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1. Introduction

1.1. Welcome from the RSAI President

by *Budy P. Resosudarmo*, Crawford School of Public Policy, ANU College of Asia & the Pacific (budy.resosudarmo@anu.edu.au)



Hi friends and colleagues, Welcome to another edition of our newsletter. First of all, I would like to thank the RSAI Council for their decision to elect me as President of RSAI for the period of 2017-18 in place of Jacques Poot, who is unable to fill the position due to his wife's ill health. My sympathy to

Jacques and I hope his wife recovers soon. I would also like to thank Andrés Rodríguez-Pose for his willingness to extend his presidency while waiting for the RSAI Council to elect a new president.

This newsletter affords me the opportunity to congratulate Fu-Chuan Lai and colleagues for successfully organizing the 25th Pacific Conference of the RSAI held on 17 – 20 May 2017 in Tainan, Taiwan, and Paul Elhorst and his colleagues for successfully organizing the 57th ERSA Congress held on 29 August – 1 September 2017 in Groningen, the Netherlands. Many quality papers were presented at both conferences. I would like to thank Roberta Capello for leading the editorial board of *Papers in Regional Science* and maintaining the quality of the journal. I would also like to thank Tomaz Dentinho for taking up the leadership of the editorial board of *Regional Science Policy and Practice*. I also appreciate the contribution of several colleagues who have conducted various activities related to regional science and our association this year.

Recently our association has received applications from regional science associations in Armenia, Bulgaria and China to join the RSAI. Their applications were approved at the RSAI Council meeting in Groningen. We anticipate that their members will soon participate in our future activities.

During my presidency I do hope we can continue to conduct our association activities; deepening and expanding them. We should be able to maintain the excellence of RSAI in developed countries to enhance and deepen the knowledge of regional science. We continue to expand our regional science sections in developing countries, in particular Asia, Latin America and Africa. And, we should ensure the relevance of regional science for policy development in the world. To effect this, I would like to encourage further collaboration between national sections in conducting existing activities as well as more cooperation between academics from developed and developing countries and, whenever possible, to develop stronger "soft" cooperation between journals within RSAI. In my opinion, we should be aiming to establish RSAI as the foremost global association covering all regions in the world that significantly contributes to

the sustainable improvement of the wellbeing of all people living in it.

We will conduct the 1st Congress of the Latin American and Caribbean Regional Science Association in Sao Paulo, Brazil, on 11 to 13 October 2017 and the 64th Annual North American Meetings of RSAI in Vancouver, Canada, on 8 to 11 November 2017. I am looking forward to meeting as many of you as possible at these two conferences. Our World Congress will also be coming up very soon: our 12th World Congress will be in Goa, India, from 29 May to 1 June 2018. It is expected that this World Congress will be attended by members of all RSAI sections and I encourage all leaders of RSAI sections to encourage their members to participate. We should see this World Congress as a place to meet our friends and to expand our networks throughout the world. For more information about our World Congress:

<http://www.regionalscience.org/2018worldcongress>

See you in Goa next year.

Regards,

Budy P. Resosudarmo

1.2. Welcome to the 64th Annual North American Meetings of the Regional Science Association International, Vancouver, November 8-11, 2017

by *John Leatherman*, Local Organizer (jleather@ksu.edu) and *Hanna Maoh*, Program Chair (maohhf@uwindsor.ca)



John Leatherman



Hanna Maoh

On behalf of the North American Regional Science Council, the Canadian Regional Science Association, and the Mid-Continent Regional Science Association, we welcome you to Vancouver, British Columbia for the 65th Annual North American Meetings of the Regional Science Association International. We look forward to some exciting events this year including Mark Partridge's RSAI Fellow Lecture on Wednesday, Nov. 8, 6:30-7:30, "Follow the Money: Aggregate, Sectoral and Spatial Effects of an Energy Boom on Local Earnings." Alessandra Faggian's Presidential Plenary on Thursday, Nov. 9, 10:30-12:00 is titled, "What to do (if anything) with Peripheral Areas? Some Reflections." The Alonso Prize Lecture organized by David Boyce and Huw Williams and chaired by David Plane is, "Forecasting Urban Travel: Past, Present and Future" on Friday, Nov. 10 from 6:15 to 7:15.

Please explore the Vancouver region! There are plenty of local attractions within walking distance of the hotel including Stanley Park, Robson Street, Gastown, Chinatown, the Vancouver Art Gallery, and the Museum of Vancouver. The city also has a vibrant dining and bar scene. We've provided a list of things to do in Vancouver as well as links to tourism information resources in the conference section of the NARSC Website.

This year you have a wonderful opportunity to renew and expand your professional network. It is an excellent opportunity to learn about cutting-edge research in a variety of regional science disciplines. We hope that you enjoy catching up with old friends and making new acquaintances. Hopefully, these conversations will stimulate new ideas for collaborations ...and we can hear about them next year in San Antonio, Texas!

We'd like to extend our special thanks to Neil Reid and Matthew Lehnert for their ongoing support and guidance throughout the planning process, and Shakil Khan for assistance in constructing the conference program. Enjoy the conference and your visit to Vancouver!

1.3. Welcome from the Editors

by *Andrea Caragliu* (andrea.caragliu@polimi.it) and *Graham Clarke* (G.P.Clarke@leeds.ac.uk)



Andrea Caragliu



Graham Clarke

We are pleased to welcome RSAI members to the latest issue of the organization's Newsletter. This issue's main research theme is dedicated to the future of second rank cities. Despite a burgeoning literature discussing the overarching agglomerative forces leading to the concentration of people in increasingly larger cities, in fact, most of the world's population still lives in medium and small-sized cities, as well as in non-urban areas. While on the one hand this clearly defies traditional urban economics explanations, it also poses serious challenges in terms of managing such smaller urban areas. Maximizing the overall efficiency of the urban system, while also guaranteeing quality of life for non-major urban areas dwellers, is a major policy challenge. Ben Derudder, Diego Rybski, Rüdiger Hamm, Martin Rosenfeld, and Lewis Dijkstra share with us their ideas and the main findings from their recent research on this crucial issue.

