



# Newsletter

## International Input-Output Association (IIOA)

Number 2; May, 2008



### Editorial

## The Challenges of Sustainable Development

Dear IIOA member,

The International Input-Output Association is only one of several professional societies of which I am a member, and this is no doubt true for many readers of this newsletter. However, over the last few years I have become increasingly involved with IIOA (including as your past President) and find that more and more of the journal articles that interest me are to be found in both current and past issues of our journal, *Economic Systems Research*. The reason is simple: input-output economics is useful for understanding the most daunting challenges of our time, globalization and degradation of the environment.

Globalization and technological change have succeeded in vastly increasing the average material standard of living throughout the world. However, they have left several billion people in developing countries far behind, and they require of the world economy a rate of change that challenges the resilience of even the strongest, most developed societies. The unprecedented rate of expansion relies upon sizable increases in energy and material inputs: anticipating their future availability and prices requires a global perspective on the distribution of resource stocks and strategies for assuring access to them. The extraction and processing of these resources and of agricultural crops, as well as their trade and use, and the eventual disposal of the products made from them, constitute the major environmental pressures. "Sustainable development" is a useful label for describing efforts to meet the challenges of economic development, whether in agricultural or industrialized societies, and to reduce both poverty and environmental pressures.

Input-output economics, including the form of its basic mathematical model, date back many decades. The properties that make it the framework of choice – both conceptually and practically – for taking on the challenges posed by sustainable development have long been recognized but are only now being systematically exploited. Two reasons account for the current surge of attention: the pull of contemporary pressing questions that require the unique attributes of input-output models and the push of new colleagues joining us from intellectual backgrounds rooted in fields other than economics, in particular the physical sciences.

Input-output economics is uniquely suited to represent economic interdependence. All economic modelers value its ability to capture the direct and indirect structural connections among sectors. However, input-output models of the world economy can also reveal the direct and indirect connections among countries or regions, linking their consumption and production, savings and investment. These models can connect geographically situated resource endowments to their uses in the production of goods and services for consumption globally. All input-output models, from the 70-year old iconic expression --  $(I - A)x = y$  -- to contemporary input-output models that are theoretically far more ambitious, represent these interdependences consistently. They are able to do so in not one but two domains simultaneously: the physical stocks and flows of resources and products, and the associated costs and prices. All input-output models are able to deal with this duality, implicitly if not explicitly: they alone among economic models provide a straightforward representation of physical stocks and flows using variables and units familiar to physical scientists and also situate them within the context of an entire, multi-sectoral, monetized economy.

Input-output models can be used to evaluate prospects for sustainable development by identifying the economic and environmental implications, in both monetary and physical terms, of scenarios describing particular alternatives. For example, if the scenario prescribes improved diets in developing countries, the analysis can determine the physical requirements (for land, water, and chemicals) for the diet upgrade and its economic and environmental costs; if the scenario imposes a tax on the carbon content of purchased fuels in certain regions, the consequences of the tax can be estimated in terms of the changed distributions of income within and among countries.

### In this issue

- Editorial, by Faye Duchin..... p.1**
- Eurostat Manual (2008) ..... p.2**
- Awards ..... p.2**
- Hispanic-American I-O Soc .... p.3**
- In the next ESR issue ..... p.4**
- Highlights, in journals ..... p.5**
- Highlights, in books ..... p.6**
- Upcoming conferences and workshops ..... p.6**
- International Projects ..... p.8**
- Databases ..... p.9**
- Welcoming ..... p.9**

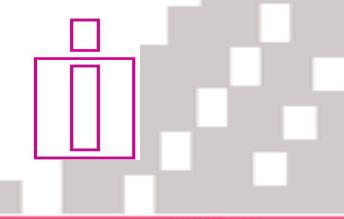


The [Eurostat Manual of Supply, Use and Input-Output Tables](#) has recently been published and is available for download on the Eurostat website!!!

[http://epp.eurostat.ec.europa.eu/portal/page?\\_pageid=1073,46587259&\\_dad=portal&\\_schema=PORTAL&p\\_product\\_code=KS-RA-07-013](http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1073,46587259&_dad=portal&_schema=PORTAL&p_product_code=KS-RA-07-013)



You can already access the [programme](#) of the next Input-Output Conference at Seville!!! (see inside)



# Newsletter

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Alternatively, one might ask under what conditions desirable outcomes could be achieved through a particular scenario, for example by quantifying the need for targeted subsidies that could make a higher-cost but lower-carbon energy source competitive.

Analysis with an input-output model generally requires more detailed specification of the scenarios than other kinds of economic models because the latter instead employ formal equations, in particular to describe behavioral responses of different actors. The equations necessarily also rely on implicit assumptions, although they are taken for granted and thus easily overlooked or even forgotten. With input-output models one can analyze the impacts of practices that may be more costly than other options but potentially preferable from social and environmental points of view. Impacts of reduced material consumption or shifts from heavily animal-based diets toward more plant-based diets in rich countries can be evaluated. Such scenarios would be formally dismissed and thus never even considered by neoclassical models with endogenous choices of technologies and endogenous consumption decisions, as these models choose technologies *only if they are cost-saving* and reject consumer behavior that results in a reduction in utility, however that elusive variable is measured.

