved buildings and valuable heritage and, therefore with higher chances of demographic revival under specific intervention measures, but also highly affected villages, with high probability of remaining extinct. We conclude by reflecting upon the future development directions the identified village categories might take.

### AN INTEGRATIVE APPROACH OF THE RURAL PERIPHERALITY. ROMANIA CASE STUDY

### Gabriela Pascariu, Alexandru Ioan Cuza University of Iasi, Romania Bogdan-Constantin Ibănescu, Alexandru Ioan Cuza University of Iasi, Romania

The main objective of this research is to provide a GIS-based method for computing an integrated peripherality index for rural areas. The novelty of this proposal consists in examining the peripherality from different angles, not only as a spatial effect.

Firstly, we used the spatial accessibility for identifying peripheral places. Spatial accessibility from LAU2s to regional and micro-regional centres (previously determined on the criteria of economic performance and demographical mass) was calculated, thus enabling the identification of central places and the identification of spatial peripheral areas. For the assessment of accessibility, it was taken into account the road network in vector format assigning a mean traffic speed for each type of road.

Secondly, an economic peripherality index was calculated based on the economic potential of each rural LAU2. Both spatial and economic indexes were used for computing a composite rural peripherality index.

The delineation of peripheral areas has been achieved through the identification of the regions where LAU2s concentrated low values of peripherality index (compared with the national mean); a local index of spatial autocorrelation (Getis-Ord Gi\*) was used. This method enabled the detection of local "pockets" of dependence that may not show up when using global statistics.

By using this approach, we obtained a map highlighting the peripheral areas and also a differentiation of the peripherality degree of rural areas. The approach presented in this study can successfully be transferred to other territories and to different levels of analysis.

## QUO VADIS RURAL CROATIA: SCENARIOS FOR FUTURE DEVELOPMENT OF THE CROATIAN COUNTRYSIDE

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The research presents preliminary results of the CRORURIS scenario building exercise for future development of rural Croatia. The main motivation for the research was the predominantly negative recent trends facing the Croatian countryside. Although not a single or homogenous entity, rural Croatia is unfortunately, in great part, synonymous with other problem areas possessing negative demographic, economic, and social features. More than one-third of Croatian territory is home to less than 7% of the (mostly elderly) population. This fact alone poses a serious threat to development and weakens the state's spatial and functional integration. Croatia's recent integration into the EU changes the geopolitical, economic and social context, and brings in wider regional and global forces for consideration in planning and development. Rural demographic patterns (especially out-migration of rural youth), macroeconomic and agricultural market trends (ever decreasing agricultural population and number of farms, an increase in individual farm size, land abandonment, etc.), and environmental concerns and regulations (pressures and land use changes) are among the most important factors recognized in international studies that should be closely examined in relation to the endogenous context.

Recently, there have been numerous scenario-based approaches to studying future trends and driving forces for rural Europe, both in academic and political discourse, on national and EU levels (e.g. SCENAR 2020, EURURALIS, ESPON). However, to our knowledge, no scenario-based research on rural areas in Croatia has been conducted and only few partial impact analyses have been conducted in recent Croatian agricultural policy

By combining factor analysis, cluster analysis and the Delphi method, i.e. quantitative and qualitative tools, the goal of the research was to build future development scenarios for rural Croatia through 2031 and study their implications for regional and rural development. Based on results of the factor analysis, 15 key variables influencing the development of rural areas were identified, and then used to conduct a cluster analysis. Six different types of rural areas in Croatia were recognized. Based on this, a panel of scientists and experts considered possible future developments of each variable through two rounds of questionnaires. Monte Carlo simulation was then used, resulting in the most likely new types of rural areas (clusters) in the year 2031. Furthermore, the experts' responses were qualitatively analysed and interpreted to form the basis for explorative scenarios.

Via scenario method it was possible to encompass a wide analytical area, the complex set of important factors that influenced development characteristics, and possible future influences. Scenarios pointed to links among various aspects of regional development, and the implications stemming from them are important both for spatial planning and the wider rural development context.

## USING EDP FOR THE MANAGEMENT OF INTERMEDIARIES' NETWORKS TO STRENGTH REGIONAL INNOVATION ECOSYSTEMS

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The capacity of intermediaries is one of the most relevant factors to explain the differences on the implementation of smart specialisation strategies. Intermediary organisations are entities that provides innovation services to companies, like clusters, associations, development agencies, competence centers, etc. Despite the potential waste of money caused by overlaps and failures of coordination, the territories with higher number of intermediaries translate more efficiently into specific economic implementations the research and innovation policies driven by the public administration.

Less developed regions have weaker innovation ecosystems with fewer intermediaries and less capacity to translate innovation support policies into practice. These regions have "greater need for innovation related investments, they have also a lower capacity to absorb public funds earmarked for innovation compared to economically advanced regions" (Morgan, 2016) However the new context with smart specialisation strategies provides opportunities, it has given bigger relevance to new actors and empowered traditional ones like regions, cities, social entrepreneurs and NGOs. These new actors bring also new forms of governance which are also encouraged by the partly bottom-up S3 strategies.

There are already territories in Europe (e.g Helsinki-Uusimaa Region - Rissola et al, 2017) where the 'triple helix' of science, industry and government has already expanded to a model of a 'quadruple helix' with a fourth strand, being the public sphere. These are good models that inspire regional practitioners. At the same time, there is the move in the same direction of less developed regions and countries using smart specialisation. Clearly, it is important to identify these territories, getting lessons to be learn by other less developed regions.

In the region Centre-Val de Loire there is a good example of reinforcement of intermediary organisations using the entrepreneurial discovery process (EDP) of the smart specialisation strategies. Dev'Up is the development agency of the region and coordinates the network of intermediaries using EDP to setup priorities and evaluate performance leading to a better articulation of the professionalisation of the innovation ecosystem. Another interesting example is the Pro-Akademia foundation from the Lodzkie region. This region is considered as weak innovator; with a traditional approach to innovation. However Pro-Akadamia acting as competence centre is giving strongly momentum to the regional innovation ecosystem coordinating in practice the smart specialisation internally, and being able to internationalise the ecosystem with many H2020 projects and organising relevant international conferences.

Finally, it is expected that S3 will empower many other intermediaries in other territories. This is for example the case of regions in Rumania where the smart specialisations are leaded and implemented by development agencies, which act as coordinators of different intermediaries' organisations. Advanced innovation ecosystems with a variety of intermediaries will contribute to the growth of less developed regions.

INARTICULATE IDEAS ON DEVELOPMENT AND COOPERATION FROM CENTRAL AND EASTERN EUROPE - ANALYSING CENTRAL AND EASTERN EUROPEAN NETWORKING ACTIVITY IN EU TERRITORIAL COOPERATION PROGRAMMES

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Macro-regional differences in Europe, and especially the differences between former socialist EU member states (cited many times as Central and Eastern European Countries) and the rest of the EU is frequently referred in professional and research conversations on development policy. We believe that analysing networking ability of Central and Eastern European organisations inside European-wide setups may useably contribute to this wider Central European development discourse.

This study analyses principally the performance of Central and Eastern European countries (hereinafter CEE countries) through their project activity in transnational and interregional programmes supported by the European Territorial Cooperation (ETC) objective of the EU Cohesion Policy. These programmes may serve a suitable research field of examining networking performance in European context. Projects supported by these programmes shall be implemented in a partnership consisted of organisations from several different countries. The subsidies of these programmes are available under basically the same circumstances for organisations of all EU member states and even in some countries outside of the EU. Therefore, in this context, networking performance can quite purely reflect the abilities and the intentions on joining the European (EU) ideas.

According to the hypothesis of this study, a considerable difference exists between programme activity of the CEE organisations and the Western European (WE) ones. This study examined activities of partners on an empirical base. Data sets on partners published by management authorities of the programmes were used. A common data base was built and its quantitative data was analysed. Beyond the quantitative data analyses it was a great advance during completing this study that the author participated in several ETC projects before and even coordinated partnership on national level. This knowledge on the mechanisms of these programmes was also involved into this study by the author and by interviews with other experts with similar experiences. It helped to understand the general attitude, mission and approach of the participating partners.

The study partly proved the correctness of its pre-assumption: a difference was verified between the activities of CEE and WE. Another major difference was also detected between the activities of ordinary partners (having only partial responsibilities in a project) and the activities of so called 'lead partners' (generating and governing projects). The latter group is overwhelmingly dominated by WE organisations. Therefore, there is only a small room for CEE organisations to express and implement own project ideas.

