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European regional science: the strength of gaps in our knowledge (review of the ERSA 2009 Lodz Congress papers)

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**European regional science: the strength of gaps in our knowledge
(review of the ERSA 2009 Lodz Congress papers)**

Abstract

In the focus of this year review are gaps of our knowledge in regional science and how they can be filled with our collective efforts. All papers reviewed are distributed into numerous topical sections and three clusters of topics: 1) closely connected with the framework of regional innovation system; 2) relatively weak connected; 3) not connected.

To characterize the peculiarities of the major national schools of regional science in Europe we have gathered papers from ERSA 2002 till ERSA 2009 Congresses, and articles from the leading 12 journals of regional science from 2000 till 2009. National schools are grouped in three clusters: CEE countries, Southern Europe, and the rest.

With the same pool of Congress papers and journal articles we have described the specific creative manner of 16 intellectual leaders of the ERSA.

Introduction

This report continues the efforts to generalize the results of the annual European Regional Science Association Congress¹. This time we generalize the results of the last 49th European Regional Science Association Congress held in 2009 at Lodz. In the first part of the paper we have reviewed the selected Congress papers. In the second we have described major schools of European regional science. In the third part we have described the creative manner of intellectual leaders of the ERSA.

I. Review of the Lodz Congress papers

There were 263 reports at the Lodz Congress flash. After several rounds of selection (European authors, European issues, not purely theoretical papers) we have had 208 papers for our analysis. This year our desire was not to follow topical structure of the previous analysis for the Amsterdam, Volos, Cergy and Liverpool Congresses but to stress the direction of the most important intellectual efforts of the European community of regional scientists. We think that it is regional innovation system, regional cognitive process. Under such criteria we have organized three clusters of papers – 1) closely connected with the framework of RIS; 2) relatively weak connected with RIS; 3) not connected with RIS.

First cluster of topics closely connected with the framework of RIS

1. Regional innovation process (29²)

In this year review my desire was to create the intellectual core of papers from the last Lodz Congress. This means that I have deliberately expanded the topic devoted to the regional knowledge economy, regional cognitive process. It is evident that for the contemporary regional science this is the direction of the main intellectual attack. From one year Congress to the other we can see the gradual process of expansion of the theme of regional knowledge economy to the new territories of research. For instance, at the Lodz Congress the theme of knowledge economy has penetrated inside the topic of border regions and low and medium technology industries,

¹ See Pelyasov A. European Regional Science: Between Economy of Culture and Economy of Catastrophes (Review of the ERSA 2005 Amsterdam Congress Reports). The Volos Congress papers, # 437; Pelyasov A. One more year of intellectual ascent of European regional science: review of the ERSA 2006 Volos Congress reports. The Cergy Congress papers, # 200; Pelyasov A. European regional science: in search of strength in diversity (Review of the ERSA 2007 Cergy Congress papers). The Liverpool Congress papers, # 283; Pelyasov A. European regional science in the creative age: review of the ERSA 2008 Liverpool Congress papers. The Lodz Congress papers.

² Here and later this is the total number of papers inside the topic.

inside regional policy which is redefined as inclined for “reduction of transaction costs of knowledge transfer between regional economic actors”.

Therefore I have changed my usual “precise” approach to fix Congress papers to the exact theme and tried this time to combine the more possible papers devoted to the theme of regional knowledge economy - even if they could be distributed to the other “ordinary” topic too. Because of such generous approach the number of papers in the first topic devoted to the regional innovative process is more than twice bigger than in the second, devoted to the regional labor markets.

We can reveal two approaches among these papers. The first can be called the broad one, as authors try to look at the whole contemporary process of regional development as innovative, “as a series of fundamental innovations”. This approach was at the heart of Schumpeterian conceptualization of regional development. The second can be named the narrow one as authors are telling about knowledge factors in the regional economic development, about spatial dimension of cognitive, innovative processes. My belief is that only the first approach can promise breakthrough in our understanding of contemporary regional reality.

1.1. New methodology for research of spatial cognitive processes

R.Cappelin is one of the experts in elaboration the topic of methodology of the regional cognitive process. As R.Camagni he, too, belongs to the old generation of Italian regional scientists who are masters of qualitative methods of research (but not spatial econometrics as younger generation of Italian scholars is well aware of). At the Lodz Congress he has prepared the work on territorial aspect of cognitive process: *Cappelin R., Wink R. The spatial dimension of cognitive processes and innovation policies in medium technology clusters*. I would like to stress some ideas inspired from this paper. They are not evident and therefore can be considered as our **GAPS** in understanding the essence of creative process in the regions. Maybe the difference between tacit and formal knowledge lays in different network structure of the first and the second. In the first - weak ties, in the second strong ties dominate. Maybe informal institutions play more essential role in maintaining flexible network structure for tacit knowledge providing constant non-linear recombinations (feedback, cycles, etc.) between elements and switches from weak to strong ties and vice versa.

Professor R.Cappelin mentioned the positive role of routines as the economizing tools in thinking, that liberate brain for creativity. But maybe overroutinized regional economy, overwhelmed with formal institutions (as in some American states) leaves no place for official collective creativity? And maybe deinstitutionalized regional economy leaves more place for individual and collective creativity as we can judge according to the recent experience of CEE countries?

I would like to name one more paper in the methodology line: *Kramar Hans. Innovation and space: the concept of regional knowledge production functions*. Having examined spatial patterns of patent applications author tries to reveal the key location factors of inventive activities for the Austrian regions. To my mind real **GAP** here is our contemporary lack of understanding of the regularities in the location of knowledge-based services and activities in general. Contemporary location theory mainly concentrates on the spatial pattern of industrial activities. Empirical analysis is shifting gradually towards the service sector and creative factors of location, accessibility and availability of knowledge as the major location factor. But we do not have comprehensive theory explaining regularities in location of creative industries, services, and capital. Therefore it is not surprising that at each year ERSA Congresses miniscule part of all papers is devoted to the topic of location.

At every Congress I admire with G.Maier’s ability to create new angle in regional research, to look for new topic, new method, new tool of analysis. In his focus at the Lodz Congress were star scientists and their “pro-development” behavior: *Maier Gunther, Trippl Michaela, Kurka Bernhard. Star scientists and regional innovation: understanding the role of scientific talent for the development of cities and regions*. To understand to what extent top scientists are engaged in regional

development he has undertaken web-based survey of 720 top scientists and research professionals (identified by the number of citations they generated in journals in the ISI databases in the period 1981-2002 in 21 research disciplines). His conclusion was that “they are strongly embedded in their regional economies: more than two thirds of the investigated stars act as source of highly qualified graduates for regional companies, foster the entrepreneurial spirit of their students, engage in specific activities like performing R&D projects with firms selling patents to companies and providing policy advice”. Here the **GAP** is spatial and temporal differences in the extent of talents’ involvement in the regional development, the role of different factors and filters that determine this process.

New concept of brain competition policy (*Reiner Christian. Brain competition policy as a new paradigm of regional policy. A European perspective*) was born at the result of synthesis of knowledge economy paradigm, regional migration theory and regional innovation policy. And this is very typical way of invention of new concept at the result of merging of several old ones (with knowledge economy among them). Author understands brain competition policy as the attraction, retention, education, circulation and utilization of talents functioning as knowledge spillover agents in and between regional, national and supranational economies. He suggests four strategies of brain competition policy: immigration, return, circulation and diaspora. Immigration and return policy are defined by attracting foreign highly-skilled workers with the aim of making them permanent residents. Brain circulation policy refers to all policy measures promoting the temporary attraction of external highly-skilled workers to the respective region, enabling face-to-face contacts between regional and external talent. Diaspora approaches are defined as all policy measures which target to utilize foreign national talent in the absence of geographical proximity.

My understanding that the **GAP** here is the broad approach how to strengthen the base of regional talents at the result of education, attraction, embeddedness and other efforts, but not only migration. Maybe we should reformulate the goal of regional policy as the increase of the layer of talents in the region?

1.2. New techniques and methods to work with regional cognitive process

At each year Congress authors try to suggest new methods (or to develop old methods on new fields) to discover regional creative process. Such efforts were visible at the Lodz Congress too. For instance, for the EU countries - *Korres George M., Elias Kourliouros, Marmaras Emm., and Tsombanoglou G. Mapping the innovation activities in Europe* - authors in this paper analyze innovation statistics and examine innovation activities in EU; for the Russian Federation - *Granberg Alexander, Pelyasov Alexander. Geographic dimension of innovative activity* – authors reveal relationship between patent activities and the factors forming innovative infrastructure in the Russian regions; in the Belgium - *Corsatea Teodora. Geography of science. Success breeds success* – authors analyze the quality of scientific production in a regional context - according to the impact factor of publications differentiated per field of science.

My understanding is that the **GAP** here is our inability to go beyond familiar indicators of patent activity, and other familiar indicators of innovative activity towards “new” traditional statistic indicators that can get cognitive interpretation. For instance, indicators of community health, mental disease, psychological disorders that can be reread as parameters of regional cognitive process. Such intellectual search for new indicators and approaches to measure creative process in the regions can be found in *Sucháček Jan. On the emergence of mental territorial disparities*. Author tried to reveal mental disparities in mental maps formed on the basis of aggregation of individual images of particular spots and territories reflecting the psychological representation of space.

One more potential **GAP** is competence-based approach to measure regional cognitive realities. My guess is that potential of this method has not yet elaborated. In only one paper at the Lodz Congress did it appear: *Hussler Caroline, Rondé Patrick, Ott Hervé. Location, Industry and network effects on innovativeness: a competence-based analysis of French data*. Authors examined French innovation system in the manufacturing sector, and different educational channels through which firms may obtain the knowledge necessary to undertake innovation. The acquisition of regional

internal and external competences was considered as very important in-between step of the firm in its grown-up as innovative entity.

1.3. R&D and innovative process in the lagging and forward regions

Several papers were devoted to the topic of R&D and lagging regions of Europe: *Göksidan Hadi Tolga, Katsikis Ioannis N. Public policies and R&D performance: the role of public R&D in the STI systems of Turkey and Greece; Atalik Gunduz, Alkay Elif. The impact of R&D differentiation in Europe on sustainable development.* Authors told about insufficient level of industrial research and central role of the public R&D in the European innovatively lagging countries as Turkey and Greece, ways how to converge the investments in R&D in lagging regions.

My guess is that the **GAP** here is our lack of understanding (or numerous contradictory viewpoints) about peculiar way of peripheral regions in the knowledge economy, how it can be developed under the new innovative conditions.

But things are not very good with the advanced regions too. For instance, Spanish authors analyzed productivity growths generated by R&D activities in the regions of Spain: spillovers are more significant in the northeast area of the country, in which the regions are growing faster, are closer to the European Union and more urbanized, closer to an R&D nucleus such as Madrid or Barcelona: *Fernández-Vázquez Esteban, Rubiera-Morollón Fernando. Estimating regional variations of R&D effects on productivity growth by entropy econometrics.* But the **GAP** is in our understanding of the mechanism of knowledge transmission: how the effects derived from accumulating knowledge in one specific region can be transmitted to other locations through technology spillovers.

1.4. Universities and innovation process

Several papers at the Lodz Congress were devoted to the popular topic of economic and innovative role of Universities in the regional development. In one of them authors try to measure total (direct, indirect and induced) employment effect of Niederrhein University of Applied Sciences: *Hamm Rüdiger, Schmitz Yasemin. Universities of Applied Sciences and Regional Development – The Case of Niederrhein University of Applied Sciences.* My understanding is that the **GAP** here is difficulties in concrete calculations of the University economic impact by channels: increase productivity of private enterprises; spinoffs formation; cooperation between professors and private enterprises in research projects; practically oriented bachelor, diploma or master thesis, etc.

Another paper was devoted to the impact of commuting distance on the choice of a field of study of engineering, economics or health & welfare: *Cloodt Daniëlle, Cörvers Frank, Heijke Hans, van Thor Jesper. The impact of distance deterrence on the choice of field of study in vocational education in the Netherlands.* Utilizing the unique dataset of more than 15,500 first-year students authors realized that what matters for the choice of a field of study is the whole educational infrastructure within a region.

1.5. Sectoral approach to innovative development

What was new with sectoral approach for innovative development at the Lodz Congress was the increasing attention to the phenomenon of low and medium technology industries that before were beyond the focus of RIS-researchers. For instance, Austrian scientists did a research on companies in the plastics industry. They realized that even in this innovatively mediocre industry about a third of plastic manufacturers generate technological complex innovations, patents and use internal and external research and development facilities, exploit knowledge sources and innovation partners along the value chain (key customers and suppliers which are frequently located internationally) or in knowledge intensive business services: *Grillitsch Markus, Tödting Franz. How important are cooperation and location for the innovation performance of companies in low and medium technology industries? Evidence from the Austrian plastic industry.* My point is that the **GAP** here is lack of understanding of the difference in knowledge links and knowledge transfer mechanism between high and low tech industries.

I think that the achievement of the French “agricultural” paper on hemp and flax was the discovery of the territorial structure of R&D actors in this field and constructive merge of French cartography culture and the concept of territorial structure of sectoral innovative process. The map of regional actors of sectoral innovations given in this paper is very informative: *Caron P., Barbier M. Sustainable innovation with industrial hemp and flax in France: towards non-absorptive intermediary actors*. My guess is that real **GAP** here is lack of our understanding in knowledge networks dynamics, networks “breathing”. I mean constant recombinations of actors inside the innovative networks.

One paper at the Congress reflected new interest to the creative industries and their role in regional innovative development inspired by R. Florida’s books: *Ciuc Vasilica, Atanasiu Draga, Lincaru Cristina, Dragoiu Codru. CSR practices and the “cultural or creative industries” development in Romania at regional level*. The **GAP** here is at the very beginning: how broad or narrow should we define these regional creative industries for the purpose of regional economic development?

1.6. Territorial approach towards innovative process

Territorial approach in the innovative process was realized at the Lodz Congress at the different levels: at the EU level, at the level of border regions, separate countries and regions. At the EU level authors investigate the determinants of innovative activity, as well as its impact on regional growth in the EU during the period 2002-2006: *Petrakos George and Anastasiou George. Regional innovation, growth and convergence - divergence patterns in the EU*. They revealed the formation of two European clubs: a “convergence” club including the less innovative regions and a “divergence” club including the most innovative European regions. My guess is that the **GAP** here is how EU public policy can determine innovation indicators, what is the relationship between innovation and cohesion policy, innovation public policy and the dynamics of regional inequalities in Europe.

At the level of border regions we can see real breakthrough - the development of the theory of border regions “in the light” of knowledge economy concept. Authors of the provocative paper on comparison between Öresund and Centropo border regions³ (which differ enormously in terms of socio-institutional and political factors, culture, history, economic structure and geography, regarding their capacity to develop an integrated innovation space) suggest the idea of trans-frontier innovation systems as the most advanced form of cross-border integration: *Lundquist Karl-Johan, Trippel Michaela, Winther Lars. Cross-border innovation spaces in Europe: A comparative analysis of the Öresund region and the Centropo area*. Authors proclaim the existence of three stages in the development of trans-border integration: Stage I (weakly integrated) is characterized by a low level of cross-border economic relations in general and a lack of knowledge interactions and innovation linkages in particular; too large differences in innovation ability, performance and receiver competence, high soft and hard barriers (big physical and institutional distance). In stage II (semi-integrated) one can observe an emerging knowledge driven system. Windows of opportunities lead to increased cross-border learning processes in a few selective parts of the economy, in narrow segments of the science base and economic structure where good levels of cognitive and functional proximity could be found. Stage III (strongly integrated) is characterized by a considerable flow of knowledge, expertise and skills across the border. These knowledge interactions form substantial synergies for cross-border interaction and learning in many economic and scientific sectors, in both business systems and knowledge bases (that means that high levels of functional and physical proximity are evident).

At the country level one can mention the paper: *Szepvolgyi Akos. Mind the gap – issues of network-based territorial development in Hungary*. Author gives characteristics of network-based development initiatives among universities, industrial and governmental sectors. Special attention is devoted to the diffusion of knowledge and innovation. Finally, at the regional level one can mention paper on the Russian Magadan Oblast: *Golobokova Galina M. Innovation mechanisms of the Northern region competitiveness*. The author structurizes three segments in the regional economy: hi-tech, mid-tech, low-tech production and tries to link them by financial flows: the

³ The Öresund region is composed of Southern Sweden and Eastern Denmark, and the Centropo area is located at the intersection of Austria, Slovakia, Czech Republic and Hungary.

income from export low-tech production should be used to finance the first and the second sectors of the regional economy.

1.7. Human capital in the regions of Europe

In the previous reviews of the ERSA Congresses I posed this subtopic at the regional labor market theme. This time because of my desire to give expanded view of the regional knowledge economy and innovation process I have decided to include it in the first theme - that to my mind created the intellectual core of the Congress. Human capital actually is inseparably connected with regional innovative and cognitive processes.

I would like to start this description with the problem how to measure the essential part of human capital, that is educational capital. This important topic was developed in the paper *Karhunen Hannu. Measuring educational capital: impact on regional skill-convergence*. The author elaborates new method for measuring education: aggregated years of education are weighted by proportional costs of different educational degrees (cumulative public costs of education). This makes it possible to measure education by monetary means like other assets. This is important as regional differences in education may be a source of economic and social inequality. My understanding is that the **GAPS** here are the obvious heterogeneity of education and its depreciation through time and how these factors can be taken into consideration in the calculation of educational capital.

Authors of the next paper describe a positive role of human capital proxied by education (the average years of schooling) in reducing regional income per capita disparities in the Portuguese regions over the period 1991-2006 and regions' ability to adopt new technology: *Cardoso Catarina, Pentecost Eric. Growth and convergence in the Portuguese regions – the role of human capital*. The **GAP** here is lack of our understanding how new even distribution (location) of higher education institutions across the country's regions can promote to decrease per capita income disparities.

Issue of overeducation was elaborated on the example of the Finnish regional labor markets: *Jauhiainen Signe. Overeducation in the Finnish regional labor markets*. Author studied the influence of spatial characteristics and mobility on the risk of overeducation for men and women. Her estimates were that 9,6 % of all workers in Finland are overeducated. Women in a small local labor market have the highest probability of being overeducated. Living in the metropolitan area, in a university city, or in regional centre decreases the probability of being overeducated compared to the reference group of small regions.

Authors of the next two papers have analyzed the regional impact of human capital: first, on regional labor productivity - *Fischer Manfred M., Bartkowska Monika, Riedl Aleksandra, Sardadvar Sascha, Kunnert Andrea. The impact of human capital on regional labor productivity: A spatial regression approach*; and second – on performance of migrant entrepreneurs - *Nijkamp Peter, Stough Roger, Sahin Mediha. Impact of social and human capital on business performance of migrant entrepreneurs – a comparative Dutch-US study*.

Authors of the first study using 198 NUTS-2 European regions for the sample period from 1995 to 2004 provides evidence for the existence of spatial externalities connected with human capital. And authors of the second study proclaim that lack of market and entrepreneurial experience can worsen business performance on migrant entrepreneurs.