Prospects for sustainable development will be vastly improved by research identifying strategies that are physically coherent and environmentally desirable, and that can open up new technological paths by considering technologies that are initially more expensive but also qualitatively different from the ones now in place. The inflow of practicing scientists from other fields brings not only expertise in obviously vital areas but also a fresh assessment of the logic of our models, not burdened by assumptions and practices that are generally unexamined because considered standard practice within the economics profession. Today, the unique strengths and the choice of simplifications characteristic of input-output economics appear compelling to many interdisciplinary researchers, and the fruits of such ongoing research collaborations are increasingly in evidence in our journal and at our professional meetings.

Faye Duchin  
Professor of Economics  
Rensselaer Polytechnic Institute, Troy, NY USA



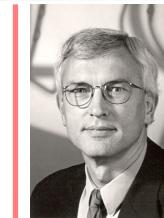
The [Eurostat Manual of Supply, Use and Input-Output Tables](#) has recently been published and is available for download on the Eurostat website.

Supply and use tables and symmetric input-output tables are an integral part of the [European System of Accounts \(ESA 1995\)](#). The manual discusses compilation issues and provides best practices and harmonised solutions.

The strategic objective of the publication is to enhance the statistical basis in this area. The Eurostat Manual intends to ease the compilation of supply, use and input-output tables, foster quality and stimulate harmonisation of methods. The main emphasis of the Manual is to describe the methodologies and procedures for the compilation of supply, use and input-output tables in the European Union.

The 2008 release is consequently derived from a 2002 version; it further elaborates intelligibility and transparency. The theoretical explanation of the compilation steps is accompanied by a complete set of empirical tables, which illustrates the recommendations using real data. Boxes examine special issues in more detail and flow diagrams visualise concepts and interrelations. Moreover, various numerical examples provide an easy access to the complex compilation procedures.

Due to its clear focus on the practical implementation, the Eurostat Manual complements [SNA 1993](#) and ESA 1995 as well as the [United Nations' Handbook of Input-Output Table Compilation and Analysis](#)' of 1999. For national accounts experts the Eurostat Manual may serve as reference book. Finally, interested data users may also benefit from this publication as a source of background information and clarification.



### Awards

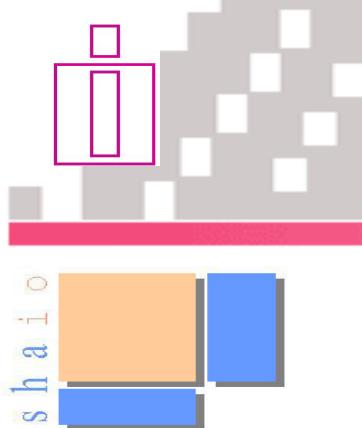
**Professor Jan Oosterhaven** of the University of Groningen has been selected as a Fellow of the Regional Science Association International (RSAI)

The fellowship is one of the most high profile symbols of academic recognition the RSAI gives, and is a lifetime appointment. Oosterhaven will receive his award at the 48th Congress of the European Regional Science Association (ERSA) in August 2008 in Liverpool, UK. The ERSA is the European branch of the RSAI. More information: [www.rug.nl/staff/j.oosterhaven/index](http://www.rug.nl/staff/j.oosterhaven/index)



Professor Karen R. Polenske received the [Sloan Industry Studies Best Book Award](#) at the Sloan Industry Studies Annual Meeting May 1 for her book "The Technology, Energy, Environmental -Health (TEEH) Chain in China: A Case Study of Coke-making"

The selection committee noted that "We consider this book to be an absolute exemplar of an industry studies book due to its focus on a particular industry, its close contact with people in that industry (at multiple levels), its theoretical and empirical grounding, its impact on the industry, and its potential impact as a model for industry studies across countries." In accepting the award, Polenske said "Actually, of course, the award is for each of the 15+ faculty and students from diverse disciplines who were my team members and who conducted the surveys, participated in the field trips, and wrote the different chapters in the book I edited, as well as for all the Chinese plant managers, government officials, and others who provided information and assisted with plant visits and those who helped me with the research and publication of the English and Chinese versions of the book."



## Hispanic American Society of Input-Output Analysis

The First Constitutional Assembly of the Hispanic-American Input-Output Society (SHAIO) will be hosted by the next Intermediate Input-Output Conference at the Pablo de Olavide University at Seville (Spain).

SHAIO was founded in 2007 with the aim to support, disseminate and promote input-output research, national and regional accounting and other related socio-economic oriented tools to address issues that are currently at the front of worldwide human's concerns: climate change, sustainable economic development, productivity trends, international trade and income distribution, to mention various examples. SHAIO also aims to create a scientific network in order to participate in research projects where these tools might be used for applied research and policy making. The Spanish-speaking I-O community is growing fast and one of the main issues will be to promote and disseminate statistical and applied international I-O research among Spanish-speaking researchers, universities and other research institutions. Hopefully, this may contribute to strength the links between Europe and part of the other side of the pond.

Therefore, SHAIO envisages to: (1) promote scientific projects through the associate members; (2) organise (biannual) general scientific meetings and (biannual) workshops on specific matters; (3) publish a Working Papers Series; and (4) set up a website as the main communication link between the Society and its members.