For the other usual columns of the Newsletter, we first travel to Ritsumeikan University in Kyoto, this issue's Centre of Excellence in Regional Science; next, we take a connection flight to Melbourne, where Yves Zenou, this issue's Meet the Fellows hero, is located. Yves tells us about the way he got started with spatial topics and we are confident his story will inspire many

young Regional Scientists to undertake research in this exciting field.

The Newsletter also presents you the usual updates from the RSAI, with news about some of the most important recent associational events.

Have a nice read!

2. News from the RSAI Council

2.1. Notes from the Council on China, Armenia and Bulgaria

The Regional Science Association of China becomes member of RSAI

On August 31st in Groningen the RSAI Council unanimously accepted the Regional Science Association of China (RSAC) to be an associated member of RSAI with all the obligations and benefits of a section and its members. The RSAI Council also approved the creation of a Restructuring Committee whose task is to look at the evolution of regional science associations in Asia and in Africa and to propose to the RSAI Council, within three years, a restructuring of the organization conducive to worldwide coverage and to allow any section to be represented in various RSAI Councils. Until then the members of the Regional Science Association of China have access to all the rights of any other RSAI member including being elected for the RSAI Council as Councillors at Large. Once there has been a restructuring of RSAI more suited to accommodate Asian and African sections the sections in Asia and Africa that are not linked to any Supreregion can also have representatives belonging to their Supreregion in the Council.



Left to right: Budy Resosudarmo, President of the Regional Science Association International; Sumana Bandyopadhyay, President of the Regional Science Association of India; Tomaz Ponce Dentinho, Executive Director of the Regional Science Association International; Xue Ling, Vice President of the Regional Science Association of China

In the RSAI Council Xue Ling, Vice President of the Regional Science Association of China reported the evolution of regional policy in China since 1970s: i) the importance of Location Theory to support regional planning in the seventies; ii) the scientific background that accompanied the transition to a market economy in the eighties and nineties; iii) the theoretical framework to address the issues of urbanization and rural decline sensed at the turn of the century; and iv) the scientific requirements needed to support the ongoing development strategies (One Belt/One Road; Sustainable Development, Smart Specialization and Big Data management). Xue Ling informed the Council that since the creation of the Regional Science Association of China in 1991, following a visit of Walter Isard, there has been many regional science conferences, seminars and workshops with the participation of international researchers and that RSAC can account for around 1000 members and many more can join in the future. Finally, Xue Ling said that RSAC wants to reinforce international cooperation through the involvement in international meetings, the increase of international publications and exchange of professors and students.

Armenia - RSAI path to the Caucasus, Middle East and Central Asia

On August 31st in Groningen the RSAI Council also welcomed the Regional Science Association of Armenia (RSAA) as an associated member of RSAI. Anahit Harutyunian from the Armenia Delegation reported that since 2013 there has been regular annual regional science activities in Armenia (workshop in 2013, conference in 2015 and workshop in 2016) and participation of regional scientists from Armenia in European Summer Courses (2016) and Conferences (2015, 2016 and 2017). Anahit Harutyunian informed the Council that the legal entity created in Armenia and its integration within the RSAI community will allow the organization of regional science meetings in that central part of the world involving participants from Armenia, the region and the world. The plan is to cooperate in the development of regional science activities in neighboring countries in the Middle East and Caucasus. The Armenian Regional Science Association has 35 members and more members are expected also from Armenians in Diaspora.

Bulgaria – filling the gaps in Europe

On September 1st in Groningen the ERSAC Council approved the application of the Regional Science Association of Bulgaria that once ratified by RSAI Council in Vancouver will become part of RSAI. This steady enlargement of regional science associations to East European Countries creates the challenge to expand regional science activities in Serbia, Albania, Macedonia, Kosovo and Albania with organizations adapted to the characteristics of the Balkans where very good researchers can be contacted and very interesting topics deserve attention.

2.2. RSPP Annual Paper Award

This prize is awarded annually for the Best Paper published in *Regional Science Policy and Practice*.

For 2017, the winners are:



Akihiro Otsuka and Mika Goto (2015). "[Estimation and determinants of energy efficiency in Japanese regional economies](#)", *Regional Science Policy & Practice* 7 (2), 89-101

"The paper contains a full empirical attempt to model and a significant regional issue of policy and practice concern: the spatial patterns of energy efficiency across the prefectures of Japan. Useful findings of the study are clearly spelled out for policy-makers. The paper is itself a model of how regional science methods can be harnessed for making contributions to policy and practice. As such, is a most meritorious demonstration of the underlying concept for our relatively new journal and thus highly deserving of receiving the award. Identification and estimation of variables that are understood and can be used by policy -makers." and



Roberto Camagni and Roberta Capello (2015). "[Rationale and design of EU cohesion policies in a period of crisis](#)", *Regional Science Policy & Practice* 7 (1), 25-4

"A great literature review and an important (continuing) EU issue. A reflective and policy-prescriptive paper focused on EU regional policies in the context of a period of economic downturn. Broad-ranging, the paper marshals a variety of data to buttress its argument. A nicely done contribution. A prospective paper with great impact well rooted theoretically and with sound methods

2.3. Second Congress of the Regional Science Association of Morocco

On the 11th and 12th of October 2017 in Rabat the 2nd Congress of the Regional Science Association of Morocco took place with the general theme "*The Ambition of Sustainability from the Perspective of Territorial Complexity and Society of Risks*". With 85 participants, 89 presentations and 4 keynote speakers the Congress was a remarkable signal of the vitality of the Moroccan Regional Science Association and of the importance of Regional

Science in Morocco and in general in Africa. Participants came from Morocco, Algeria, Tunisia, Cameroon, Benin, France, Portugal and Brazil, both women and men, young and senior, with many diverse backgrounds representing the disciplines that compose regional science (economics, transport, agriculture, environment, planning and policy). Participants analysed the reality with sound methods, discussing their interesting results for the global literature on resilience and risk management; indicators of sustainable development; adaptation to climate change; territorial governance and regional development; ecosystem services; water and energy issues; and agriculture and food security.



