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## Regional Science and the Economic crisis

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## 1. Introduction

### 1.1. Welcome from the President: Economic crisis and regional policies: the role of RSAI

*Roberta Capello*



The financial and economic downturn that hit the main economies of the world has not yet ended, but its social effects are already evident: high unemployment,

social problems, loss of purchasing power by retirees and low income people. Macroeconomic policies developed to recover from the crisis have different impacts at the regional level, and modern economies will emerge from the crisis with a “two-speed growth model” that will reinforce regional disparities. For this reason, structural, long-term, supply-side policies must complement public investment to limit the territorial asymmetries caused by the recession period. In advanced regions in this period, structural policies must be devoted to reducing the social costs of the crisis, while in weak areas they must support the few indigenous activities that are present (like entrepreneurship and innovation capabilities). The integration of short- and long-term policies managed at different governmental levels is a key to long-run success. Regional long-term policies must be devoted to increasing efficiency, innovativeness, and competitiveness in those sectors where short-term policies are intended to increase consumption. All regional structural policies must be based on the uniqueness of places by reinforcing the assets and core competences already present in the

area. Turning Territorial Diversity into Strength (the title of the “Green Paper on Territorial Cohesion”, by the EU, 2008) summarizes this notion to synthesize the idea that regions should build their competitive advantages from below, investing in their particular competences, resource endowments and even weaknesses, renovating their productive ‘vocations’ and cultural assets. Regional scientists with a worldwide vision will be of primary importance to suggest a new path towards a balanced development, and RSAI is the right vehicle for scientists to obtain a global perspective of regional economic problems, of their possible interpretations and policy solutions. I am glad to say that our RSAI family is enlarging and expanding its presence in new countries and new areas. The Colombian section of RSAI has been officially established, and the Argentinean one will follow soon. Also in East Asia new expansion possibilities are present and I look forward to welcoming new Asian sections. In an integrated and global economy like the present one an internationally widespread Association is a valuable asset not only for our scientific community, but for the future of our society.

### 1.2. Welcome from the Editors



Welcome to the 3<sup>rd</sup> edition of the revamped RSAI newsletter. The theme

for this edition is the recent global economic and financial crisis which continues to impact on world economies and of course has been particularly newsworthy recently in Greece. We have major contributions from Roberta Capello, Phil McCann, Patricio Aroca and a panel of young scientists from the ERSA conference in Lodz. Our regular features continue, with a profile on RSAI Fellow David Boyce, a trip around a leading RSAI centre of research (Jacques Poot and his team from Waikato) and an introduction to regional science in Bangladesh (one of the newest sections). In between we have plenty of news and gossip! Please note that the first two editions of the new newsletter are available directly from the RSAI website (look under publications). As ever, please get in touch with news, offers of reports etc or simply open letters. Enjoy volume 3! (e-mails at the end of the newsletter)

## 2. Economic Crisis (1): views of ERSA young scientist panelists

The economic crisis is global but its consequences are local. Crises affect different regions in different ways. In the European Union, while Poland was able to avoid a decline in GDP, its neighbours Ukraine and Hungary found the impacts to be very severe (and now Greece has hit the headlines with its financial crisis). What do such crises tell us about the spatial dimension of economic performance? In this contribution, the participants of the 2<sup>nd</sup> young regional scientist's round table that took place during the 49<sup>th</sup> Congress of the European Regional Science Association in Lodz will share their thoughts with us.

Regional science has now a long tradition of research in the role of

geography in economic growth. We know now that geography matters, also (or especially) in times of economic crisis. Yet, for small and peripheral countries, the question remains unanswered: does geography condemn us to be forever peripheral to growth while incredibly vulnerable to decisions made in the distant hubs of the world or can we consciously and knowingly shape our more peripheral cities to be new centralities?

*Ioulia Ossokina, CPB Netherlands Bureau for Economic Policy Analysis*



A recent paper by Reinhart and Rogoff examines the aftermath of several financial crises and concludes that these crises have deep impacts on output, asset (housing) prices,

employment and government budgets. A key question is which region-specific factors may affect the negative impacts of a crisis? CPB Netherlands Bureau for Economic Policy Analysis recently published a book on the current crisis. This book analyzes factors that may influence the depth of the crisis. Some of these factors do vary by country or even by region within a country. These include:

- A strong dependence of a region on export markets, especially those hit by the crisis, increases the negative regional impact of the crisis, while diversification in export markets may smooth the blow.
- A bubble in the regional housing market before the crisis may considerably increase the depth of the crisis through a drastic fall in house prices. Decreasing house values, together with large mortgage loans, negatively

- impact investment and lead to a decrease in consumption.
- Employment protection policies tend to delay the economic recovery as firms wait longer to remove less productive employees and delay hiring new people when the economy recovers. More generous unemployment benefits have a positive economic impact in the time of the crisis as they help maintain purchasing power.
  - A relatively small budget deficit before the crisis is likely to smooth its budgetary consequences and contribute to a quicker recovery.

The variation in these elements may help explain the regional variations in the depth of the crisis. However, the global nature of the current crisis, and any mutual regional interdependence, may make it harder for regions to get out of the crisis.

*Signe Jauhiainen, researcher at the University of Jyväskylä*



In a small open economy, the export sector has a significant role as an employer in regional labour markets. Therefore, the regional unemployment rate increases

when the global demand for export products decreases. In this situation individuals might decide to migrate in order to enhance their employment opportunities. Consequently, a region might encounter loss of population and human capital. These local consequences might affect the regional economy in the long-term. When the global economic crisis has caused unemployment in regional labour markets, the influence of public sector

interventions might be limited. However, these interventions are needed. For example, the social inclusion and employment of younger workers is crucial when the crisis has increased the unemployment rate of young people. The labour market participation of the younger generations might be difficult after the crisis without interventions. Nevertheless, growing firms and new jobs are essential to regain economic growth in regional labour markets.

*Silvia Golem, PhD at the University of Split*



While by regional crisis we typically mean some supply-side problem and expect the regional authorities to respond to it through a range of supply-side

measures, this global economic crisis calls for different type of measures. Whatever the causes of this global economic crisis, it seems that the problem is lack of demand. As a consequence, the majority of the fiscal measures that developed countries have so far employed to alleviate the economic effects of the financial crisis, are mostly taken from the central government level. Regional development authorities do have a role in the delivery of regional public works programmes; but at the moment, it seems that they have little, if any, strategic role in monetary and fiscal policy. In the long run, however, regional development authorities play an important role – they are expected to get regional economies into good shape on the supply side, so that they can respond to demand growth and make the recovery less painful.

Sara Levy, PhD at the Radboud University Nijmegen



The economic crisis is global, but can solutions be local? In this era of devolution, “local solutions” might help ease the blow of what seems to be beyond a region’s control.

The role of regional science, if it wants to inform policy, is to gain insight into which processes operate at different scales: what is global and what is regional, what is structural and what is contextual, and which solutions can be exported and which strategies should be adopted by different regions? But the biggest challenge is possibly a different one: to be able to diversify its measures of prosperity, to go beyond the GDP as a measure of welfare, and beyond volatile GDP growth as the candle that lights the way.