# Newsletter

## International Input-Output Association (IIOA)

Number 2; May, 2008

SHAIO was founded from a multi-country research group called Input-Output Group (IOG), which was set up in Oviedo (Spain) in 2003. Currently, the Society consists of three institutional members (Institute of Statistics of Andalusia, the Galician Institute of Statistics and the Statistical Institute of Catalonia) and around 50 researchers from several countries like México, Colombia, Chile, Australia and Spain. The SHAIO kindly invites all interested people to join the Society.

Carmen Ramos from the University of Oviedo (Spain) presides over the provisional Council until the First Constitutional Assembly will take place next July. José M. Rueda-Cantuche (Joint Research Centre's IPTS of the European Commission) acts as vice-president, Monica Serrano (University of Barcelona) as secretary, Ana S. García (University of Oviedo) as treasurer, Esteban Fernández (University of Oviedo) as vocal for the organization of meetings and events, and Miguel A. Tarancón (University of Castilla La Mancha) as webmaster.

To date, SHAIO has organised two editions of the Spanish Conference on Input-Output Analysis. The first edition took place in Oviedo in 2005 and the second in Zaragoza in 2007. These conferences were bilingual (Spanish-English) and had a remarkable success of attendance of researchers from Spain, rest of Europe and American Spanish speaking countries. The next edition will be hosted by the University of Castilla La Mancha in Albacete (2009). You can access the SHAIO website at [www.shaio.es](http://www.shaio.es), where you can find all the information about us, how you can become a member of the Society as well as other interesting data on input-output analysis research

The Working Papers Series of the Hispanic-American I-O Society (SHAIO) is edited by Rosa Duarte (University of Zaragoza) and José M. Rueda-Cantuche (JRC-IPTS). The WP Series aims to cover the following needs of the present I-O scientific community:

(1) There is currently no relevant, fruitful and stable presence of national statistical institutes and other I-O data producers in the academic literature. The absence of new theory and empirical contributions in most of the outcomes of statistical offices and other related research institutions make them deserve only a modest place in the I-O arena.

Needless to say, the work done by these institutions are extremely useful for the scientific community in the sense that the accuracy and reliability of their data outcomes will affect highly to applied research.

(2) Young I-O researchers hardly can access I-O experts to benefit from their comments and suggestions. To that purpose, they are compelled to submit their papers to international journals that will rarely accept them for publication. Frequently, they will only receive a rejection letter without any useful indication. Hence, the WP series aims neither to compete in the international journal market nor to struggle against impact factor indices. They only pursue that young researchers could have somewhere to publish their early works after they have been evaluated by a top level group of I-O expert referees.

(3) In line with one of the main objectives of the SHAIO, the WP series aims to promote and disseminate statistical and applied I-O research among Spanish-speaking researchers, universities and other research institutions. The Society expects this may contribute to stretch the links between Europe and part of the other side of the pond.

The WP consists of a set of two series: (1) Input-Output Analysis; and (2) National and Regional Accounting. While the former is self justified, the latter could give national and regional statistical offices and, generally speaking, data producers the opportunity to discuss their research (no need to be an original contribution) by appropriate referees and an outstanding editorial board. The WP may also serve to improve the already few existing links between data users and data producers by including not only methodological research but estimation techniques of missing data, data modeling, etc. Fidel Aroche (Autonomous University of Mexico) and Álex Costa (Statistical Institute of Catalonia) have been appointed to coordinate, respectively, the two WP series. We are all waiting for your contributions!!

Provisional  
Council of the SHAIO



# Newsletter

## International Input-Output Association (IIOA)

Number 2; May, 2008

### In the next ESR issue

#### Economic Systems Research

#### Journal of the International Input-Output Association

Volume 20

Number 2

June 2008

Erik Dietzenbacher. Editorial

SPECIAL ISSUE: CHINA'S GROWING PAINS—RECENT INPUT-OUTPUT RESEARCH IN CHINA ON CHINA

GUEST EDITOR: Christian De Bresson

**Christian DeBresson.** China's Growing Pains—Recent Input-Output Research in China on China: Foreword

**Xikang Chen, Ju-e Guo & Cuihong Yang.** Yearly Grain Output Predictions in China 1980–2004

China has a population of 1.3 billion and grain accordingly plays a crucial role in the Chinese economy. In this paper we suggest to predict grain output mainly by factor inputs and asset holding, and present a Systematic Integrated Prediction Approach (SIPA). The key elements of SIPA are an extended input-output model with assets, nonlinear variable coefficient forecasting equations, and using the minimum sum of the absolute values. Since 1980 we use the approach to predict yearly national grain output of China. The prediction lead time is more than half a year. The bumper, average, and poor harvests are accurately predicted every year. The average error rate over the period 1980–2004 is 1.9%.

**Cuihong Yang, Xikang Chen & Jian Xu.** A Method to Optimize Gross Fixed Capital Investments for Water Conservancy in China

A major concern of policymakers and researchers in China, is to find an appropriate size of the gross fixed capital investments for water conservancy (GFCIWC). This paper determines the optimal proportion of GFCIWC to GDP. Unlike engineering economics, we investigate the benefits of GFCIWC at a macro-economic level, using the 1999 input-output table extended for water conservancy.