Left to right: Eduardo Haddad from the University of São Paulo; Abdellatif Khattabi, Presidente of the Regional Science Association of Morocco; El Harrouni Khalid from National School of Architecture Rabat; El Hassani Ahmed from Institut Scientifique Rabat; and Tomaz Ponce Dentinho, Executive Director of the Regional Science Association International.

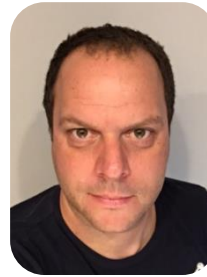
The keynote speakers offered interesting talks on stimulating topics: Reconversion of Mining Towns by Abdelaziz Adidi, Director de the Institute for Land Use Planning and Urbanism; Research Questions for Africa by Tomaz Ponce Dentinho from the University of Azores; Adaptive tools to address coastal risks by Maria Snoussi from the University Mohamed V in Rabat; and Trade in Water: constraints and perspectives by Eduardo Haddad from the University of São Paulo.

Next year, the third Congress of the Regional Science Association of Morocco will be in the North of the country, in Tangier or Tétuan. There, a growing number of participants is expected to join not only from Morocco and Africa but also from nearby European countries like Spain, Portugal and France. There are also sound plans to organize a Regional Science meeting in Tunis and within two years another Regional Science Conference in South Africa. Soon an African Network of Regional Science Associations will be created with the aim to promote the diffusion of Regional Science in Africa.

3. The future of second rank cities

3.1. The relevance of the regional and network embeddedness of second-tier cities

by Ben Derudder, University of Gent (Ben.Derudder@UGent.be)



The assumption that urban economic growth largely depends on agglomeration economies, and that these agglomeration economies mainly depend on urban size is increasingly being disputed. For example, there is now substantial evidence that in Europe larger cities are neither growing faster nor economically more successful than smaller cities:

population shares across the European city-size distribution remained relatively constant over the past few decades, while second-tier cities often outperform first-tier cities in terms of economic growth rates. These and related observations question all-too-straightforward links between city size and economic growth, and seem to contradict longstanding regional science and economic geography literatures stressing the prime significance of agglomeration economies for growth, as well as the new economic geography models that tend to predict the development of less and larger cities over time (see Dijkstra et al. 2013; Frick and Rodriguez-Pose, 2017).

Of course, these empirical observations do not need to fundamentally challenge received knowledge. Indeed, they may simply call for more nuanced appraisals of cities-as-agglomeration-economies. For example, it could be argued that a simple variable such as city size to gauge agglomeration economies is in practice problematic because of all sorts of intervening processes, ranging from the relevance of urban form to the absence of unified production functions for smaller and larger cities. In addition, identifying cities as bounded spaces in which agglomeration economies unfold is debatable in the face of the various geometries of agglomeration economies (Rosenthal and Strange 2003). Moreover, it has become clear that spatial extent of agglomeration economies often, and perhaps increasingly, stretches well beyond cities as we commonly conceive them (Parr 2002). Coupled with the observation that these regionally stretched agglomeration economies attenuate with distance, it becomes clear that research assessing the link between urban size and economic performance clearly needs to come to grips with the fact that urban boundaries are perforce regionalizing, contentious and fuzzy (van Meeteren et al. 2016).

However, recently we have also seen the development of research agendas that propose a more fundamental shift in our thinking. These research agendas emphasize the relevance of the network and regional embeddedness of cities. Here I briefly explore these – partly overlapping and intersecting – research agendas. First, it has been argued that in addition to localized externalities there are also ‘mobile externalities’ that are not

spatially constrained. This notion is best captured by the idea of 'urban network externalities' (Capello 2000), which refers to the benefits originating from the functional relationships between cities. For example, economic activities in the downtown centers of cities such as London, New York, and Hong Kong feed (on) each other by means of strong inter-city connections (Taylor and Derudder 2016). Connectivity in urban networks may thus provide a substitute for the benefits of agglomeration, and it has been argued that the performance of cities becomes increasingly dependent on their position in urban networks at different scales (McCann and Acs 2011).

Second, we have seen the re-introduction of Alonso's (1973) concept of 'borrowed size' (see Meijers et al. 2016). The notion of 'borrowed size' emphasizes the role of the wider regional context in which 'cities' are located, and perhaps above all the possibility for small and medium-sized cities to internalize the agglomeration economies of nearby larger cities, while avoiding their agglomeration costs. When urban constellations in a region are adequately internally connected into a 'polycentric urban region', preferably by means of a transport and communication system that is fast and congestion-free, such a regional system can be expected to share agglomeration externalities between cities. This research agenda clearly shares some ideas with research on 'regional externalities' and the 'urban network externalities' literature because network connectivity in a regional cluster of cities is a key prerequisite for borrowed size to occur, yet there is an additional focus here on how multiple settlements (potentially) share agglomeration externalities.

Taken together, both challenges to the overgeneralized bigger-is-better notion stress that the regional and network embeddedness may be becoming more important for urban performance. This may in turn help explain why relatively smaller cities have the opportunity to compete with larger ones, provided that they are well connected in regional, national and international networks. Clearly this does not question the relevance of agglomeration benefits as a driving force of urban-economic dynamics, but it does suggest that multiscale networks of cities may replace or complement more traditional localized externalities. This leads to a number of emerging research questions, some of which were explored in a recent special issue of *Papers of Regional Science* (Burger and Meijers, 2016). For example, one key question is how agglomeration and network externalities interact. Testimony to the relevance of this reading is that it is implicitly addressed in some of the most cited papers in the spatial-economic sciences in the 1990s and the 2000s (e.g., Amin and Thrift 1992, Bathelt et al. 2004). Yet, relatively little is known about the relative importance of urban network externalities at different scales vis-à-vis agglomeration externalities, or which types of cities would profit from what type of network externalities.