The biggest risk is that every time there is an economic crisis, long-term societal objectives are put on hold or even abandoned. In times of economic prosperity, there seems to be room for “other kinds of happiness”, for emphasizing other goals: environmental sustainability, equity, human development. Economic crises make us cynical about the dreams of sustainable and creative cities: cities nesting an ever broadening community of educated, tolerant, creative and bohemian people; cities that offer an infinite range of ethnic menus and life-style options, and round the clock night-life while still being a good place to raise your kids; cities that are both engaged to the world and committed to their hinterlands; cities in which science has discovered the formula of ever-lasting crises-free economic prosperity.



### 3. News and recent events

#### 3.1. Inauguration of the Stan Czamanski prize for outstanding scholarship by a young scholar from the Israeli section

The Israeli section of the RSAI held its annual meeting in January at Tel Aviv University. The event attracted nearly 50 regional scientists and 15 papers were presented. The event also marked the inauguration of the Stan Czamanski prize for outstanding scholarship by a young researcher from the Israeli section. Stan is one of the most senior members of the international regional science community and until recently was a regular participant at Israeli section meetings. The prize was made available through the benevolence of his son, Dan Czamanski also a very active member of the regional science world. First prize this year went to Yuval Arbel for his paper on ‘Climatic Differences Among US States and Land to Structure Elasticity of Substitution: Empirical Evidence from a New FHA Sample’. The runner up prize was presented to Anat Tchetchik for her work on ‘Optimal Sizing for Rural Tourism Villages-Agglomeration and Club Good Effects’. Congratulations to both.

#### 3.2. Twenty years of REAL

A celebratory Research Symposium entitled “20 Years of Regional Economic Analysis at REAL” took place at the University of Illinois at Urbana-Champaign (UIUC) Alice Campbell Alumni Center on November 16<sup>th</sup> & 17<sup>th</sup>, 2009 in Urbana, Illinois.

A group of UIUC graduates, research fellows and associates of the Regional Economics Applications Laboratory (REAL), and friends of Professor Geoffrey

Hewings held this research event in his honour to celebrate his contribution to graduate education and to the interdisciplinary field of Regional Science. The Regional Economics Applications Laboratory (REAL) is now in its 20<sup>th</sup> year. UIUC Alumni in Austria, Brazil, Chile, Indonesia, Ireland, Japan and the US formed a committee to organise the two-day event. The 55 delegates who attended engaged in lengthy and productive discussions on many aspects of regional economic analysis, including discussion on the recent fortunes and prospects for the Illinois economy.

To date, thirty-eight PhDs have been awarded to UIUC students of Geography, Economics and Urban & Regional Planning who have worked with Professor Hewings. REAL has provided a vehicle for funding and training researchers from all over the

world to attend and develop skills in regional economic analysis. Over 100 researchers have come to Urbana in the last three decades to study or to undertake shorter research projects with Professor Hewings.

The symposium was opened by Professor Barbara Wilson, Vice-Provost for Academic Affairs at UIUC and Geoff's colleagues Professor Bruce Rhoads, Head of the UIUC Department of Geography and Professor Edward Feser, Head of the UIUC Department of Urban and Regional Planning. All three speakers spoke of the energy and enthusiasm that Geoffrey Hewings has brought to his research and to his engagement with students. During the event, Professor Hewings was presented with a replica of a paving stone bearing his name that will be laid at the Alumni Center in Urbana in Spring 2010.



*Opening the research Symposium (L to R); Prof. Bruce Rhoads, UIUC Department of Geography, Prof. Barbara Wilson, UIUC Vice Provost for Academic Affairs, Prof. Aisling Reynolds-Feighan, University College Dublin, Prof. Geoffrey Hewings, UIUC-REAL, Prof. Edward Feser, UIUC Department of Urban & Regional Planning.*



Delegates at the “20 Years of Regional Economic Analysis at REAL” Research Symposium

#### 4. Economic crisis (2): The Global Financial Crisis and Some Regional Science Observations

*Phillip McCann, Professor in Economic Geography at the University of Groningen*



The global financial crisis of late 2008 was a phenomenon the like of which in many ways had not been experienced since the Great

Depression of the 1930s. The scale of the crisis is evident from the fact that bad debt and foreclosures were at levels not seen for three quarters of a century and the contraction of credit in the US fell at the greatest rate since 1942 (Stiglitz 2010). Yet, there are many differences between the current crisis

and that of the 1930s. Firstly, the widespread existence of social safety nets in industrial countries has helped to cushion many of the worst effects of the crisis. Secondly, the global economy today is very different from what it was eighty years ago. Societies are far more interconnected via transportation technology, supply chains and information technology than in previous eras (Zakaria 2010), and we can consider the impacts of this from two perspectives. On the one hand it was this technology connectedness which itself drove much of the global contagion effects emerging from the sub-prime loan market. At the same time, however, such connectedness contributes to a much greater degree of globally distributed knowledge and learning and a greater sense of awareness of the costs of breaking or disrupting these linkages. This itself militated against nationalism and protectionism and provided for the possibility of new modes of international coordination and cooperation. While I think that Thomas Friedman (2005) is wrong with most of his *World is Flat* thesis (McCann 2008), this is the sense in which I think he is

correct. Thirdly, in hindsight our understanding of the catastrophic impacts of the mixture of protectionism, nationalism, and balanced budget responses to the 1930s crisis means that today's governments have a knowledge advantage over previous administrations. The result in 2009–2010 was an unprecedented degree of international coordination between all large economies in terms of their parallel treasury and central bank-sponsored financial bail-outs of key institutions, the nationalization of many private sector financial houses, and massive increases in domestic credit availability.

Strangely, the result of such coordination is that to many observers, not a great deal appears to have changed. For those who lost their jobs, livelihoods, savings and assets as a result of the crisis, then the world really has changed. However, for those who have escaped such impacts, much of the today's reality appears to be the same as in the pre-crisis era. Wall Street has lost only two major merchant banks – Lehmann Brothers and Bear Stearns – or three if we allow for the ownership status change of Merrill Lynch. In addition, as well as the insurance giant AIG, some regional banks disappeared, while various other banks, building societies and other mutual institutions in Europe and elsewhere came under public ownership. Moreover, it is not just some of the OECD countries which face serious financial issues. China itself also has serious long run financial imbalances, largely related to the loans provided to state-owned enterprises (Pei 2010). Yet, taken as a whole, this looks like largely business as usual. In recent months, many major hedge funds and banks have once again started paying out large bonuses and some journalists have referred to the crisis as being something akin to alarm raised about the potential impacts of the Y2K bug. This is somewhat puzzling and leads to the

questions as to whether the 2009 financial crisis really was actually anything different from other previous crises such as the stock market crash of 1987, the recession of 1991–1992, the Asian crisis of 1997, the Russian default of 1998 or the bursting of the dot.com bubble in 2000.