Different kinds of impacts are induced by GFCIWC. These include forward benefits (flood control, water supply, irrigation, hydroelectric power, soil and water conservation, environmental protection) and backward benefits for GDP; negative social effects; and opportunity costs of GFCIWC. The results are put into a set of regression equations between total benefits of GFCIWC and the proportion of GFCIWC to GDP, from which the optimal proportion – or a desirable range – can be determined. The results may provide policymakers with guidelines for allocating investments.

**Xiuli Liu & Xikang Chen.** Methods for Approximating the Shadow Price of Water in China

Using the input-output tables for water conservancy for the nine major river basins in China in combination with linear programming techniques, we calculate the shadow prices of industrial water and productive water in the nine river basins. After the results are subjected to factor analysis, the shadow prices of industrial water and productive water are obtained for each Chinese province in 1999. Then, nonlinear models for calculating the shadow price of water in specific counties are given. They appear to be valuable tools for setting reasonable water prices and establishing a market for water in China.

**Ning Ai & Karen R. Polenske.** Socioeconomic Impact Analysis of Yellow-dust Storms: An Approach and Case Study for Beijing

Dust storms can extensively disrupt socioeconomic activities and pose hazards to human health and the ecosystem; yet no one has made a systematic analysis of dust storms from an economic perspective. Using a case study for Beijing in 2000, we present a preliminary analysis of socioeconomic impacts of yellow-dust storms, integrating regional economic analysis models with environmental-economic evaluation techniques. Our analyses demonstrate that the costs of delayed effects of yellow-dust storms can be higher than those of the immediate effects, and that the impacts potentially caused by supply effects can be greater than those caused by demand effects. Because this is a preliminary analysis with extremely limited data, our primary purpose is not to produce precise numerical results, but to develop an integrated model that policy analysts can use and further improve to evaluate the comprehensive impacts of other phenomena with similar properties more accurately.

**Hongxia Zhang & Xikang Chen.** An Extended Input-Output Model on Education and the Shortfall of Human Capital in China

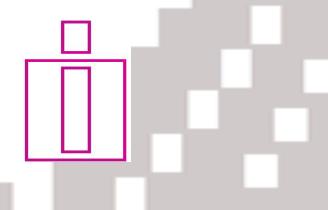
This paper proposes an extended input-output model on education. Production is divided into two subsystems, the education sector and the non-education sector. The education sector is reflected by both "monetary flows" and "student flows." Second, static and dynamic extended input-output models, including human capital production and allocation, are built. Third, the 1999 Chinese extended input-output table on education is compiled. Based on this table, the relation between human capital production and national economic development is analyzed. In particular it is found that too few university graduates are "produced", while a surplus of young people with only primary-school education go into industry.

**Jin Shui Zhang.** A Multi-sector Nonlinear Dynamic Input-Output Model with Human Capital.

In this paper, a two-sector model of endogenous growth is extended to a multi-sector nonlinear dynamic input-output model. If the model is on its balanced growth path (where prices – but not quantities – are assumed constant over time), it can be shown that the linear dynamic Leontief model is a special case. At the same time, on its balanced growth path, our model can be interpreted as a linear CGE model. The model distinguishes  $n+1$  sectors:  $n$  sectors producing physical goods, and one sector producing new human capital. A method is given for calculating the growth rate of GNP, the profit rate, the prices of goods, and the level of production when the model is on its balanced growth path. We point out the relation between the balanced growth rate and the profit rate.

#### IN MEMORIAM

**L. Martin Cloutier, Jorge Niosi & Amadou Diallo.**  
Obituary: Professor Christian De Bresson (1945–2007)



# Newsletter

## International Input-Output Association (IIOA)

Number 2; May, 2008

### Highlights in journals

This paper was awarded as the ES&T's Best Paper of 2007 in the journal *Environmental Science and Technology*:

[http://pubs.acs.org/journals/esthag/promo/top\\_papers/top2007/policy1.html](http://pubs.acs.org/journals/esthag/promo/top_papers/top2007/policy1.html)

**G. Peters, C. L. Weber, D. Guan & K. Hubacek**, China's Growing CO<sub>2</sub> Emissions-A Race between Increasing Consumption and Efficiency Gains. *Environmental Science and Technology*, 41/17, 2007, pp. 5939-5944.

China's rapidly growing economy and energy consumption are creating serious environmental problems on both local and global scales. Understanding the key drivers behind China's growing energy consumption and the associated CO<sub>2</sub> emissions is critical for the development of global climate policies and provides insight into how other emerging economies may develop a low emissions future. Using recently released Chinese economic input-output data and structural decomposition analysis we analyze how changes in China's technology, economic structure, urbanization, and lifestyles affect CO<sub>2</sub> emissions. We find that infrastructure construction and urban household consumption, both in turn driven by urbanization and lifestyle changes, have outpaced efficiency improvements in the growth of CO<sub>2</sub> emissions. Net trade had a small effect on total emissions due to equal, but significant, growth in emissions from the production of exports and emissions avoided by imports. Technology and efficiency improvements have only partially offset consumption growth, but there remains considerable untapped potential to reduce emissions by improving both production and consumption systems. As China continues to rapidly develop there is an opportunity to further implement and extend policies, such as the Circular Economy, that will help China avoid the high emissions path taken by today's developed countries.