# TOWARDS STRENGHTENING SMALL AND MEDIUM-SIZED COMPANIES (ADAPTING FRENCH PRACTICE IN HUNGARY)

#### Peter Pola, Hungarian Academy of Sciences, University of Pécs, Hungary

The French state mobilizes innovative instruments to promote the development of its regional small and medium-sized companies, thereby it significantly contributes to enhancing the territorial competitiveness of the national industry. Having acknowledged the dangers of the excessive domination of multinational companies, it has opted for the reinforcement of the local

entrepreneurial milieu via instruments such as granting favorable loan constructions or encouraging interfirm networking.

The study has two main focuses. By reviewing the institutions and instruments designed to support French SMEs the authors' aim is to evaluate the role that firms, their various alliances, interest representing organs may play in shaping the supporting environment, to examine the flow of information between the governmental and the local entrepreneurial sector and the instruments that may contribute to raising its efficiency. The authors recognize the merits of the French model, which prompts them to seek ways to adapt the model or various of its elements to the Central Eastern European context. Do efforts to boost regional competitiveness via strengthening the local and regional entrepreneurial milieu at the peripheries of the core area produce similarly positive results, is it possible to attain organic regional economic growth in less developed areas?

### DOES THE MATRYOSHKA PRINCIPLE APPLY TO RESILIENCE?

Nicola Pontarollo, JRC, European Commission, Italy Carolina Serpieri, JRC European Commission, Italy

The state of the economy is strictly related with an increase in output combined with improvement in social welfare of people within a country. Policy debate around economic development at regional and local scales is increasing. Regional and local territories are usually equipped with special endowments, resources and competences, which affect economic growth of entire countries positioning them with a key sustainable competitive advantage over others. Policies are converging on the objective of reinforcing regional specialisations, by addressing leading regions to spread their potential over neighbourhoods or lagging regions to reinforce their economic system, and supporting local business clustering. This prioritization to regionalism and localism has also expanded to the debate on resilience capacity, which has emerged with greater emphasis after the onset of the financial crisis, drawing attention to resistance and recovery of territorial economies to different exogenous shocks. The concept of resilience is very broad and is associated with several definitions and alternative interpretations related to different strands of literature, (among others, regional and spatial economy, economic geography, macroeconomics, etc.). We refer to Martin and Sunley (2014) who proposed the following clear definition for resilience: "the capacity of a regional or local economy to withstand or recover from market, competitive and environmental shocks to its developmental growth path, if necessary by undergoing adaptive changes to its economic structures and its social and institutional arrangements, so as to maintain or restore its previous developmental path, or transit to a new sustainable path characterized by a fuller and more productive use of its physical, human and environmental resources".

It is widely recognized that strong national identity, integrated national market and effective national and international economic policies can result in strengthening local economies and their capacities to adapt and recover after shocks.

Our research project, in the context of the LUISA Territorial Modeling Platform, aims at investigate to which extent national and regional characterizations can shape the local level and its resilience dimension in the European Union. This could probably address policy strategies in terms of reorienting their targets and financial resources to the territories which would generate higher benefits for the whole countries. The Matryoshka principle asks for a recognizable relation of "object-within-similar-object" that in our opinion can be applied to better understand the EU structure and dynamics. To the

best of our knowledge, the Matryoshka relationship has never been applied to the EU NUTS classification neither has ever been the rationale for a regional and local approach to resilience capacity in context of recessionary shocks analysis.

First of all, the level of analysis needs to be identified. The economic territory of the European Union has a hierarchical or nested structure. The current NUTS classification lists three levels, from macro regions (NUTS 1) up to small regions and provinces (NUTS 3). Second, appropriate econometric techniques usually adopted in the literature will be investigated. Multilevel models are particularly suitable for research analysis in case data are organized at more than one level. These models can be applied to data at many different levels. Although two-level models are the most commonly used due to manageable computational complexity, a three-level model will hopefully be considered. Our ambitious purpose is, applying the EU classification, to identify the role of countries and macro regions as a potential driver of local resilience. Different explanatory variables will be explored in order to cover multiple dimensions of resilience, encompassing economic and social categories, as well as different model specifications to obtain the best possible fitting.

# LOCAL ECONOMIC DEVELOPMENT STRATEGIES IN MEDIUM-SIZED CITIES ON THE EUROPEAN PERIPHERY: THE CASE OF DEBRECEN, HUNGARY

Zsolt Radics, University of Debrecen, Hungary Gábor Kozma, University of Debrecen, Hungary Ernő Molnár, University of Debrecen, Hungary

While metropolitan regions are appreciating in the spatial structure of the globalising economy, medium-sized cities often face the lack of critical mass needed for economic development. The latter centres are provincial "large cities" concentrating 100-200 thousand inhabitants in Hungary: their higher economic performance should be essential in order to mitigate the dichotomy between the capital city and the rural space as well as to reduce the regional differences in a country characterised by the overwhelming role of the capital. These "large cities" play especially important roles in underdeveloped regions where differences along the settlement hierarchy are even more spectacular: there are huge development gaps between "large cities" and their surroundings. Although developing provincial counter-poles based on the French experience is not a new initiative in the Hungarian regional policy, new challenges are basically created by economic globalisation including much more actors than earlier and mechanisms reaching beyond the borders of national economies.

The appreciation of qualitative location factors rooted in the local environment is a central idea of the "new regionalism" theories (industrial districts, regional clusters, regional innovation systems) explaining the spatial economic inequalities by the internal factors of the regions. On the other hand, this thought was also integrated into the "global production network" concept observing spatial economic differentiation as a result of changing positions and relations within the international division of labour. The hard reproducibility of qualitative factors makes the cumulated advantages and the local institutional environment important and generates need for the theoretical integration of path dependence thought as well as for the research of local actors and development strategies. Our presentation shows the economic development of peripherical located medium-sized European cities from the point of view of local actors. After a short description of Debrecen's situation, we provide a comparative analysis of local economic development strategies for the last two decades.

In the frame of our empirical analysis we examine (1) how different mainstream concepts appear in the local development strategies, (2) what kind of bottlenecks causing obstacles for economic restructuring and growth are identified from time to time, (3) which development objectives are determined in the local strategies in order to manage them and (4) what kind of local institutions and mechanisms building the framework for realizing these aims are envisioned (also including the way of working out these strategies and local participation). (5) A further goal of our presentation is to point at the possible changes in the ideas about the city's role referring to the organisation of economic space. The changing approaches and contents of local development documents can be indices of a successful learning and adaptation process or failed attempts of a city seeking its place at the same time. But answering the question whether Debrecen's local economic development strategies can be regarded successful or not is beyond the scope of our presentation...

# SPATIAL CONCENTRATION AND DEVELOPMENT OF LABOUR-INTENSIVE INDUSTRIES ON THE EUROPEAN PERIPHERY: THE CASE OF THE HUNGARIAN TCLF SECTOR

## Zsolt Radics, University of Debrecen, Hungary Ernő Molnár, University of Debrecen, Hungary

The labour-intensive TCLF (textiles, clothing, leather and footwear) sector is a globalised industry having transnationally fragmented production networks. Due to its buyer-driven commodity chains, the massive deregulation tendencies as well as the decreasing transportation and communication costs increasing global competition of potential locations and changing geography of the industry can be observed. The East Central European semi-periphery shows upgrading tendencies regarding the way of production, the product structure as well as the functions within the value chains: more efficient production, creative, knowledge-intensive products targeting niche markets, institutions or industrial segments as well as higher value-added (strategic) functions beyond the production might mean the future of the region's TCLF industry presently having declining employment.

Because of the upgrading tendencies qualitative location factors developed by long-term accumulation processes, which can be found mostly in spatial industrial concentrations, are gaining in their importance. According to the "new regionalism" literature (e.g. industrial districts, regional clusters, regional innovation systems) agglomeration economies (localization economies) create positive externalities for the industrial actors by offering skilled labour force (Marshallian "industrial atmosphere"), special inputs (industry-specific infrastructure, suppliers), learning and cooperation possibilities. Cluster-based development policies use these factors to create a competitive local milieu for the development of industries having critical mass for the generation of such mechanisms.