There are three responses to this. Firstly, there is no doubt that the scale of the crisis dwarfed any other crisis since the end of WWII, and it was the dawning awareness of the sheer scale of the crisis, allied with the decisive action of the UK's Prime Minister Gordon Brown, which prompted the degree of global action that we witnessed. Any sluggishness in response was largely due to the fact that the economics profession as a whole was unprepared for what happened. Few observers predicted either the nature or scale of the crisis or any of the likely resulting impacts on the overall economy. I consider that Paul Krugman's original *The Return of Depression Economics* published in 1999 was by far the most insightful assessment of where we were heading, and reading his subsequently revised version of 2009 only confirms this for me. A small number of other commentators, including Andrew Oswald at Warwick, also clearly articulated the likely scenarios, but these few voices were regarded by most observers as mavericks.

Secondly, it is also possible that the global economic and financial system as a whole still has a higher degree of resilience nowadays than in previous eras following on from the purging of inflation in the 1970s under the Fed's leadership by Paul Volcker (Zakaria 2010). Obviously, we now have worries about debt levels and inflation in many countries, but these are rather short-term concerns. Over the longer term, the danger of cutting back too early in response to pressures and lobbying from

the financial sector are very real as we need to consider the long run induced growth and taxation effects. This is particularly the case where public expenditure can be targeted at infrastructure and education, because the tax yields on a 5–6% return on these types of public investments is more than enough to offset the temporary increases in the national debt (Stiglitz 2010).

Thirdly, the crisis has already led to fundamental changes in certain political arenas, most notably with the expansion of the G8 to the G20, in that the crisis forced a greater level of international awareness as to the key role that emerging economies now play in the global economic system. The households in emerging countries are still the source of enormous flows of savings which fund the consumption behaviour of western households, and the emerging countries produce many of the manufactured goods for western consumers. In this sense, our increasing global interdependency has not been changed by the crisis; the crisis merely transferred much western private debt to public debt. However, the move from the G8 to the G20 potentially will allow the BRICS countries (Lattimore and Safadi 2009) of Brazil, Russia, India, Indonesia, China and South Africa, to play a much greater and constructive role in global economic coordination and decision-making over coming years. The fact that neither China nor India was tempted to resort to protectionist measures in the crisis demonstrates a genuine global commitment to open markets. Notwithstanding the outcomes of the Copenhagen summit, this could be positive also for climate change initiatives, as the G20 countries account for both the vast majority of emissions and also have to be the sources of the solutions. This wider summit framework potentially provides opportunities for both broader and deeper discussions. In

parallel to these developments, and also acknowledging the shifting geographical realities of the global economy, Australia is calling for the setting up of a new Asia-Pacific community organization to act as forum for debates over climate change, trade and also as a forum for resolving disputes over access to raw materials and resources. As well as potential new political institutions there are also possible new financial institutions which may emerge. China is pushing for the yuan to become an international reserve currency, and the yuan has already been adopted as an official trading currency between South East Asia and two Chinese provinces along its periphery (Foroohar and Liu 2010). A new \$120 billion regional reserve fund, an Asia-only version of the IMF, is due to be launched this month, largely bankrolled by China's massive foreign exchange reserves (Foroohar and Liu 2010). Similarly, German ministers have even come out recently in favour of a putative European Monetary Fund in response to the crisis in Greece (*The Economist* 2010). Yet, whether the crisis and these emerging institutional changes will lead to a larger or less narrowly focused IMF or fundamentally new forms of financial regulation still remains to be seen. One argument is that the concerted and coordinated actions of governments were in reality so successful at stemming the crisis that the actual outcomes have not been serious enough in order to effect real changes in the architecture and regulation of global financial services (Fukayama 2010). But irrespective of what western governments choose to do, things are changing anyway and the symbolic significance of the move from the G8 to the G20 is not lost on anyone.

In terms of regional science there are several aspects of these discussions which are worth considering. First, the issues of the long run growth impacts of

infrastructure and education investments are a major topic within our field, and one of the insights we can offer is that not only the level of these investments, but also the location of them is critical. Ostensibly the right investment but in the wrong place or with the wrong scale is actually the wrong investment. Regional science thinking can help inform the wider debates as to the geographical patterns and the optimum levels of such investments in different locations. Second, and this same vein, one of the things that we do know is that knowledge, and all of the manifestations of that knowledge such as patents, copyrights, licences, indices of entrepreneurship, innovation and creativity, are increasingly concentrated in city-regions (Acs 2002). At the same time, this is not simply a matter of scale in many countries. While cities are generally growing in USA, Japan and Korea, and knowledge is therefore increasingly contained in large agglomerations, in many of the other OECD countries things look rather different. In Europe, in particular, city sizes are not increasing, but rather the development of inter-urban networks is increasing. Expanding this theme, the connectedness of the knowledge locations in the emerging global human and communications networks appears to be critical, and here the emergence of the BRIICS countries implies that global network structures of trade and knowledge are reconfiguring and shifting geographically. This is also a growing theme in regional science (Reyes et al. 2009). Third, regional science also explains why many regions are so resilient, even in the face of major shocks. For example, London suffered more than most locations in the credit crisis precisely because of its central role in these markets. In mid 2008 London accounted for 35% of the world's foreign exchange deals and an even larger share of the world's over the

counter derivatives. Yet, by late 2009, the average daily turnover was down 25% from its 2008 peak and mergers and acquisitions (M&As), which had become the mainstay of London, were at their lowest levels in forty years. Of the 84,000 jobs lost in Europe's financial services industry in 2009 almost half were in London (Underhill 2010). Growing fears of financial regulation in response to political pressures to find ways to avoid the future need for similar types of financial bail-outs, led to widespread talk of financial institutions, and particularly hedge funds and private equity firms leaving en masse for other safe havens such as Switzerland. Yet, although the advertising agency WPP moved to Ireland for tax reasons and McDonalds moved its European HQ to Geneva, as far as I am aware, not a single major financial institution has relocated out of London. On the contrary, ABN-AMRO relocated its headquarters from The Netherlands to London, and the timing was good as London office rents are now at their lowest levels for twenty years, and lower than many other European centres (Underhill 2010). In the aftermath of the financial crisis, some eighty per cent of European hedge funds and sixty per cent of European private equity funds are still located in London. As regional scientists know, the reason is that the agglomeration effects of all of the myriad networks of ancillary services, expertise and human capital are what make agglomerations 'sticky' and so resilient even in such adverse circumstances. At the same time, we also know that such agglomeration processes drive competition and entrepreneurship, and on this argument we would expect the rejuvenation of London to lead the UK out of its current recession. Indeed, anecdotal evidence on new tenders, contracts and commissions from a wide range of sectors suggests that London's economy is starting to pick up rapidly.