**E. Dietzenbacher & E. Velázquez**, Analysing Andalusian Virtual Water Trade in an Input-Output Framework, *Regional Studies*, 41/2, April 2007, pp. 185-196.

Andalusian agricultural sectors are relatively small, but account for 90% of annual water consumption. More than 50% of the agricultural final demands is exported to other Spanish regions or abroad.

Using the concept of virtual water within an input-output framework, it is found that a substantial part of Andalusian water consumption is embodied in its exports. Considering the virtual water content of its trade, Andalusia is a net exporter of water. Examining regional policy aspects, a reduction in the exports abroad of agricultural products yields considerable benefits in terms of water savings, while the negative effects are only moderate.

**M. Ciaschini & C. Soccia**, Final demand impact on output: A macro multiplier approach. *Journal of Policy Modeling*, 29/1, Jan-Feb 2007, pp. 115-132.

In this paper a method of policy evaluation is designed which gives a deeper insight of the interactions between policy objective (total output) and policy control (final demand) at multi-sectoral level. An application, based on a regional social accounting matrix, illustrates how macro multipliers ruling the multi-sector/multi-industry interactions can be consistently defined and evaluated. We show that those aggregated multipliers are activated or neutralized by specific structures of the policy control and that no other outcome in the objective variable is reachable. A comparison with traditional impact multipliers is then performed. It shows how the proposed method, while providing the complete set of multipliers and associated structures, ends up with designing a more refined tool for policy evaluation.

**K. Mukhopadhyay**, Impact of Thailand's trade with OECD countries on the environment. *Asia Pacific Trade and Investment Review*, UN ESCAP, 2/1 2006, pp. 25-45.

The impact of trade liberalization on the environment is a matter of debate. Two conflicting hypotheses have emerged from the debate. One, the pollution haven hypothesis, suggests that the developed countries impose tougher environmental policies than do the developing countries, which results in distortion of existing patterns of comparative advantage. Thus, the polluting industries shift operations from the developed to the developing countries; developing countries therefore become "pollution havens." The second hypothesis, the factor endowment hypothesis, predicts that trade liberalization will result in trade patterns consistent with the Heckscher-Ohlin-Vanek theory of comparative advantage based on factor endowment differentials.

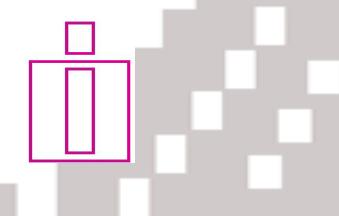
Rich countries are well endowed with capital. Since capital-intensive goods are often also pollution-intensive, factor-endowment theories of international trade predict that rich countries specialize in polluting goods. Thus, the manifestation of the pollution haven hypothesis is in direct conflict with the factor

**U. Lehr, J. Nitsch, M. Kratzat, C. Lutz & D. Edler** Renewable Energy and Employment in Germany. *Energy Policy*, 36/1, 2008, pp. 108-117.

The positive impacts of an increasing share of renewable energy on the mitigation of climate change as well as on the decrease of the dependency of energy imports are indisputable. However, one persistent problem for the German economy has been its high level of unemployment in the recent past. Therefore, any policy strategy will be measured also by its net impact on the labor market. The paper describes the results of a study that models this impact and is novel within three respects: firstly, an Input-Output-Vector for the renewable energy sector was developed based on the results of more than 1000 interviews with an extensive questionnaire, secondly gross and net effect of two different policy scenarios for Germany until 2030 were calculated and thirdly the approach varies from earlier studies by its explicit modeling of export and foreign trade effects.

**J. Ferreira do Amaral, J. Dias & J. C. Lopes**, Complexity as interdependence in input-output systems, *Environment and Planning A*, 39/7, 2007, pages 1770-1782.

In this paper we propose a new index of connectedness for an input-output system which is considered useful for quantifying economic complexity as the level of interdependence between the component parts (sectors) of a national (or regional) economy. This index is empirically applied in a tentative answer to the following questions: Should we expect to find a natural shift towards greater complexity as an economy grows and develops? Is a larger economy necessarily more complex than a smaller one? The inter-industry tables of several OECD countries provide the material support for making international and historical comparisons of economic complexity as a level of interrelatedness.



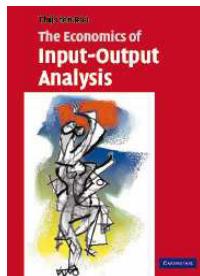
# Newsletter

## International Input-Output Association (IIOA)

Number 2; May, 2008

### Highlights in books

**THE ECONOMICS OF INPUT-OUTPUT ANALYSIS,**  
Thijs ten Raa, Cambridge University Press, Cambridge  
(2005), 197 pages. ISBN: 978-0-521-84179-5.