The implementation of cluster-based policies has two major obstacles regarding the development of labour-intensive industries in our post-socialist regions. On one hand the logics of the former socialist industrialisation created vertically integrated large-sized firms and branch plant economies neglecting local initiatives and horizontal linkages, which makes it difficult to activate all the elements of local environments needed for the exploitation of positive externalities. On the other hand, the decline of the labour-intensive sectors during the change of regime as well as after the turn of the Millennium laid off the earlier industrial concentrations that accumulated the industry-specific knowledge and had the critical mass for the development of potential clusters.

The aims of the presentation are twofold. First of all the regional concentration tendencies of the TCLF sector - through a comparison of county-level data for three years (1985, 2000, 2015) before and after the transformation crisis as well as after the post-millennial decline - will be examined in order to present the changes and to define the potential areas for cluster-based development of the labour-intensive sectors in Hungary. The investigation will be extended by the results of a recent settlement-level analysis. Secondly, the possibilities and limitations of a cluster-based industrial policy will be shown by summarizing the experience of a field research in the largest shoe-producing region focusing on the intra-regional linkages and dimensions of cooperation.

# METHODOLOGIES FOR SMART SPECIALISATION STRATEGIES: A COMPARISON BETWEEN THE WESTERN EUROPEAN AND CEE COUNTRIES

## Alasdair Reid, EFIS Centre, Belgium Elina Griniece, EFIS Centre, Belgium

This paper upon the results of ONLINE S3 project funded under Horizon 2020. The project aims to develop an e-policy platform, augmented with a toolbox of applications and online services, able to assist national and regional authorities in the EU to design, implement, monitor and evaluate their smart specialisation agenda. To scope the methodological approaches that regions have applied in the design of their RIS3, the project team undertook a comprehensive mapping exercise of smart specialisation processes in more than 30 European regions. Further an extensive literature review was performed on the (good) practices for the application of various analytical methods for designing smart specialisation strategies. The paper summarises the key findings from this mapping exercise and compares the patterns of RIS3 analytical approaches used in Western European regions and those employed by regions in CEE countries.

The results of the RIS3 mapping exercise indicate that regions have not closely followed the RIS3 steps as set out in the first Guide to Research and Innovation Strategies for Smart Specialisation (2012). Regions did not necessarily go through all steps indicated in the guidance material, but either used this theoretical framework more holistically or applied the methodological guidance only partially. Analysing various smart specialisation processes, it was clear that in many regions even the key concepts of the RIS3 steps were not (fully) understood. The gap analysis also revealed a significant discrepancy between the existing theoretical description of RIS3 methodologies and their practical implementation during RIS3 strategic planning.

The comparative view of the mapping results underlined that there is no clear-cut divide in terms of methodological sophistication among Western European regions and regions from CEE countries. While regions from CEE countries were certainly faced with a greater challenge for RIS3 design due to the lack of experience and track in research and innovation policy-making in general, it cannot be claimed that these regions overall used fewer or less rigorous methods. In fact, it was surprising to see that many leading innovator regions in Western Europe seem to have put little effort into RIS3 process and the strategy design is more 'a lip service' to EC requirements rather than a serious basis for regional economic transformation. At the same time, some CEE regions (e.g. in Czech Republic, Lithuania, Poland and Slovenia) with much more modest innovation performance have undertaken comprehensive RIS3 exercises introducing real novelties into their policy making routines.

# SUSTAINABLE URBAN MOBILITY AS A MAIN STRATEGIC CHALLENGE IN PROGRAMMING URBAN DEVELOPMENT IN POLISH CONDITIONS. WROCŁAW CASE.

#### Małgorzata Rogowska, Wroclaw University of Economics, Poland

Urban areas are nowadays facing new challenges connected with shift in demography and economy, where main point of interest is focus on supporting qualitative development process with non-tangible assets. Local authorities also meet communication problems that evolve strongly towards building and supporting sustainable transport system with active mobility. Article presents contemporary situations of three polish cities in a context of its actual social and economic assets with the particular attention put on the process of participatory programming urban development till 2030. The main aim of this paper is analysis and evaluation existing priorities and transport policy tools in polish cities. Main subject of analysis is Wrocław - a city located in south- west Poland. Article presents contemporary problems and possible solution towards enhancing sustainable urban mobility in Wrocław and results of a survey that highlight inhabitants' point of view for further development. Three different development paths are considered and compared. Based on analysis Author presents recommendation for optimal programming urban development process in polish conditions.

# DEVELOPMENT ASPECTS OF THE WEST-NÓGRÁD REGION AND WITHIN, THE SZÉCSÉNY SUB-REGION IN HUNGARY

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This study is focusing on the development gap of the West-Nógrád region and within, the Szécsény sub-region in Hungary, with respect of the indicators of their regress. It aims to discuss the available data in comply with the path, where the region is retreating from the surrounding domestic regions as well as from the Eastern-Slovakian regions. Several studies in literature analysed the development in peripheral regions, either in neutral and place-based approaches. From this study's perspective, it was important to find that a considerable set of literature got to the conclusion that via the infrastructural (physical) development projects per se these regions have not been able to sustain growth.

The main problems concerned in this study about the region's development are: the deteriorating demographical situation, the high rate of unemployment, the abating real estate market, and the prevailing peripheral disadvantages. Municipalities have stepped forth in infrastructural developments, mainly in the tourism sector, with the declared aim of enhancing cross-border connections, but without real significant effect on the surrounding villages and towns. Another highly problematic issue of the sub-region is the constant outflow of financial and human resources to richer areas.

It is worth to question those inhabitants whom are affected the most by the downturn and poverty, if the local society is aware of the missed opportunities they face in a recession region. Do they see any chances to revert (change back)?

In order to enhance employment, i.e. to retain locally generated incomes within the region, the authors' view is that there should be an organisation or programme to help, initiate and organise the marketability of local products, especially in regard to agriculture. Additionally, tailor-made and

specified infrastructural developments would be needed to help the production and sale of local agricultural products.

The purpose of this study is to lay down the theoretical foundations of place-based regional development strategies, as applied to the West-Nógrád region and the Szécsény sub-region development path. In this context, the authors are formulating a questionnaire for a prospective research about the socio-economic issues of the regions in concern. Representativeness should be kept in advance due to the aging, impoverished and undereducated population within the region, and especially, in the sub-region.

The main hypothesis of this paper is that without the substantial advancement of the human sector in the region, the infrastructural development projects may not sustain growth.

# THE COMPLEX SYSTEM OF RESEARCH AND TECHNOLOGY ORGANIZATIONS: APPROACH OF A SENSITIVITY ANALYSIS

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Research and Technology Organizations (RTO) are important players in the German Research and Innovation System. Approaches, to describe the systemic work and effects of these kind of institutions, are just been realized at federal level and have been aggregated over a number of institutions. Thereby, especially quantitative information are used and qualitative methods are been ignored. At this point, the task is to find an appropriate method to connect both aspects. Because of the linking of quantitative and qualitative information, benefits towards other studies are expected and the understanding of RTOs as a complex system is increasing.

The sensitivity analysis of Vester® might be suitable for the goal to combine quantitative data and qualitative aspects. Three levels are been drafted at the sensitivity analysis. On the first level, the existing complexity of the system is been reduced to a manageable and still relevant set of influencing variables. Afterwards the interrelations of the individual influencing variables and the system networking is been captured on the second level. The evaluation of the analyzed system regarding his optimization, suggestibility and controllability is been implemented on the last level. Now, these three levels are been split in nine interdependent steps. Especially in the steps four to six (scrutiny of the interrelations, determination of the role in the system, and investigation of the overall networking) quantitative and qualitative studies can be involved for the description of the interrelations. To visualize the interdependencies, a cross-impact-matrix is been used. Here, the measuring is been made with a uniform scale, quantitative and qualitative information are been equally distributed and are been taken equally into account in the sensitivity analysis.

This article will answer the questions, where the sensitivity analysis of Vester® is been applied and which knowledge according to the specific application is been gained. Furthermore, it is important to ask the question if there is a difference between sensitivity analyses and if yes, is there a variation in the understanding of "sensitivity"? In addition, the first steps of the suggested sensitivity analysis of Vester® is been conducted and a first system picture of RTO is been presented.

The result of the article is the confirmed suitability of the methodology for the system of RTOs. Moreover, a general understanding of this sensitivity model and the application of the first steps is

been presented. Therefore, the article is the fundament for the ongoing usage of this methodology and sensitivity analysis.