In several papers from CEE authors the theme of the weaknesses of educational process in former socialist countries was developed: *Frunz Ramona, Pascatiu Gabriela Carmen. Priorities of investment in human capital in Romania* *Walukiewicz Stanisław, Wiktorzak Aneta. Human and Social Capital in Education*.

But unexpectedly human capital can influence even the travel behavior of commuters and potential migrants: *Huber Peter, Nowotny Klaus. Return intentions among potential migrants and commuters: the role of human capital, deprivation and networks*. Authors of this paper empirically analyze the determinants of the intended duration of stay of potential migrants in the Slovak, Hungarian and Czech border regions to Austria - as well as commuters - at the example of one of the most densely populated border regions between the new EU member states and the EU15 (the Vienna-

Bratislava region). Distance and education play a more important role for commuters' duration of stay.

2. Regional labor market (14)

We have already discovered that this topic has been deliberately squeezed in comparison with previous reviews. But my understanding is that labor markets theme is nevertheless very closely connected with regional knowledge economy issues. Therefore describing works in this section we are still very close to the intellectual core of the Congress, to the research agenda of high priority for regional scientists.

2.1. Two opposite cases of the immigrant impact on the regional knowledge economy

The role of immigrants on the regional creativity can be different depending upon their qualitative characteristics. On one hand, skilled foreign workers can be seen as a positive production amenity from a regional perspective. Their share and their diversification into different national groups raise local wage and employment levels for natives: *Suedekum Jens, Wolf Katja, Blien Uwe. The Effects of cultural diversity on regional labour markets in Germany.* There has been a notable increase in the group of high-skilled and a decline in the group of non-university trained foreign workers in Germany. The diversity of the nationalities of which the foreign workforce is composed has also risen considerably.

On the other hand, immigrant workers can negatively influence total regional productivity when they are concentrated in sectors of low productivity and value added: *Sanchez Antonio Garcia, Matros Luis Palma, Marcos Cristina Borra. An analysis of the impact of immigrant workers on Andalusian economy productivity.*

My guess is that our **GAP** here is lack of understanding how should national and regional immigration policy be tuned to take into consideration all these small but important details of the local migration flows. Can we evaluate the creative impact of cultural diversity provided by immigrants?

2.2. Internal mobility on the labor markets of Germany

Because of persistent differences between the Eastern and the Western part of the country differences in regional labor market conditions are still pronounced and big in Germany. And regional disparities in unemployment have even increased since the mid of the 1990s. Because of these differences there are considerable interregional migration and commuting flows in Germany. To exaggerate the situation German authors even posed the question why do people still live in East Germany and do not leave regions with low income and employment prospects – particularly in the country where language, information or cultural barriers are so small: *Bonisch Peter, Schneider Lutz. Local social capital, institutional shock & regional mobility – an explanation of persistent labor market disparities within Germany.* They have tested the hypothesis that informal social capital of the Eastern Germans does fix them to their Eastern motherland. But it was not proved in quantitative analysis. Therefore our **GAP** here is the understanding of the possible role of social capital in human's mobility.

Authors of the next paper investigate the impact of labor mobility migration as well as commuting on regional disparities wages and unemployment between 1995 and 2005. They found out that labor mobility tends to reduce *unemployment* disparities. Commuting was less important for a reduction of labor market disparities: *Granato Nadia, Haas Anette, Hamann Silke, Niebuhr Annetrin. Does labor mobility reduce disparities between regional labor markets in Germany?*

2.3. Measurement of regional employment and self-employment effects

Generally the topic of employment in regional studies is well elaborated. But each Congress authors managed to find fresh turns in it. And Lodz Congress was not the exception. For instance, Spanish authors have united successfully location theory and probability of being employed: *Viñuela-Jiménez Ana, Rubiera-Morollón Fernando, Cueto-Iglesias Begona. Are the successful labor profiles different among national and local levels? An analysis of urban size and territorial location effects over employment profiles in the Spanish case.* To explain the patterns of employment distribution they have creatively refused to use traditional administrative regional division and decided to use their own

“economic areas” combining two key characteristics - the size of population and the location of the region (in terms of its distance from a large metropolis): 1) *MA1: metropolitan* areas of more than 2,5 million inhabitants. *MA2: metropolitan* areas of between 500,001 and 2,500,000 inhabitants; 2) *CUA1 central urban* areas of between 100,001 and 500,000 inhabitants. *CUA2: central urban* areas of between 50,001 and 100,000 inhabitants; 3) *CRA: central rural* areas, less than 50,000 inhabitants; 4) *PUA1: peripheral urban* of between 100,001 and 500,000 inhabitants. *PUA2: peripheral urban* areas of between 50,001 and 100,000 inhabitants; 5) *PRA: peripheral rural* areas, less than 50,000 inhabitants. They found out that there is a significant gap between central and peripheral areas in the chances of being employed. As for a relationship between employment and size of the region, it exists but is not very strong. It will be interesting to test these results for the regional labor markets of European countries of different size and shape.

What are the factors that determine sustainability of small business employment? That was the question posed by Norwegian author: *Stambøl Lasse Sigbjørn. Maintenance of and exits from self-employment in Norway - measured by regional labor market mobility in a longitudinal analysis*. He discovered that the maintenance of self-employment is higher for men than for women, for middle-aged self-employed than for younger and older self-employed, for those with middle education compared with low or high education and higher among self-employed with Norwegian citizenship than those with foreign citizenship. The exit from self-employment gradually decreases during the years after the establishment, except for the fourth year when the exit rates increase.

Interesting topic of location-induced gender discrimination in jobs accessibility was elaborated in *Oslund Liv. Job accessibility and gender related differences. An analysis based on hedonic house price estimation*. Author revealed that labor markets tend to be segregated for men and women: jobs that attract women and men are distributed differently across the geographical area. Job accessibility is significantly higher for women in the administrative centers, and significantly higher for men outside the administrative centers. Women face reduced job accessibility the further they live from the administrative centers of the municipalities.

My guess is that the **GAP** here is lack of our understanding of self-employed and gender-related differences in commuting pattern.

Last paper to mention in this theme is a bit technical one: *Eksioglu Gozde, Cubukcu K. Mert. Examining the employment structure of a mid-size settlement using the base multiplier: The example of Denizli, Turkey between 1970 and 2000*. Authors have estimated the basic multiplier for a mid-size settlement from 1970 to 2000. In the first phase, the basic multiplier increases as one or more sectors start to produce export goods and services. Thus the number of basic sector employees increases more rapidly than the total employment. In the second phase, the basic multiplier starts to increase as the developed economy generates more and more local employment for a more diversified local economy.

2.4. Macroeconomic effects on the labor market

Several papers at the Lodz Congress were devoted to the link between macroeconomics and regional labor markets. For Poland this issue is very important because of hot discussions on the consequences of entering the euro zone for the country (how long will it take for the regional labor markets to return after the shock?). General conclusion is that Polish regions differ in their response to the regional shock after joining the euro zone. The average adjustment period should be 5-8 years. In nine regions the effects of the demand shock on unemployment rates will persist after 10 years. Employment structure of the region is one of the particularly significant factors determining the length of adjustment period. *Rogut Aleksandra. Regional labor market flexibility in Poland*.

Authors in the other paper try to evaluate the link between regional unemployment and individual reservation wages with the “Labor Market and Social Security” model (PASS) that includes many variables to determine wages, such as gender, age, qualification, etc. *Blien Uwe, Messmann Susanne, Trappmann Mark. Do reservation wages react to regional unemployment?*

2.5. Microeconomic effects on the labor market

Here issues of labor force ageing, municipal policy, housing markets, and social exclusion were elaborated. For instance, Romanian authors presented a detailed analysis of the demographic ageing impacts upon the employment structure of the Romanian regions, pointing both inter-regions and sectoral differences. Industries with delayed upgrading and restructuring, also education and health and social protection are in attractive for the young generation and therefore have the maximum share of elder workers in the majority of Romanian regions. On the other hand, wholesale and retail trade, hotels and catering can offer better employment and career opportunities for young people, have higher flexibility and openness to the market demands and therefore are in general younger by their employees. *Iordan Marioara, Albu Lucian Liviu, Chilian Mihaela-Nona. Labor force ageing – developments and challenges in the Romanian regions.*

Authors argue that labor market policies of municipalities matter for the level and growth of municipal social assistance benefits. The best option for a municipality to lower the burden of social assistance is to improve coordination and investment in the local labor markets. *Broersma Lourens, Edzes Arjen, van Dijk Jouke. The effects of municipal policy strategies on in- and outflow of social assistance in the Netherlands, 1999-2007.* In the other paper authors convince us that labor market accessibility effect is enough stable across regions: *McArthur David Philip, Osland Liv and Thorsen Inge. The spatial transferability of labor market accessibility and urban attraction effects between housing markets.* And finally in the last paper of this theme authors reveals differences among Czech localities with labor market indicators: *Horák Jirí, Ivan Igor, Inspektor Tomáš, Tvrđý Lubor. Identification and monitoring of socially excluded localities of Ostrava City using a register of unemployment.*

I think that we should work for more organic, more natural integration between regional markets research and regional innovation system. This **GAP** should be closed by numerous bridges: regional/local policy for the smart labor market; knowledge-based regional labor market; flows of talents on the regional labor market etc.

3. Metropolitan zones and areas (11)

This theme is entirely connected with regional knowledge economy and innovation process. However very often scientists prefer not to discover this evident link. Our desire is that every study of global cities, megaregions, city-regions contribute to the concept of RIS of regional cognitive process. Good examples in this are R.Florida's books on creativity, creative class and creative city.

3.1. New methods to reveal and explore global cities

Authors of two Congress papers have suggested new methods to discover global cities. In the first authors develop a method of measuring the metropolitan cities by hyperlinks of Internet search engines. For avoiding "noise" of this method, they use key words as filters: *Mamatov Timur, Samson Ivan. Metropolisation and enlargement of European Union: an analysis by the hyperlinks with filters.*

Authors of the second paper voted for social network analysis, that can open up a new perspective on complex functional relations between locations; besides social network analysis multivariate methods like multidimensional scaling and cluster analysis can be used. The overall objective is to combine methods of analysis in order to grasp spatial hierarchies of emerging polycentric urban structures like Mega-City Regions: *Bentlage Michael, Thierstein Alain. Interlocking firm networks and polycentric Mega City Regions in Germany. A perspective on methods to analysis and visualisation.*

3.2. Urban sprawl as external feature of metropolitan areas

It is evident that spatial dynamics of metropolitan areas is connected with regional innovation process, and emergence of new creative industries and services in the metropolitan areas. But in reality no attempts have been undertaken to link these two phenomena. The majority of Congress papers on urban sprawl can be understood as a snapshot of the problem, no more. This is the evident **GAP** in our contemporary work (urban sprawl-regional knowledge economy-new location theory). We need broad and comprehensive works of urban sprawl with the viewpoint of new principles and rules of location, knowledge economy, and creative class. It

is not enough to measure urban sprawl but it is time to understand its integration inside the essence of new location processes.

For instance, some industrial activities like manufacturing plants tend to be more decentralized. On the other hand, certain types of skill-intensive and idea-intensive economic activities such as finance, law which require good communication and face-to-face contact are expected to be more centralized.

And again we approach the same location problem: lack of our understanding of the new regularities of location patterns does hinder the progress in many directions of the regional knowledge economy. We can not make progress in RIS, in understanding of regional cognitive process, if we are not capable to solve the problem with new location theory adequate for the new creative age and new regional knowledge and network economy.

Authors at the Lodz Congress have developed urban sprawl theme from the different turns. Austrian researchers used quantitative measures to generate indicators for whether or not urban sprawl is an important problem for the city of Vienna. They employed density gradients since density gradients allow statements concerning urban compactness, a lack of which is often associated with sprawl. When they compared Vienna's density gradient to the density gradients of other cities, they found Vienna's density gradient was relatively steep. Vienna can thus be characterized as a relatively compact city. They concluded that urban sprawl is not an important problem for the city of Vienna. *Lechner Julia, Maier Gunther. Sprawl or no sprawl? A quantitative analysis for the city of Vienna.*

Another team of authors used black and white aerial photographs from 1956 and panchromatic satellite imageries from 2005 for studies of growth and change of informal settlements in urban areas of Barcelona in Spain. *Alhaddad Bahaeddin, Cladera Josep Roca, Burns Malcolm C. Monitoring urban sprawl from historical aerial photographs and satellite imagery using texture analysis and mathematical morphology approaches.*

And finally Croatian authors using data on the total number of firms that are located in the central and peripheral fraction of the metropolitan area of Split, have demonstrated the process of decentralization - relocation of several previously centrally located economic activities to periphery and link between economic decentralization and urban sprawl. *Golem Silvia, Mustra Vinko. Decentralisation of Economic Activities in the Metropolitan Area of Split.*

I think that evident GAP here is not the absence of reliable indicators of urban sprawl and dynamics in urban land use. These are important but partial, technical questions. What is important **GAP**, I think that is lack of understanding how to deal with urban sprawl in urban policy and planning.

3.3. Internal problems of metropolitan areas

I think that the major **GAP** in this field of research is lack of holistic approach in the issue of redevelopment. I do not mean comprehensive embrace of every part of development strategy, not. What I do count important is united view of material and spiritual redevelopment - that is re-branding. But as a rule these two lines of urban reconstruction (technical and cultural) are seen as isolated. Because of such my position I deliberately combine two papers at the Lodz Congress on spiritual and material redevelopment in one block.

City branding is a bridge between a city's potentials and the use of this potential for the benefit of the local society. It is a set of procedures to manage, strengthen and develop the image of the city for its current and/or future citizens and enterprises. They are connected with the processes of culture-based redevelopment of urban space. This process was examined for the case of Istanbul: *Bakbasa Ceyda. The implementation of cultural branding strategies and their effects on Istanbul.*

On the other hand Polish authors dealt with very material process of revitalizing of the city center of Cracow. According to the Polish law the owners of neighboring buildings must agree on construction works associated with renovation of the old building. Because of such institutional barriers for the development company sometimes it is more profitable to build from the scratch in less attractive places and do not engage with renovation of long-standing

tenements in most attractive places in centers of the cities. *Banas Jan. Difficulties of property development in a historical city centers in Poland on example of Cracow.*

Authors of another paper in this theme explore different ways how to determine the metropolitan subcenters in a polycentric reality on the example of metropolitan region of Barcelona: *Núñez Carlos Aguirre, Duarte Carlos Marmolejo. Effects of labor subcentres in urban property values. Case study of the metropolitan region of Barcelona.* Their method provides a set of 15 municipalities that act as sub-metropolitan team.

What I think is a real **GAP** in our knowledge here is ambivalence with urban policentricity. We do not have comprehensive works on the mechanics of emerging policentricity of metropolitan regions (and evaluation of this phenomenon - for the better or for the worse?) but only fragmented data on the topic.

Authors of several Congress papers prefer to deal with contemporary internal problems of metropolitan regions. For instance, public transportation and jams - *Berköz Lale, Tepe Emre. Accessibility of new transportation systems in mass housing areas in Istanbul;* residential mobility - *Alkay Elif. The Structure of Residential Mobility in a Metropolitan Area;* deficiencies in city-planning new zones of concentration of immigrants - *Almirall Pilar Garcia, Valdivia Blanca Gutiérrez. Foreign immigration, housing and city: the cases of Madrid and Barcelona.*

4. Urban issues (11)

This topic includes papers on different aspects of urban development - urban forms, transformations, dynamics, etc.

4.1. Urban form

Authors of the first paper in this section presented comparison of the urban typologies. Differences between the compared typologies seemed to be the result of the use of different geographical units, the choice of different variables, and the use of different analytical methods. *Berghuis Stefan, Borsboom Judith, Bräuer Astrid, Folkert Rob, Ottens Henk. Typologies of urban form dynamics in Europe.*

Authors of the second paper here discussed the effect of urbanization trends on quality of place. Dynamic cities suffer from high pressure on the house market, making it difficult for people to find affordable housing. These cities often face influxes of international immigrants which direct themselves at the cheapest and least popular houses. This results in large-scale socio-economic and ethnical segregation. In cities that have a more diverse and mixed housing stock with a higher quality of place, such as Madrid and Bologna, segregation is less intense and obvious. In the eastern European countries, their transition from a socialistic system to a market-based system had a large impact on their cities' quality of place. *Folkert Rob, Berghuis Stefan, Borsboom Judith, Brauer Astrid and Ottens Henk. Urban form dynamics and the quality of place in European cities.*

4.2. Urban shape and financial indicators

At the result of the analysis of 82 Italian metropolitan areas the author concluded that cities with a higher degree of functional polycentricity are more virtuous both in terms of private and external costs of mobility, while the degree of compactness is associated with lower environmental costs but with higher private costs. Both bigger cities and southern cities are generally less virtuous if compared with those of the centre and the north. *Veneri Paolo. Urban polycentricity and the social costs of commuting.*

Authors of the next paper determined the effect of urban size and distance from the main metropolis on the income of urban residents - *Fernández-Vázquez Esteban, Rubiera-Morollón Fernando, Aponte-Jaramillo Elizabeth. Urban income and city size: ecological inference with entropy econometrics for the Spanish municipalities.* The cities located close to a large metropolis present higher GDP's per person than the ones located far away. This can be considered as agglomeration effect.

4.3. Cities and young residents

One new topic at the Lodz Congress connected with urban life is the link between cities and young residents. At the result of economic outmigration many European cities lose their most valuable asset - young residents who after graduation leave their home towns in search of better jobs and better life. Author suggest to use territorial marketing to revert this unfavorable tendency. *Wawrzyniec Rudolf. Creation the positive city image among young citizens as a way to keep them within the city.*

In the next paper the author examined daily mobility of residents of segregated neighbourhoods (teenagers in the “Zones Urbaines Sensibles” (ZUS) of the Ile-de-France), to promote understanding of life in such places and to explore potential desegregation effects of increased mobility. *Oppenchain Nicolas. Daily mobility and segregation: the case of the adolescents residing in the “Zones Urbaines Sensibles” of the Ile-de-France.*

4.4. Urban redevelopment by public-private partnership (PPP) in Poland

Authors in the two Congress papers voted for PPP in the urban revitalization schemes. Public-private partnership can be deemed as a promising approach to implementing revitalization programs of degraded urban spaces, due to joint efforts of both public and private entities in the enterprise. PPP is characterized by flexibility, which makes this formula applicable in the case of vast and substantially complex projects. *Mataska Y. Public-private partnership – a method of implementation revitalization schemes of degraded urban spaces.*

Lodz is striving towards exploiting in the adequate degree its post-industrial architectural heritage as the element building city attractiveness and competitiveness thanks to the outstanding cultural tourism resources. Suggested model of city’s regeneration is based upon a public - private partnership. *Wojnarowska Anna, Bartosiewicz Bartosz, Kowara Sylwia. Spatial and functional conceptions of future development of the historical workers’ housing estates - within the frame of regeneration process of Lodz post-industrial heritage.*

4.5. Papers on different urban issues

Among this multi-faceted group of papers I would pay attention on the work on paradoxical pattern of spatial transformation in the former socialist countries on the example of Hungary: *Virág Tünde. Changing patterns of social and ethnic residential segregation in Hungary.* It is very rare to meet Congress paper devoted to the spatial regularities of post-socialist transformation. As a rule authors prefer to give just descriptions of the transition to the market economy and new emerging realities in the regions of CEE countries. This author understands new organization of space in the Hungarian cities as “a spatial equivalent of the re-stratification and polarization going on in the society as a whole”. My guess is that this is very constructive style of thinking. He told us about the lock-in effect for the most disadvantaged groups who have not moved and still do not move towards the settlements that can offer jobs, but into the opposite direction. I think that one of the **GAPS** in our knowledge is lack of understanding of the spatial regularities of post-socialist transformation combined in these countries with their transition from industrial to service-dominated economy. It is the responsibility of the authors from CEE countries to create such theory. My guess is that Hungarian authors that inherited traditions from their famous Janos Kornai are closer to the fulfillment of such task than others.