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3.2. Agglomerations economics of CO2 emissions

by Diego Rybski, Potsdam University (diego.rybski@pik-potsdam.de)

President Donald Trump announced on June 1, 2017 that the U.S.A. would cease all participation in the Paris Agreement. The 2015 Paris Agreement on climate change mitigation represented an unprecedented success of global diplomacy after decades of efforts, first in the scientific arena and later in international negotiations. While in the early years of climate change research, the earth system was mostly investigated from a physical perspective, lately a variety of socio-economic facets have been added to the international research agenda. In line with these developments cities have also caught the attention of climate scientists. Due to their comparably small physical extent, cities play a negligible role in global climate models. Nevertheless, they represent singularities in space with extreme densities of people and assets. On the one hand, cities are blamed for emitting the majority of anthropogenic CO2 and thereby driving climate change. On the other hand, cities are expected to suffer the most from climate change consequences, including natural hazards, heat waves, etc. Thus, it is not surprising that two large conferences are dedicated to "Cities and Climate Change";



namely 19-21 September 2017 in Potsdam, Germany, and 5-7 March 2018 in Edmonton, Canada.

Despite their ambivalent role in the complexity of climate change, most researchers agree that cities could also be a solution. The intuitive argument is that due to economies of scale cities could be more efficient. One expects positive effects, such as (i) more economic output per capita and (ii) less per capita CO2 emissions, and negative effects, such as (iii) more urban heat and (iv) increased vulnerability to natural hazards. Certainly, the challenge is to optimize any of these aspects. In the following section I want to discuss some new findings regarding item (ii).

The evidence is mixed whether cities exhibit de- or increasing returns to scale of CO2 emissions with city size. Therefore, we recently adopted the well-known Kaya Identity which is given by

$$C = P \cdot G/P \cdot E/G \cdot C/E$$

where C is CO2 emissions, P is population, G is GDP, and E is energy. The identity can be used to understand if particularly low/high emissions from a country are due to the low/high GDP per capita (G/P), energy intensity (E/G), or carbon intensity (C/E).

If we assume scaling relations

$$G \sim P^\beta$$

$$E \sim G^\alpha$$

$$C \sim E^\gamma$$

$$C \sim P^\varphi$$

as typically found for cities, then we obtain

$$\varphi = \beta \cdot \alpha \cdot \gamma$$

which we call "Urban Kaya Relation" (Gudipudi et al. 2017). If we find sub-linearity ($\beta < 1$) then, ceteris paribus relative to their size, large cities emit less CO2 than small ones. The Urban Kaya Relation indicates where this efficiency is stemming from.

Our results show that large cities in developed countries are typically more emission efficient than smaller ones due to their less than proportional emissions given their energy consumption. In contrast, larger cities in developing countries are typically less emission efficient owing to more than proportional GDP and emissions with respect to population and energy consumption, respectively. The evidence, however, is still weak due to a lack of consistent cross-country data.

Nevertheless, more and more data is collected on the city scale and – to close the circle with the introduction – more than 300 mayors in the USA have signed a document to abide by the Paris accord.

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3.3. Medium Sized Cities: Ideas for a new European Urban Economic research agenda

by Rüdiger Hamm,¹ Niederrhein University (ruediger.hamm@hs-niederrhein.de) and Martin T.W. Rosenfeld,² University of Halle (Martin.Rosenfeld@iwh-halle.de)



The document "Cities of Tomorrow," compiled under the leadership of the Directorate General for Regional Policy of the EU, further develops and solidifies core thoughts of the development strategy of Europe 2020. Under the headline "Cities are decisive for the sustainable development of the European Union" the executive summary of this document (European Commission 2011, p. VI) substantiates amongst others that the development of cities will determine future economic, social and territorial development of the European Union, and that cities will become decisively important for their surrounding areas as economic engines, places of networking, creativity and innovation, and as business centres. Furthermore, a description of a common vision can be found (European Commission 2011, p. 10ff), in which cities can be viewed as (or can be expected to become) places of social progress, platforms for democracy, cultural dialogue and diversity, places of ecological and environmental renewal, as well as places with a high level of attractiveness and engines of growth. This view coincides with modern approaches of regional economic theory; often cited in this context is the statement by Fujita and Thisse (2002) that "agglomeration can be thought as the territorial counterpart of economic growth".

The authors live in Krefeld and Halle – two German Cities with 225.000 and 237.000 inhabitants respectively – and at the moment they have reasonable doubts that these two cities are able to fulfil the European Commission's high expectations, especially that these cities really belong to the European growth engines. Cities like Krefeld and Halle can as well be found in other parts of Germany. A typology of German cities (Bertelsmann Stiftung, 2016) classifies both cities together with 138 other German municipalities as "economic centres with low dynamics of economic growth". Common features of this type of cities are: they are urban centres with a high population density, they have a low dynamic of economic growth, they are characterised by relatively low incomes and limited purchasing power, many people living there receive social transfers, the share of poor children is high and these cities often bear the

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² IWH - Halle Institute for Economic Research – Member of the Leibniz Association, Halle on Saale, Germany.

burden of a high public debt. And a lot of examples of this type of city can also be found in most other European countries. According to Haase et al. (2016) only one-third of all European cities have enjoyed continuous population growth since the Second World War; Turok and Mykhnenko (2007) state that more than 40 % of all large European cities are shrinking. Therefore, urban shrinkage has become an important phenomenon in Europe and the topic of urban shrinkage is strongly connected with the topic of slowly growing cities. For politicians at all levels of government (local, national, European) this leads to the question whether economic policy should support these cities – and if so: by which measures – or is it better to concentrate political support on the main metropolitan areas of each country?