# ANALYZING THE EFFECT OF THE 500 BIGGEST CENTRAL EUROPEAN COMPANIES ON SPATIAL STRUCTURE - A CASE STUDY FROM EAST-CENTRAL EUROPE

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In the globalised world and world economy, the importance of multi- and transnational companies has increased, as well as the effect of supranational and national institutions and of governmental decisions. Big cities, the stage of these activities have become the leading centres of the world economy. In the last decades, the increasing economic leading role of the cities, the metropolitan concentration of the "new economy" and the political, administrative, cultural and social importance of the cities have become determining. Companies, institutions, national economies, different territorial units and actually human beings are continuously taking part in competitions but they have to perform well in different race conditions.

The new economy of big cities has a concentrating effect. For companies and institutions, the opportunity to establish relationships, the variety of business services, the formation of networks promoting interactive learning, creativity and innovation and constant changes require the "closeness" of companies to each other. Therefore the clusters, the traditional and not traditional economic activities and the related services have become thicker in these developed metropolitan regions. It has become accepted that global competition is actually the competition of big cities and regions as well. At the same time, however, besides the intensive competition, cooperation closer than before appears in the economic space. Besides big companies, small and medium size enterprises also get involved in the global, regional and urban spaces in big quantity.

The economic leading role of cities is reflected in the space structure and it has an effect on the appearance of nodes and networks. It can be stated that many theoretical and practical works aim at describing the spatial structure of Eastern Central Europe. This article gives an overview of these papers. As for the big cities and cities, many classifications and rankings can be found in the literature, out of which the demographic, the functional and the hierarchy based classifications may be the most popular ones. Based on the Deloitte CE 500 list, we investigated the economic performance of cities in 2015 and the changes between 2007 and 2015. We have examined the correlation between the models outlined and the economic performance that can be demonstrated by large companies. We are particularly concerned about the most important cities, and we have looked at their competitiveness. We have analyzed the extent to which trends in general, industry dominance, or local causes are due to the change in revenue in the countries of the region.

LINKAGES ACROSS DIFFERENT SPATIAL LEVELS AND INNOVATION NOVELTY: AN ANALYSIS OF SME IN CENTRAL AND SOUTH EASTERN EUROPE

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This paper addresses the question how innovation novelty is influenced by enterprise linkages to other enterprises at different territorial levels. In networks, collective processes or cooperations knowledge diffuses and innovations occur. The creation and use of knowledge across different spatial levels is central to innovation. As novel innovations are spreading and adapted to new local contexts, knowledge diffuses. Enterprises access this knowledge by their linkages to other actors in their country or abroad. However, empirical analysis on how enterprise linkages across different spatial levels impact on innovations' novelty is still scarce.

On the one hand, empirical studies focused on innovation novelty give little attention to the spatial dimension of enterprise linkages; on the other hand, empirical research focused on international linkages does not distinguish different grades of innovation novelty. Using a multinomial logit model with recent enterprise level data on innovation novelty and international linkages of innovative Small and Medium Enterprises (SME) in Central and South Eastern Europe from the European Bank of Reconstruction and Development (EBRD) and the World Bank (WB), this paper attempts to bridge this gap with an empirical analysis of both dimensions: Do firms relying on international knowledge sources introduce innovations new to the international market? Or do firms' international linkages on the contrary foster knowledge transfer and innovations new to the local market?

From scientific and policy perspective alike, the regional focus of the data on Central and South Eastern Europe proves interesting. The European Commission promotes the internationalization of the SMEs as backbone of the European economy, to foster innovation, improve competitiveness and economic performance. However, little is known about innovation novelty and international linkages of SME in the new and potential EU member countries in Central and South Eastern Europe, a region which is thought to have low innovation productivity and where innovation policies focused on technological development rather than absorptive capacity are adopted. Yet, the innovativeness of SME in this region is directly linked to the Lisbon agenda's goal of the EU as the most competitive and dynamic knowledge-based economy in the world.

Preliminary results point to mixed influence of linkages across different spatial levels on novelty of product as well as process innovations. While foreign ownership seems to impact on the novelty of product innovations, development in cooperation with suppliers from abroad seems to impact on the novelty of process innovations. Also, whether an enterprise is located in the main business city of its country seems to influence innovation novelty.

This cross-country and cross-sector analysis extends the current understanding of the influence of various types of international linkages on novelty of SME's product and process innovations. The main contribution is that the paper differentiates the influence of international and local linkages on different levels of innovation novelty. The results have implications for policy makers and managers in SME in the region alike: Policies aiming at facilitating technology and knowledge transfer as well as management strategies in firm networking can be refined according to targeted innovation novelty and enterprise location.

# THE ROLE OF INSTITUTIONS IN THE CROSS-BORDER REGIONS – THEORETICAL REFERENCE POINTS

### Marcela Slusarciuc, University "Stefan cel Mare" Suceava, Romania

The paper we propose is linked to a larger research with the main purpose to prove that in the process of the economic growth of the cross-border areas and the resilience acquirement, the good institutional practices and the transaction play an important role. We intend the article to be a part of a more extended analyse of state of knowledge in the fields related to the cross-border regions, with a multidisciplinary approach: institutional economy, institutionalism, cooperation and partnership theories, cross-border cooperation, games theories, resilience, institutional and social change, transaction costs. Therefore, the specific research goal of this paper is to identify the main institutions involved in the development of the cross-border regions to induce social changes, policy embodied, for a better support to economic activity and increased capacity of averting or recovering the negative effects of external shocks. Besides an inventory, we search the role or possible contribution of the institution to the cross-border cooperation in the region and, we intend to identify if there are specific institutions for the cross-border areas or the institutional frame is similar with any region on a national territory. In this article, we approach the institutions as two meanings — as organized entities from public, private and civil society, and as rules and good practices that link the before-mentioned organizations in a network.

### SOURCES OF ECONOMIC GROWTH IN CEEC REGIONS – A STRUCTURAL DISAGGREGATION

### Maciej Smetkowski, Centre for European Regional and Local Studies (EUROREG), University of Warsaw, Poland

The paper analyses the sources of economic growth in the regions of Central and Eastern European countries (CEEC) using a multi-dimensional approach that takes into account: a) disaggregation of the economic structure; b) the international and national contexts of regional development processes, and c) the main types of regions. The results corroborate the validity of such an approach, showing the interrelationships between the development dynamics of individual regions and the structural changes that are difficult or impossible to identify using an analysis of aggregated values. In particular, the analyses conducted as part of the study helped identify the key constituents of metropolisation processes taking place in the regions of the major city centres, the progress of reindustrialisation processes occurring in transitional regions and the mechanisms underpinning development of peripheral regions. Based on these differences, some general recommendations for policies implemented in these types of regions were formulated.

## THE INSTITUTIONAL BACKGROUND OF THE HUNGARIAN REGIONAL POLICY IN THE MIRROR OF THE EUROPEAN COHESION POLICY

### Edit Somlyódyné Pfeil, Széchenyi István University Doctoral School In Regional Science And Economics, Hungary

The objective of the presentation is to give an analysis about the Hungarian Regional Policy from regulatory and institutional aspects, concerning its urban policy aspect and the implementation of the governance-method and the place-based approach required by the EU Cohesion Policy. According to my hypothesis, the new state-centred institutional structure does not promote the cohesion and the development of the urban network. The presentation will try to explore the reasons for that.

Hungary delivered a new regional policy in 2014 in a form of the National Development and Spatial Development Concept. Thematic objectives are divided into sectoral policy and territorial objectives within which the creation of a "competitive, innovative economy" is featured between mid-term sectoral policy objectives, while the creation of an "urban network guaranteeing a polycentric spatial structure" features among the territorial objectives. The rationale for that is, spatial cohesion has not been realised during the former seven years while spatial inequalities have increased in Hungary. On the other hand, the Public Administration Reform has been going on for half a decade. In the centre of the administrative model stands the creation of a strong, active state that gives preference to hierarchical relations. Albeit cooperation among the administrative tiers, lacks institutional frameworks in Hungary just as much — due, among other things, to the deprivation of the self-government units at sub-national level of their functions, the fragmentation of the municipalities and the missing demand by the central government — as horizontal cooperation does. The intensity of the cooperation among the municipalities has considerably decreased since 2010.

In addition, in Hungary the central power returned, after the years of regionalisation, to the strict administrative boundaries. The new conservative state philosophy stresses the statutory state spaces and does not encourage the space construction for public-private networks. The main question would be, if this approach could be seen as effective and appropriate for activating the relevant forces in producing integrated and coherent outcomes in regional policy.