London is still ranked number one in both the global city rankings and also the global financial centre rankings and as a regional scientist I see no reason why this should not continue. However, the arguments above would suggest that emerging financial centres in Asia in particular are likely to move up the rankings in the coming decades. Fourth, the sectoral impacts of the crisis are further complicated by geography. In the case of the UK, while London was in the eye of the financial storm itself, and the adverse effects were visible within days, in contrast, emerging evidence suggests that many of the other more peripheral regions of the UK are those parts of the economy which have actually suffered the most adverse long-term impacts of the crisis. Many of these locations were specialized in manufacturing and engineering and for whole swathes of these industries, what began as a credit crisis stalling the funding of inventories and capital expenditure became a balance-sheet crisis for firms which had for a long time been lean and efficient. My guess is that in terms of the regional responses to the crisis, London and its hinterland will emerge much faster than other UK regions, even though the causes of the crisis emerged primarily in other sectors. Yet, examples such as this are rather particular to a country. Emerging evidence from the OECD suggests that the pattern of regional impacts of the crisis varies enormously between countries. Any resulting public policy responses will also be specific to each country, and will depend on the role which different localities play in their national interregional systems. Fifth, as has been suggested above, the global storm generated by the crisis will lead to greater efforts between countries to foster further regional institutional integration on a range of political and regulatory issues. In economic terms, my guess is that this will further enhance

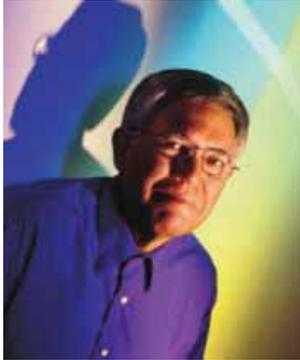
the processes of increasing global regionalism (Rugman 2000) that we are already observing, rather than globalization per se.

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## 5. Meet the fellows: David Boyce (also RSAI archivist!)



David Boyce is Adjunct Professor of Civil and Environmental Engineering at Northwestern University in Evanston, Illinois, near Chicago, and Professor

Emeritus of Transportation and Regional Science at the University of Illinois at Chicago, where he served until 2003.

During the past 40 years, my research interests have narrowed and become more focused. I began my academic career with an interest in methods related to metropolitan land use and transportation planning generally, and long-range forecasting in particular. I also had an interest in the impact of transportation infrastructure on urban travel and location behavior, drawing on my early training in statistical methods. During the same early period, I learned about convex optimization methods and their extensions for deriving and solving certain travel and location models. Since 1980, I mainly focused on formulation and implementation of integrated travel forecasting models, that is models that represent in a consistent manner the various choices that urban travelers make: route, mode, destinations for work, shopping and recreation, and even location of their residences. Most recently, I have been working with a model of route choice for congested networks based on the user or selfish equilibrium principle. Presently, my principal activity is writing a book on the history of the field of urban travel forecasting.

From 1968 until 1989, I served in various leadership positions of RSAI, primarily related to organization of international conferences. In late 1997, I became the RSAI Archivist, succeeding Barclay Jones who established the RSAI Archives at Cornell University during the 1970s, and continued as Archivist until his death in 1997. The purpose of the RSAI Archives is to collect, organize and preserve materials pertaining to the founding, development and influence of the Regional Science Association International (correspondence, newsletters, conference programs and abstracts, financial reports, directories, etc.). From time to time, I also advise individual regional scientists about placing their research papers in appropriate archives, such as their university archives or local or regional historical societies. Finally, I contact and encourage regional scientists who have been active in RSAI to arrange for the preservation of documents related to our association's activities. And occasionally, I succeed in doing so! If you are interested in such arrangements for your own papers, please do contact me at [d-boyce@northwestern.edu](mailto:d-boyce@northwestern.edu).



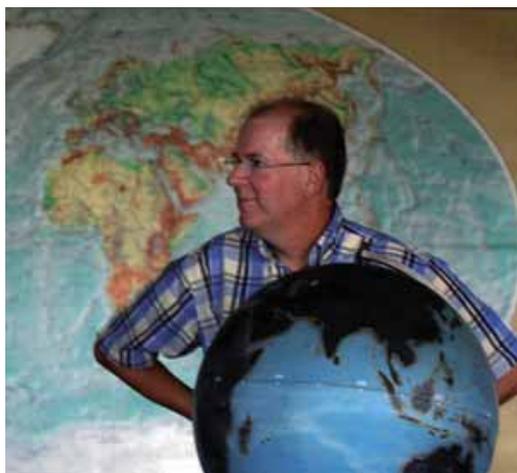
## 6. Centres of Regional Science: Population Studies Centre, University of Waikato, New Zealand

Although there has been an active group of regional scientists "Down Under" for more than three decades, most of those resided in Australia. In recent years more interest has emerged "across the ditch" (local speak for "across the Tasman Sea", i.e. in New Zealand). One person who has been active in regional science for more

than 30 years in the latter country is Professor Jacques Poot of the University of Waikato.

Jacques obtained a Masters' degree in econometrics from VU University Amsterdam in 1978 and, given that he had already enjoyed visiting New Zealand several times, and that he had a large number of relatives living there, decided to do a PhD in Aotearoa (the Maori name for New Zealand, meaning "land of the long white cloud"). He was offered a junior lecturer position at Victoria University in New Zealand's capital Wellington and, in no small way influenced by his Dutch mentors Peter Nijkamp and Piet Rietveld, wrote a PhD thesis on models of New Zealand internal migration and residential mobility. This turned out to be a successful venture, with the thesis being awarded the PhD Medal of the Australia and New Zealand Section of RSAI, and the resulting publications leading to tenure at Victoria University.

In 1994, Professor Poot moved to the University of Tsukuba in Japan to work with Professors Kohno and Higano. He



**Professor Jacques Poot surveys the world...**

also completed that year a term of ANZRSAL Vice-President. After 2.5 years in Japan, Jacques and his family returned to New Zealand but the ties with regional science remained strong, including the hosting of the 1997 PRSCO conference in Wellington and the Pacific Editorship of Papers in Regional Science from then until 2006. In 2004, Jacques was offered a Research Chair in Population Economics in the Population Studies Centre (PSC) at the University of Waikato in Hamilton (about 2 hours south of the largest New Zealand city Auckland), combined with the directorship of the PSC. The PSC was established in the early 1980s and is the only centre for demographic analysis and teaching in New Zealand. Senior staff include Richard Bedford (population geography), Peggy Koopman-Boyden (gerontology) and Ian Pool (demography; recently retired). After Jacques completed his term as director, Richard Bedford took over and, in turn, handed over the reins in February 2010 to newly-recruited Professor Natalie Jackson (demography), who ran a population research unit at the University of Tasmania. The PSC is a self-funding entity within the University of Waikato, and most of its revenue comes from multi-year research grants offered by the Foundation of Research, Science and Technology (FRST); the so-called Marsden Fund, and consulting contracts. The large grants focus on a wide range of topics, including: Enhancing Wellbeing in an Ageing Society (2004–2009); Settlement and Circulation of New Zealanders Living in Australia (2005–2009); Economic Impacts of Immigration (2005–2009); Infrastructure (2006–2011); Spatially Integrated Poverty Mapping (2007–2009); Choosing Regional Futures: Developing a Spatially-Integrated Decision Support System (2006–2010) ; From Planet to Paddocks:

an Integrated, Multi-Scale Assessment of Climate Change Influences on Land-Use Trends (2009–2010); and Integration of Immigrants (2007–2012). All these projects involve collaboration with other agencies, such as Environment Waikato (the regional government); the Hamilton City Council, the Department of Labour, the Immigration Service, District Health Boards, etc. The Centre also has a strong link with Waikato's Department of Economics, in which Jacques Poot teaches, and supervises PhD students in labour, regional and urban economics. Several of his students are supervised jointly with Professor Philip McCann, who recently moved from Waikato to the University of Groningen in The Netherlands.