The problems briefly outlined before marked the starting point of a research project which is until now just a cooperation of the authors and a PhD-student (Anna Herzog), but should – from our point of view – become an international comparative project. Our research agenda so far is focusing on cities...

- ... that are Medium-Sized Cities (MSCs). MSCs neither are “Mega Cities” or capitals nor do they belong to the group of the somewhat smaller “Second-Rank Cities”, but are cities with about 100,000 to less than 500,000 inhabitants – they are kind of “Third Tier Cities”. Furthermore, MSCs constitute a type of city that is characterized by a large heterogeneity – some of them are currently developing quite well, especially if they are well equipped with universities and public research institutes, others are shrinking, stagnating or can best be described as slowly growing cities. They are a widespread and very relevant type of city in Germany and in Europe: More than 40 percent of European urban population are living in cities like this, while only 20 percent are living in urban agglomerations with more than 2.5 million inhabitants (Giffinger, R. et al. 2007, p. 3). These figures emphasize that European MSCs play a significant role regarding population, GDP, employment and economic development in Europe.
- ... that often have been quite successful in the past (especially in the old industrial times), but which are currently slowly growing or shrinking and are faced with multifaceted social and economic problems – therefore producing doubts whether they are able to fulfil the expectation of being European growth engines.
- ... that form a class of cities normally neglected in regional science, especially as to international comparative analyses which are either focusing on metropolitan areas (first or second tier cities) or on the problems of rural and peripheral regions.

The objective of our project is to take an inventory of research on urban decline and shrinkage, to put different elements of this research into a common context and, thus, to improve the understanding of urban decline in general and especially for the case of MSCs. In detail several research questions should be asked or renewed in the context of MSCs:

- How can the heterogeneous developments of MSCs be explained? Which types of MSCs are affected by slow growth, shrinkage or decline? What reasons – beyond the much too general explanation of “structural change” – cause problems for formerly successful MSCs and why are some of them more successful in adapting to these problems than others?
- Which factors increase or reduce a MSC’s risk of becoming and remaining a city in decline? What factors increase its ability to adjust to any kind of structural change? Which conditions must be fulfilled by a city to be “resilient” against urban decline and which circumstances make cities vulnerable to urban decline?
- Which already existing elements of regional economic theory can be used to answer these questions?
- What can and should be done to strengthen the ability of MSCs to fulfil their role as future European growth engines? Should policy just concentrate on MSCs of certain types and neglect other types – or would it be better to just concentrate all efforts on primate cities?

From our point of view two lines of research might help to find answers to these questions:

- On the one hand a more general approach can be used to analyse the existing theoretical and empirical literature. Therefore, one part of our future research will be to develop a theoretically based framework and, thereafter, to use this framework for analyzing and comparing as many international case studies as possible on cities and regions in decline.
- On the other hand a more specific approach can be used. In another part of our research we therefore intend to elaborate single or comparing case studies using the same or a similar research concept. The research concept is already developed and it is (or will be) applied in case studies for some East-German cities (Halle, Chemnitz, Rostock) and for two former textile cities (Mönchengladbach in Germany and Mulhouse in France).

Especially in relation to the second approach it would be interesting and helpful to find international research partners interested in the topic of MSCs and in elaborating comparable case studies for other cities. These ideas – as well as some first results – have been presented during a special session on “Slowly Growing Cities” at the annual congress of the European Regional Science Association (ERSA) in Groningen (the Netherlands). The special session was a platform to discuss these issues and an opportunity to find international partners interested in the described topic. Scholars who are interested in this research are cordially invited to contact the authors. We are planning to start with an expert workshop on discussing our criteria for comparative urban research within the first half of next year.

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3.4 Why we need a global, people-based definition of cities and settlements

by Lewis Dijkstra, Economic Analysis Unit - European Commission DG for Regional and Urban Policy (Lewis.DIJKSTRA@ec.europa.eu)

'Make cities and human settlements inclusive, safe, resilient and sustainable'³ is the UN sustainable development goal specifically dedicated to cities and settlements. Several of the targets and indicators linked to this goal should be measured for each city.



So far, however, cities are left undefined. This has significant drawbacks as many of these indicators are highly influenced by whether the boundary is drawn only around the dense urban core or the wider urban agglomeration. For example, access to public transport will be high in the centre, but much lower in outlying suburbs. Increases in the built-up area will primarily occur at the edge of the city and little will change in the city centre as it is already mostly built-up. Open space will usually be more prevalent in suburban areas than in city centres.

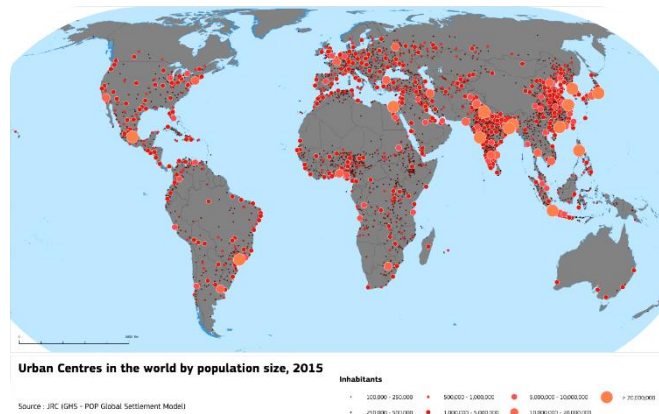
To allow meaningful comparisons between cities across the globe, a global definition is needed of where a city stops. At the UN-Habitat III conference in Quito last year, the EU, the OECD and the World Bank committed to developing such a definition. This effort has since be joined by the FAO and is supported by UN-Habitat. The goal is to present this to the UN Statistical Commission by 2019.