### CHALLENGES OF EGTCS IN THE EXTERNAL BORDER AREA

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The European Union created an opportunity for members to establish EGTCs, bodies with legal personality in 2006 to facilitate the cooperation of national, local and regional players and the efficient use of Union resources. The EGTC as an acknowledged legal entity can support new approaches to cross-border governance. The legal framework of EGTC can promote the cross-border institutionalisation, thus the development of cross-sectoral policy integration. The paper addresses the question which of the levels of the public administration is suitable for realising national/subnational purposes within the changed economic, societal and political frameworks of the border areas in CEE.

The EGTC tool allows the intervention across borders, and the setting up an EGTC often depends on the history of the countries involved. In Central & Eastern Europe the countries had exceptionally

closed borders with the West. With the opening of the borders in the 1990s the chance for cooperation became available.

Although Central & Eastern European countries have a good reputation of EGTCs along the internal borders in the evaluation of the EU, the countries can't achieve the ambitious goals that those set at European level on the external borders. The external borders, due to the Schengen acquis, are evidently in a disadvantageous situation. The establishment problems on the external borders are analysed in the research.

Referring to the EGTC Regulation (EGTC Regulation 1082/2006, Article 3) the creation of an EGTC is the competence of the cooperating parties. The EU's commitment and assistance need to be matched with the dedication of central governments. But the top-down support of EGTCs by central governments in some countries is still missing; therefore the political reluctance slows down the elaboration process.

Hungary is among the leading countries when it comes to EGTC in the internal border area. The paper analyses the reasons why the EGTC setups with the participation of third countries' regional and local governments on the Union's external borders cannot achieve their aspirations, namely the approvement by national authorities therefore their registration.

The paper is looking for the answer to what extent the development of crossborder relations is influenced by state-centred traditions. Cross-border cooperation players can easily identify these obstacles and they can provide solutions.

In methodical terms, the empirical work is based on information obtained from three sources: interviews, documentation and statistical datas. Beyond that, the paper focuses on the collection of practical information in connection with the elaboration and registration of the analysed Banat-Triplex-Confinium EGTC, and devotes particular attention to the failure of cross-border partnership in the Hungarin-Romanian-Serbian triple-border region.

# TOURISM INDUSTRY AND TERRITORIAL DEVELOPMENT: ASSETS, STRATEGIES AND PERSPECTIVES, THE CASE OF SKIKDA (ALGERIA).

#### **Boulassel Soufiane, Eötvös Loránd University, Hungary**

Tourism is considered an important pillar of the economy; It is also a sector where international competition has become more severe in the last decades than ever before. Algeria is one of the countries that are trying hard to develop this economic sector to become internationally more competitive. This strategy is fuelled by the need to: diversify a hydrocarbon-based economy, to take advantage of the material and cultural heritage, to promote local development, and to improve the environmental sustainability of natural resources.

Skikda belongs to those regions in the country that have the best opportunities and the most assets to become attractive tourist destinations especially for its strategic location and touristic spectacles. The latter include mountains and forests officially belonging to the Nr. 9 Tourist Expansion Zone (ZETs) of Algeria according to the decree 88-232 of 5th November 1988.

My paper aims to analyse the actual situation of tourism in the Skikda region and evaluate the national and regional policies of tourism industry, including the role of ZETs, in order to identify potential future strategies for promoting territorial development.

## SUSTAINABLE ECONOMIC DEVELOPMENT IN POLARISED METROPOLITAN AREAS BASED ON AGRICULTURE

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The importance of peri-urban areas as productive transition zones between urban and rural areas is often overlooked in spatial planning. Instead, they become 'dormitories' that residents commute from to reach employment and other economic activities. These areas can include protected forests, agricultural land, wetlands and other ecological features essential for urban residents. Promoting sustainable agriculture in peri-urban areas in a changing climate as a viable economic activity and a source of employment that offers several advantages in relation to job creation, food security, sustainability, land use development, increased resilience and improved health and wellbeing.

Metropolitan Melbourne, Australia, provides a good example. At present, peri-urban metropolitan Melbourne produces 41% of the entire food needs of the metropolis. This is expected to drop to 18% by 2050 due to urban growth, population increase, climate change and policies that directly affect farmers. As a result, there is now a strong interest in the development of evidence-based approaches to guide the planning of peri-urban Melbourne.

This paper reports on the use of expert-systems modelling (Land Suitability Analysis) to determine the best use of land based on key properties of the biophysical environment (soil, climate and landscape) as they are today, and as they might in the future under the different climate scenarios developed by the International Panel on Climate Change (IPCC). A key feature of the approach is capturing local knowledge, by semi-structured interviews, to inform the modelling and the subsequent policy and planning recommendations to Local (provincial) Government.

### THE GOVERNANCE OF METROPOLITAN DEVELOPMENT IN ROMANIA

### Cristina Stănuș, Lucian Blaga University of Sibiu, Romania

This paper approaches metropolitan development in Romania from a governance perspective. Is builds on existing literature concerning inter-municipal cooperation (IMC) as a governance-oriented mechanism, which discusses notions such as formal political arrangements, tasks, composition, scope, scale, efficiency in public service provision, and the drivers of cooperation. Beyond formal political arrangements, a key area concerns the politics of setting up and operationalising IMC arrangements. Whether cooperation happens, and the economies of scope and scale, and the degree of institutionalization of IMC arrangements (especially voluntary ones) depend on what happens in the black box of local governments (political decision-making processes at local government level, the behaviour of individual decision-makers). The politics of voluntary inter-municipal cooperation is approached here with a focus on metropolitan arrangements centred on Romania's ten largest cities. The Romanian context provides an interesting laboratory for studying these aspects for several reasons: (a) constitutional and legal barriers make anything other than voluntary amalgamation practically impossible; (b) the Romanian local government system is excessively politicised; and (c) the legal framework for IMC and metropolitan areas does not provide for the creation of strong public metropolitan authorities. Combined, these elements created conditions for the inner workings and

the outcomes of Romania's emerging metropolitan arrangements to be influenced by: local political conflicts resulting in significant policy shifts after each election, (in)abilities to negotiate and compromise within and between municipalities (especially between the city and other municipalities involved), and (in)abilities to garner the support of citizens for metropolitan projects. Based on the analysis of relevant documents and in-depth interviews with key actors, this paper tries to assess whether and how the excessive politicisation of the Romanian local government system hinders metropolitan development.

STRUCTURAL FUNDS IN CENTRAL AND EASTERN EUROPE: DRIVERS OF CHANGE OR MERE FUNDING TRANSFERS? INSIGHTS ON THE IMPACT OF COHESION POLICY ON NATIONAL AND REGIONAL DEVELOPMENT IN BULGARIA AND ROMANIA

#### Neculai-Cristian Surubaru, Loughborough University, United Kingdom

In recent years, there has been significant academic and policy related interest in the impact of EU funds on socio-economic development and, equally, on the factors affecting the delivery of EU Cohesion Policy on the ground. Several authors have examined the latter focusing on Central and Eastern Europe (Baun and Marek 2008; Bachtler and McMaster 2008; Ferry and McMaster 2013; Bachtler et al. 2013; Surubaru 2016). Issues of administrative capacity and quality of government are seen to be important mediating factors for the implementation of EU funds. However, the literature has devoted less attention to the potential medium or long term economic and institutional impact of CP delivery. In light of this gap, this paper seeks to examine the potential spill-over effects that might be triggered by EU funds on national economic developments, institutional practices (in particular regarding the use of national funding) and regional development dynamics. The paper draws on an evaluation of primary sources as well as on original qualitative evidence gathered from Bulgaria and Romania. It scrutinises how the two countries have benefited, or not, from these resources, following a decade long membership in the EU. In doing so, the paper tests the argument of whether or not EU funds act as drivers of socio-economic development and institutional change or if these remain mere funding transfers.