The linkage between NZ and Dutch regional science has recently become even stronger with Peter Nijkamp and Jacques Poot obtaining a large grant from the European funding agency NORFACE to lead a 2010–2013 project on Migrant Diversity and Regional Disparity in Europe. Jacques will be seconded to VU University for three months annually for this project.

As noted at the beginning, regional science is gaining strength in New Zealand, and one indicator is that Professor Paul Dalziel of Lincoln University was elected President of ANZRSAI in 2009. There is particularly an emerging interest in modelling subnational urban, regional, transportation and environmental issues. There is also a growing interest in using spatial econometrics. This trend is not only observed at several NZ universities but also among non-university researchers, for example at New Zealand's premier "Think Tank", Motu Economic and Public Policy Research. In all of this, the PSC continues to play a central role in research with strong demographic components. As in other countries, there is a desire to develop strong cross-institutional linkages. The University of Waikato has now provided PSC with seeding funding to establish, jointly with Motu, a National Institute for Demographic and Economic Analysis (NIDEA).

For further information, see <http://www.waikato.ac.nz/wfass/populationstudiescentre/>

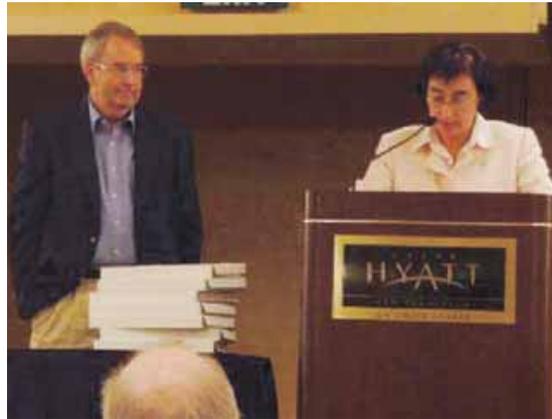


*The Population Studies Centre, University of Waikato, New Zealand*

**7. RSAI Fellows awards at NARSC 2009**

The pictures below show the new Fellows accepting their awards in San Francisco. Top left sees Keith Ihlanfeldt receiving his award from RSAI President

Roberta Capello. Top right and it's the turn of Richard Church. Middle left sees Janice Madden receive her Fellows award. Middle right is Dan Griffiths and in the picture to the bottom left is Jim LeSage. At the bottom right of the pictures Bernie Fingleton is ready to accept his award.





## 8. Economic Crisis (3): Increasing Regional Concentration in Chile

Patricio Aroca, [paroca@ucn.cl](mailto:paroca@ucn.cl)



IDEAR,  
Universidad  
Católica del  
Norte

Interest in regional problems has increased notably worldwide in recent times, essentially under

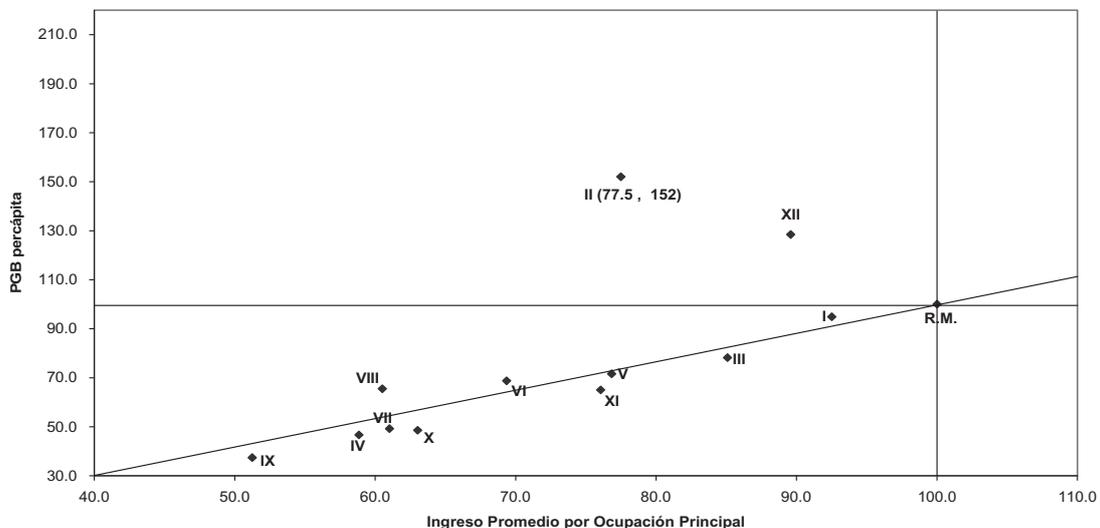
two key elements that have given shape to the current scenario: the deepening of free market policies and globalization. In this context, the inequalities that begin to emerge have different explanations from those we heard of and studied some years ago. On the other hand, the defenders of the market as an efficient mechanism for assigning the resources of the economy to the production of goods and services maintain that the market provides adequate signals to

reduce the inequalities that may emerge over space. For example, migration is the mechanism to reduce regional inequalities in unemployment and wages, while inter-regional trade is the instrument to arbitrate prices among regions.

In contrast, the new economic geography argues that inequalities among regions can continue over time and even increase as economies grow because there is a centre that takes advantage of the benefits of growth, while the regions on the periphery are left out of the opportunities that this growth generates.