*Input-output analysis is the main tool of applied equilibrium analysis. This textbook provides a systematic survey of the most recent developments in input-output analysis and their applications, helping us to examine questions such as: Which industries are competitive? What are the multiplier effects of an investment program? How do environmental restrictions impact on prices?*

*Input-output analysis is the main tool of applied equilibrium analysis. This textbook provides a systematic survey of the most recent developments in input-output analysis and their applications, helping us to examine questions such as: Which industries are competitive? What are the multiplier effects of an investment program? How do environmental restrictions impact on prices? Linear programming and national accounting are introduced and used to resolve issues such as the choice of technique, the comparative advantage of a national economy, its efficiency and dynamic performance. Technological and environmental spillovers are analysed, both at the national level (between industries) and the international level (the measurement of globalisation effects). The book is self-contained, but assumes some familiarity with calculus, matrix algebra, and the microeconomic principle of optimizing behaviour. Exercises and review questions are included at the end of each chapter, and solutions at the end of the book.*

*See the reviews of this book by William Baumol and the two Nobel Prizes in Economics, Robert M. Solow and Lawrence R. Klein at:  
<http://www.cambridge.org/catalogue/9780521602679>*

**COMPUTABLE GENERAL EQUILIBRIUM APPROACHES IN URBAN AND REGIONAL POLICY STUDIES,** Masayuki Doi (Ed.), World Scientific Publishing Co., New Jersey (2006), 424 pages. ISBN: 978-981-256-471-9.

*Computable General Equilibrium (CGE) approaches have been used extensively over the past 25 years to analyze government and other policies for both developed and developing countries. Advances in methodology, computation techniques and data availability, including Social Accounting Matrix (SAM) data, have allowed researchers to use CGE models to study the potential policy impacts of tax, trade, environmental issues, etc. at the urban and regional levels as well as the macro level. What is common with these policy topics is that they cause structural, long-term impacts, including price changes and income growth, on various entities (households, enterprises, government and other regions/countries) and industrial sectors of economies.*

*CGE modeling can compute a new equilibrium of each industry's market clearance upon the incorporation of such a policy shock, and evaluates the policy alternative as compared with the benchmark equilibrium in terms of industrial sector-wise and aggregated prices, outputs, GDP and many other indicators.*



### Conferences & Workshops

**Gordon Research Conferences**

The 2008 Gordon Research Conference (GRC) in Industrial Ecology will be held at Colby-Sawyer College, New London, New Hampshire, USA, during August 17-22, 2008. The theme of this year's GRC is: Transforming the Use of Energy, Materials, Water, and Wastes. See the full program at:

[www.grc.org/programs.aspx?year=2008&program=industeco](http://www.grc.org/programs.aspx?year=2008&program=industeco).

Contact Faye Duchin, Conference Chair, with any questions at [duchin@rpi.edu](mailto:duchin@rpi.edu)



UNIVERSITY OF  
**LIVERPOOL**

### ERSA 2008 Culture, Cohesion and Competitiveness: Regional Perspectives

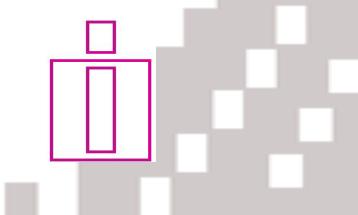
The 2008 ERSA Congress will be jointly hosted by the Department of Civic Design at the University of Liverpool and the British and Irish Section of the Regional Science Association International during August 27-31, 2008.

The overarching theme for the Congress will be Culture, Cohesion and Competitiveness - Regional Perspectives. This encapsulates a number of different aspects that are topical and relevant not only for Liverpool but also across the whole of Europe.

The programme will be organised around a variety of topics and include plenary sessions with lectures by distinguished keynote speakers, including Professor Ed Glaeser (Harvard), Professor Sir Alan Wilson (University College London) and Professor Tony Venables (University of Oxford).

A number of topics will reflect the central theme but as usual there will provision for other topics. There will also be young scientists sessions.

For details concerning submissions, dates and deadlines, registration, accommodation and travel please refer to the link: <http://www.liv.ac.uk/ersa2008/index.htm>



# Newsletter

## International Input-Output Association (IIIOA)

Number 2; May, 2008



### 3rd Seminar Jean Paelinck on Spatial modelling

Cartagena, Spain, 10-11 October, 2008

The conference aims to provide a forum for debate between young and consolidated researchers and it is open to both theoretical and applied papers which deal explicitly with questions of spatial modelling.

Contact: Fernando López ([fernando.lopez@upct.es](mailto:fernando.lopez@upct.es)) or Jesús Mur ([jmur@unizar.es](mailto:jmur@unizar.es)). More information:  
[http://metodos.upct.es/detaer/Seminar\\_JP/Seminar\\_JP.html](http://metodos.upct.es/detaer/Seminar_JP/Seminar_JP.html)



The National Seminar on Globalization and Inclusive Growth will be held at the Birla Institute of Management Technology, Greater Noida, New Delhi, India, during May 2-4, 2008. The objective of the Seminar is to work out the impact of globalization on different sectors of the business and economy in general and inequalities of growth in particular. Secondary objectives are sector specific growth impact with respect to regional spread of the growth momentum. 'Growth' there refers to broad and all inclusive spectrum.

Policy makers, executives and scholars interested in the papers and programme of the Seminar are requested to follow the link:  
<http://www.bimtech.ac.in/pdf/NationalSeminar.pdf>.

Contact Shri Prakash, Conference Chair, with any questions at:  
[shri.prakash@bimtech.ac.in](mailto:shri.prakash@bimtech.ac.in)

The 2008 Intermediate Input-Output Meeting will focus especially on managing the environment. The goal of the conference is to promote and stimulate the worldwide exchange of ideas among economists and between them and government officials, engineers and managers with interests in inter-industry analysis and related methods. Thus, we invite thematic topics related to any aspect of input-output analysis and modeling related to environmental issues.