# TERRITORIAL CAPITAL AND DEVELOPMENT: AN ANALYSIS FOR TWO HUNGARIAN TOURISTIC DISTRICTS

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The Lake Balaton is the second most popular touristic destination in Hungary, after the capital, and the related recreation area is on the focus of the Hungarian regional development. This area has strong territorial capital, but there are regional differences in the economic performance. This can be partly explained by the different classical economic variables, because there are other factors with special contents. This study examines the economic differences between two small touristic districts (Keszthely and Fonyód) of the recreation area and the explicative reasons. The research is based on territorial statistical data and a questionnaire survey between the mayors and local entrepreneurs. The first helps to analyse the well-known economic and social elements of territorial capital, the last focuses on aspects of social capital (three dimensions: social relationships, trust, and attachment) within the territorial capital system and it helps to specify the background of the differences. The results of data analysis show Keszthely is a more developed and Fonyód is a less developed district

and the results of survey show that there were differences in all three measurement dimensions of social capital: in the Fonyód district external institutional relations are more dominant and the level of trust in political institutions and associations was more negative; and the level of territorial attachment was more or less the same in the two districts, however, assessment of identity-creating elements indicated a slightly weaker attachment in the case of the Fonyód district.

### SMART CITY AS A MODEL FOR URBAN COMPETITIVENESS GROWTH

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In the analysis of urban development two concepts are currently fundamental, i.e. entrepreneurship with its environment, and quality of life. Both of these areas (represented respectively by firms and people) are two essential elements of urban competitiveness, as well as two urban development stakeholders. Analysis of smart city presented in the paper is a more detailed development of research on urban competitiveness, adding new dimensions to existing body of knowledge.

Smart city is a new trend in urban development, building on traditional theme of urban competitiveness theory. The model of smart city is quite often used as a model of urban development by urban decision-makers but just as often is criticized for being used for promotional purposed, when the sole reason of implementing such a strategy is to appear in ranking lists. The presented paper is supposed to further analyze the concept in relations to other models of urban development.

The aim of the research is to find out whether the smart city strategies, implemented in Poland, are in line with the understanding of smart city in urban development studies. Therefore, it will be possible to verify whether the smart city model suits actual resources and opportunities of a city, or the strategy is used as an instrument in the promotion strategy.

Analysis of smart city model implementation in Poland will include following elements:

- Definition of smart city in the field of economics, especially existing research on urban competitiveness and competitiveness of economies.
- List of smart city determinants and factors: as to enable evaluation of the models implementation in quantitative terms.
- Evaluation of chosen cities' position in terms of smart city model: quantitative evaluation based on data from Polish Central Statistical Office (Local Data Bank), OECD, Eurostat (Urban Audit).
- Analysis of smart city in chosen Polish cities: research on relation of content of smart city strategies and their actual effects.
- Comparison of quantitative data with declarative position of Polish cities in terms of smart city model, in order to define a possible gap (or lack of one)

### MEASURING THE SOCIAL INNOVATION POTENTIAL IN THE NORTHERN HUNGARIAN REGION

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The literature pays increasing attention on the analysis of the regions' innovation potential, basically because of its active contribution to the economic growth and competitiveness improvement. Beside the natural sciences based innovation the researchers emphasize in their works the role of social innovation, which can give an alternative solution principally in the case of settlements which are in a relatively peripheral situation. The convergence of peripheral regions has high priority also in the European Union; that is why the EU examines the territorial inequalities since almost more than 20 years. New aspect for the territorial level inequalities can be the analysis of patterns observed by the social innovation potential.

The state of territorial inequalities is a critical problem also in the case of Hungary, with special regards on the Northern Hungarian region's settlements. Character of the region is, that based on the most important socio-economic indicators is in a relatively disadvantaged, peripheral situation (e.g. last place among the regions in terms of GDP per capita; second last, sixth place in unemployment rate, R&D expenditures and income of households in 2015 based on the dates of the Eurostat, and the Central Statistics Office of Hungary). Beside this the region can be characterized by high level inner socio-economic disparities (lag of the territories characterized by small villages). The author's aim is to measure the social innovation potential of the Northern Hungarian regions' settlements, and draw up the possible spatial patterns of the indicator. The question is what kind of similarities and differences can be observed among the patterns of the Northern Hungarian region's settlements' per capita income and social innovation potential. I use the model indicators elaborated by the Faculty of Economics of the University of Miskolc for measuring the region's social innovation potential and I try to underlie the results with inequality measures and spatial autocorrelation analysis. According the results can be made a statement that in the case of the incomes the most developed territories can be found mainly in the central part of the region, on the one hand along the path of the motorway and on the other hand in the area of the county centres and their agglomeration, while the most underdeveloped territories can be found mainly in the northern and north-eastern periphery of the region, principally in the areas characterized by small villages. Instead of this in the case of the social innovation potential there are also some hot spots in the peripheries, where the bottom-up initiatives are stronger than the average, due to the complex character of social innovation index.

# THE EVOLUTION OF ABSOLUTE SPACE: FROM THE PHILOSOPHICAL ROOTS OF THE CONCEPT, TO ITS CURRENT ROLE IN SOCIAL SCIENCES

#### Gergely Tagai, MTA KRTK, Hungary

Cognition of spatiality has been of interest to human thinking since thousands of years. The interpretation of the mechanism of the universe, the perception of spatial dimensions and the spatiality of socio-economic relations has a continuous and significant influence in forming of the human thinking. The importance of inserting these perceived natural and social phenomena into a system manifests in spatial thinking. During the past decades, hundreds and thousands of years different answers were made to reply the question 'What is the world like?'. Different theories of philosophical, cosmological and social thinking from different eras have brought new but also continuously recurring ideas for the interpretation of concepts of space.

The seventeenth and eighteenth centuries were particular parts of this process, since on the basis of former philosophical, cosmological and theological knowledge and the evolving pre-modern scientific thinking, several ideological directions have emerged and been separated, related to great thinkers from Descartes, Locke or Berkeley, through Newton, Leibniz to Kant. Some of these ideas served as points of reference for later scientific thinking on spatial phenomena, even in the field of social sciences, such as the concept of absolute space of Newton, in relation to positivistic tendencies in regional science and human geography.

This paper aims to introduce three questions related to this chain of thoughts. Firstly, by revising the philosophical roots of the concept of absolute space, it attempts to clarify what this theory intended to answer in its original form contrary to some generalisations of later interpretations. Secondly, it raises the question how elements of this idea become parts of a modern concept on the field of social sciences. And thirdly, it intends to explore some elements of the current relevance of absolute space from the viewpoint of the understanding of contemporary socio-spatial processes.

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## URBAN VULNERABILITY ANALYSIS FOR 2 ACCIDENT SCENARIOS AT AN UPPER-TIER SEVESO ESTABLISHMENT IN ROMANIA

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Major accidents involving dangerous substances pose a serious threat to the health and safety of local communities and the environment, as well as to the integrity and development of infrastructure where Seveso establishments are located. There are cases when the disastrous effects may affect larger, even cross-border areas. At European level, there are continuous efforts to develop land-use planning policies and regulations to reduce consequences and to prevent future accidents from happening. Hence, research in this field comes to support the current actions and strategies of the European Commission to improve the capacity of EU Member States of coping with and responding to the identified risks by effective prevention, preparedness and response measures. In Romania, the Seveso establishments are mostly located in or very close to urban areas. This paper analysies vulnerability in case of two different accident scenarios (explosion and toxic dispersion) in Targu-Mures, a city where one of the largest Seveso upper-tier establishments in Romania is located. The approach starts with exposure analysis - the first step in the process of vulnerability analysis - which identifies all the elements at risk, be they social (population, medical facilities, schools), environmental (protected areas, aquatic units) or economic (transport infrastructure, buildings, utility and water supply networks, fuel or food storage facilities). Following the exposure analysis, vulnerability is assessed based on indicators identified so that they cover the entire range of social, economic, environmental aspects, as well as the existing response capabilities in case of major accident. The findings of the study contribute to a more efficient risk management planning, as the identification of the exposed elements and their vulnerability plays a leading role in the implementation of prevention, adaptation and mitigation measures.