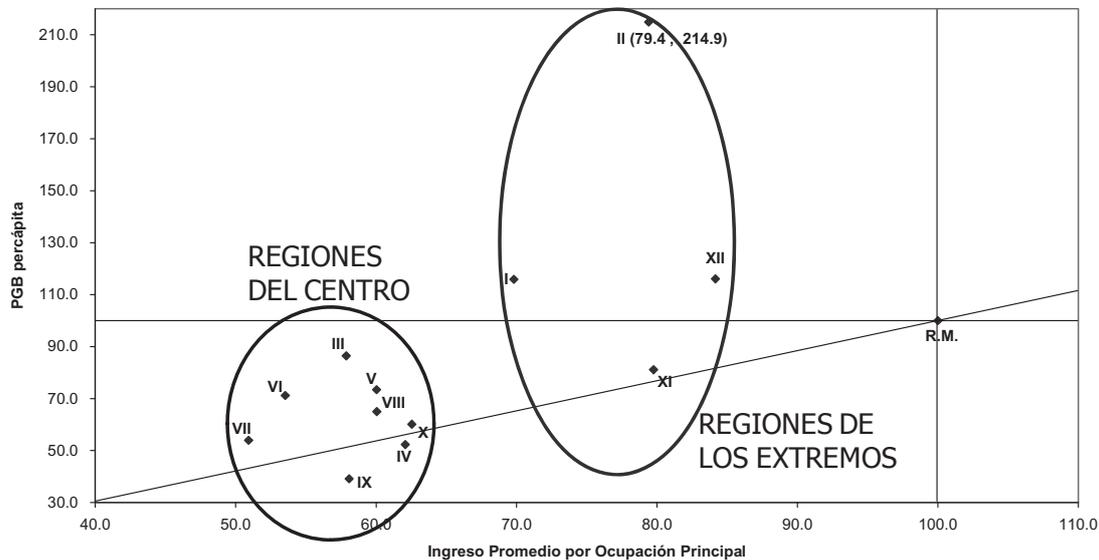
This article analyzes territorial inequalities and concentration in Chile, beginning from the basis that Chile has one of the highest levels of inequality among its inhabitants and the greatest degree of territorial concentration in the world and that in the decade from 1993 to 2003 regional differences increased, showing a center-periphery type of pattern, with Metropolitan regions being at the centre and the other regions of the country being the periphery, as shown in Figure 1.

**Ingreso Ocupacional versus Producto Percapita - 1992**  
(RM = 100)



## Ingreso Ocupacional versus Producto Per cápita - 2003

(RM = 100)



The map of Chile is characterized for being long and narrow from the north to the south. Twelve regions have been defined along this land strip, and have been given names and assigned ordinal numbers from the first in the far north to the twelfth in the extreme south, with a Metropolitan Region (MR) in the centre of this map, between the 5th and 6th Regions.

Territorial inequalities manifest themselves in different dimensions and at different levels. This work focuses on those associated with the economic and political system during a period of a decade. To do this, the preceding graphs were developed showing GDP per capita on a regional basis and average income of workers, measured as an index compared to the Metropolitan Region, which has been fixed at 100 for the two periods graphed, 1992 and 2003.

These graphs show an increasing territorial inequality. For 1992, it shows that while two regions, Antofagasta (the 2<sup>nd</sup> Region) in the north, which produces copper, and Magallanes (the 12<sup>th</sup> Region) in the south, which produces

petroleum, show higher per capita productivity than that of the MR, no region presented a higher average income per worker greater than the one of the capital city. As well, most of the regions had average incomes that were less than 90 percent of the average income in Santiago.

In 2003, the evolution of gross regional per capita product was positive for all the regions in comparison to the MR and the majority of regions increased GDP per capita with respect to MR. However, the image projected by the average income of workers who live in Chilean regions is a matter of concern because, while the regions have generally raised their output in comparison to the capital city, workers' incomes have decreased in comparison to Santiago, especially in regions in the centre of the country.

Three groups clearly emerge in the graph for 2003, the low-income regions in the centre, the medium income regions at the extremes of north and south, and the Metropolitan Region, with high incomes. Comparing the two graphs, it appears that in this decade, the differences in average incomes

among regions increased, together with differences in access to public goods and opportunities for the development of their inhabitants, thus increasing the concentrating forces around the Metropolitan Region.

### **The Concentrating Actions of the State**

The law that created the FNDR established “the National Fund for Regional Development” as a public investment fund with the purpose of territorial compensation through funding social and economic infrastructure of the regions, with the objective of achieving harmonious and equitable territorial development. After a decade (1993–2003) in which the inequalities of incomes within the country clearly increased, between 2003 and 2006 the region with the highest increase, 160 percent in the period of three years, was the Metropolitan Region, while the rest of the regions had increases of 44 percent on average. This is to say, the region with the highest incomes has received increases in funding that are over 100% greater than increases to the other regions, and this from a funding agency created to reduce territorial inequality. The amounts of public funds to be spent on communal and regional public investment are decided upon at the level of community and the region, while the amounts to be spent by sector are decided upon by the national ministries. Until the year 2000 there was a tendency towards sustained growth in communal and regional public investment, reaching 41.2 percent as compared to 26 percent in 1992. However, beginning in the year 2000, the percentage of investment under local and regional decision-making began to fall, reaching only 29.8 percent of total investment in 2007. In effect, local controlled public investment returned to levels only slightly higher than it had been in 1992. This data contradicts the

idea of the pursuit of improved efficiency in assigning resources by giving regional and communal authorities the decision-making power about which projects are more socially profitable.

Advanced human capital is fundamental for the development of good universities and research centres that can impact positively on their environment. To do this, the country has created a ‘President of the Republic Scholarship’ to finance post-graduate studies overseas, in particular for doctoral studies. While 40 percent of the population lives in the Metropolitan Region, 76 percent of the grants in 2006 were from Santiago. In 2007 this situation improved somewhat in that scholarships granted to applicants from the Metropolitan Region declined to 62 percent. However, there is still a problem that threatens regional equality of opportunities that arise because it is more attractive for new doctoral graduates to join academic teams in Santiago because they have more experience and can obtain more funding for research. As a result, an important percentage of applicants who obtain President of the Republic Scholarships will end up working in institutions in Santiago, at the cost that this brain drain provokes in the regions.

On the other side, the Central Bank of Chile is a state institution, independent of the Government, charged with maintaining price stability or low levels of inflation. The policy objective is fixed at a target of three percent annual inflation. The main instrument used to control inflation has been the interest rate, which is raised when the inflation rate goes above the target level, thus increasing the cost of indebtedness and reducing family consumption with the consequent pressure to lower prices.

In most economies this would not have a priori territorial bias, but in Chile

inflation is measured with data only from Greater Santiago. In effect, both the content of the basket of goods and the prices used to measure inflation are based exclusively on information from families and businesses located in the Metropolitan Region. Consequently, monetary policy is only efficient for the Metropolitan Region and not for any of the other regions of the country because some of the estimated regional inflation indexes show high heterogeneity of inflation across the country.

### **The Concentrating Mechanisms of the Market**

In their book about regional economies and policy, Armstrong and Taylor (2003) argue that the market contains a set of concentrating mechanisms, especially when there is a dominant city or region, as in the case of the Metropolitan Region in Chile. Traditional economic theory teaches that labour migration is an important mechanism for reducing regional or territorial inequalities in salaries and unemployment. This supposes that workers will leave regions with high unemployment and go to those that offer more possibilities of employment. This reduces unemployment in the region of origin while increasing it in the region of destination, while at the same time arbitrating the salaries paid in the economy, resulting in fewer territorial inequalities.