Another paper in this group was devoted to the topic of the role of big companies that in some areas determine both the change in urban landscape and the new links between urban center and periphery: *Ruggiero Vittorio, Scrofani Luigi. Changes in landscape and dynamics of cities.*

Authors of the last paper to mention here told us about methods and models to achieve the image of cohesion in urban settlement system: *Zipser Tadeusz, Mlek Magdalena, Zipser Wawrzyniec. The reciprocal interdependence of population concentrations and their activities as a crucial factor of continental cohesion.*

5. Location patterns (5)

I consider this theme as the most important at the ERSA Congresses. Let us remind that Walter Isard the founder of Regional Science also posed location theory and location research as

the core for the regional studies. All papers on this theme at the Lodz Congress developed our understanding of the new regularities in the location in the new creative age.

Let us start this review with the paper “on all European Union”. In it author studied how European integration would affect the industry location and sectoral specialization of local economies in the CEE accession countries. The theoretical framework of the study was based on the new economic geography, which allows to predict not only the post-integration specialization patterns, but captures also other general equilibrium effects, such as transition to market economy. Empirical results suggest that the CEE specialization pattern would be distinct from the old EU member states. Based on the simulation results the author identifies three groups of CEE regions: regions with increasing specialization, regions with declining specialization and regions with a bell-shaped specialization pattern. On average, European integration would trigger increasing regional specialization in Bulgaria and Poland and decreasing specialization in Romania. In contrast, European integration would not significantly affect regional specialization in Hungary, the Czech Republic, Slovakia and the three Baltic states. *Kielyte Kanacs. The Economic geography of spatial sorting.*

My desire is to expand this line of research on the Russian Federation and its new regularities of location after transition period. Because of the size of the country they will definitely be different in comparison with small CEE countries. This looks like the challenging **GAP** for the Russian community of regional scholars.

Another interesting paper was devoted to the topic of internal location tendencies (specialization, diversification and the existence of urbanization economies) in the Spanish industrial district of Valencia.

The most dynamic industrial sectors are dominated by sector specialization in the manufacture of tiles and ceramic tiles, footwear and sectors of the textile-garment manufacturing industry. The most dynamic industrial districts are characterized by low levels of industrial specialization (low Herfindahl index of sector specialization and a low specialization coefficient). The most dynamic districts are also characterized by a smaller business size (low values for the Herfindahl market size index), and by high levels of population in these areas. Variables linked to industrial specialization have not affected the dynamics of industrial districts but factors linked to urbanization economies and business size have had a greater effect. *Perez Jose Miguel Giner, Beneyto Jesus Santa Maria. Dynamics of the industrial districts in the Valencian region: a new methodological approach.*

Another provocative paper was devoted to the issue of geographic concentration of manufacturing industries in Spain. Author found evidence that in Spain the high-tech industry tends to concentrate in space in locations with the highest human capital level in the country at a higher extent than the remaining industries, especially in the case of aircraft and spacecraft and office, accounting, and computing machinery. Knowledge spillovers may work as an important source of agglomeration for the high-tech industry. On the other hand the low-tech industry tends to concentrate in provinces with low and intermediate level of human capital. *Alonso-Villar Olga. Measuring geographic concentration: Lorenz curves and their decompositions*

Next paper was devoted to the issue of spatial concentration of German industries on the basis of the methodology proposed by Ellison and Glaeser (1997). Data allowed to assess geographical concentration for different organizational units, namely firms (legal units) and establishments (local units). The results showed that the localization of controlling units, for example headquarters, follows other patterns and determinants than the localization of dependent units, e.g. affiliates. Measured spatial concentration depends on the definition of the organizational units of economic activity. *Koch Andreas, Krenz Johanna. The spatial concentration of German industries. An analysis based on micro-level data of firms and establishments.*

Final paper in this group of location articles was devoted to the industrial concentration of the manufacturing sector in the Istanbul Metropolitan Area. Using the Ellison-Glaeser Index the author examined the variation of localization levels both across manufacturing sectors and among different geographical scales. Empirical results showed that industries are distinctly geographically concentrated in Istanbul. However, concentration levels vary due to geographical

parts. The European side has the highest localization level followed by the Istanbul Metropolitan area as a whole and finally the Asian part of the city. *Alkay Elif. Geographic Concentration of Istanbul Manufacturing Industries.*

Second cluster of topics relatively weak connected with the framework of RIS

1. Regional economic growth (11)

In this theme the evident **GAP** is insufficient efforts to link regional innovation process with regional economic growth. Each year very few papers were devoted to the combined topic of regional innovations and growth.

1.1. All-European issues

Here I would like to pay attention on the very curious paper devoted to the rare topic of “age” factors of regional economic growth: *Brunow Stephan, Roszkowska Sylwia. Is there an age dependency of economic growth: A Polish-Czech-Slovak-German case study.* Authors in this paper consider the question whether differences in growth rates are due to differences in the age pattern of employees. Growth rates are computed for the years 1996-2005 and split into three growth periods capturing each three years. The authors find evidence that the youngest age cohort (<30 years) and the elderly group (55+) promote growth. I think that we do not have understanding of the role of endogenous *temporal* (like age of different material assets, human resources, etc.) factors in regional economic growth, and therefore to fill this **GAP** it is important to elaborate this topic more actively.

Authors of the next paper covered the convergence issue. Their purpose was to analyze regions with similar income levels *across* borders to highlight the influence of economic structures and performance, i.e. financial or service clusters in metropolitan regions like Milano, Frankfurt, Hamburg, Paris and London. Estimation of convergence by deciles provides interesting results. Convergence is very low among the poorest regions, and it tends to increase in the middle deciles, and then again to decrease for the most wealthy deciles. Based on an investigation of the correlation of the level of income per capita with the Innovation scoreboard indicators – especially the importance of patent rights - it is underlined that innovation is an important determinant of wealth. The presence of skilled labor is an important factor in the development of regions with low levels of income. In these areas plants (for example the automobile industry in Romania and Slovakia) may be located as a result of outsourcing. This will result positively in a transfer of technology in the long run, as illustrated the case of Ireland since the 1970s. *Cornett Andreas P., Sorensen Nils Karl. Reconsidering convergence in European economic growth – the emergence of new clusters across nations.*

Authors of the next paper have adopted new methodology to quantify Basic Image (a variable expressing a region’s attractiveness and overall progress towards sustainable growth and development) and applied it to for 27 European countries. *Mavri Maria, Angelis Vassilis, Dimaki Katerina. Classification of European countries based on their present state and development prospects.*

1.2. Russian regional growth

At the Lodz Congress for the first time in many years there was paper devoted to the issue of the Russian regional growth. The strength of this paper is that the author tries to give explanation of the Russian growth realities using common for the contemporary regional science tools of analysis. *Poliakov Evgueni. Structural and spatial aspects of Russian regional growth.* This paper addresses questions of regional growth in Russia of GRP per capita after the 1998 crisis. Urban agglomeration (cities of relatively large size) appears one of the most important factors of regional growth: doubling the size of the main city would lead to an extra half percent of annual growth in the region, controlling for other factors. A macroregion (core) consists of fast growing regions which reinforce each other’s growth via large market potential and geographical proximity. These are the regions of Central Russia and Northwest. A significant part of regional economic growth is brought about by growth in the rest of the country via interregional links, i.e. spatially induced. This spatial feature of growth led to formation of spatially polarized growth patterns.

I think that there are still many **GAPS** in our understanding of the regularities and peculiarities of the Russian regional growth, like the role of migration, neighboring regions in the economic growth.

1.3. Mozaic of the NUTS III regional economic growth and development

Several papers at the Lodz Congress were devoted to the concrete features of the economic growth in different European regions: factors of the efficiency and effectiveness of the regional socio-economic development - *Curic Nedeljko, Pandurov Vladimir. Efficiency and effectiveness of the regional socio-economic development (experiences in Serbia – the Banat Region)*; problems of sustainable growth and development of small community - *Pitoska Electra. Options for sustainable development strategies in mountain areas: The case regarding the revival of the community of Nymfeo, Florina in Greece*; effects of the foreign capital for the economic growth and development - *Ibrelji Izet, Kulenovi Salih, Kaduši Alma. Bosnia and Herzegovina and its diaspora: demographic and economic aspects*; relationship between specialization in the primary sector and the territorial development - *Diniz Francisco, Sequeira Teresa. Productive specialization and regional development in Portugal at the NUTS III level*; effects of divided local community on the local, regional and general economic development - *Osmankovi Jasmina, Mulaomerovi Jasminko, Halilbaši Muamer. Divided local community and economic development. Average level of unemployment in “divided” municipalities is almost 50% higher than in common; “divided” municipalities have one third lower level of economic development than the average.*

1.4. Growth indicators

Several papers were devoted to the theme of different indicators of regional growth. Statistics Portugal and a body of the Ministry of Environment, Spatial Planning and Regional Development have developed a composite indicator of development for the 30 Portuguese NUTS 3 level regions to 2004 and 2006. The indicator includes three components: competitiveness, cohesion and environmental quality - *Martins Natalino, Vala Francisco, Barradas Susana, Coimbra Carla, Fernandes Filomena, Pinho Maria Manuel, Sequeira Maria Joao. Regional development composite indicator, Portugal*. Italian authors through the application of a broad range (116) of indicators to all the 109 Italian provinces, observed how the territorial diversity could be considered like a relational good - *Prezioso Maria, Gemmiti Roberta. Cohesive competitiveness and sustainability: a planning application of STeM approach at the Italian scale NUTS3*.

My understanding that the major **GAP** here is the necessity to turn old and new growth indicators to the challenges of the knowledge economy.

2. EU issues (10)

Major **GAP** in EU regional research to my mind is lack of understanding that cohesion policy should include not only the goal of territorial competitiveness but also innovation as the first priority.

2.1. EU in general (FDI, policy, energy and other issues)

Inside this topic I would start with review of the paper on FDI in the EU regions: *Resmini Laura, Casi Laura. Evidence on the determinants of foreign direct investment: the case of EU regions*. Authors in this study analyze the determinants of Foreign Direct Investment (FDI) at regional level. They try to understand whether and to what extent variables usually employed to explain the determinant of FDI at country level, also influence the location of FDI at the regional level, and what local characteristics can be associated with the determinants of FDI. Together with these authors I think that major **GAPS** here is our lack of understanding what counterintuitive factors determine FDI very different location patterns in the EU regions.

Next papers here were devoted to the issue of spatial planning in the context of transnational cooperation - *Stein Axel. Europeanisation in the context of interregional and transnational cooperation*; EU Cohesion policy in the realities of the growth of the disparities between the Member States and between the European regions - *Ionescu R. The EU Cohesion Policy*; territorial

impact assessment of EU policies - *Zonneveld Wil, Waterhout Bas. EU Territorial Impact Assessment: Under What Conditions?*; European initiatives in renewable energy area - *Kouzmine Yael, Chanard Camille. European Union, mediterranean region and energy issue*; to high density urban development and car use in the EU - *Crampton Graham. Variation of peak urban population densities and car use in commuting in the EU.*

2.2. EU and different countries

The topic of relationships between EU and different countries of Europe was elaborated in several Congress papers. For instance, French authors analyzed the spatial distribution of EU Structural funds within the administrative regions of Bretagne and Midi-Pyrenees, polycentric and polarized one. *Tallec Josselin, Montabone Benoit, Baudelle Guy. European Union structural funds and territorial cohesion at regional scales in France.* My understanding is that the **GAP** here is lack of understanding what European regions are more competitive – polycentric or monocentric?

Moldavian authors in the next paper look for an answer to the question of whether EU's cross-border and inter-regional cooperation and emerging Neighborhood Policy could act as the effective mechanisms to resolve problems related to Moldova's internal policies like core-periphery opposition between the capital city and the rest of the country. *Kostopoulou Stella, Sirbu Olesia. Cross-border co-operation and regional development in a wider Europe: the case of the Republic of Moldova.* My understanding is that the **GAP** here is lack of our understanding how European integration can expedite the process of post-socialist transformation of CEE countries.

In the next paper Croatian author analyzed if Croatia is well prepared for the implementation of EU regional policy issues on the eve of its accession to the EU: *Frohlich Zlatan. Is Croatian regional development strategy in line with EU regional policy?*

And in the last paper Polish author told us about plans to establish in all Polish regions Regional Development Policy Observatories which will become a network of independent agencies, or regional think tanks that will use a common research methodology in the interests of implementation of EU cohesion policy. *Jarczewski O. Regional development policy and cohesion.*

3. Firms issues (7)

This topic understood as the study of the regional entrepreneurial process is very closely connected with the issue of the regional creative economy and innovation process. Unfortunately not a lot of authors do catch this Schumpeterian and Druckerian line of research. As a rule they prefer to deal with the “pure” small business issues. Therefore the challenge is to fill this **GAP** combining research on RIS and entrepreneurial activity in the regions.

3.1. Births and relocations of the firms

The first paper in this group dealt with policy strategies to strengthen the ability to transfer entrepreneurship potentials into economic value by fostering knowledge spill over and transfer activities of universities in the regional economy. Authors think that support services for industry cooperation, patenting, licensing and spinning-off can significantly improve the knowledge base of a regional economy. Especially in semi-peripheral regions the universities of applied sciences play a major role in new venture creation because of two reasons: as higher education institutions they strengthen the regional knowledge and human capital base of the population; they support existing regional small firms, e.g. in the manufacturing sector, and entrepreneurs due to their individual needs for innovation activities. In regions without higher education institutions, access to human capital and technological knowledge is limited. *Becker Katharina, Kronthaler Franz, Wagner Kerstin. The potential for new venture creation of Swiss regions – A comparison based on cluster analysis.*

Authors of the second paper examined firm relocations in the Netherlands utilizing LISA data on firm relocations within large Dutch cities during the period 1999-2006 and revealed the impact of specific neighborhood characteristics of both origin and destination locations on firm relocations: *de Jong Petra, Schutjens Veronique, van Oort Frank. Mapping and explaining firm migration at the neighborhood level: a case study of the Netherlands.*

Finally, authors of the last paper in this section focus on the propensity and the postponement to move of thousand companies analyzing a longitudinal dataset 1997-1998, 2000, 2004 and 2007 surveys: *Goetgeluk Roland, Marien Gust, Louw Erik. The propensity and the postponement of firm relocations. Testing approaches for housing choice models.*

3.2. Firms' land use and property

Firms can be examined not only directly, checking their demographic or economic indicators but also indirectly, through their land use, property or financial activity. For instance, looking for the dynamics in space use: it is larger for relocating firms than for firms that did not relocate: *Louw Erik. Changing industrial land use: a firm level analysis.*

Another way is to study ownership differences. For instance, logistics firms located in Italy differ in terms of size labor productivity and fixed assets - according to their ownership structure (foreign MNE versus domestic firms). In the medium and long run the presence of foreign MNE fosters the host country's endogenous development (develop backward and forward linkages; foster knowledge spillover towards domestic suppliers and competitors, which can give birth to spin-off firms etc.) *Brouwer Aleid, Mariotti Ilaria. Evaluating firms' ownership differences using propensity score estimation and discrete choice modeling. The case of the logistics sector in Italy.*

And it is possible to study firms by their "subsidiaries" behavior: *Hajdas-Doncic Smid, Polic O.E. Model for assisting in the process of decision making and monitoring the effects of regional support measures to small and medium sized enterprises on the NUTS 3 level in Croatia – example of the county of Krapina-Zagorje.*

3.3. Big companies

One paper was devoted to the big companies pricing strategies in the regional market: *Alderighi Marco, Alessandro Cento, Piga Claudio A. Pricing strategies in European airline markets: A case study on the route London-Amsterdam.* Authors studied the pricing behavior of low-cost and legacy carriers on the London-Amsterdam route. Price discrimination of British Airways and KLM was a leading aspect of airline pricing strategy.

4. Services (7)

It is a pity that such promising and all-embracing topic as services in the new regional economy gets only limited attention from the community of regional scholars. On one hand we are speculating on the issues of post-industrial transformation; on the other we have less than a dozen papers devoted to this extremely actual topic annually at the Congress meetings. Meanwhile this topic is naturally connected with regional knowledge economy, regional cognitive process and concept of creativity.

4.1. Social services

The topic of social services in the regional economies was covered by several authors. German authors measure the performance of municipalities in Saxony in providing day care services: *Thater Christian, Monten Anna. Determinants of efficiency in the provision of day care services.* French authors described the impact of the new governmental regulation of the care services sector on the behavior of non-profit organizations (associations). - *Leroux Isabelle, Pujol Laurent, Rigamonti Eric. The strategy adopted by non-profit care services organisations in dealing with the new French regulatory system: Strategic coalitions and reterritorialisation of activities.* Authors from Turkey investigated the growth pattern of the number of private hospitals and hospitals beds versus public hospital beds and their spatial distribution in Istanbul. *Centurk Tugba, Dokmeci Vedia. Privatization of health care facilities in Istanbul.* They concluded that most of the private hospitals are concentrated in the higher income neighborhoods.

Special issue of delivering services in the islands was covered in one paper: *Levy Y. Universal Service in the provision of transport to the islands: challenges and proposals.* Author suggested to impose universal service and public service obligations. Universal Service should refer to the provision of adequate transport services to all users in the islands irrespective of their geographical location, at a specified quality and affordable price. Public service obligations can

be designed on a case by case basis, with no universal rule regarding minimum frequencies, mandatory ports, the quality of fares and the obligation to provide continuity of service.

4.2. E-services

Two papers at the Lodz Congress were devoted to the popular topic of e-services. In the first authors indicate how the development and implementation of the e-service contribute to regional integration - *Bernhard Irene, Wihlborg Elin. Integrative public e-services driven by social entrepreneurs - regional case studies from Sweden.* In the second authors presented a general framework to evaluate the impact of the development of e-services in order to promote the cultural heritage in cities, in particular from the perspective of tourism. *Bruinsma Frank, Kourtiti Karima, Nijkamp Peter. Design of a policy support system for e-services use in cultural tourist destinations.*

4.3. Financial services

Rare topic of financial services was elaborated in one paper determining location preferences of multinational and domestic banks in the Istanbul metropolitan area. *Berköz Lale, Tepe Emre. The intra-metropolitan location of banks in Istanbul.*

5. Regional (spatial) planning issues (6)

Process of reinterpretation of the former industrial planning into the new one is very slow: now it is more the process of trial and error, empirical generalization of the experience with collaborative network of participants-stakeholders of planning process. Innovative thinking should be encouraged to create a theory of new (smart) spatial planning adequate to the challenges of the RIS and regional knowledge economy.