# IDENTIFICATION OF PEDESTRIAN TRAFFIC ACCIDENTS VULNERABILITY AREAS AROUND THE SCHOOLS. CASE STUDY BUCHAREST CITY, ROMANIA

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Road traffic safety is a topical issue worldwide. In the last decades, more and more attention has been paid to analyze the factors that contribute to traffic accidents disturbance or to identify the vulnerable or high-risk areas. Romania is currently among the countries with one of the highest road fatality rate from the EU. In the present paper we proposed to analyze the pedestrian traffic accidents, around the schools in Bucharest, in order to outline the areas exposed to road traffic accidents. Thus, we analyzed for the period 2012-2016 the frequency of pedestrian traffic accidents, around 473 schools in Bucharest. Hazard was identified by dividing the study area into 0.5 x 0.5 km areas uniformly distributed and within each area we calculated the frequency of pedestrian traffic accidents. Based on a series of socio-cultural indicators (number of schools, children, teachers) and infrastructure indicators (the number of pedestrian crossings, bus stops, traffic lights, traffic lanes) disaggregated at the level of 0.25 km2 areas, we determined the transport and social vulnerable areas. After the combination of the hazard and the vulnerable areas, we outlined a map of traffic accidents around the schools in Bucharest. We consider that these results may be helpful for local authorities in implementing measures to mitigate pedestrian traffic accidents around the schools in Bucharest and also for students, teachers and parents to be more cautious when crossing the streets in these areas.

# REVISITING THE THEORY ON THE 'PRODUCTION OF SPACE' IN ORDER TO BETTER UNDERSTAND AND CHALLENGE SOCIO-SPATIAL INEQUALITIES IN CEE

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Lefebvre's theory on the production of space has been inspiring several discourses for decades. Scholars draw on his ideas on the triadic dialectic or the critique of everyday life, they apply his spatial concept in urban studies or in a threefold model of rural space, build on the issue of urban revolution or the idea of the 'right to the city' by using Marxist political economic, postmodern cultural or feminist perspectives.

It seems however, that Hungary (and CEE countries in general) stayed away from these international academic discourses for a long time, in spite of the fact that different modes of production got great emphasis in the Lefebvrian concept of space, thus the special historical experiences of post-socialist Europe might add new aspects to these debates.

Using some results of a research project on 'Contemporary theories of space and spatiality in the Central Eastern European context' (National Research, Development and Innovation Office – NKFIH K 115870) this paper aims to study: i) why there has been little engagement with Lefebvre among geographers in Hungary and ii) how geographical/regional studies in this country (and region) can use insights of the Lefebvrian concept of space to better understand socio-spatial inequalities at different scales. I will apply the example of the still-marked rural-urban dimension of Central and Eastern European uneven development and present how some new arguments based on this spatial peculiarity can broaden international theoretical debates such as the old one on the "right to the city" or a recent one on "planetary urbanization".

# NEW METHODS FOR IDENTIFYING LOCAL INDUSTRIAL CLUSTERS — A CASE STUDY ON NORTHERN TRANSYLVANIA

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In the last years clusters — as a phenomenon — have begun to play an increasingly important role not only within the economic environment but also in a policy context, the concept being often mentioned in development policies and financing programmes alike, often considered as an easy and straightforward solution for complex social and economic issues. From birth to present times the concept has suffered a series of modifications, dividing also the experts in the field into two groups — the believers and the skeptics.

A series of studies have pointed out the role clusters play within the process of economic development by ensuring the strong link between the "economic" and the "academic", this type of knowledge transfer being considered the key element in generating competitive advantages in the face of an increasing global competition. Making use of these specific types of advantages, clusters can represent thus an optimal environment for implementing future innovation policies.

Although in Romania in the last decade a series of strategic documents on clusters and their role in economic development have been elaborated, the majority have merely given us a static picture on the status quo, not insisting neither on conditions essential for their development, nor the interrelation between different sectors. Due to the lack of a consent regarding the scientific methods, many of the studies have not only lead to controversies, but they have also made the process of comparing the results at EU level impossible.

Starting out from the above mentioned difficulties, the present research has set out to identify and analyze relevant economic agglomerations in Northern Transylvania by applying the methodology used by the European Cluster Observatory for elaborating the 2014 edition of the European Cluster Panorama, combined with the concept of Local Industrial Clusters borrowed from the research of Thomas Brenner. The innovative nature of the research is underlined by the fact that the methodology has been adapted and applied at micro (settlement) level, thus offering the possibility for the results to be validated with the help of accessibility analysis and territorial autocorrelation.

Along with the results and achievements of the research, the paper will discuss the limitations of the above methodology, putting specific emphasis on the drawbacks of firmly delimiting certain cluster categories as well as the partial validation of research results by relevant local stakeholders.

# SOCIO-SPATIAL POLARIZATION: DRIVING FORCE AND OUTCOME OF TERRITORIAL MOBILITY IN POSTSOCIALIST ROMANIA

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Over the past two and a half decades, the transition from a centralized to a market economy has affected the spatial configuration of Central and Eastern European countries by re-widening the gap between cores and peripheries at a regional scale. Using the case of the Romanian North-West Region (NUTS2) as an example, our contribution focuses on one of the mechanisms of core-periphery relations, that of territorial mobility in light of increasing socio-spatial polarisation. The aim is twofold. First, to show how core-periphery disparities influence mobility flows by offering different levels of

structural advantages. Second, to exemplify how various social groups can add to these advantages by choosing their place of residence and work, through internal migration and commuting.

Through a descriptive census data analysis, we map internal migration over the past two decades, as well as present day commuter flows, categorizing the places of origin and destination in terms of cores and peripheries. As the data shows, in this time territorial mobility has both followed and influenced the changes in the core-periphery structure, with flows increasingly directed towards urban centres and their metropolitan regions. Additionally, a comparison between mobile and total populations shows that the former is better educated and better employed, as the most visible migration flows consist of young well-educated adults moving to urban centres. This confirms the deepening divide between cores and peripheries at a small spatial scale, and helps understand the impact that the population can have on the development of settlements.

The analysis shows that in the Romanian North-West Region centres are reaping the cumulating benefits set off by higher capital investment (jobs creation, infrastructure improvement, political and innovation networks engagement etc.), attracting human resources through internal migration and commuting, and consequently utilising this incoming mobile population as a driving force for further economic development. Meanwhile, starting from a position of disadvantage and dependency in relation to cores (struggling with limited access to desirable resources, low levels of income, lack of investments, lack of services, deindustrialization, etc.), peripheries are shrinking in terms of demography and experiencing the smallest average growth in development. Because of the lack of equal access to occupational, educational and financial opportunities, peripherality becomes a driving force for territorial mobility, seen by the individual as a strategy to adapt to or overcome peripheralization. As those with the possibility to migrate might leave, the available human capital diminishes. Consequently, the highly differentiated life chances between residents of cores and peripheries support the reproduction and enhancement of socio-spatial inequalities.

### LONG-TERM RESIDENTIAL MOBILITY AND TRAVEL BEHAVIOR OF ELDERS IN BUCHAREST-ILFOV METROPOLITAN AREA

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The collapse of the socialist bloc in 1990 exposed Central and Eastern European (CEE) countries to the global economy to varying degrees, restructuring their internal markets and political-administrative structures, and bringing significant changes to urban areas. Romania, an Eastern European emerging country, exhibited socio-economic changes, such as increase in income, diversification of workforce, and changes in lifestyle since the political system change in 1989.

Long-term mobility of people involves decisions about their residential locations and associated travel behavior. Places of education and employment, along with socio-demographics and mobility ownership tools also play an important role in residential self-selection.

A longitudinal perspective on these relationships is available from people's life courses for Bucharest-Ilfof Metropolitan area. The data was collected by means of an online life-course survey among a representative sample within the area of interest. Due to the complex nature of the data reported, three periods of analysis were set, so that to allow us to make longitudinal comparisons, and correspond to the National Population Census in 1992, 2002, and 2011. As our focus is on the spatial dimension, prior to any analysis, we engaged in data inspection and cleaning, followed by geocoding procedures in order to geographically locate places of residence, education and workplaces. As the respondents reported the exact address for all the locations of interest, we can assess measures of accessibility and distances accurately. Distance distributions were plotted for covered distances for each of the considered transport modes used for commuting and education trips.

Exploratory in nature, our study exhibits an overview of transformations in personal history, locations of residence, education and employment as well as the associated travel behavior for elders currently residing in Bucharest-Ilfov area, since 1989 until 2016. Although our sample is reduced to a restricted share of our collected data, the findings aim at contributing to forecasts in travel demand as inferred by the socio-demographic and economic characteristics of individuals. Also, we intend to assess the travel behavior of the elders by assuring their needs in cities that continously expand their build-up areas and are highly dependent on motorized transport.