However, the level of interregional labour commuting that has emerged in Chile, which, according to the 2002 Population and Housing Census, is almost double the level of interregional migration, implies that workers have separated their region of residence from their region of work. Aroca and Atienza (2008) show that the regions at the geographic extremes have net positive commuting, while the regions from the centre have net negative commuting. That is, the proportion of workers who go from the centre of the country to work

in the remote regions (Tarapacá and Antofagasta in the north and Aysén and Magallanes in the south) is higher than those who go from extreme regions to the centre. This labour mobility strongly concentrates incomes around the centre of the country and is another source of territorial inequality. On the other hand, the estimated figures in Chile for inter-regional trade and for trade from the regions with the rest of the world, shows that the Metropolitan Region had a large trade surplus with the other regions of the country, while at the same time having a proportionally higher trade deficit with the rest of the world. In effect, Santiago imports goods from the rest of the world and exports them to the regions. The regions, in contrast, do the opposite, in that they have significant trade surpluses with the rest of the world while presenting a deficit with the rest of the country. Therefore, when a project is developed in a region, an important proportion of the expenditures of the project end up being made in the Metropolitan Region, while a project carried out in the Metropolitan Region imports very little from the other regions and it is probable that the impact of imports from the rest of the world is much more significant. These projects also have the consequence of greater concentration of demand for goods and services in the Metropolitan Region, given that projects undertaken throughout the country significantly increase demand in the Metropolitan Region, but not in the other regions.

In addition, most of the large firms whose operations are located in the regions, have set their headquarters in Santiago, increasing concentration around the Metropolitan Region.

### **Conclusions**

Inequality in the distribution of incomes in Chile has been a serious problem for several decades, which a series of governments have not changed

significantly. This has resulted in Chile having one of the highest levels of inequality in the world. This phenomenon is distributed with some differences in the territory. However, a look at the country from a spatial perspective shows an additional inequality, a high concentration of both incomes and the benefits of growth around the Metropolitan Region, despite the fact that increases in production in the other regions have been very high. In effect, the Metropolitan Region has a strong capacity to appropriate the incomes generated by the economic growth of the country.

This work shows that the process of concentration has been increasing over time and that in the last decade three groups have emerged, defined by notable differences in the levels of average incomes received by their workers. The income variable is postulated as the closest to reflecting the well being of the inhabitants of the Chilean regions. The first group is composed solely of the Metropolitan Region, which has the highest incomes and an increasing gap of income levels with the rest of the country. A second group is composed of the regions at the geographic extremes, which are characterized as producers of primary goods such as copper, petroleum and salmon. The other regions, with low incomes, are located in the centre of the country, to the north and south of the Metropolitan Region.

The reasons for increasing inequality are government actions and market mechanisms. Among the government actions are the evolution of the fund intended to reduce regional inequalities, the increased centralism of public expenditures, the assignment of state scholarships for advanced human capital and the monetary policy of the Central Bank of Chile to control inflation.

Among the market mechanisms that increase regional inequality concentration

around the Metropolitan Region is notably labour mobility, especially inter-regional commuting, inter-regional trade and high concentration of managerial or decision-making bodies of the private sector in the capital of the country.

Finally, the results indicate the urgency of a strong regional policy that can change the current tendency by promoting more balanced territorial development and reducing the concentration around Santiago, the capital of the country.

### Acknowledgements

Research Nucleus "Regional Science and Public Policies", from ICM, MIDEPLAN, Chile.

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- Aroca, P. y M. Atienza (2008). La conmutación regional en Chile y su impacto en la Región de Antofagasta. *Revista EURE*, Vol. XXXIV, # 102, pp. 97–120.

## 9. New member groups: Bangladesh Regional Science Association

The Bangladesh Regional Science Association (BRSA) was instituted in October 2006 as a forum to facilitate intellectual interaction among regional scientists in Bangladesh and as well as with international research communities in related fields. Active interest from RSAI and PRSCO officials has been very instrumental in bringing the association to its present stature. At the present time, BRSA has 110 members from disciplines as diverse as Geography, Urban and Regional Planning, Economics, Sociology, and Environmental Science

(among others). After the inauguration the Association has organized one national conference in 2007 (ACRS-1) and in the following year it had the exciting opportunity to host the 2008 Summer Institute on behalf of PRSCO. These meetings, being the pioneering interaction opportunities for regional scientists in Bangladesh, attracted remarkable participation from international scholars as well as young Bangladeshi scholars who were greatly encouraged by the promising potentials of the field. Below is some key information on the two conferences:

*1<sup>st</sup> Annual Conference on Regional Science (ACRS-1), BUET, Dhaka*

The first ever regional science conference in Bangladesh, ACRS-1, was organized jointly by BRSA and the Department of Urban and Regional Planning of Bangladesh University of Engineering and Technology (BUET). The sessions were housed in three venues in BUET, Dhaka from March 16–17, 2007. A total of 67 papers were presented in the 17 technical sessions with 111 local and international participants.

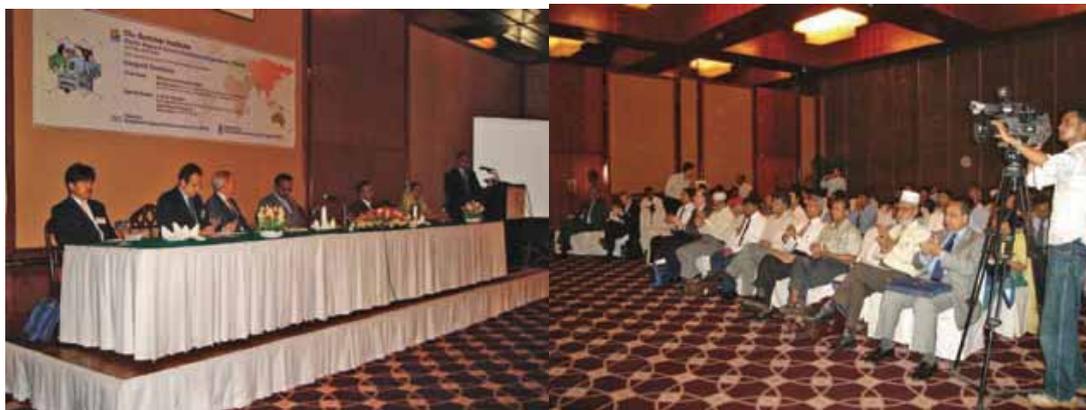


**The speakers and the audience at the ACRS-1**

*10<sup>th</sup> PRSCO Summer Institute, Pan Pacific Sonargaon Hotel, Dhaka*

BRSA hosted the 2008 PRSCO Summer Institute with the theme *Regional Development and Millennium*

*Development Goals (MDGs)* in collaboration with United Nations Development Program (UNDP). The sessions took place in the Pan Pacific Sonargaon Hotel during 15–16 May 2008.