5.1. New methodology of spatial planning

It will be wrong to say that no attempts are undertaken in the community of regional scholars to create new methodology of spatial planning. For instance, at the Lodz Congress at least three papers were devoted in some point to this topic. Authors in one of them focused on two different approaches applied to develop spatial scenarios. The first is the European wide ESPON 3.2 project. The second is the Austrian OROK project. The first approach has advantages such as formulating quantitative simulations and comparing different options. The strength of the second approach is the wide participation and engagement of involved agents. However a participative approach may not always be feasible, for example when covering a wide geographical scale and involving strongly heterogeneous actors. *Williams Rachael, Penker Marianne, Hiess Helmut. Critical evaluation of scenarios for spatial planning and regional development.*

Another attempt to create new methodology bridging vision and reality in the planning process was undertaken in the paper on Haifa Metropolitan region in Israel. *Frenkel Amnon, Yechiely Ofra. Bridging the gap between vision and reality: a methodological assessment tool for long-term normative planning implementation.* Integrative methodology stimulates action that bridge the gap between vision and reality, assists planners to formulate an implementation-oriented spatial plan rooted in long-term vision, yet flexible and adaptable to temporal changes.

In the last paper in this group the author compares different approaches for infrastructure planning in the Netherlands, the United Kingdom and the United States of America and stress the positive role of alliances between public and private partners. *Lenferink Sander. Market-oriented infrastructure planning: an international overview of strategies.*

5.2. Methods of planning

Different methods in planning were described in the Congress papers. For instance, applied general equilibrium model was used as a planning tool for a system of heterogeneous Dutch cities. *Vermeulen Wouter. Growth controls, agglomeration externalities and welfare in a system of heterogeneous cities: Costs and benefits of planning Randstad Holland.* Another method was social accounting matrix that was used for the case of Seville. *Cardenete M. Alejandro, Maestre Pedro. Using SAMs in province as a way to study territorial cohesion and integrative planning in Europe: the case of Seville.*

Value chain approach was applied for comprehensive planning of cruise tourism. *Russo Antonio Paolo, Gui Lorenzo. Cruise ports: a strategic nexus between local and global in regional planning.*

6. Regional governance (6)

Real challenge is to create conditions and institutions for multi-level governance/ co-governance on the regional or municipal level. Therefore elaboration of special scientific approaches to solve this problem is very actual goal. Each paper in this section can be seen as the slow move in this direction.

6.1. Analysis of governance

In several papers authors tried to analyze government of different levels and its policy. For instance, in one paper cohesion policy was evaluated - *Wostner Peter, Šlander Sonja. Does Cohesion Policy Work? An indirect econometric approach.*

Authors of the next paper tried to measure the degree of development of the e-Government with special synthetic indicator. They concluded that if smaller local councils (85% of Spain's municipalities have fewer than 5,000 inhabitants) are unable to provide such service, a digital gap will be opened in public administration. *Perez Jose Miguel Giner, Bailen Maria Carmen Tolosa. The e-Government in Spain: a dynamic analysis at regional level.*

In the last paper of this group authors utilized social network analysis as regional governance tool. *Zumbusch Kristina, Schwanke Katja. Social network analysis as regional governance instrument regional policy intelligence in the face of network-regions.*

6.2. Governance in different European countries

Concrete cases of regional governance were presented in the several Congress papers. For instance, Dutch authors explored the possible mutual strengthening of territorial cohesion and community based self-organization, and proposed preliminary ideas on how this strengthening can be achieved by organization principles. They concluded that territorial cohesion can only be fruitfully developed if spatial planning authorities are capable (or learn to be capable) to deal with initiatives that are not theirs - capable to deal with community based self-organization in regional, spatial development. *Boonstra Beitske, Duijn Mike, Rijnveld Marc. Governing (regional and urban) spatial development in The Netherlands: strengthening territorial cohesion by community based self-organization.*

Author of the other paper presented the results of public consultations held in Wrocław and Zielona Góra in 2007 by means of online surveys. Online surveys are effective mechanisms for co-operation and co-governance in Poland. The findings of the studies were used to define the principles of the future development of cities. *Damurski Łukasz. Online survey as a tool for the participatory urban governance. The Polish experience.* Author of one more Polish paper on this topic told us how the Polish territorial authorities perceive the concept of market orientation according to empirical study. *Kowalik R. The market orientation concept in the Polish territorial governments. Results of an empirical study.*

7. Regional clusters (4)

Four-five papers are devoted to the cluster topic at each last Congress. The majority among them at the Łódź Congress were on the identification and evaluation theme.

7.1. Methods for cluster identification and evaluation

Czech author presented methods for cluster identification. His paper was made under grant "Methodology of clusters and entrepreneur chains identification in Czech regions". *Stejskal Jan. The methods for industrial clusters identification in region.*

Italian authors analyzed the birth and development of collaborative enterprises networks. These networks are the basis for clusters or industrial districts. *Baffo Ilaria, Confessore Giuseppe, Turina Maurizio. An indicators framework to evaluate industrial clusters development.*

Polish authors tried to identify and map clusters in the country. Their research has led to identification of 47 actually existing clusters and 74 new cluster initiatives dispersed in the

country. Besides, 20 virtual (existing only in documents) clusters were identified. *Nowakowska Aleksandra, Przygodzki Zbigniew, Sokolowicz Mariusz E. Mapping clusters in Poland.*

7.2. Cluster policy

One paper of German authors was devoted to the cluster policy. Their paper evaluates the cluster-oriented policy introduced in 1999 in Bavaria, Germany, the goal of which was to foster innovation and regional competitiveness by stimulating cooperation between firms, public research, and financing institutions. Cluster-oriented policy increased the likelihood of becoming an innovator in the targeted industry by 5.1 to 11.2 percentage points.

They concluded that government can support industry prosperity by providing public (research) infrastructure and other institutions that stimulate the innovation process, as well as by providing services that leverage innovation by making private R&D more effective. But these types of institutions create spillovers and have the desired result only if they are already embedded in an existing industry structure. *Falck Oliver, Heblich Stephan, Kipar Stefan. Local industrial policies difference-in-differences evidence from a cluster-oriented policy.*

8. Tourism (4)

Because of flexible nature of tourism activity this topic can be either expanded enormously or radically squeezed when the majority of papers are distributed among other adjacent themes. This time I have tried to minimize total number of papers on this subject. Authors of the first article in this group proposed a holistic approach to tourism in the two destinations - Spain and Mexico. They utilized Tourism Satellite Account to estimate the whole impact of tourism activity. *Carrillo Irma Magana, Fabeiro Carmen Padin. Tourism and development: A proposed system for tourism activity from a synergic and holistic perspective.*

Authors of the next paper focused on tourism in Greece and the ways in which it can act as a driving force for a region's development. *Doumi Maria, Angelis Vasilis, Dimaki Katerina. Tourism as a driving force for the development of islands and isolated regions.*

In the very informative paper on cultural tourism in Amsterdam Dutch authors told that modern tourism is increasingly becoming a high-tech sector, even in areas which are traditionally perceived as low-tech domains, such as cultural heritage. e-Services are becoming an important tool in a competitive global tourist system. The authors used micro-simulation modeling to offer a micro-based picture of motives and behavior of the total relevant tourist and resident population, including their preferences and personal characteristics. Empirical model was applied to the use of e-services by tourists in Amsterdam. Older persons often favor tangible cultural heritage, while younger persons appreciate intangible cultural heritage. Younger persons have a stronger preference for e-services in general and for interactive games in particular. Women have a stronger appreciation for cultural heritage. Higher educated persons appreciate interactive kinds of e-services (e.g. e-forum, interactive games) less than lower educated people. *van Leeuwen Eveline, Nijkamp Peter. A micro-simulation model for tourist e-services to attract visitors to cultural heritage sites in Amsterdam.*

Last paper deals with the issue of hotel managements in Greece. Authors suggested new policies to upgrade the quality of the Greek hotels by leasing. *Papafloratou Despoina, Lagos Dimitris G., Balomenou Chrysanti K. Financial leasing and hotel industry: practical applications of leasing for the Greek hotel sector.*

Third cluster of topics not connected with the framework of RIS

1. Transportation issues (10)

This group of papers combines very multi-faceted subjects of accessibility, public transport, modeling and GIS technology in transport.

1.1. Transport accessibility

The issue of accessibility was posed for different means of transport in the different countries. Authors from the Czech Republic analyzed public transport accessibility for all municipalities - *Ivan Igor, Horak Jiri, Šedenkova Monika. Public transport accessibility in the Czech Republic.*

Author from France explored the relationship between the extension of the underground lines into densely-populated areas and changes in urban and social fabric. *Padeiro Miguel. The expansion of the Parisian underground system and suburban local polarizations: a research note about causality and accessibility.* Authors from Norway described situation with regional airports - *Lian Jon Inge, Ronnevik Joachim. Airport competition - regional airports losing ground to main airports.*

1.2. Modeling effects in transport systems

In European countries and EU in general there are many different models of transport systems. As a rule at the ERSA Congress several authors give description of these models. For instance, at the Lodz Congress ISEEM model was presented: *Heyndrick Christophe, Witlox Frank, Van Steenbergen Alex. A charge for freight transport, an application of the Integrated Spatial-Economic Ecological Model (ISEEM) for Belgium.* Authors simulates the effect of a high kilometer charge on trucks. They concluded that introduction of the kilometer charge for freight would affect poor households more than rich, due to a rise in the price of basic goods and a rise in unemployment.

Another author presented the results of the SCATTER project. *Gayda Sylvie. Evaluation of the impacts of accompanying measures to the future regional express railway network (RER) in Brussels, within the SCATTER project.* The research project SCATTER was dedicated to the problem of urban sprawl. A package of measures which counter-act and compensate the negative effects of the RER in terms of outmigration of households outside the Brussels-Capital Region were suggested: congestion pricing, reduction of public transport fare in the urban centre, tax on suburban residential developments and on offices located in areas poorly served by public transport. They should be integrated in united land use/transport strategy.

Model analyzing the effects of changes in economic flows on traffic, and vice versa, was presented in the paper of the author from the Netherlands: *Wansink Maurice J. Oude. Traffic flows, business location, and economic performance in urban regions.* The model embraces three different submodels. The first is a regional input-output model (transactions table), specified for different subregions of the region under study. The second model determines the distinction between private and business traffic flows in the region. Third, an allocation model, determines which business traffic flows can be attributed to economic transactions, both from inside and outside the region. Two scenarios for the near future were suggested. One scenario discusses the effects of ongoing economic growth on traffic demand, whereas the second scenario focuses on the effects of planned changes in traffic infrastructure on the regional economy.

Last two papers in this group were devoted to the topic of individual mode choice between public and private transport - *Brunow Stephan, Schulz Carina. Do international differences exist in individual mode choice? An econometric cross-country study;* and different policies for dealing with congestion infrastructure - *McArthur David Philip, Thorsen Inge, Uboe Jan. The simultaneity between migration and commuting in the presence of congested infrastructure.*

1.3. GIS-methods of analysis for transport systems

Several papers were devoted to the GIS-methods in the transport modeling. For instance, special GIS-based location analysis model was developed to analyze the present situation in the Turkish intermodal terminal landscape. *Pekin Ethem, Macharis Cathy. A GIS-based location analysis model for freight villages in Turkey.* After visualizing the current intermodal terminal landscape, the model handles various scenarios, such as the introduction of new terminals and the effect of possible government subsidies for beginning of intermodal services. Another paper was devoted to the GIS and network analysis tools to develop a “social exclusion” map: *Ribeiro Vitor. Geographic Information System support to map related transport disadvantage and social exclusion.*

2. Rural development and support of the rural areas (9)

Since early 1990-s the European Union in collaboration with national governments has lunched the LEADER initiative focused on the diversification of the economic and entrepreneurial activities, upgrading of local culture, improvement of the environment and living conditions in the rural territories. Since that period three LEADER initiatives have been lunched:

LEADER I during the period 1991-1994; LEADER II from 1994 to 2001; the last one LEADER + for 2002-2008. Therefore several papers at the Lodz Congress were devoted to the concrete practice of the program implementation in the EU rural areas.

2.1. Rural programs and governance

In Greece LEADER + initiative has promoted to establish new projects in agro-tourism and agro-industry: *Karafolas Simeon. Public aide on financing the infrastructure for the rural areas, the LEADER + initiative in Greece.* In Poland LEADER initiative strengthen the desire for further experimentation and research for more effective multi-level governance in the rural areas: *Augustyn Anna. The concept of multi-level governance and its actual implementation within rural development policies including LEADER in Poland.*

The topic of efficient policy in the rural areas was continued in the paper on the German experience. The author told us about the major choice between a more centralized and a more federal model of rural local government. This choice is connected with allocation of competencies between the municipal and other levels of government, between the municipalities and the private sector. *Rosenfeld Martin T.W. Spatial concentration and centralization as efficient solutions for local government reform in rural areas? Empirical findings from Germany.*

I think that the **GAP** here is in our inability to provide productive synthesis from theoretical ideas of fiscal federalism, new institutional economics, knowledge economy for the special case of local rural government organization.

2.2. Analysis of rural development and dynamics

The review in this section should start with very interesting paper of Dutch authors: *Koster Sierdjan, Brouwer Aleid E., van Leeuwen Eveline S. The welfare effect of economic diversity in rural and urban regions: an analysis of Dutch municipalities.* They have explored different relationship between economic diversity and economic development in urban, intermediate and rural regions in the Netherlands, using jobs per sector indicator as the measure of diversity. They concluded that diversity has no influence on the general income levels in the rural municipalities. Much more important is the access that rural municipalities have to urban areas to explain income levels. Rural regions could be divided into leading and lagging regions; regions with a relatively high or low employment growth in a certain period. This could then be linked to the economic diversity at job level.

Authors concluded that issues of diversity are most important in the intermediate zone municipalities. Urban municipalities have reached a glass ceiling for diversification and have now “truncated diversity”. However, when new sectors do rise or opportunities appear due to Jacobs externalities, these new sectors will be forced to locate in the intermediate zone, which is then functioning as the overspill area of the urban municipalities.

Authors of the next paper dealt with the levels and spatial patterns of crime in rural Sweden: *Ceccato Vania, Dolmen Lars. Crime in rural Sweden.* They concluded that rural municipalities, particularly those closer to urban areas, are criminogenic environments for both thefts and violence outdoors. Remote rural areas have had the highest increase in reported crime levels in comparison with accessible rural and urban areas. Southern rural municipalities are more criminogenic because they are more exposed to local and regional flows of people and goods than the northern rural municipalities. Divorce rate and young male population are the most important covariates that explain the variation of both violence and thefts. Differences in degree of urbanization between northern and southern Sweden and the ratio of alcohol serving licenses per inhabitants were significant indicators for 1996 and 2007 rural crimes.

In the next paper the author evaluated the relevance of spatial indicators to show explicitly specificities of current dynamics and to throw light on challenges of sustainable planning of the Mediterranean peri-urban spaces: *Balestrat Maud. Spatial indicators for the analysis of peri-urban dynamics in the Languedoc Mediterranean area.* Finally, authors of the last paper identified the major factors of attractiveness for the rural settlements and created new index: *Gulumser Aliye Ahu, Baycant-Levent Tuzin, Nijkamp Peter. From Depreciation to Appreciation of Rural Areas – Beauty Idols in Europe.*

2.3. Modeling of rural issues

As a rule rural territories because of their numerous peculiarities are not the common field for econometric modeling. And only Dutch researchers with their quasi-rural territories manage to model complicated rural effects. It is not surprising that the only two papers devoted to the topic of rural modeling are written by Dutch. In the first - *Dekkers Jasper, Rietveld Piet. Modeling land speculation with rural-urban land use transitions* – authors combined hedonic pricing method, linear probability model, weighted least squares to model the Dutch rural land market and the possible occurrence of spillover effects between rural-urban submarkets. (These submarkets are created by spatial planning policies restricting urban land development in the Netherlands).

In the second the authors model on- and off-farm activities of Dutch farmers. (The share of income gained by off-farm activities, such as a job in town, has been steadily increasing among farmers the past few years.) With this model it is possible to analyze the importance of off-farm activities in distinctive regions in the Netherlands and possible effects on the efficiency of agricultural policies. *van Leeuwen Eveline, Dekkers Jasper and Rietveld Piet. The development of a spatial microsimulation model at the farm-level to analyze on and off-farm activities of Dutch farmers.*

3. Water and resource issues (8)

If we look through papers devoted to the topic of resources and water shortages at the last ERSA Congresses we understand that practically none of them deals with knowledge-based approaches and concepts. Innovation, creativity are rare words in this papers. So it is a challenge for the researchers to take into consideration new realities of the regional knowledge economy here.

3.1. Water issues

The majority of papers on water issues at the Lodz Congress were written by Portuguese and Spanish authors. In the first authors try to present the relations between the economy, technology, environment and the law/regulations using a spatial interaction model with land and water use. *Dentinho Tomaz, Silveira Paulo, Masson Eric, Khattabi Abdellatif, Antonelli Marco, Silva Vasco. Spatial interaction model with land and water use. An application to coastal regions of Marocco, Portugal and Italy.*

In the next work authors focused on the evaluation of public preferences for improvement of water quality in the Guadiana estuary, an international water body shared by Portugal and Spain. The survey revealed a strong public support for the introduction of an action plan to improve water quality in the estuary. A majority of respondents were in favor of the environmental improvement plan, with a mean willingness-to-pay of 39 € per person per year over a five year period. *Guimaraes Maria Helena, Sousa Carlos, Carcia Tiago. Cost and Benefit of water quality improvement in Guadiana Estuary, Portugal/Spain border.*

Next two papers by Portuguese authors dealt with study of increasing block tariffs (IBT) for water for residential use - *Monteiro Henrique. Residential Water Demand in Portugal: checking for efficiency-based justifications for increasing block tariffs* and joint consideration of the water and wastewater activities in the Portuguese water industry - *Monteiro Henrique. Estimation of a Cost Function for the Portuguese Water and Wastewater Industry.*

And final paper in this section deals with the issue of local green taxes - *Jensen Peter Sandholt, Schmidt Torben Dall. Local green taxes: Determinants of mix and level of water taxes among Danish municipalities.* Authors focused on the types of taxation (lump sum or proportional taxes) pursued to deal the expenses related to supplying water to households. Political orientations among politicians in municipal councils is decisive factor for the use of some types of local green taxes.

3.2. Resource issues

Issues in this section covers the topic of agent-based modeling as a tool for integrating social and natural processes *Gaube Veronika. Integrated modeling of interrelations between social-economic*

processes, land use and ecological substance flows: A participative analysis; spatial approach to investigate the relationships among biophysical and economic attributes in the forest of Cansiglio - Giaccaria Sergio, Lanotte Alessandra. The treasure hidden in the forest: a spatial approach for the economic assessment of forests benefits; and management of waste biomass and raw materials from agriculture - Jasiulewicz Michal. Potential of biomass from agriculture in the development of biofuel production and dispersed power engineering.