This work has started by applying the degree of urbanisation (Dijkstra and Poelman 2014) to the globe. To do this, the Joint Research Centre developed a new and freely downloadable global population grid⁴ based on a combination of remote sensing and the global population data collected by CIESIN⁵. The degree of urbanisation identifies (1) cities, (2) towns and suburbs, and (3) rural areas. Cities are defined by an urban centre which consists of contiguous grid cells of 1 sq km with a density of at least 1,500 inhabitants and at least 50,000 in the

centre. This first application has identified 10,000 cities (see map).

This new data source opens many new opportunities, including analysing the role of second-tier cities. Urban research often targets global cities and capital cities, while the role of second-tier cities is less frequently discussed. Also in investment decisions, the capital city is often heavily favoured over the other cities in the country (Dijkstra 2013, Dijkstra et al 2013).

The World Urbanizations Prospects is the most cited source for global urbanisation levels. It provides a global coverage, but based on national definitions. For example, the minimum population threshold to be considered as an urban area varies between 200 and 50,000 (UNPD 2014). As a result, what is classified as urban in one country may become rural in another. It should not come as a surprise that using a single definition based on population grids yields a, sometimes radically, different picture (European Commission and UN-Habitat 2016) (Pesaresi et al. 2016).



The degree of urbanisation provides a neutral and comparable way of defining a city. As a result, indicators based on this definition will be much more comparable than those based on national city definitions.

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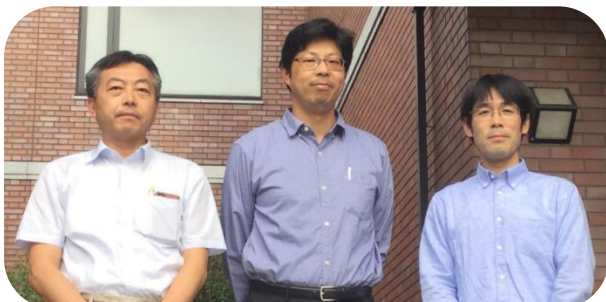
4. Centres of Excellence in Regional Science: Regional Science, Geography and GIS & GISc at Ritsumeikan University

by Keiji Yano, Tomoki Nakaya and Kazumasa Hanaoka, Geography Department, and Hidehiko Kanegae and Yusuke Toyoda, Policy Science
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The Institute of Disaster Mitigation for Urban Cultural Heritage

Ritsumeikan is a large private university in Kyoto, Japan, which was first established as a private academy in 1869 before receiving a modern university charter in 1922. Ritsumeikan University offers a wide range of courses in advanced studies at its Kinugasa Campus in Kyoto (KIC), Biwako-Kusatsu Campus (BKC) in Shiga and Osaka-Ibaraki Campus (OIC) in Osaka. The year 2000 marked the 130th anniversary of the founding of the Ritsumeikan private school and the 100th year since the establishment of Ritsumeikan University.



Prof. Dr. Keiji YANO, Prof. Dr. Tomoki NAKAYA and Associate Prof. Dr. Kazumasa HANAOKA, Department of Geography

Ritumeikan University has very strong departments related to regional science, economics, geography and Geographical Information Science. The Geography Department belongs to the Area Studies Program in the College of Letters (KIC) together with Regional Tourism and Kyoto studies (<http://www.ritsumei.ac.jp/acd/cg/lt/asp/eng/index.html>). The Ritsumeikan Geography programme, with more than an 80-year history, provides an opportunity to study wide-ranging topics, from Japanese historical and cultural geography to advanced geography encompassing natural, social, and human sciences. Twelve leading academic staff members specializing in all types of fields meet the diverse demands of students, businesses, and the community. The Geography Department is also famous for leading GIS and GISc education and research in Japan. Our recent research topics include human impact on environmental changes and natural hazards, and our outputs have brought practical benefits to society. The Geography department has played a major role in the "Digital Humanities Center for Japanese Arts and Cultures" at the Art Research Center (<http://www.arc.ritsumei.ac.jp/en/index.html>), and "Disaster Mitigation of Cultural Heritage and Historic Cities" at the Institute of Disaster Mitigation for Urban Cultural Heritage (<http://rdmuch.jp/en/index.html>). These advanced research projects have been promoted based on the Global Center of Excellence (COE) Programs funded by the Japanese Ministry of Education and Science and they also contribute to the accumulation of academic knowledge.



Prof. Dr. Hidehiko KANEGAE, Associate Prof. Dr. Yusuke TOYODA and Assistant Prof. Dr. Satofuka ONO, College of Policy Science, Member of JSRSAI

Another area of Regional Science study at Ritumeikan is the College of Policy Science (<http://en.ritsumei.ac.jp/ps/>), OIC. From the view point of sustainable urban and regional planning & development and disaster mitigation, faculty members are engaged in regional science academically and administratively. The Policy Science department has fifty academic staff members specializing in interdisciplinary fields from Political Science, Economics, Urban Planning, Environmental Science and Business Administration toward policy making and formation. The College of Policy Science specializes on problem-solving and making policy recommendations. Some of the Policy Science members are also affiliated with the Art Research Center and the Institute of Disaster Mitigation for Urban Cultural Heritage mentioned above. Moreover, the faculty members play a major role in the Research and Development Institute of Regional Information (<http://www.ritsumei-rdiri.org/english/>).

Professors Hidehiko Kanegae and Yusuke Toyoda from the Policy Science department at Ritsumikan University organized the 54th Annual Meeting of the Japan Section of the RSAI from Friday the 6th to Sunday the 8th of October, 2017 in Kyoto, Japan.

http://jrsai.jp/wp/wp-content/uploads/2017/07/20170721RSAI54Conference_eng.pdf
We are looking forward to seeing all of you one day in Kyoto.