**Inaugural Ceremony of PRSCO Summer Institute in Bangladesh**

### *Executive Committee*

The following is the composition of the BRSA executive committee:

*President:* Sarwar Jahan, Professor of Urban and Regional Planning, BUET

*Vice President 1:* M I Juberi, Professor, University of Rajshahi

*Vice President 2:* Hafiza Khatun, Professor of Geography, University of Dhaka

*Executive Secretary:* K M Maniruzzaman, Professor, Urban and Regional Planning, BUET

*Joint Secretary 1:* Fakhru Islam, Professor University of Rajshahi

*Joint Secretary 2:* Musleh Uddin Hasan, Assistant Professor, BUET

*Joint Secretary 3:* Tofael Ahmed, Professor, Bangladesh Agriculture University

*Treasurer:* Akhteruzzaman, Bangladesh Bank

For more information please visit the website of BRSA: <http://www.brsa.org.bd/>



## **10. Future Events**

### **10.1. 50<sup>th</sup> European Regional Science Meeting (ERSA)**

The ERSA meeting 2010 will take place from 19–23 Aug 2010 in Jonkoping, Sweden. The main theme of the ERSA Congress is Sustainable Regional Growth and Development in the Creative Knowledge Economy. A broad range of topics are listed among the themes for paper sessions and more than thirty special sessions are organised as well. Some of the world's leading regional scientists, among them Nobel Laureate Paul Krugman, will be giving keynote speeches and talks at the congress.

The Jönköping Congress will celebrate the 50th Anniversary of ERSA. This is something that you will notice both in the scientific and the other arrangements of the Congress. We plan for an unforgettable scientific event! <http://www.ersa.org/ersa-congress/>

### **10.2. 57<sup>th</sup> Annual North American Meeting of RSAI**

This year's meeting will be held at The Grand Hyatt Denver from Wednesday November 10th to Saturday November 13th, 2010 in Denver, Colorado. A new innovation introduced this year will be the opportunity to participate in poster sessions in addition, or as an alternative, to the regular paper sessions. We're also working on optional sightseeing activities and training opportunities.

The registration portal of the North American Regional Science Council (NARSC) is now open. Always an important part of the conference, please think about organizing one or several themed sessions. Paper/poster abstracts and session proposals can be submitted any time from the opening date through to August 1, 2010. Information about the 2010 Denver Conference is now available at the NARSC Website <[www.narsc.org](http://www.narsc.org)>.

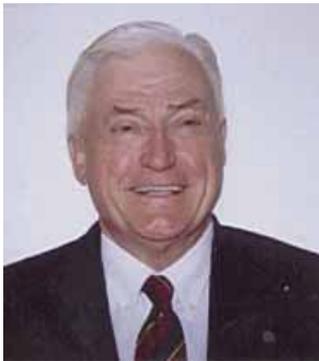


## **11. RSAI recent prizes**

### **11.1. The Kohno award for services to RSAI 2009**

At the NARSC meeting in San Francisco Professor Lay Gibson became the first holder of the new RSAI Kohno award for outstanding service to RSAI.

Prof Bob Stimson (University of Queensland and former RSAI president) writes:



**Lay Gibson**

Lay Gibson has a long and distinguished record of service to the broad regional science movement and to the international, supra-

regional and local section levels of RSAI. That involvement has been continuous since the mid-1960s. At the international level, in the late 1980s Lay was on the Committee formed by Dave Boyce to look at the creation of what became the RSAI. Subsequently he worked tirelessly on the task of helping to operationalize the new model for RSAI and on encouraging its adaption in the Pacific, in Europe and in North American. After being President Elect of RSAI (1992), he became the second President of the RSAI (1993 and 1994). As the Immediate Past President, he then chaired the RSAI Long Range Planning Committee (1995 and 1996) and has continued to serve on that Committee, being a regular attendee at its meetings. Lay's detailed knowledge of the evolution of the RSAI since the re-organisation of the Association initiated in the late 1980s is of a detail that is unsurpassed, and he is basically one of only a few that has the 'corporate memory' of the modern RSAI.

At the supra-regional level, Lay Gibson has played very engaged a role in PRSCO since the 1970s. He is a former Vice President and President of PRSCO, and has spent many years as a member of the PRSCO Council. He has also been a strong contributor to NARSC, particularly through representing the WRSA, and he is a former President of NARSC. In 1994 that body awarded Gibson the North American Regional

Science Council Distinguished Service Award for continuing service in the field of Regional Science.

At the local section level of the Western Regional Science Association, Lay Gibson has been continuously involved for more than 40 years. He attended his first WRSA meeting in the mid-1960s and has been active in that Section ever since. His involvement includes being Vice President (1996–97), President Elect (1997–98) and President of WRSA (1998–1999). Prior to that Gibson was Executive Secretary of WRSA for a long period of time from 1979 to 1997, and he has served on the WRSA Board since 1979. In 1991 Lay was elected a Fellow of WRSA.

More than most academic regional scientists, for several decades Lay Gibson worked tirelessly promoting regional science in public policy and to practitioners in regional development. His academic outreach work at the University of Arizona has been instrumental in bringing regional science methods and approaches to the interaction between the academy and both business and government agencies. That is seen in particular in the leading role Lay has played in both the training of practitioners in regional economic development – particularly in the US, but also in other countries – and in conducting research and consulting in the field of local regional economic development, especially in his home State of Arizona.

Within the Regional Science community Lay is an absolute stand-out in his commitment and dedication over a long and sustained period of time providing diverse and outstanding service to the development and operation of the organisation at all levels of RSAI. The Regional Science movement owes him thanks for helping make RSAI and its constituent bodies what they are today.

### 11.2. New RSAI Fellows

The RSAI is delighted to announce the following have been elected as Fellows from 2010

- Paul Krugman, Princeton University
- Diego Puga, Madrid Institute for Advanced Studies
- Aura Reggiani, University of Bologna
- Robert Stimson, University of Queensland
- Gerald Carlino, Federal Reserve Bank of Philadelphia
- Richard Morrill, University of Washington
- Michael Sonis, Bar-Ilan University
- David Plane, University of Arizona
- Eric Verhoef, University of Amsterdam
- Henk Folmer, Wageningen and Groningen Universities

Congratulations to all! See a future newsletter for pictures of each receiving their awards

### 11.3. Martin Beckmann prize 2010

It is a great pleasure to announce that the jury of the RSAI Martin Beckmann

Prize (consisting of Masa Fujita, Jean Paelinck, John Quigley and Jouke Van Dijk) have unanimously chosen the paper by Thomas Scherngell and Michael J. Barber, titled 'Spatial interaction modelling of cross-region R&D collaborations: empirical evidence from the 5th EU framework programme', published in Issue 3, pages 531–546 as the best paper published in 2009 in PiRS and thus as the winner of the Martin Beckmann Prize 2010. Congratulations from all at RSAI, and we look forward to presenting their award at either the ERSA or NARSC meeting later this year.



### 12. Next Issue

To celebrate World Cup year the theme of the next issue will be 'Sports and Regional Science'. Please send any contributions directly to Eveline van Leeuwen [Elleeuwen@feweb.vu.nl](mailto:Elleeuwen@feweb.vu.nl) or Graham Clarke [G.P.Clarke@Leeds.ac.uk](mailto:G.P.Clarke@Leeds.ac.uk).