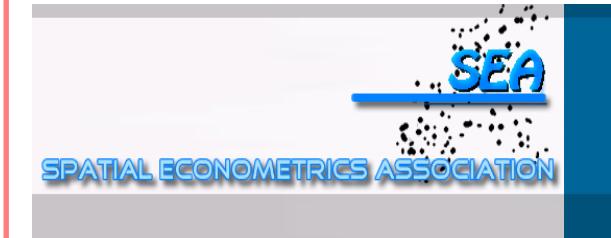
All necessary information regarding the parallel sessions, keynote presentations and parallel courses are already available on the link:

[http://www.upo.es/econ/IIOMME08/prog\\_general.php](http://www.upo.es/econ/IIOMME08/prog_general.php)

**Call for Papers.**- Please recall that accepted full papers and poster presentations must be sent before May 15, 2008.

For more information, please follow the link:

<http://www.upo.es/econ/IIOMME08/index.php>



Spatial Econometrics is becoming more and more popular in many scientific fields. The 2nd World Conference of the Spatial Econometrics Association aims to bring together economists, econometricians and regional scientists to discuss the present achievements and future challenges and opportunities. The conference will be held on 17-19 November 2008 at New York Marriott at the Brooklyn Bridge, NY.

The Conference will be immediately followed by 55th Annual North American Meetings of the Regional Science Association International, 2008 , which runs from Thursday November 20th to Saturday the 22nd. Visit the website to have details for the possibility of registering jointly to both meetings:

<http://spatialeconometr.altervista.org/>

Important dates

- Submission of abstract: 31st May 2008 (POSTPONED) (please send the abstract to the local organizing committee secretary: Kyle Handley at the email address NYSEA2008@gmail.com)
- Submission of final paper: 15 October 2008
- Final date for registration: 29 October 2008





# Newsletter

## International Input-Output Association (IIOA)

Number 2; May, 2008

### International projects



#### NISD Partnership Project - Promotion of Sustainable Development in the Context of Regional Economic Integration - Strategies for Environmental Sustainability and Poverty Reduction

The Asia-Pacific region is one of the world's fastest growing trading regions. Free Trade Agreements are expected to peak by 2020 with the full establishment of the East-Asia trade community and exert profound effects on the environment, society and economy of the region. To promote sustainable development in the context of regional economic integration, this project aims to provide policy makers with (1) a regional economic integration framework, (2) environmental policy options and (3) poverty reduction plans. The research will focus on regional economic integration in the 'ASEAN Plus Three' framework. This framework was chosen in order to reflect the social, economical and environmental diversity of East Asia.

The partnership project has been initiated and will be carried out by five members of NISD: the Institute for Global Environmental Strategies (IGES) and National Institute for Environmental Studies (NIES) in Japan; the McGill University in Canada; the Korean Environment Institute (KEI), and UNEP's Economics and Trade Branch based in Geneva. Other institution in the region will provide input and be involved in national level activities, including, the Policy Research Centre for Environment and Economy of State Environment Protection Administration of China, the Indonesian Institute of Sciences, the Thailand Environment Institute and the Institute of Environmental Science and Technology of University of Hanoi in Vietnam. China, Indonesia, Japan, the Republic of Korea, Thailand and Viet Nam were selected for the purposes of conducting case studies.

An inception workshop was held in October 2005 in Hayama, Japan that discussed activities to be undertaken, the role of each institution and the schedule of the activities. The basic approach to address the project's objective is a policy analysis using various qualitative and quantitative policy analysis techniques. As part of this analysis the project aims to develop strategic environmental policy options in support of sustainable development in two stages:

In Stage 1, the team will first carry out a policy review and trend analysis and identify a set of potential priority sectors/issues. This will be followed by a scenario building taking into account one exogenous driver, namely the state of economic integration in East Asia. Third, an assessment of the impact of economic integration on the environment using trade flow simulation will be conducted under the different scenarios in order to set priorities for intervention. Then, policy packages will be built, taken into account institutional capacities of the target countries. The last step of Stage 1, involves the assessment of policy packages at the regional and country level to identify the environmental, social and economic implications of the scenario-specific policy packages.

Based on the policy analysis and policy implications derived during stage 1, Stage 2 will seek to develop target-oriented environmental policy options in support of sustainable development. The team will set targets for each country. The selected policy packages will combine different instruments in order to effectively design a n environmental policy package. Then, the environmental, social and economic implications of each policy package will be quantitatively and qualitatively assessed at regional and national level using the policy impact assessment procedure established in Stage 1. The expected outcome of Stage 2 will be strategic environmental policy options.

A series of thematic workshop and national and regional policy dialogues are also part of the work plan and will be held at important milestones of the project in the participating countries.

For further information regarding the Partnership Project, please contact Hideyuki Mori from IGES at [h-mori@iges.or.jp](mailto:h-mori@iges.or.jp).