5. Meet the Fellows: Yves Zenou

by Yves Zenou, Department of Economic, Monash University, Australia
(yves.zenou@monash.edu)

We are the product of the choices we make but also of the people we meet. This is particularly true for me and for my research interests. Indeed, in August 1987, when I finished my Master's Degree in Economics and Econometrics at the Université de Paris 10 (Nanterre), I was looking for a possible dissertation topic for a PhD. I had the chance to meet Gerard Ballot, professor at the Université Pantheon-Assas (Paris 2), who suggested that the analysis of spatial labor markets could be an interesting and challenging topic. I decided to embark on this journey, having for sole reference the seminal paper of Harris and Todaro published in American Economic Review in 1970. In my dissertation, I studied the spatial aspects of labor markets, both from theoretical and empirical perspectives. I defended my dissertation in December 1991. I then met Jacques Thisse, professor at CORE in Belgium, who really taught me how to do research. My intellectual debt to him is immense. We wrote several articles together on the theory of local and regional labor markets. Jacques introduced me to Masahisa Fujita and Tony E. Smith, the leaders of the regional science group at the University of Pennsylvania. For me as a junior researcher in 1995, working with Masa and Jacques, two well-established urban economists, was a very challenging experience. I learned a great deal from this collaboration. My meeting with Tony Smith was also decisive. He taught me the rigor of mathematics and the way to prove theorems. Simplicity, kindness, and complexity are certainly good ways of describing Tony. At that time, I also worked with Marcus Berliant who taught me mathematical tools I had never heard of before: differential topology. Diving into the world of general equilibrium with its infinite dimensions and manifolds was a very important experience. It helped me understand the way a general equilibrium is calculated and how one proves its existence and uniqueness. I then collaborated with Jan K. Brueckner who helped me fathom the way to write simple models in order to capture complex economic situations. After having had these different mentors, I was able to work on my own and collaborate with younger researchers.

A large part of my research in Regional Science and Urban Economics has been to study the links between urban economics and labor economics. I believe that many key issues in urban economics can be analyzed in a new and deeper way when the labor market is introduced. In particular, the emergence of urban ghettos and its consequences for the labor-market outcomes of ethnic minorities is difficult to understand if the land and the labor market are not integrated. For example, there is an important empirical literature,



revolving around the "spatial mismatch hypothesis", which states that, because ethnic minorities are physically distant from job opportunities, they are more likely to be unemployed and to obtain low net incomes. Surprisingly, the numerous empirical works which have tried to test the existence of a causal link between spatial mismatch and the adverse labor-market outcomes of minorities are usually not based on any theory. In different papers, I could provide different mechanisms for the spatial mismatch hypothesis. My book, *Urban Labor Economics*, published by Cambridge University Press in 2009, summarizes all my contributions to this area of research.

In 1998, while I was actively working on urban-labor-market issues, I had the chance to meet a young researcher, Antoni Calvó-Armengol, who was working on a new field in economics, namely network economics. I had to invest a lot in new mathematical tools, such as graph theory and discrete mathematics, to be able to enter this new area of research. Thanks to him I learned relatively quickly these tools and started to apply them to different aspects of the economy. Indeed, network economics analyses the economy not in isolation, but as part of the social structures that support it. Network economics looks not only at direct interactions between two people, but the ripple effect of interconnected links between their friends, friends-of-friends and so on.

Topics such as crime sound more like sociology than economics. But a crucial difference is that network economics provides a mathematical model to interpret behavior and test relationships, allowing for predictions. Indeed, economics has always struggled to explain crime and that's exactly the kind of problem network economics is designed to tackle. With Antoni Calvó-Armengol

and Coralio Ballester, I have developed a concept called the “key player” that is useful in understanding and targeting criminal networks. Who is the criminal you want to remove from the network so you will reduce total crime the most? We have a mathematical model that can solve this question. To test the key-player idea in the real world, I have worked with the police in Sweden to obtain data on all co-offender criminals. When I asked the police which criminals to target, the answer seemed obvious for them – to cut crime, go after the kingpins. But identifying who these were was not necessarily easy. The police had a lot of data, but no scientific method to sort it with. They tended to concentrate on major groups, such as immigrants, or people with existing criminal records. I took a different approach. Each time two people committed a crime together, I linked them in a graph (co-offender networks). Gradually, I created a network with this information, charting the links and different connections between them all. By doing so, I was able to arrive at ‘key players’ the police should be targeting. When someone is removed I could analyse the impact of those remaining. Key players are the ones that show the biggest impacts. People react: they form new links, or commit more crime. My research shows that targeting key players can reduce crime by 20-30% compared to targeting the most active criminals.

Financial markets are another application. In the wake of the global financial crisis of 2008, I looked at the global banking sector. Here I wanted to answer several questions: in a financial crisis, which institution do you want to bail out, to avoid contagion? How does the risk spread through the balance sheet? And which bank should be allowed to fail? The impact of large key players considered “too big to fail” - such as US investment bank JP Morgan and General Motors – may be obvious, but I wanted to understand much more about the impact smaller players may have on the system. My research showed that the bank you want to bail out is not necessarily the one with the highest market share and profit, but the one with a central position in the network of interbank loans.

I strongly believe that network economics is within the purview of regional science and urban economics. To understand this, let’s go back to the issues mentioned at the beginning of this article, i.e. the study of the labor-market outcomes of ethnic minorities. Clearly, distance to jobs is crucial for understanding why ethnic minorities experience adverse labor market outcomes. But this is not the whole story. There are other elements at stake since even when black workers live close to jobs (e.g. in New York City), they still have problems in finding a job. Social networks are obviously an important part of the story and are not always related to the distance to jobs.

There is indeed strong empirical evidence showing that social networks play an important role in the job search and job finding processes. Individuals seeking jobs read newspapers, go to employment agencies, browse on the web and mobilize their local networks of friends and relatives. In my recent research, I tried to put together urban labor economics and network economics by studying the relationship between non-market interactions (or peer effects and social networks) and urban

economics through the labor market. For example, I studied how residential location determines social interactions which, in turn, affect labor market outcomes. Building on Granovetter’s idea that weak ties are superior to strong ties for providing support in getting a job, I showed that, if minority workers do not have access to weak ties, in particular because they are segregated and separated from business centers, then their main source of information about jobs will be provided by their strong ties, also residing in segregated areas. But if the latter are themselves unemployed, the chance of escaping unemployment will be very low. As a result, a policy aimed at reducing the unemployment of ethnic minorities needs to take into account the fact that they are separated both in the social and the geographical space, and this is what prevents ethnic minorities from finding a job.