### UNEQUAL DEVELOPMENT IN R&D FIELD IN CEE COUNTRIES

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Research and development (R&D) is widely known as a key factor in promoting economic growth and competitiveness, both at national and regional level. Regional innovation and competitiveness is a relatively new theme of interest in CEE countries. Previous studies show that the indicators that are important for competitiveness can be grouped into three themes: basic infrastructure & accessibility, human capital and other factors, among which R&D and innovation plays a significant role. In this context, the authors aim at exploring the differences and changes in the field of R&D in twenty countries in Central and Eastern Europe. These countries were grouped in three categories: EU members (Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic, Slovenia), Eastern Partnership members (Belarus, Moldova, Ukraine) and EU candidate and potential candidate countries (Albania, Bosnia and Herzegovina, Kosovo, Macedonia, Montenegro, Serbia).

The analysis takes into consideration the last three programming periods (1994-1999, 2000-2006, 2007-2013) and also the perspectives for the present period 2014-2020, using as main indicators the R&D expenditure as a % of GDP, the number of researchers, journal articles, patent, trademark and industrial design applications and high-technology exports. The differences among the analysed countries are significant, the R&D expenditure in GDP ranging from 0.15% in Albania to more than 2% in Slovenia and the Czech Republic. In what concerns the competitiveness of these countries, we took into consideration four main pillars (as presented in The Global Competitiveness Report): macroeconomic environment, higher education and training, technological readiness and innovation. From the innovation point of view, one can also notice big differences among the CEE countries, some of them being placed in top 50, such as Estonia, Slovenia, the Czech Republic and Lithuania, and others at the end of the hierarchy, such as Moldova and Bosnia Herzegovina. The paper also explores the involvement of these countries in R&D projects financed by the EU within the FP4 – FP7 and Horizon 2020 Programmes and their fields of interest.

Based on this analysis the authors try to present the capacity of the CEE countries to innovate and underline the role of the policymakers in developing sustainable policies on research and

development, encouraging investments in R&D field in order to improve the quality of education, strengthen the performance in research and innovation, and thus stimulate economic growth.

# REGULATING THE URBAN COMMONS: USING BEHAVIORAL INSIGHTS FOR MECHANISM DESIGN

### Anamaria Vrabie, Bucharest University of Economic Studies, Romania Rodica Ianole-Călin, University of Bucharest, Romania

One of major international urban policy debates is around the optimal land use regulation and appropriate spatial policies and use of engineering and economics approaches for reducing the negative consequences of density. In the case of housing, urban governments typically exercise a great deal of regulatory control, Romania included. Real estate developers and owners face various construction standards, height regulations and controls over usage, external decoration and preservation. The typical justification for these controls is that buildings can create externalities. Some of these controls, embedded already into urban policy, stem from Garrett Hardin's 1968 article, The Tragedy of the Commons, which assume that resources held in common – including the urban commons of facades, sidewalks, streets and parks – are doomed to exploitation.

This paper examines the effect of build environment regulations for facades emergency repairs and beautification implemented by Cluj-Napoca municipality (RO) in 2016, designed as an enforcement mechanism to avoid public casualties and negative city image. The scope is to identify if and how this intervention design could be slightly modified to be more effective by encouraging a more pro-social behavior and minimizing homeowners' resentment. The paper is structured as follows: the theoretical background provides an analysis of the rationale of this policy mechanism through (1) the rational model of crime and (2) theory of social norms, for both the proposer (local public authority) and the responders (the homeowners which received summons). The review follows considerations on national policy design pertaining to fiscal policy, law and urban planning, and evaluations of benefits and costs for compliance, non-compliance and enforcement of the policy.

The empirical section evaluates the data collected from the sample of 47 homeowners that underwent retrofitting works, targeted by the policy. For this purpose, a questionnaire was built on a baseline assessment of previous responses to summons sent by local public authority to homeowners between 2013-2016. The items were adapted from a recent preference survey module tested as a valid instrument to capture social preferences (trust, altruism, positive and negative reciprocity), thus deviations from the rational model of choice, that offer a new understanding about what really drives behavior change.

We conclude with several recommendations for further research in the form of field experiments focused on exploring a pro-social incentive mechanism design that captures responder's behavior patterns. The relevance of the present research is noteworthy especially in the context of emerging evidence of the key insights of behavioral economics into attitude-behavior gap, status-quo bias and myopic preferences under which people make decisions for designing programs in areas of delivery of public services and urban policy.

### **GEO-ECONOMICS AS POWER POLITICS: A CONCEPTUAL ANALYSIS**

#### Mikael Wigell, The Finnish Insitute of International Affairs, Finland

Geo-economic power appears to be a crucial aspect of today's international relations. Some observers even speak about a new geo-economic game, where economic power is leveraged aggressively to extract concessions and pressure neighbouring countries. Yet, despite increasing references to "geo-economics", the term has rarely been defined and there is no agreement on what is meant with it. This paper contributes to the emerging debate on geo-economics in IR and foreign policy analysis. Its main purpose is to review the geo-economics literature. Oddly, considering the term's increasing popularity, no comprehensive review has been done hitherto. The paper will make a first categorization of the different analytic approaches as they emerge from such a review. It will try to add some clarity to the concept, show how the different elements usually associated with geo-economics relate to each other and what the analytic uses of different conceptualizations may be. It will also make references to work that normally have not figured in discussions on geo-economics, but may suggest fruitful avenues for geo-economic analysis and theory-building. The paper forms part of a larger research project that analyses power transitions and new practices of power politics by major actors such as the US, Brazil, China, India and Russia.

### GLOBAL TECHNOLOGY LEADERS IN RURAL REGIONS: BEYOND THE LAMPPOST SYNDROME

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The importance of agglomeration economies, co-location and concentration of economic activities can be traced back to Marshall (1920) who argued that there is an advantage for firms in the same industry to locate near one another because workers and firms learn from each other. Michael Porter (1990) expanded on this arguing that co-location not only of similar specialized firms but also of other firms in industry together with suppliers and customers increases the positive spillovers and promotes innovations.

Nevertheless, the agglomeration and urbanization economies are a relatively large group of often interrelated factors and hence they may affect different actors and organizations differently. For instance, Henderson et al. (1995) showed that the life cycle of products is critical in determining what kinds of agglomeration economies enhance economic growth in urban areas. Further, Artz et al. (2016) argue that the agglomeration economies cannot be limited only to urban regions. They can spill over to surrounding areas and rural areas can benefit from them as well, for instance through commuting. Further, rural areas are diverse and some can achieve certain (local) agglomeration economies related to specific activities concentrated in the location – as Artz et al. (2016) puts it there is a continuum of sizes along which agglomeration economies can operate and even some rural regions can reach to them (Artz et al., 2016, p. 73).

The aim of this paper is to analyse how the dimensions of the GPN framework (value, power and network) differ in relation to agglomeration and urbanization economies. More precisely, the aim of the analysis is to test whether the location of a particular type of a firm within a GPN corresponds with the theoretical assumptions related to regional development literature — following the literature agglomeration economies, one may assume that leaders of the GPN will be particularly attracted by large urban (and metropolitan) areas, whereas firms at lower positions in the GPN will be more often located in rural, non-metropolitan regions.

### LONG-RUN REGIONAL ECONOMIC FORECASTING: A REVIEW OF THE METHODOLOGIES

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In Hungary, regional inequalities are increasing fast, regarding their ranges of appearance and their spatial scope. Some authors even refer to this process as the tearing up of the country, and urge policy interventions. The political promises of eliminating the spatial inequalities and the rapid catching-up of the backward regions proved unrealistic, and effective spatial policy can work only on the basis of a comprehensive knowledge about the spatial processes. My research may constitute some contribution to this knowledge through investigating the methodologies of long-run regional economic forecasting.

In the presentation I intend to review, systemize and evaluate the literature on the practical implementation of regional economic forecasting methods. As suggested by the literature, long-run economic forecasting is best performed with the help of structural models which are able to provide valid forecasts even when the economic environment is subject to radical changes. At the same time, (macro)econometric models perform better in short-run forecasting, however, these are vulnerable to the Lucas critique. Regional economic processes are often studied with the help of computable general equilibrium (CGE) models, and their spatial version, the spatial computable general equilibrium (SCGE) models which will also be reviewed. Finally, the research will focus on the method of regional downscaling of a national level forecast. Here, a macro model provides forecast for the most important macro variables, then these data are downscaled to a regional level with the help of statistical methods, such as a factor model. This exercise suggests that a combination of different forecasting techniques may be useful to arrive at a plausible model based on the Hungarian regional data (preferably at the NUTS 2 level).

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