My understanding is that we should strengthen resource line of regional studies at the expense of utilization of knowledge economy and RIS paradigm. Now it is evident **GAP** for the future work.

4. Financial issues (6)

I see two major **GAPS** in the annual elaboration of the financial theme at the ERSA Congresses: 1) rare attempts to integrate theme of finances with the theme of regional knowledge economy, for instance in the topic of venture finances; 2) no attempts to speculate on the topic of regional finances, that is financial system adapted completely to the specific of the regional economy and regional community but still integral part of the national financial system.

4.1. Local finances

Papers in this section are devoted to the topic of local revenues and spending in the municipalities of Europe. For instance, Spanish authors studied the strategic interactions in the Spanish local tax system with spatial econometrics procedures. They analyzed the property tax, the motor vehicle tax and the building activities tax, that represent jointly the 80 % of the tax revenue at the local level of government in Spain. *Delgado Francisco J., Mayor-Fernandez Matias. Tax mimicking among local governments: some evidence from Spanish municipalities.*

Polish authors modeled communes' own income and investment expenditures. *Kossowski Tomasz, Motek Pawel. Spatial modeling of the income and investment expenditure of communes in Poland.*

Israeli authors analyzed the property tax burden from the payer's perspective to evaluate the performance of the taxation method. *Horne Ron, Felsenstein Daniel. How equitable is 'Alternative Assessment'? The distribution of the residential property tax burden in Israel.*

In the final paper of this section was elaborated the topic of different dynamics of per capita expenditures in communities with declining and communities with growing population. *Lais Kathrin. Municipal population and local expenditures – The case of local road spending.*

4.2. Business cycle

The effect of business cycles on real wages and relative public sector wages is examined on the example of Finland for 1990-2004: *Maczulskij Terhi. Public-private sector pay gaps over the business cycle: evidence from panel data.* Public and private sector wage differentials are affected by changes in economic circumstances. public sector real wages move less pro-cyclically than private wages, that is, private sector workers are more sensitive to macroeconomic variations.

4.3. Credit risks

Italian authors intended to explain the determinants of credit risk by analyzing simultaneously idiosyncratic factors at firm level and macroeconomic elements. The empirical analysis, based on the Italian economic system, takes into consideration the period 2002-2006 and a sample of Italian private firms. Firms' credit risk is negatively influenced by profitability, degree of liquidity and level of equity on total liabilities. The relationship between size and default risk is positive. *Provenzano Vincenzo, Demma Cristina. Credit risk and simulated spreads risk adjusted for Italian regions.*

5. Housing market (5)

Inside the topic of housing markets at the ERSA Congresses one can reveal two major lines: attempt to link problems of regional housing markets with the "neighboring" regional phenomena like regional labor market, migration of talents, etc.; and often very sophisticated studies of the mechanics of the regional housing market in itself, but not as indicator of the more

broad processes like regional knowledge economy or knowledge spillover. Unfortunately the amount of the second group of papers absolutely predominates.

5.1. General issues

The dignity of the paper in this section is that it clearly delivers the message of close link between regional housing and labor markets. *McArthur David Philip, Osland Liv, Thorsen Inge. The spatial transferability of labor market accessibility and urban attraction effects between housing markets. Effects of both urban attraction in the housing markets and labor market accessibility are stable across the regions studied and there is no need to estimate separate models.*

5.2. Housing markets in different regions

Papers in this section deal mostly with the issue of house prices and factors that determine and describe their behavior in the European regions. For instance, Spanish authors told us about the spatial distribution of the price of housing and the population density in Valencia. They distinguish between the case of monocentric city that becomes polycentric and the real situation of monocentric city in which subcenters have emerged. *Perez Montiel Manuel, De Souza Rech Gislaine Cristina. Interdependence between urban interventions and the price of housing. Effects on urban morphology in the case of Valencia (Spain).*

Israeli authors stressed that regional house prices in Israel are globally cointegrated in the long run, and there are spillovers from neighboring housing markets in the short, medium and long terms. *Felsenstein Beenstock R. Spatial error correction and cointegration in nonstationary panel data: regional house prices in Israel.*

Portuguese authors suggested new understanding of housing price determination in a medium size city. *Marques Joao Lourenco, de Castro Eduardo Anselmo, Bhattacharjee Arnab. Explaining house prices in Portugal - a local scale approach.*

German author compares rent levels between Eastern and Western part of the country. He suggested urban renewal subsidies in the East German housing market that may lift up housing quality and the rent level. *Weiss Dominik. Is the East worth the money? Rents and local amenities in Germany.*

6. Institutions (4)

The topic of regional and national institutions and their role in regional economic development is presented very modestly at the ERSA Congress (GAPS). Several papers gave contribution to this topic at the Lodz Congress. In one of them authors speculate on the topic how informal institutions influence the decision to become an entrepreneur. The early movers (in 1960-1970-s) from Eastern to Western Germany adapted the informal institutions of Western Germans in some parts while the late movers (1980-1990-s) are comparatively stronger influenced by the socialist environment they grew up in. Their probability of being self-employed was lower. *Bauernschuster Stefan, Falck Oliver, Gold Robert, Heblich Stephan. The Shadows of the past. How implicit institutions influence entrepreneurship.*

Authors of the next paper demonstrated that it is important and fruitful to take institutional variables into account when estimating wage curves. Industrial relations and bargaining regimes may influence specifically the relationship between regional unemployment and the wage level. *Blien Uwe, Dauth Wolfgang, Schank Thorsten, Schnabel Claus. Institutional restrictions to an "empirical law": The wage curve under different regimes of collective bargaining.*

Serbian authors showed the model of institutional framework for regional socio-economic development: RDA (Regional Development Agency) as Public agencies and Management body in charge of manage of regional socio economic development process. *Curic Nedeljko, Pandurov Vladimir. Private sector within the institutional framework of the regional socio-economic development (experience in Serbia).*

Final paper in this section deals with 2006 INAO reform and how it modifies the operators' behavior. To face the reform, they adapt to the new constraints, developing new strategies and modifying their actions in order to decrease production and transaction costs. *Akimowicz Mikael. The effects of the 2006 INAO reform on the quality labeled food chain system in France.*

7. Islands (5)

That islands gradually become popular topic for the geographers and regional economists I can say now, after publication of Jared Diamond “Collapse”, entirely devoted to topic of island, isolated communities, for sure. According to my reviews of ERSA Congresses since 2005, each year at least four-five papers contribute to the development of this subject. And very often some of them are devoted to the topic of Italian islands. For instance, at the Lodz Congress two papers dealt with Italian islands of Sicily and Sardinia. In the first authors suggested strategy of “decentralized concentration” for internal cohesion of the community by creating networks of social interaction, economic, institutional and planning between the metropolitan center and the interior towns of medium size. *Cirelli Caterina, Nicosia Enrico, Porto Carmelo Maria. Sicily in search of the European dimension of policy development and cohesion.*

In the second authors told us that coastal status of the city has negative influence on its administrative capability, and on its efficiency in spending, complicates urban planning in Italy. *Lai Sabrina, Zoppi Corrado. The city-development strategy of Sardinia, Italy: the policy of the ERDF regional operation program*

Last two papers were devoted to the issue of services for the island communities. Greek authors told us about ICT as means of bridging local inequalities for the island communities. *Alexopoulos Andreas, Gaki Eleni, Angelis Vassilis, Dimaki Katerina. Information and Communication Technologies as Means of Bridging Regional Inequalities.*

Author of the last paper on island topic told about the need for Universal Service in the provision of transport to the islands. It refers to the provision of transport services to all users, irrespective of their geographical location, at a specified quality and affordable price. *Levy Y. Universal Service in the provision of transport to the islands: challenges and proposals*

I think that still many efforts can be done from the scientific community to assist islands in overcoming their spatial discontinuity.

8. Regional impact of mega-events (4)

In this year review for the first time I have decided to create special theme of regional impact of mega-events. In the previous reviews papers devoted to this topic were distributed along the different sections like cultural issues or financial issues. But really it is special topic of separate scientific interest.

Authors speculated on the demand-side and supply-side effects of the Hockey World Cup 2006. They told us that the interest of the media decreases relatively fast after the end of the Hockey World Cup. Football receives higher attention. *Goebel Christiane, Hamm Rudiger. The improvement of image by major sports events. The example of the Hockey World Cup 2006 in Monchengladbach.*

Greek author told us about institution of The Cultural Capital. These kinds of events raise the prestige of the city image and improve its profile. The picture promises a new quality of living and development in areas that contribute to the «sustainability» of society. *Nikolakopoulou Christina. Economic Impact of Cultural Events.*

Another paper of Greek authors examined the impact of mega-political event - spatial patterns of social revolt, the spatial linkages enabling its chain expansion across the country. They analyzed the damages’ and destructions’ impact on the local economy. *Kapitsinis Nikolaos, Mikroni Maria, Nakou Panagiota, Papatomas Thomas. The spatial dimension of a social uprising: impacts on spatial and financial development. The case of Greece in December of 2008.*

Last again Greek paper dealt with the impact of 2000 Greek national election. *Prodromidis Prodromos-Ioannis K. Modeling omitted spatial information: The case of the 2000 national elections in Greece.*

9. Social capital (2)

Two papers at the Lodz Congress were devoted to the popular topic of social capital. Authors in the first summarized about fifteen years of empirical research on various spatial levels on the impact of social capital on economic performance. At the firm level there is strong evidence on the impact of social capital on firms’ performance. When the unit of research is moved from single actors to spatial units with a large number of anonymous actors, the results become less clear. Contradictory results of studies on national and regional levels. The authors

told that to develop measures for values like creativity, entrepreneurship and tolerance, and to find better measures for social networks is the main challenges for future research on social capital's impact on the economy. *Westlund Hans, Adam Frane. Social capital and economic growth on various spatial levels – conclusions from 65 studies.*

Authors of another paper on this issue examined in detail the various approaches to the study of social capital in social sciences. They estimated social capital's level for the Italian local labor market. Their result highlighted the existence of differences not only between northern and southern Italy, but also inside each single macro area. In fact they told us about the presence of "four Italy": two in the Northern Italy and two in the Southern Italy. *Coppola Gianluigi, Fiorillo Damiano, Paolucci Carlo. Social Capital and Local Development: the Case of Italy.*

Different issues

1. Typology of European regions and international issues (3)

It is usually instructive to study new typologies of European regions as they are catching hidden realities of their development. Author of one Congress paper established typology that comprises 39 European regions organized in six relatively homogenous regional families. *Falck Simon. National regional families on the European area.*

Author of the other paper on international issues calculated the values of the internationalization indices for each Polish region. The performed analysis has confirmed a significant disparities in the level of internationalization of Polish regional economies. *Branka R. The level of internationalization of Polish regional economies.*

Authors of the next paper describing the methodology and the initial results of a research that means to monitor the implementation of the SEA Directive in Northern Italy. *Spaziante Agata, Carbone Mirko, Murano Chiara. Monitoring the implementation of the European "SEA Directive": a methodological support to the Competent Authority activity.*

2. Cultural districts

One paper at the Lodz Congress was devoted to the relatively new subject of cultural districts (of course, written by Italian author), but located not in urban clusters and creative districts but in extra-urban areas, with potential to foster sustainable local development in these areas. The cultural district can generate wealth and development, but it is also the place for people who look for a new lifestyle. The opportunities offered by the tourist market and the high quality products demand have generated new occupation for the extra-urban communities and dynamic young people remain in their small villages of origin to open new activities, recover traditional jobs, get involved in the management of the system. External people discover these territories and, finding a better quality of life, settle down or establish lasting relationships and bring their contribution to the local development. *Lorenzini Eleonora. Cultural districts in extra-urban areas: distinctive factors and policy actions to foster an emerging local production system.* This sounds like a plan for action for peripheral local communities with cultural assets.

3. Gender and social issues (4)

Gender issues are very important for contemporary society. But it is a pity that as a rule they are elaborated very one-sided, as a discrimination issue. But the challenge (and the **GAP**) is to give this problem knowledge-based, cognitive vision: how men and women absorptive capacity can strengthen each other in the interests of creative regional development?

At the Congress Portuguese author investigated for statistical evidence of a glass ceiling effect on women's wages: whether gender-based wage discrimination is greater among high paid employees than it is among low paid employees. Really women become more relatively disadvantaged with regard to pay as they advance to the upper levels of the wage hierarchy. Therefore particular attention should be given to gender wage disparities among high wage earners given that the disparities among this group of employees is relatively larger. *Mendes Raquel. Gender Wage Inequality in Portugal: quantile regression evidence.*

Greek author analyzed the spatial distribution of male and female employment, unemployment and non-participation in the labor force across the country's 1034 municipalities. He managed to econometrically isolate the effects of the spatial factors from the effects of the non-spatial factors on these indicators. *Prodromidis Prodromos-Ioannis K. The Use of disaggregated data in the comprehension of the sub-regional diversity and the formulation of policy in Greece.*

Several papers dealt with social problems in the European regions. Spanish authors in one of them analyzed the poverty in seventeen Spanish Regions and an Autonomous Community. Authors created a multidimensional index after factorial analysis of standard indicators and used this index to classify Spanish Regions by a cluster analysis. The results showed that it is possible to divide Spanish regions in three groups depending on poverty indicators: the regions with fewer problems; the regions with real big difficulties; and the rest that attain indicators close to Spanish mean. *Calvo Jose L., Figueroa Cristina Sanchez, Martinez Jose A. Poverty in Spain: A regional analysis.*

One paper dealt with settlement patterns in Norway (rare country for regional analysis and rare subject of analysis). Authors discussed negative and positive impacts of a centralizing population pattern for individuals, regions and the nation. High speed of centralization might increase the imbalances between the infrastructure and the population, both in central and peripheral regions; centralization might negatively influence the level of service provision by social institutions. *Bjornsen Marte, Johansen Steinar, Foss Olaf. Impacts of a centralizing population pattern in Norway.*

4. Spatial dimension of inflation

I would like to attract attention to the paper devoted to the rare topic of regional varieties in inflation. On the basis of a disaggregated data set, Hungarian authors studied inflation persistence in Hungary between January 2002 and June 2007 by focusing on regional cross-sectional variation by using micro price data from the CPI database on a monthly basis. Authors analyzed both temporal and spatial differences of inflation. Inflation persistence decreased between 2002 and 2007 at the country level and also at the regional level. This means that inflation is less anchored in the past at the end of the sample period than before. *Zsibok Zsuzsanna, Varga Balazs. Spatial differences in inflation persistence in Hungary.*

5. Regional disasters

Under contemporary world of risk and uncertainty the theme of disasters of different kind like floods, fires, terrorist attacks, becomes more popular among regional scholars. Interesting approach to flood as spatial disinvestment leading to regional reallocation of economic activity⁴ was realized in one paper of the Congress: *Ivanova O., Koops O., Jonkhoff W. Regional economic effects of flooding.* Authors evaluated the effects of different water policy options on regional flooding risks using RAEM model that is a complementary model to the HIS-SSM model.

In the Netherlands, the HIS-SSM model is a common used instrument to calculate the total damage of a flood. The flood damage results of the HIS-SSM model are for 95 percent based on the physical damage of buildings and infrastructure in the flooded area. However, a focus on physical damage leads to underestimations in total damage projections because intermediate and long term economic damage after the flood period are not explicitly assessed. The RAEM model, a spatial computable general equilibrium (SCGE) model for NUTS3 regions in the Netherlands, is applied to calculate the *indirect* effects of flooding. Simulations for flood scenarios in the Greater Rotterdam area show that total damage estimated by the HIS-SSM model increases by 15 to 55 % in the RAEM model, depending on the location and size of the flood.

Another paper in this section deals with effects of climate change. *Buyck Y. "Greater Paris" in post-Kioto context: a sustainable approach for climate change.*

6. Methods, models, spatial econometrics (4)

Authors compared proximity approach - spatial econometrics and hierarchy approach - multilevel modeling using Belgian mobility data and productivity data of European regions. One of the advantages of a multilevel model is that it can incorporate more than two levels (spatial

⁴ Households can choose to migrate or search for new job opportunities. Firms can choose to reallocate capital investments.

scales). Another advantage is that a multilevel structure can easily reflect an administrative structure with different government levels. Spatial econometrics on the other hand works with a unique set of neighbours which has the advantage that there still is a relation between neighbouring municipalities separated by a regional boundary. The concept of distance can also more easily be incorporated in a spatial econometrics setting. *Vanoutrive Thomas, Parenti Angela. On proximity and hierarchy: exploring and modeling space using multilevel modeling and spatial econometrics.*

The subject of another Congress paper was modeling of German internal migration flows since re-unification. *Mitze Timo. The role of network autocorrelation in modeling German internal migration: spatial regression versus filtering in a dynamic panel data approach.*

Next paper deals with factorial and cluster analysis in statistic regionalization of Bosnia and Herzegovina. *Osmankovic Jasmina, Somun-Kapetanovic Rabija, Resic Emina, Domazet Anto, Halilbašić Muamer. The application of factorial and cluster analysis in statistic regionalisation of Bosnia and Herzegovina.*

Last paper in this section deals with the differences between Czech regions. Author's goal was to group eight Czech cohesions regions on the basis of the growth of population dynamics during four periods: 1970 - 1979, 1980 - 1993, 1994 - 2005 and from 2006. *Šotkovsky Ivan. Dynamic Spatial Typology of the Population Growth in Czech Cohesions Regions after 1970.*

II. Major schools of European Regional Science

Inside the European Regional Science Association one can easily notice internal division between national sections in the decision-making process, votes, and in shifts of cities where Congresses are held. On one side - representatives from Nordic countries, Germany, the Netherlands, Great Britain, Austria, Israel and France; on the other side – representatives from the Southern Europe - Italy, Spain, Portugal, Greece, Turkey. And we should mention separately representatives from Central and East European countries because of specific of their regional economic, social and political problems.

Let us characterize briefly major schools of European regional science according to this division inside Association. To do this I have looked through all papers from 2002 till 2009 ERSA Congresses and organized folders of papers of each school. Then I have looked through major journal of the Regional Science for the last 10 years to pick up articles which can be added to the schools' folders as good representatives of the unique feature of each school. Finally I have 960 files of Congress papers and journal articles distributed among 13 folders of the major schools (appendix 1 – several examples).

Then I have looked through all these files of each folder to acquire general impression of the peculiarities of the creative manner of each European school of regional science. Of course my judgments are subjective and should be considered only as the first preliminary step to characterize (qualitatively) each school of European regional science.

First cluster of schools

1. Nordic school of European regional science includes papers and articles of representatives from Finland, Sweden, Norway, Denmark, Iceland. Totally there were 119 files in the folder of this school. Initial general impression upon reading all these materials that this scientific school gravitates to the “alive” realities more than to complicated econometric modeling of them.

I would stress four characteristic features of this school of scientific thought. *First*, strong focus on the local (municipal) labor markets. For instance, in federative Germany regional labor markets are in the focus of research of regional scholars but here, in the unitary small countries of the Northern Europe, local, municipal level predominates.

Nordic countries have very strong and long traditions of the local self-government inside the centralized unitary state. Municipalities are one of the biggest employer in many districts of these countries. Therefore it is not surprising that the local level of labor markets is of high priority.