In terms of academic career, I have changed countries and moved around a lot. I started as an assistant professor at the Université Pantheon-Assas (in Paris) in 1992, did a post-doc for two years at Center for Operations Research and Econometrics (CORE) in Belgium (1994-1996), became a professor at the Université du Maine, in Le Mans, France, in 1998, then took a professor position at the University of Southampton, UK, from 2000 to 2003. After that, I moved to Stockholm, to be a professor of economics, first at the Research Institute of Industrial Economics (IFN) and then at Stockholm University. In between, I visited the University of California, Berkeley, for one year (2009-2010). In January 2016, I moved to Melbourne, Australia, and I’m currently a professor of economics and hold the Richard Snape Chair in Business and Economics at Monash University. I have been the co-editor of Regional Science and Urban Economics for the last 10 years (starting in 2007) and have been recently elected Fellow of the Econometric Society (2016), which is rare among regional scientists (only two other RSAI Fellows have received this honour).

6. Call for Abstracts: 12th World Congress of the RSAI, May 29 to June 1, 2018, Goa, India

The Regional Science Association International (RSAI) and the Regional Science Association of India invite regional scientists, economists, economic geographers, urban planners, policy makers, and researchers of related disciplines to participate in the 12th World Congress of the Regional Science Association International, with the main theme "Spatial Systems: Social Integration, Regional Development and Sustainability". The Congress will be hosted by the Regional Science Association of India.

We invite formal paper presentations (deadline of **November 30, 2017**). The [abstract submission portal](http://www.regionalscience.org/2018worldcongress) is now open. Full information on the venue, abstract submission, registration, schedule of events, accommodation and travel information is posted at www.regionalscience.org/2018worldcongress



About the Focal Theme

Across the world, communities are striving to achieve an ecologically and socially secure future. The intricately linked ideas of sustainability and integration are the key to achieving our development goals. As regional scientists, our common pursuit of a sustainable future may be attained with more efficient understanding of the 'region' as a spatial unit. Keeping this objective in mind, the theme of the 2018 Congress highlights the importance of analyzing spatial systems as not just physical space or social space, but shared space. The sub-themes will be aimed at providing a platform for debates and discussions around the key issues of contemporary regional science and carve out the way to future research agenda.

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SS00 – Forty Under Forty

Geoffrey Hewings

SS01 – Water management in South Asia: From conflict to cooperation

Paulo Casaca

SS02 – Smart Cities Initiatives for the 21st Century: Myth or Reality

Sumana Banerjee and Vijay Pandey (Chair)

SS03 – Territorial Governance and Local Development in Developing Countries

Andre Torre (Chair) and Habibullah Magsi

SS04 – Spatial Econometric Interaction Modelling

Manfred M. Fischer (Chair) and Yee Leung

SS05 – Spatial Analysis: From Neural Computing to Deep Learning

Yee Leung (Chair) and Manfred M. Fischer

SS06 – Walled Territories

Andrea Székely

SS07 – Economic Corridors, Development and Regional Cooperation in South Asia and Beyond

Siegfried O. Wolf

SS08 – Metropolitan Governance in a conflict, competition and cooperation contexts

Jorge Gonçalves

SS09 – Analytical Approaches to Climate Change at Multiple Scales

Gerrit-Jan Knaap

SS10 – Rural Transformation

Subrata Dutta

SS11 – The future of leisure: tourism, mobility and transportation

João Romão (Chair), Peter Nijkamp and Luca Zamparini

SS12 – Transforming Metropolitan Regions: Ideas and Examples

Amit Chatterjee

SS13 – Citizenry and Regional Planning

Subhra Chattopadhyay

SS14 - Revisiting rural-urban dichotomy for integrated regional development

Manisha Jain and Artem Korzhenevych (Chair)

SS15 - Conflict, Migration, and Diaspora

Manas Chatterji

SS16 - Comparative Patterns of Indian and Chinese Urbanization

Manas Chatterji

SS17 - Regional Science and Peace Science

Manas Chatterji

SS18 - Natural and Man-Made Disaster Management

Manas Chatterji

SS19 - Globalization and Regional Science

Manas Chatterji

SS20 - Gender and Social Justice

Saraswati Raju

Regular Sessions

RS01 - Big Data for Regional Science

RS02 - Cooperation and Development

RS03 - Environmental Issues

- RS04 - Infrastructure, Transportation and Accessibility
- RS05 - Innovation and Entrepreneurship
- RS06 - Location of Economic Activity
- RS07 - Methods in Regional Science and Urban Economics
- RS08 - Migration and Labor Markets
- RS09 - Real Estate and Housing
- RS10 - Regional and Urban Policy and Governance
- RS11 - Regional Finance, Investment or Capital Markets
- RS12 - Rural Development
- RS13 - Social Integration
- RS14 - Spatial Planning
- RS15 - Spatial Systems in Transitional economies
- RS16 – Tourism

We look forward to welcoming you in the dazzling city of Goa in May 2018.

With warmest regards,

The Organizing Committee

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RSAI NEWSLETTER, the newsletter of the Association, appears two times a year and contains information about upcoming conferences and meetings, recent publications and a periodic guide to graduate programs in regional science. Please send all electronic submissions of material for the RSAI Newsletter directly to andrea.caragliu@polimi.it and/or G.P.Clarke@leeds.ac.uk.

In addition to the RSAI publications, members are offered an opportunity to purchase other regional science journals at reduced rates and participate in the national and international conferences at reduced rates.

For details on how to become a member, contact the Executive Director at rsai@apdr.pt or visit www.regionalscience.org

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