<http://www.unep.ch/etb/areas/NISDpprjts.php>



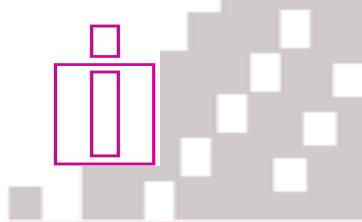
#### Productivity and Environmental Tax Reform in Europe

<http://www.petre.org.uk/>

PETRE is a three-year project, one of four funded by the Anglo-German Foundation (AGF) as part of its "Creating sustainable growth in Europe" research initiative, details of which can be found on the Foundation's website. The project was led by the Policy Studies Institute until the end of 2007 but is now led by King's College London. PETRE has five other project partners, based in the United Kingdom, Germany, Austria and the Czech Republic.

The overall aim of the project is to generate substantial new insights into the conditions for sustainable economic growth, and how this might be promoted through public policy, by linking the concepts of resource productivity and environmental tax reform (ETR). In particular, it will investigate the major issues related to resource productivity and ETR, including both economic and environmental implications and impacts. While the project will focus on Germany and the United Kingdom, it will also consider the implications for other countries within the European Union, and within the global economy.

The project comes at a time of some challenge for European policy-making, in respect of both unemployment and fiscal balance. So far there is little evidence of the Lisbon Strategy and process providing the new impetus to growth and competitiveness that was intended. In these circumstances it is more difficult to achieve the policy integration, in particular in respect of environmental policy, which is called for in the EU Sustainable Development Strategy. It is intended that this project should generate significant new ideas and recommendations in respect of these issues, contributing thereby to both the Lisbon process and the objective of policy integration.



# Newsletter

## International Input-Output Association (IIOA)

Number 2; May, 2008

### Databases

#### Australian Bureau of Statistics - Input-Output Work Program

The Australian Bureau of Statistics (ABS) has recently established a new program of work focussed on Input-Output tables. In Australia, Input-Output tables have typically been compiled by the ABS every 3-4 years and have been released some 3-4 years after the reference year in question. Most recently, the 2001-02 Input-Output tables were released in July 2006. This new program of work aims to meet user needs for improved Input-Output (I-O) data by:

- 1.- Compiling I-O tables on an annual basis.
- 2.- Reducing the gap between reference period and release date.
- 3.- Improving the quality of the data feeding into the I-O tables.

The move to annual I-O tables is mainly in response to the Australian Government's aim to address the climate change issue, and specifically to establish an emissions trading scheme for Australia in 2010. The Australian Treasury (who have responsibility for the development of the emissions trading scheme) will use the I-O tables to model the impact of a 'carbon price' on the Australian economy. The ABS is also aware that there is a large number of other users (and uses) for the tables and as such will be seeking to leverage off this new initiative to meet other needs.

The first full set of tables from this program will be 2004-05 reference year tables to be released in June 2008. The tables will be available free of charge from the ABS website ([www.abs.gov.au](http://www.abs.gov.au)).

For more information please contact Michael Smedes ([michael.smedes@abs.gov.au](mailto:michael.smedes@abs.gov.au)).



### Welcoming

The International Input-Output Association welcomes the following new members since early autumn 2007:

**Abul Quasem Al-Amin**, Universiti Kebangsaan, Malaysia  
**Antonio F. Amores**, Pablo de Olavide University, Spain  
**Peter Bruce**, Statistics.Com, United States  
**Ignacio Cazcarro-Castellano**, University of Zaragoza, Spain  
**Martin Distelkamp**, GWS-Inst. of Econ. Structures Research Germany  
**Angela Druckman**, Centre for Environmental Strategy, United Kingdom  
**Stefan Giljum**, SERI - Sustainable Europe Research Institute, Austria  
**Troy Hawkins**, Norwegian University of Science and Technology, Norway  
**Andrew Hunt**, Durham University, United Kingdom  
**Abdul-Hamid Jaafar**, Universtiti Kebangsaan , Malaysia  
**Andrejs Jauzems**, Ventspils University College, Latvia  
**Manfred Lenzen**, Center for International Sustainability Analysis, Australia  
**Ricardo Lopes**, State University of Maringa, Brazil  
**Christian Lutz**, GWS-Institute of Economic Structures Research, Germany  
**Andreas Löschel**, Center for European Economic Research, Germany  
**Ilmo Maenpaa**, Thule Institute, University of Oulu, Finland  
**Florencia Médici**, National University of La Plata - CONICET, Argentina  
**Besa Muwele**, African Development Bank, Tunisia  
**Juan Carlos Parra**, Georgetown University, United States  
**Sergio Plaza**, University of Barcelona, Spain  
**Hanna Shcherbich**, Freie Universitaet Berlin, Germany  
**Ariel Wirkierman**, National University of La Plata, Argentina  
**Ling Yang**, Xi'an Jiaotong University, China  
**Devrim Murat Yayan**, Politecnico di Bari, Italy

### Short notes:

Within the 14<sup>th</sup> All India Input-Output Research Association Conference held at the University of Hyderabad, Hyderabad, India during March 25-27, 2008, Prof. **Debesh Chakraborty**, former Professor of Economics at Jadavpur University, Calcutta (India) gave a lecture in honour of late Prof. **Sukhamoy Chakravarty** titled: *Input-Output Analysis: Where are we after seventy years?*

\* \* \*

Prof. **Karen Polenske** has received a one-year seed funding grant from BP (British Petroleum) to conduct research on regional energy-intensity trends in China. This research will cover the trends in all China, especially on the role of technological changes in electric generation in reducing the energy intensity.

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