Also the whole definition of the labor market here is unique. The border between it and other social systems – the educational system, the private household economy, etc. - are getting increasingly blurred. Employment is defined not as regular occupation but is rather “a temporary

state or the current manifestation of long term employability”. Employment status also loses its previous strictness and now is flexible combination of different stages of encounter, adjustment, stabilization and renewed preparation for a new job or a new task. Phenomenon of overeducation of employee is very common for the Nordic local labor markets.

Second, I would like to stress strong focus of this school on the role of knowledge in the development of peripheral economies – firms, communities, and settlements. The role of social capital in the innovation process in the isolated communities. Problem of service accessibility/delivery for the peripheral communities and municipalities in territories of low density is elaborated in this school very profoundly. For instance, differences in costs of old men and women for the municipal budget.

Third, I would mention gender issues that get some peculiarities in this school: gender aspects of the social capital, gender asymmetry in the employment, gender structure as the reason of inter-municipal differences.

And finally, *fourth*, a lot of subjects are elaborated around Universities, like migration of graduates, impact of the type of University on the earning of its graduate and others. For the whole school tendencies for inter-disciplinary, business-scientific networking, international cooperation are very typical.

2. German school. Totally there were 89 files in the folder of this school. My general impression is that this school gravitates to concrete cases and case studies: less purely theoretical papers, more empirics, and easy models based on the informative data bases. Let us mention strong technical culture of employees, risk-averse behavior of economic actors, strong system of fiscal federalism as features deeply embedded into the subjects of German regional research.

I would stress three characteristic features of German school of European regional science. *First*, very systematic and broad approach to the issues of regional labor market. It is very heterogenous, culturally diverse, because of Eastern Germany merge in early 1990-s and a lot of immigrants. Regional labor markets are more often the subject of research for this school than the regions themselves. For instance, German scientists tell about economic convergence of regional labor markets but not regions. Even the EU integration issues German scientists are inclined to examine as the integration of the border labor markets. New models of NEG German scientists are checked on their regional labor markets. R.Florida’s idea on the role of bohemians in economic development on the German soil is transformed as the role of bohemians in the activity of regional labor markets. 180 German labor markets are analyzed with very sophisticated technique. Special procedures are elaborated to reconstruct missing data for the local labor markets. Flow approach is very popular to analyze labor markets. It means accent not on migration of employee per se, but on the transition of worker between different status: “The ADETON method was originally developed to estimate flow matrices of regional labor markets in the Multi-Accounting System (MAS). Purpose of the MAS is to give a comprehensive survey of the stocks and flows of people in education and training, in employment, unemployment, and household activities. The flows between the stocks are represented by transition matrices. The results are used for a rational design of regional labor market policy (training measures, job creation schemes, etc.)”.

Second, in comparison with other European schools German school develops cluster theory more actively using its empirical material. “Cluster policy” is one of the main slogans for a new regional policy in East Germany. Special accent on innovation networks, business-partnerships, general economic cooperation between East and West of the country is the focus of German regional policy and research. And cluster initiatives are examined as the proper tool to strengthen territorial cohesion of the country.

Third, topic of urban policentricity, mega-city regions, metropolitan cities, redevelopment of old industrial zones and cities is typical for many papers of the German authors. In comparison with the other countries in Germany these works have more broad and comprehensive character.

3. Dutch school. Totally there were 67 files in the folder of this school. I would stress four major features of this very strong school of European regional science. *First*, unique integrative and network understanding of the space and spatial factors. Dutch space is compact, risk, overorganized, regained from the Nature. Because of constant pressure of shortages in space nowhere in Europe does this sacred feeling of space exist. Conditions of overdensity and spatial packedness provoke ideas of territorial cooperation, coalitions, synergy, multi-use and networks as the tools to provide the maximum degree of compactness.

Because of this constant stress of shortages in territory this school is champion in spatial planning, models of human interaction in space, research on commuting. Commuting looks like comprehensive, integral phenomenon of Dutch life, that influences many others. Understanding of commuting behavior in the Dutch school is superb and multi-dimensional: human's choice of the route in commuting; duration of commuting between suburban place of living and urban place of work; impact of natural factors on the speed of commuting; means of transport and commuting, etc.

In this school urbanism is transforming its nature as socio-economic phenomenon and becomes phenomenon of dense spatial organization. The whole process of urbanization here is not division territory into urban and rural, but the process of coexistence adjacent urban spaces. Multi-functional urban land use is well-elaborated approach. Productivity of industrial space is calculated very precisely.

Common issue of firm births and growth here under the conditions of limited space transforms into the issue of firms' relocation in space, firms' migration.

Second, competitive advantage of this school is the talent to link economic, transportation systems with natural, climatic factors, integrate economic statistics and data on climate. For instance, integration floods statistics and economic data; trade and transport statistics. It is owing to the close connection between economic and natural factors in the compact territory of the Netherlands that Dutch scientists do manage to link these phenomena in a productive way. For instance, they succeeded in strategies to harmonize spatial and urban planning in flood-prone areas. Water management and spatial planning are associated now more closely, especially at the regional level: "Dutch water management currently is in a position of fundamental change and renewal. The emphases has shifted from technical measures such as heightening dikes and enlarging drainage capacities towards allowing water to take more space. Since the late 1990s, water management has been modified from an approach of "keeping it out" towards "fitting it in". That means more attention and links with spatial planning.

Third, in this school networks are not the popular word but the real condition of sustainable economic development. The whole urban spatial structure of the country is not hierarchal but network-based, polycentric: "four cities which form the Randstad as nodes in one network, each has a specialization and interacts horizontally with each other by means of flows of people, goods and information". Network behavior and organization is the best answer on the challenge of shortage in space.

And finally, *fourth* is the art of spatial modeling as the unique feature of this school. Very influential world-class school of spatial econometrics was born in the overdensed space of the Netherlands (for instance, traffic congestion and road pricing etc.). These models are based on the scrupulous and detailed data – accessible owing to the compactness and small size of the country. Because of this it is possible to model here the issues that in the other schools are elaborated only qualitatively like redevelopment of industrial cities. These econometric models coexist with new qualitative methods like rough set analysis

4. English and Irish school. Totally there were 46 files in the folder of this school. Cosmopolitan character of this school is provided by Italian, Greek, Spanish researchers at the faculties and departments of economic geography, regional economics, and spatial planning at the British Universities. English regional scholars are champions in building international scientific alliances, co-authorships, utilizing natural advantage of their English language. British school does not have over-sophistication in spatial models, as Dutch school. English scholars as

a rule are proponents for classic econometric models. I think we can stress three characteristic features of this school.

First, strong traditions of classical English political economy in regional research. I mean obligatory conclusions and recommendations for public policy after any econometric or other regional research. It is natural here, but for instance, for the Dutch school it is not necessary. And in the traditions of American economics it is not obligatory too. Real dignity of English school is inseparable connection problem-solving research, recommendations and implementation of the results of the study in the public policy.

For instance, let us name popular now theme of knowledge spillovers from the Universities to the innovative firms, elaborated in the Dutch, Austrian, Italian schools. But only British scientists go as far as public policy, recommendations how to soften barriers to promote knowledge flows.

It is not surprising that technique to measure quantitatively efficiency of regional policy and its actions is very strong in this school. The whole potential of spatial econometrics and other toolbox of regional science was utilized to evaluate the impact (and consequences) of regional policy on economic growth and development of the regions and cities of Great Britain. In this school it is common to evaluate not ex-post effects of for instance public and private benefits from the projects but to evaluate ex-ante effects of them. Such research is invaluable assistance for the Regional Development Agencies as core structures in the British regional policy, responsible for regional strategies, planning and its implementation. These agencies not only implement public policy actions, identify key regional sectors for state assistance, but collect important data that regional scholars can use.

Second, I think that competitive advantage of the English school is comprehensive research on urban economic growth, synthesizing endogenous theory of economic growth, climatic factors, Universities, human capital, measures of public policy, fiscal federalism, including comparison of European and American cities, etc. It is very typical for the English school to unfold this topic in the maximum possible width. I think that traditions of strong school of urban planning do help in this. British scholars are leaders in elaboration of the problems of urban employment and their contemporary polarization.

Third, I would like to mention curious combination of British old experience and traditions in financial services and energy and drive of the young Ireland tiger in building regional innovation system. London cluster of financial services is well-elaborated topic, special attention is paid to its coexistence with the regional knowledge economy. Innovation in services is the popular topic for the British school but not for the other schools in European countries. Let us mention very scrupulous studies on the financial schemes of big transport projects (Private Finance Initiative, Public Private Partnership et als.).

Having seen several presentations of scientists from Ireland and Northern Ireland at the annual ERSA Congresses I got the impression that they rejuvenate the whole British school of regional science, add this peculiar drive and innovative spirit (let us name Nola Hewitt-Dundas, for instance).

Because of island position transport issues get some peculiar sound: low-budget carriers, transport mega-projects, etc. British scientists prefer to compare different models of economic growth - classic, endogenous growth, New economic geography, in their research utilizing the best in Europe special data base Cambridge econometrics.

5. French school. Totally there were 35 files in the folder of this school. My guess is that one of the advantages of this school is close connections with French-speaking researchers of North America in Canadian Quebec - like, for instance Mario Polese. I would suggest two key features of this school.

First, theory of proximity (A.Torre and others) that was created on the strong philosophical traditions of M.Foucault, J.Derrida, P.Bourdieu and French theory of communication. Proximity is understood cognitively, in the context of interaction, communication, learning, close and distant knowledge spillovers. Works of this school on

geographical and organized proximities and their role in knowledge exchanges and firms innovations are very influential. Authors distinguish between phenomenon of constant (like firms location) and temporary (like face to face communication) proximity. Organizational proximity means similarities in for instance ethnic identity. It is a challenging goal to elaborate the theory of regional cognitive process utilizing concepts of organizational (institutional) and geographical (spatial) proximity.

Second, I would like to stress redefining of agriculture and its role in regional economic development. New functions of agriculture are taken into account in many papers. They reveal different attributes of land: agriculture may produce rural amenities, landscape, ecological services, habitat for wildlife and biodiversity.

At the end of this brief description of the French school one should mention French cartographic culture that let to map major actors in innovation for concrete branches of the economy; unique Ile de France metropolitan region as the driver of the advanced tendencies in Europe, competent-based approach frequently used by French researchers of the regional knowledge economy.

6. Austrian school. Totally there were 18 files (papers and articles) in the folder of this school. My point is that it is impossible to analyze Austrian school of regional science without understanding of its links with Austrian economic school of F.Hayek, J.Shumpeter, L. von Mises and others, but even broader – with German philosophical traditions of systems approach and dialectics. Really we can see in the Austrian school of regional science strong intellectual influence of the German-speaking scientific community. Big difference between Austrian economic school and mainstream neoclassical economists determines the peculiarities of the Austrian style of regional research.

For modern Austrians the main difference between the neoclassical market model and Austrians' own is that, in theirs, adjustment processes and market disequilibria are central. Adjustment copes with dispersed knowledge and the lack of it. For the Austrian economist, process, discovery and uncertainty are essential for everyday economics... Austrian economics has a few characteristic features important to regional economics. Firstly, it considers the economy so dynamic that mechanistic modeling does not help us understand it. Secondly, Austrian economics is the science of the process of choice of human actors that is difficult to predict. Actors may react differently to the same stimuli under more or less the same circumstances. Thirdly, economics is considered to be the science of exchange between individual actors, in which government plays no significant role. To put it bluntly, the government is considered to be an agent blocking the process of choice, and should therefore be limited as much as possible. Fourthly, individuals act under uncertainty. Consumers and producers do not have full knowledge of their environment, not in the present and certainly not in the future. This means that there is an element of discovery in the behavior of economic actors. This includes their attitudes and actions toward risk⁵.

I would stress four features in the Austrian style of regional research.

First, holistic approach, the desire to develop not a partial question but the whole problem in its integrity. Forest should not be lost behind the trees, after scrupulous description of small details. For the Austrians it is typical to pay attention to the definitions, methodical things. I can see here inheritance of the German philosophical traditions. (Germans maybe have lost them but Austrians maintain). Several widely spread definitions in the regional science like regional identity initially were formulated inside the German-speaking community. Institutional speculations on the knowledge spillovers, on the role of clusters as cognitive institutions (case of Styria) is well developed here.

Second, I would mention that Austrian school manages to deal well with knowledge spillovers, cognitive issues in very peculiar cases when it is difficult to follow traces of knowledge. It is a real talent of Austrians to find cognitive dimension, knowledge breathe where the rest do not see it. Let is mention F.Hayek's "Competition as discovery procedure". I think that this ability to make invisible visible is the real dignity of the Austrian school and its contribution for the methodological base of European regional science. In this school topic on knowledge sources, different channels of new knowledge for the firms is well-elaborated.

⁵ Heijman Wim J.M., Leen Auke R. On Austrian regional economics// Papers in Regional Science. 2004. Vol. 83. P. 487–493. P.491.

Austrians understand the mechanism of knowledge spillovers very clearly. I think this is because of small size of the country and dominating position of Vienna that help feel the real effect of knowledge movements. For instance, Austrians studied information exchange between metropolitan city-regions and their suburban territories very well on the example of Vienna. And then having understood this process here they can see it in other parts of Europe in less favorable conditions for monitoring. The conclusions of the other colleagues from different European schools can be tested here in Austria easily again because of the small country size and good visibility. Location factors of innovative activity are well studied in this school according to the same reasons.

Third, Austrians effectively use sociological methods, mail, telephone, web-surveys of hundreds of firms and experts. Small size of Austria helps to mobilize face to face communication to provide high return rate. Austrians deal well with institutional approach to such familiar phenomena as clusters, very often combine this approach with classic econometric models. This combination of different quantitative and qualitative methods in their toolbox is their unique strength. Let us remind that for French school it is common to use only institutional approach, for the Dutch school – mostly spatial econometrics.

Fourth, border location of Austria between Western countries of “old” EU and CEE countries helps to expand the impact of school beyond national frontiers. Austrians develop EU issues of convergence, trying to pay special attention on the role of innovative factors in it.

7. Israeli school. Totally there were 18 files (papers and articles) in the folder of this school. After reading all papers and articles of the representative of this school I got the impression that the whole phenomenon of this school existence is under the question. Really there are few purely regional subjects of research in Israel, as a rule expansion on the regional field of the experts from industrial economics, town planning, etc. But still let us underline three major features of this school.

First, only in Israel it is possible to study rare and exotic “small” things like territorial distribution of venture capital, spatial distribution of high-rise buildings within urban areas. Lack of data does not afford to initiate such kind of research in bigger countries.

Second, new approach to the common problem of interregional differences includes the role of small size of the country, and separation the problem of differences in the metropolitan central and peripheral regions.

Third, spatial distribution, geography of crime: “due to its population heterogeneity and unique social structure, Israel can be considered a natural laboratory for examining issues related to crime, inequality, ethnicity, and their geographical context. (Studies examining the relationship between crime and the ethnic structure of Israeli society have become part of the Israeli criminology mainstream). For the rest schools of regional science elaboration of this topic in Israel can be instructive.

Second cluster of schools

1. Italian school. Totally there were 105 files (papers and articles) in the folder of this school. Lot of them were devoted to the development of Sicily – how to inspire competitiveness in this part of Italy; transformation of low-tech industries like wine into high-technology, knowledge-based with the wine regional research system; present and future development of famous Italian industrial districts like Emilia Romagna. Sometimes Italian authors sin by the choice of topic of research with evident result: it is funny to understand after complicated modeling that the truth is so banal.

I would mention three specific features of the Italian school of regional research. *First*, strict internal division of this school into old generation of scientist with mostly qualitative methods of research, proponents of institutional analysis; and more younger generation of scientists who are fluent with econometrics tools, and very often they got some graduate of post-graduate training at the British Universities. Unfortunately there is not a lot of cooperation

between these two very distinct groups of scholars. My guess is that the success in qualitative research of the old generation is comparatively more evident than achievements of the young generation of Italian scholars. For instance, I appreciate very much the qualitative analysis of the innovative process in the clusters of high technology industries did by the representatives of the old generation.

Let me hypothesize that this intellectual division between scientists of different age, different intellectual experience, somehow is connected with economic north-south division of the country.

Second, I highly appreciate insistent attempts in this school to find ways how to transform cultural diversity of Italian provinces into the realities of regional economic growth. Italians have their own understanding of regional cognitive process which can be productively combined with more formal Austrian, Dutch, or British approach.

Third, urban tourism in metropolitan areas nowhere in Europe does get such constructive attention of the researchers. Italian authors describe the concept of local tourist system, prefer to utilize holistic approach to urban tourism.

2. Spanish school. Totally there were 126 files (papers and articles) in the folder of this school. The power of this school is not clearly visible at the ERSA annual Congresses, it is somehow shadowed by more comfort and fluent English-speaking representatives of the other schools. But in the papers and journal articles we can get this feeling of condensed intellectual work. This school is a bit isolated from European mainstream and it certainly helps to find brand new themes and areas for research. For instance, study of thousand of Spanish research groups, not the university teams or business community, but this intermediate unit between the university and the academic inventor or innovator⁶. Or papers on the link between scheme of property and innovative activity of the. Or studies of the link between regional and national business-cycles. Or the desire to link regional economic growth with the age and size of firms: small process innovating and young firms grow faster than old, large and non innovating firms. Maybe regions with the highest share of small and medium size firms should be the ones with the highest growth?⁷ Can we divide traditional and old industries by the type of knowledge and how it is transferred? Traditional rely upon tacit knowledge transferred from generation to generation vertically. On the other hand high-tech industries rely upon formal and tacit knowledge transferred horizontally. Several papers in Spanish folder were devoted to the advantages and disadvantages of emerging industrial district 22@ in Barcelona in comparison with other European industrial districts (like Greater London, Ile de France, Dublin, etc), and factors that can be responsible for growing density of firms located in 22@ district⁸.

I would mention three specific features of this school. *First*, very direct, easy, transparent, qualitative, with simple econometric models, generalization of the EU situation with knowledge economy. More technologically advanced European schools sometimes lose essentials behind the sophisticated toolbox. For instance, in the research on EU interregional convergence, now territorial cohesion. Spanish research on the theme of convergence are methodically simple but profound in the analysis of all group of influential factors.

Therefore Spanish school has comparative advantage in its efforts to utilize easy macroeconomic models and definitions in the regional studies. Really attempts of the Spanish researchers to implement macroeconomic phenomena like inflation, business-cycles work in the Spanish regions very good. My guess is that there was initially strong school of

⁶ Sero Manuel Acosta, Guerrero Daniel Coronado, Leon M. Dolores, Rosario Rodriguez M., Munoz Marin. What factors determine the generation of patents in Andalucia (Spain)? Does public policy support technological knowledge generation in Universities?

⁷ Calvo Jose L. Industrial Employment Growth in Spanish Regions: the Role Played by Size, Innovation, and Spatial Aspects.

⁸ Mascarilla O., Yegorov Y. Spatial Agglomeration of Firms: Theory and Application for Industrial District 22@ of Barcelona.

macroeconomists and then they expanded towards the subjects of regional science, very successfully. Models of economic growth are merged with factors of knowledge and innovation and are used for the provinces of Spain.

Second, Spanish school has accumulated productive experience in studies of fiscal decentralization and economic growth: fiscal decentralization does indeed soften regional disparities.

Third, unique research on the role of service industries in the dynamics of macroeconomic indicators like employment cycles. Authors told about high heterogeneity in the cyclical behavior of the labor market in European countries and that the services play a cushioning role, softening the total employment cycle.

3. Greek school. Totally there were 78 files (papers and articles) in the folder of this school. I would stress two specific features of this school. *First*, profound elaboration of the problems of peripheral, often rural territories. They are characterized by gradual shrinking of the extensive agricultural sector, employment decline in several manufacturing activities, increasing economic role of the service sector, lack of dynamic innovative sectors, bad state of education, massive influx of immigrants, increased female participation in the labor market. It is because of good understanding of the realities of the rural areas did Greek authors prepare typology of the rural zones for the whole Europe⁹. In this paper they have differentiated rural and peripheral territories by accessibility (rural accessibility less than 80 minutes, urban more than 140 minutes).

Second, planning of the development of coastal tourism to promote sustainable development of Greek coastal cities. The whole Greek style of life, ports, local self-government, economy, entrepreneurship, cultural heritage turn into tourism. There are several articles with such broad concept of coastal tourism. And Greek tourism does have its clear peculiarities in comparison with Italian or Spanish.

4. Portuguese school. Totally there were 69 files (papers and articles) in the folder of this school. I would stress three specific feature of this school. *First*, detailed development of the research on small and medium-sized towns in rural areas. *Second*, theme on competitiveness of regions and industries, elaboration of special indices. This topic sounds more loud than the theme of innovative development and knowledge economy - because it is a challenge to turn Portuguese regional economy into a competitive one. Close to this is the theme of costs and benefits of decentralization in the case of service delivery. *Third*, experience of water management under the conditions of natural limitations.

5. Turkish school. Totally there were 64 files (papers and articles) in the folder of this school. I would stress two special features of this school. *First*, numerous articles and papers are devoted to Istanbul Metropolitan Area, developing the subject of regularities and peculiarities in the dynamics of Metropolitan areas in the developing countries - like Turkey. Very interesting is elaborated the topic of urban transformation, redevelopment of old districts of Istanbul, privatization of urban services, location of the banking sector. *Second* specific theme is gated communities, spatial segregation in Ankara and Istanbul. We can also mention theme of the development of the new industrial districts in Turkey.

Third cluster of schools

Here we have collected 89 papers from **CEE countries**. In spite of the varieties of their subjects the general line is exploration of the spatial regularities and peculiarities of the radical economic post-industrial transformation in the former socialist countries of Europe. I think that **Hungarian** school of regional scientists stands close to create new theory of the spatial economic transformation. I was amazed by not very numerous but very strong works by our Hungarian

⁹ Ballas Dimitris, Kalogeresis Thanasis, Labrianidis Lois. A comparative study of typologies for rural areas in Europe ERSA Congress. 2003. №43.

colleagues. They are well-equipped with new technique of spatial analysis, create good models. Their works are successfully embedded into the EU research projects. I can mention papers on territorial competitiveness of the municipalities, transport accessibility of the municipalities, FDI in the Hungarian firms, macroeconomic effects of interregional discrepancies.

Romanian school of regional science is very active and is gaining strength from one Congress to another. For instance, at the Lodz Congress more than 20 papers were delivered by Romanian participants. The dominating themes are EU and Romania - the EU extension to the Central and Eastern Europe (CEE) countries¹⁰; special case of Bucharest and its problems - Up 66% of Romania's volume of real estate deals is made in its capital, Bucharest. Bucharest is the third city in Europe in which the 500 most important European multinational companies intend to expand their business, according to the 19th edition of the European City Monitor, a report issued annually by the real estate consultants Cushman & Wakefield¹¹; ethnic entrepreneurship in Romania¹²; contribution of different factors to the regional competitiveness¹³. Location issues are elaborated in several papers. Authors mentioned that Romania, as a transition country with an economic structure coming from the formerly centrally planned economy and unable to adjust to a market-oriented structure in a short period of time, first despecialized as a result of restructuring and privatization measures. Romanian regions become less specialized during the last decade. Economic reform led to decrease in production in key sectors and to replacement of the big state industrial enterprises by small and medium firms, more flexible and able to adapt to the new economic realities¹⁴.

Researchers in the **Polish** school pay a lot of their attention to the restructuring of the Silesian industrial problem region into more diversified and innovative one with technological parks and other innovative infrastructure. "Pro-innovative networks, in which under more or less formally conditions cooperate industrial/service companies, research/educational institutions, regional/central governments, professional bodies and even private persons, are put forward as a possible way to solve the reindustrialization problems. Their importance is emphasized in the Regional Development Strategy for Silesia, 2000-2015". Another line of research is renewal of traditional cultural centers of Poland. Very important topic of research is modeling the impact of increasing globalization on the Polish regions and the regional consequences of the country's entrance in the euro zone.

Croatian school of regional science is very knowledgeable with the issues of island economic development and their peculiar political and economic problems. **Slovak** school covers themes of regional bottlenecks on their route from industrial to service economy, regional disparities under transformation period and others. **Slovenian** school develops the issues on the role of geographical factors in the era of economic transformation (agglomeration effect, economic concentration, industrial specialization). **Serbian** school deals with challenges of development of new institutions, restructuring of state sector and huge socially - owned companies, development of entrepreneurship and some others.

Having finished this brief description of the major schools in European regional science I have asked myself what could be the most surprising result of the work? It is path-dependency issue. I am really amazed how profound is the influence of the past intellectual traditions, past economic and philosophical schools on the peculiarities of contemporary "script" of each

¹⁰ Ailenei Dorel, Mosora Cosmin, Țațu Delia. Regional economic convergence in Romania and EU cohesion. Socol Cristian, Marinas Marius, Socol Aura. The relationship between EU regional policy and economic flexibility. The Romanian case; Andrei Dalina. Foreign Direct Investment and economic growth in Romania and other EU member countries (a two models or the "pair-models" idea for FDI and economic growth).

¹¹ Pauna Carmen Beatrice, Chirvai Dana Ileana, Maier Gunther. Real Estate Investment and Urban Development: the case of Bucharest; Pauna Carmen Beatrice, Chirvai Dana Ileana. Bucharest – interstitial space, socio-techno-economic and comfort perspectives.

¹² Constantin Daniela L., Goschin Zizi, Dragusin Mariana. The positive impact of ethnic entrepreneurship on the Romanian economy. The case of Turkish entrepreneurs.

¹³ Constantin Daniela L., Mitrut Constantin, Nechifor Catalin I. Competitiveness and sustainable regional development in Romania. The impact of tourism.

¹⁴ Goschin Zizi, Constantin Daniela L., Roman Monica, Bacescu Monica Condruz, Ileanu Bogdan. Divergent evolutions of specialization and concentration. Evidence from Romania.

national school. For instance, I could not expect such strength of intellectual traditions in the activities of British, Austrian, French, and Nordic schools.

III. Intellectual leaders of European regional science association for the last 10 years

To choose authors for this study, three criteria were used: these persons should be cited in the article *Isserman Andrew. Intellectual leaders of regional science: a half-century citation study// Papers in Regional Science. 2004. Vol. 83.P. 91-126*; they should be participants of several last ERSA Congresses and presented papers; they should be active at the ERSA organizing structures (ERSAC or EOC) in the last 10 years. Our approach was not strict, and we include the person in the list if he was mentioned even in two cases. Finally we have 16 persons for short description of their work in Regional Science.

Roberto Camagni (3+¹⁵)

I would mention four major features in the creative style of R. Camagni. *First*, his very broad mind, gravitation towards wide methodological generalization, multicriteria approach, mostly qualitative, as it is typical for the old generation of the Italian regional scientists. He is very good debator what was clear in his bitter dispute by correspondence with P. Krugman on the issue of territorial competitiveness. He is a scientist of great learning and this certainly helps him in debates with the most noble authors.

Second, he elaborates methodological problems of regional science like territorial capital, local competitiveness¹⁶, cognitive approach to territorial development¹⁷. This is very rare in our community and therefore is very valuable input for the regional science.

Third, he successfully redevelops old definitions in the innovative aspect, like, for instance, territorial capital. And *fourth*, he is very strong in methodological elaboration of the basis of EU regional policy - theoretically sound, simple and operational: "territorial cohesion may be seen as the territorial dimension of sustainability".

Roberta Capello (14+)

I would name five characteristic features of the creative style of R. Capello. *First*, her manifold works on urban economy, knowledge economy, methodological articles on the regional science, urban and regional economics. In every article and paper it is easy to understand her background as regional economist. *Second*, R. Capello feels very precise similarities and differences between industrial and regional economists, potential of cross-fertilization of ideas between both communities. *Third*, she has very clear and direct, sometimes too categorical, manner of research. She manages to formalize qualitative phenomena, soft factors of regional development like collective learning, territorial capital, innovative milieu concept. This is the real challenge. *Fourth* she is very knowledgeable in evaluating economic consequences of the measures of public policy: "Even regions similar from the economic point of view, like lagging or advanced regions, should not be treated as single homogenous entities, when ICTs policies are concerned; their capacity to grasp economic advantages stemming from ICTs policies is extremely different. ICTs policies are far from being only a decision on the spatial distribution of financial resources. A call for tailored policy actions is of main concern; policies which should avoid the discrimination between "imitative regions" and "advanced technological regions" are necessary". *Fifth*, she can make progress very rapidly. The style of her earlier articles was to take definition and try to elaborate it using new empirical material in the new aspect – like

¹⁵ This is the total amount of papers and articles in our folder of this author. See appendix 2.

¹⁶ R. Camagni: "Local competitiveness is interpreted as residing in local trust and a sense of belonging rather than in pure availability of capital; in creativity rather than in the pure presence of skilled labour; in connectivity and relationality more than in pure accessibility; in local identity besides local efficiency and quality of life.

¹⁷ R. Camagni: "A cognitive approach is increasingly superseding the traditional functional approach to show that cause-effect, deterministic relationships should give way to other kinds of complex, inter-subjective relationships which are receptive to external stimuli, can react creatively, and are able to co-operate and work synergetically".

relational capital or collective learning. Now she is working much broader, modeling future scenarios of EU countries' and metropolitan regions' economic growth.

Paul Cheshire (6+)

Paul Cheshire is very sophisticated in the elaboration of the problems of European urban growth. For instance, he has determined the role of relative size of the university sector in explaining growth differences between European cities, the role of better weather in population dynamics of the major European cities over the past 20 years. Some of his papers and articles in the last years are devoted to the economic phenomena of housing markets, school quality, with attempts to develop spatial dimension of them.

Juan Cuadrado-Roura (10+)

I would mention three specific features in the manner of J. Cuadrado-Roura. First, he is a very knowledgeable expert in understanding the essence of integrative processes in the EU, economic and social cohesion. Second, he has the talent to create very clear and narrow focus in his econometric models. Third, last years he initiated studies on the role of service sector in the dynamics of macroeconomic indicators of European regions – “to check the degree in which differences in creation of employment and labor mobility observed in the different European countries, can be explained by the different degrees and rhythms of employment tertiarization”; “to test the hypothesis that a greater presence of employment in the service industry has important consequences on the fluctuation of employment at national level”; “that the services play a cushioning role in labor market in European countries, softening the total employment cycle”. This is very interesting and rare topic in the European regional science. Any progress in this direction will be extremely helpful for the scientific community.

Manfred Fischer (8+)

It is possible to name three specific features in the manner of M. Fischer. *First*, he positions himself as a classic economic geographer (not regional or urban economist) and tries to develop geographic dimension in macroeconomic models. For instance, he considers knowledge spillovers as a geographical phenomenon: “geographical distance has a significant impact on knowledge spillovers, and this effect is substantial”. *Second*, in the last years his insistent interest was in knowledge spillovers between high-technology firms in Europe (captured by patent citations), from university to high technology sector in Austria. He concluded that knowledge flows within European countries more easily than across. Such spillovers follow a clear distance decay pattern. Interregional knowledge flows are industry specific and occur most often between regions located close to each other in technological space.

Charlie Karlsson (9+)

I would tell about four specific features characterizing the creative style of research by Charlie Karlsson. *First*, it is study on relationship between regional growth and access to knowledge. In many articles he stresses that spatial proximity to knowledge resources is important to materialize the positive effect of such resources, inter-regional linkages for knowledge diffusion are important factors for understanding how knowledge networks are created and how these networks influences regional patterns of production and export, the degree of high educated labour (at least three years of college or university study) and dense populated markets explain much of the variation of gross regional product across municipalities in Sweden. He told that regional and local externalities that provide fundamentals for increasing returns have a most significant role in the Swedish economy.

Second, it is the issue of location patterns and proximity: proximity matters for the relationships between industrial and university R&D, spatial proximity should be measured using accessibility measures; the location of industrial R&D in Sweden is quite sensitive to the

location of university R&D, while the location of university R&D is insensitive to the location of industrial R&D.

Third, I would like to stress his work to identify potential spatial clusters in the 81 Swedish functional regions. And finally, fourth, his cycle of articles on the entrepreneurship and SMEs in Sweden.

Enrique Lopez-Bazo (6+)

I would mention three features in the very original creative manner of this Spanish author. *First*, his studies on the role of human capital, acquired in the formal education system, in the growth of the Spanish regions over the last few decades. Human capital increases the probability of migration of the workers. He concludes that formal education system is a tool for promoting regional economic development. Equalization of educational attainment across regions could promote regional economic and social cohesion.

Second, he tries to link dynamics of inter-regional disparities with technological transformation. And this is very interesting point. He told that the convergence process up to the early eighties can be associated with the diffusion towards the periphery of mature activities (automobiles, consumer durables, petrochemicals), whereas the emergence of high-value activities of a new product cycle (computers, electronics, telecommunications) seems to have caused a renewal in the centripetal forces in order to benefit from the agglomeration economies, R&D, human capital and physical infrastructure and amenities of the core regions. Different phases of production of those products could lead again to a convergence process in the future, similar to that observed until the eighties. Some peculiarities of the new products (such as the constantly shortening cycles for technology intensive products) may preclude the expected spatial diffusion, and thus a convergence process, in the near future.

He told about two sub-periods of European development: one of slow growth until 1985 and the other characterized by higher growth rates in 1990-s. First was characterised by industrial rationalisation and economies adapting to the new economic framework along with low growth. This sub-period was critical for old-industrialized regions in the United Kingdom, France, Belgium, Germany, etc. which lost ground in the ranking of production, while others took advantage of the new situation, either becoming the new core (southern Germany and northern Italy) or leaving behind their poor peripheral classification (north-eastern Spain, Lisbon, French Mediterranean and mid-Italian regions). During the second period economies were able to show their potentialities for growth and the success in their adaptation to the new environment.

Third, he wrote on the necessity to support policies explicitly designed to encourage regional knowledge transfers across EU countries. This recommendation is based upon the results of his studies that “despite progressive dematerialisation, location and physical geography still matter in the European Union”.

Gunther Maier (9+)

His detailed and unhasty manner of research distinguishes him from the rest community. Last years he has prepared a series of informative papers on the networks of ERSA, journal preferences of the participants of the ERSA community, history of ERSA. I would stress one very clear special feature of all his studies. He insistently looks for possibilities to measure immeasurable, to quantify those things that for the first look is impossible to evaluate. In this context we can understand his search for new methods of analysis in different sciences. It can be novel technique of social network analysis, calculation of urban sprawl or administrative absorption capacities of Candidate Countries, design of a regional identity index, or web-based survey of “star scientists”. But general vector is always one: acquisition of new knowledge by very original and talented manner and method.

Philip McCann (19)

Philip McCann is very multi-faceted researcher. It will take a time to mention all his areas of scientific interest. I would name only three of them. My guess is that the strongest line of his research is rediscovery of the old theory of location. He could write a special book on this agenda, filling the contemporary gap in this area (until now he has prepared several articles on

the topic¹⁸). New regularities of location with the lenses of cognitive, organizational and institutional factors for big multinationals, for high-tech industries in different countries look like the most interesting part of his work.

He told about the need for a redevelopment of analytical industrial location theory, reconsideration the microeconomic foundations of this theory, its methodological basis. Models of clustering, from new economic geography, transactions-cost assumptions and broader definitions of spatial transactions costs, environmental and resource characteristics should be incorporated in the new location-production type of framework.

Second specific feature of his works is ability to develop other concepts on the new empirical material, test and check them. For instance, he described three ideal types of cluster. And third peculiarities of his creative manner is the ability to discover hidden links and relationships. For example, relationship between the interregional migration behaviour of UK students and graduates to and from university, the knowledge assets of the regions, and the regions of employment of the graduates; compensatory function in the labour market of migration mechanism for UK female graduates, who are generally more migratory than male graduates. Philip has the ability of clear non-formalized vision of the real processes, real links – before econometric modeling. It is very rare and precious feature that helps him to jump to counter-intuitive conclusions: spillovers of embodied human capital, rather than informal tacit information spillovers between universities and local firms matter in interregional knowledge flows.

Peter Nijkamp (28+)

I would mention four specific features in the creative manner of Peter Nijkamp. *First*, breadth of his scientific interests, very wide geography of his studies – regions and countries in Western, Eastern Europe, US, Asia. But his scientific topic usually, on the opposite, is very narrow. He takes narrow exotic theme and elaborates it. *Second*, one can name his articles and papers sprinter-type, short distance-like. They are short stories like A. Chekhov's, but not novels or epics like L. Tolstoi's. He is a real master of short story. *Third*, he is fond of new methods of analysis like Distance Friction Minimization (DFM), Data Envelopment Analysis (DEA), Multiple Objective Quadratic Programming (MOQP), etc.

And *fourth*, he is sophisticated in the studies of marginal and therefore vulnerable communities and areas. For instance, migrant and ethnic, female entrepreneurship in different European countries and cities. Or rural periphery of Europe and rural entrepreneurship. He is interested in phenomenon of human mobility and tries to develop this subject from many sides.

Piet Rietveld (17+)

Area of his scientific interests is huge: multi-functional land use, institutions in the foreign trade, models of transport competition, impact of new infrastructural project on the local economy, etc. Can we find penetrating lines in such broad scientific art? I think three dimensions we can reveal. *First*, his attempts to evaluate economically things and phenomena that is difficult to measure: open space as non-economic value influencing residential property values (he utilizes hedonic pricing method for this), travel time of car pooling versus solo driving etc.

Second, his successful efforts to estimate the impact on natural factors and events on the economic and social parameters in the econometric models. I think that in this area he is number one in the European community of regional scientists. For instance, he states that total impact of flood on house values in the municipalities affected by the recent high tide events is substantial with a decrease between about 7 and 13% (this devaluation does not disappear after some years). Or he concludes in another paper, that low water levels hamper inland waterway transport much more often than high water levels. In periods of low water levels inland waterway vessels have to

¹⁸ See The rise, fall and rise again of industrial location theory, Reg. Studies. 2003. Vol. 37. P. 649–663.

reduce their load factors and as a result transport prices per ton will increase. Piet Rietveld is really talented in this synthesis of environmental, social and economic strata in regional research.

Third, I appreciate his vivid sense of reality, his internal understanding how complicated system works: “the market potential of railway services depends to a considerable extent on the quality of the total chain from residence to place of activity and vice versa”. The findings also emphasize the importance of making integration between the modes seamless and it confirms the findings that public transport passengers view the interchange negatively”.

Andres Rodriguez-Pose (25+)

I would like to mention three specific features in the creative manner of A. Rodriguez-Pose. *First*, he is the leader in the research of European regional economic growth in the London School of Economics. He has been studying this problem since mid-1990-s, in different countries of Europe, now in Great Britain. His understanding of this problem is uniquely profound and broad. He has started in Italy with very easy studies, now after 15 years he is an experienced master of the growth “genre”. He involves new factors like institutions of family, R&D spillovers, combines them in unexpected way and finally rediscovers the problems of regional economic growth. Global vision and detailed research are characteristic features of this scientist.

Second, let us say some words on his style of research. His toolbox is very multi-faceted – he utilizes econometric models and institutional analysis to get filigreed, sometimes counterintuitive results. For instance we get accustomed to the trivial truth on the positive impact of the big infrastructural projects. Everything is clear here. But not for this scientist:

Effects of infrastructure are much more complex than initially predicted by Aschauer-type analyses. Whereas regions benefit from having good initial levels of infrastructure and from being surrounded by regions with equally good endowments, new investment in infrastructure seems to be completely disconnected from growth performance, and investment in neighbouring regions is, on the whole, negatively associated with regional growth. Moreover, the positive effects of infrastructure endowment wane quickly in time, becoming insignificant shortly after the initial positive impact. In contrast, the negative effect on the regional growth potential of investment in transport infrastructure in the neighbourhood seems to be longer lasting...

The timing of infrastructure investment is crucial. Invest in transport infrastructure too early, and you may expose uncompetitive regions to stronger areas and markets, leading to even greater concentration. Invest too late, and you may prevent the development of the periphery.

Paying attention to the complex relationship in time and space of the factors that influence growth will we be able to maximize the positive effects of delivering greater accessibility and connectivity of the regions in Europe, while minimising the economic and welfare risk of exposure of regions with weak economic tissues that are often ill-prepared to compete in more integrated markets...

If the aim is to maximise the regional economic return to any new infrastructure investment and to enhance economic cohesion, investment in infrastructure has to be coordinated with policies aimed at developing human capital and the innovative potential of regions.

Another example with decentralization. Everuthing is again clear here. The more decentralization the more freedom, the more local economic development. This banal truth is evident for everybody. Not for Andres – for him type of decentralization matters:

Contrary to expectations, decentralisation has coincided in the sample countries with a relative increase in current expenditures at the expense of capital expenditures, which has been associated with lower levels of economic growth in countries where devolution has been driven from above (India and Mexico), but not in those where it has been driven from below (Spain)...

The degree of devolution is in most cases irrelevant for economic growth and, when it matters as in the cases of Mexico and the USA it is linked to lower rather than greater economic efficiency.

Third, he tries to offer recommendations for EU Commission at the end of his research. It is rare in the European community of regional scientists. He knows how to measure economic consequences of political processes.

Michael Steiner (4+)

This Austrian scientist is very knowledgeable in the network analysis in regional studies. Let us mention his brilliant work on Austrian economic clusters as network structures.

Michael Storper (5+)

Among his colleagues Michael Storper is very distinctive. He is a real erudite. His fame started from mid-1990s when his concept of ‘untraded interdependencies’ gained popularity in the community of regional scholars. No econometric modeling, very “accessible” articles, but simultaneously very profound generalizations at the result of productive synthesis of economic geography, sociology, regional science. His works on the increasing influence of the local factors like geographical proximity in patent activity are very well done. The same can be said on his collaborative research on the comparative of innovative process in the US and Europe.

Attila Varga (10+)

I would mention two specific features that characterizes the creative manner of Attila Varga. *First*, the role of geography and space in macroeconomic models. In his works he combines three streams of scientific thought – the New Economic Geography (role of initial conditions for spatial concentration of economic activity), the New Growth Theory (of endogenous economic growth) and the New Economics of Innovation (interactions among the actors in the region) to develop a new model of technology-led regional economic development on one hand, and to channel the innovation system literature into the more general regional economic growth problem, on the other hand.

Second, I would like to stress his efforts to understand the play of “transmission shaft” between knowledge spillovers and regional economic growth: how knowledge spillovers influence economic growth through entrepreneurship and agglomeration of economic activity in space: “spillovers occur because knowledge created by universities has some of the characteristics of public goods, and creates value for firms and other organisations... Spillovers of university research on innovation extended over a range of 50 miles from the innovating agent, but not with respect to private R& D...

Hans Westlund (7+)

I would like to mention three specific lines in Hans Westlund’s creative manner. *First*, his research on social capital. He concludes that “private and public actors can change local social capital. Local organizations who act as intermediate nodes between the local groups and the political bodies seem to be of special importance. But changing local social capital is a longterm mission that demands sustainable work”. He told that through social capital we can see influence of the civil society on regional economic development.

Second, his works on new rurality in Sweden: new rural labor markets, net migration to rural areas and others new phenomena. And finally, his attempts to measure regional effects of universities and higher education.

At the end of this micro-study I have two remarks. First I am surprised by the degree of influence of the initial background on the whole style of thinking and research of the scientific talent in the ERSA community. I can almost always guess who is regional economist, economic geographer, or mainstream economist by his background among our intellectual leaders. The whole manner of his study did help me.

And second, we can distinguish two situations with “leaders-school” coexistence. First situation when leader does completely “suit” to the nature of his (her) scientific school. This is true for Roberto Camagni, Paul Cheshire, Manfred Fischer, Charlie Karlsson, Gunther Maier, Peter Nijkamp, Piet Rietveld, Michael Steiner, Hans Westlund.

Second situation is when leader is beyond the scope of his Mother school. This is true for Roberta Capello, Juan Cuadrado-Roura, Enrique Lopez-Bazo, Philip McCann, Andres Rodriguez-Pose, Michael Storper and Attila Varga. Let me explain. Roberta Cappello combines Italian and British, possibly Dutch features in her studies. Andres Rodriguez-Pose also is not typical British regional scholar: some subjects of research he choose are closer to the Spanish

school (decentralization and growth). Attila Varga combines Austrian style of research on knowledge spillovers and American neoclassic. Variety of intellectual traditions is very productive for the scientist and his creative manner.

Conclusion

Our review of the papers from the Lodz 2009 ERSA Congress helped to name the more essential GAPS in the contemporary European regional science. They can not be filled by isolated efforts of one school, one brilliant scientist. But only with collective efforts of many schools and many scholars, each with its own creative manner, will the advances in development of regional science be possible.

List of Congress papers and journal articles to characterize different schools of European regional science

Dutch school

- Abreu Maria, de Groot Henri, Florax Raymond. Spatial Patterns of Technology Diffusion: An Empirical Analysis Using TFP. ERSA 2004 Congress. 24p.
- Berghuis Stefan, Borsboom Judith, Brauer Astrid, Folkert Rob, Ottens Henk. Typologies of urban form dynamics in Europe. ERSA 2009 Congress. 14p.
- Beugelsdijk Sjoerd, van Schaik Ton. Toward a unified Europe? Explaining cultural differences by economic development, cultural heritage and historical shocks. ERSA 2003 Congress. 31p.
- Besseling Paul, Ebregt Jos, Saitua Rafael, Ossokina Ioulia. Multifunctional land use in the Amsterdam South Axis area: a cost-benefit analysis.
- Beugelsdijk Sjoerd, de Groot Henri, Linders Gert-Jan, Slangen Arjen. Cultural distance, institutional distance and international trade. ERSA 2004 Congress. 23p.
- Blijie Berry. The impact of accessibility on residential choice: empirical results of a discrete choice model.
- Bockarjova Marija, Steenge Albert E. Thinking about Big Floods in a Small Country: Dutch Modeling Exercises.
- Blijie Berry. A Theoretical Model for Measuring the Influence of Accessibility in Residential Choice Behaviour. ERSA 2004 Congress. 28p.
- Boonstra Beitske, Duijn Mike, Rijnveld Marc. Governing (regional and urban) spatial development in The Netherlands: strengthening territorial cohesion by community based selforganisation. ERSA 2009 Congress. 22p.
- Boschma Ron A., Weterings Anet. The effect of regional differences on the performance of software firms in the Netherlands. ERSA 2004 Congress. 20p.
- Broersma Lourens, Edzes Arjen, van Dijk Jouke. The Effects of Municipal Policy Strategies on In- and Outflow of Social Assistance in The Netherlands, 1999-2007. ERSA 2009 Congress. 19p.
- Broersma Lourens Oosterhaven Jan. Regional Labor Productivity in The Netherlands. Diversification and Agglomeration Economies.
- Broersma Lourens, van Dijk Jouke. Regional Differences in Productivity Growth in The Netherlands: An Industry-level Growth Accounting.
- Brouwer Aleid E. The inert firm; why old firms show a stickiness to their location. Preliminary version. ERSA 2004 Congress. 23p.
- Cheng Jianquan, Le Clercq Frank, Bertolini Luca. Understanding urban networks through accessibility.
- Debrezion Ghebregziabiher, Pels Eric, Rietveld Piet. The impact of rail transport on the prices of real estate: Empirical study of the Dutch housing market.
- Dekkers Jasper, Rietveld Piet. Modeling land speculation with rural-urban land use transitions. ERSA 2009 Congress. 25p.
- de Blois Chris J., Boonstra Harm Jan, Linders Gert-Jan. Integrated Trade and Transport Statistics. Analysing transit flows for the Netherlands. ERSA 2008 Congress. 11p.
- de Jong Petra, Schutjens Veronique, van Oort Frank. Mapping and explaining firm migration at the neighbourhood level: a case study of the Netherlands. ERSA 2009. 14p.
- de Jong Bart. Schiphol Airport Amsterdam: to understand the past is to secure future economic growth. ERSA 2006 Congress. 21p.
- de Graaff Thomas, Rietveld Piet. Telework, Frequency of Working Out-of-home and Commuting: A Labor Supply Model and An Application to the Netherlands. ERSA 2004 Congress. 20p.
- De Langen Peter W. Improving training and education in clusters. Lessons from three port clusters.
- de Vaal Albert, van den Berg Marianne. Producer services, economic geography, and service tradability// Journal of Regional Science. 1999. Vol. 39. N 3. P.539-572.
- de Vor Friso. Performance of Industrial Sites: The Case of Amsterdam. ERSA 2007 Congress. 19p.
- De Vries Aldert. Income segregation in The Netherlands: trends and analysis.
- Elhorst J. Paul, Oosterhaven Jan. Effects of transport improvement on commuting and residential choice. ERSA 2003 Congress. 22p.
- Florax Raymond, de Groot Henri L.F., Heijungs Reinout. The empirical economic growth literature: robustness, significance and size. ERSA 2003 Congress. 35p.
- Frenken Koen, van Oort Frank G., Verburg Thijs, Boschma Ron A. Variety, Employment and Regional Development in the Netherlands. ERSA 2004 Congress. 24p.
- Horlings L.G. Strategies for vital coalitions and sustainable regional development in the Netherlands. ERSA 2008 Congress. 23p.
- Huisman Corina, van Wissen Leo. A multistate demographic model for firms in the province of Gelderland. ERSA 2004 Congress. 23p.
- Huisman Corina, van Wissen Leo. A model of internal firm relocation in the Netherlands.
- Ivanova Olga, Koops Olaf, Jonkhoff Wouter. Regional economic effects of flooding. ERSA 2009 Congress. 22p.

Ivanova Olga, Manshanden Walter J. J. Impact of the regional production patterns on the spatial distribution of economic growth: case of the Netherlands. ERSA 2008 Congress. 16p.

Koetse Mark J., Bruinsma Frank R., Rietveld Piet. Costs of road infrastructure for passenger and freight transport in the Netherlands. ERSA 2003 Congress. 17p.

Koomen Eric, Groen Jan. Evaluating future urbanization patterns in the Netherlands. ERSA 2004 Congress. 18p.

Koster Sierdjan, Brouwer Aleid E., van Leeuwen Eveline S. The welfare effect of economic diversity in rural and urban regions an analysis of Dutch municipalities. ERSA 2009 Congress. 24p.

Kuhlman Tom, Tabeau Andrzej, Gaaff Aris, van Tongeren Frank, Dekkers Jasper. Linking models in land use simulation: Application of the Land Use Scanner to changes in agricultural area.

Lambooy Jan G., Boschma Ron A. Evolutionary economics and regional policy// The Annals of Regional Science. 2001. Vol. 35. P.113-131.

Lenferink Sander. Market-oriented infrastructure planning: an international overview of strategies. ERSA 2009 Congress. 25p.

Linders Gert-Jan M., de Blois Chris J., Boonstra Harm Jan, de Groot Henri L.F., Exel Jeanet. Integration of Trade and Transport Statistics for the Netherlands: A Modelling Approach. ERSA 2007 Congress. 68p.

Louw Erik. Changing industrial land use: a firm level analysis. ERSA 2009 Congress. 18p.

Louw Erik, Bontekoning Yvonne. The productivity of industrial land in the Netherlands. ERSA 2004 Congress. 14p.

Linders Gert-Jan M. The Effect of Domestic Institutions on International Trade Flows. A sectoral analysis. ERSA 2004 Congress. 20p.

Melendez-Hidalgo Jose C., Rietveld Piet, Verhoef Erik. Transport Infrastructure, Spatial General Equilibrium and Welfare. ERSA 2004 Congress. 25p.

Oerlemans Leon A.G., Meeus Marius T.H. Spatial embeddedness and firm performance: an empirical exploration of the effects of proximity on innovative and economic performance. ERSA 2002 Congress. 25p.

Oosterberg Willem, van Drimmelen Camiel, van der Vlist Maarten. Strategies to harmonize urbanization and flood risk management in delta's.

Oosterhaven Jan. On the Dynamics of Net versus Gross Multipliers. ERSA 2002 Congress. 7p.

Pellenbarg P.H. Firm migration in the Netherlands.

Pol Peter M.J. The Economic Impact of the High-Speed Train on Urban Regions. ERSA 2003 Congress. 20p.

Priemus Hugo. Regeneration of Dutch Urban Districts: the Role of Housing Associations.

Van Eck Jan Ritsema, Daalhuizen Femke. The Randstad as a Network City.

Proost S., S. der Loo Van, de Palma A., Lindsey R. A cost-benefit analysis of tunnel investment and tolling alternatives in Antwerp.

Ras Michiel, van Gameren Edwin, Eggink Evelien. The demand for housing services in the Netherlands.

Raspe Otto, van Oort Frank, van der Laan Lambert. ICT and Productivity: relations and dynamics in a spatial context.

Raspe Otto, van Oort Frank. ICT loves agglomeration: the urban impact of ICT in the Netherlands. ERSA 2004 Congress. 40p.

Rietveld Piet, Rodenburg Caroline A. Multifunctional land use: an accessibility interpretation. ERSA 2003 Congress. 15p.

Rodenburg Caroline A. Assessment of multifunctional land use. ERSA 2004 Congress. 38p.

Rouwendal Jan, van Vuuren Daniel. Evaluation of the regional economic policy in the New Economic Geography. ERSA 2004 Congress. 23p.

Rouwendal Jan, Pommer John. A model of car ownership and use incorporating quality choice and ownership of multiple cars. ERSA 2003 Congress. 19p.

Sabir Muhammad. Weather and Speed of Car Commuting Trips: A Case study for The Netherlands. ERSA 2008. 10p.

Sable Michael. The Impact of the Dutch Biopharmaceutical Industry on Regional Economic Development in the Randstad.

Slob Anne, Bolt Gideon, van Kempen Ronald. Spatial knock-on effects of area-based urban policies: Practices from Utrecht, the Netherlands. ERSA 2006 Congress. 19p.

Smit Martin J. Agglomeration and absorptive capacity in the Netherlands. ERSA 2008 Congress. 18p.

Soetanto Danny P., van Geenhuizen Marina. Growth of University spin-offs. A tale of two cities and different network impacts. ERSA 2007 Congress. 19p.

Soetanto Danny P., van Geenhuizen Marina. Determinants of University Spin-offs' Growth: Do Socioeconomic Networks and Support Matter? ERSA 2006 Congress. 20p.

Soetanto Danny P., van Geenhuizen Marina. Technology Incubators as Nodes in Knowledge Networks.

Straatemeier Thomas. Potential accessibility: an interesting conceptual framework to address strategic planning issues in the Amsterdam region?

Ubbels Barry, Verhoef Erik. Acceptability of road pricing and revenue use in the Netherlands.

Van Boxtel Martijn, Huys Menno. Unravelling decision making about the future developments of Amsterdam Airport Schiphol.

van den Berg Vincent. Choice of Train Ticket: a Study on Dutch travelers. ERSA 2008 Congress. 31p.

Van den Brink Margo, Meijerink Sander. Implementing policy innovations. Resource dependence, struggle for discursive hegemony and institutional inertia in the Dutch river policy domain.

van Geenhuizen Marina, Doornbos Holmer. Knowledge networks of innovative companies: which role for local learning? ERSA 2004 Congress. 13p.

Van Gils Marcel, Huys Menno. The need for more variety in Dutch spatial planning policies: The case of van Leeuwen Eveline, Dekkers Jasper, Rietveld Piet. The development of a spatial microsimulation model at the farm-level to analyse on- and off- farm activities of Dutch farmers. ERSA 2009 Congress. 23p.

Van Leeuwen, Vreeker R., Bruinsma F. A comparative study of integrated river basin projects in Europe. ERSA 2003 Congress. 22p.

Van Ommeren Jos. The commuting distribution. ERSA 2004 Congress. 27p.

van Oort Frank, Raspe Otto, Burger Martijn, van Brussel Judith. Economic networks and urban complementarities in the Dutch Randstad region. ERSA 2006 Congress. 36p.

Van Oort Frank G., Raspe Otto. The knowledge economy and Dutch cities.

van Wee Bert. Innovations in Transportation: research and policy lessons of recent successful cases. ERSA 2003 Congress. 20p.

Van Wissen Leo, Schutjens Veronique. Geographical scale and the role of firm migration in spatial economic dynamics.

Verhoef Erik T. Second-best congestion pricing schemes in the monocentric city. ERSA 2004 Congress. 21p.

Verhoef Eric T., Rouwendal Jan. Pricing, capacity choice and financing in transportation networks. ERSA 2003 Congress. 26p.

Vermeulen Wouter. Interaction of Regional Population and Employment over Time: identifying short-run effects and equilibrium adjustment. ERSA 2004 Congress. 28p.

Vermeulen Wouter, Van Ommeren Jos, de Vries Jaap. Commuting and panel spatial interaction models: evidence of variation of the distance-effect over time and space. ERSA 2003 Congress. 18p.

Vermeulen Wouter. Interregional migration in The Netherlands: an aggregate analysis. ERSA 2003 Congress. 28p.

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