

Editorial Statistics and Tourism Satellite Account Programme

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(Programme Director)
& Clara van der Pol,
World Tourism Organization
(UNWTO)

Dear IIOA member,

Input-Output analysis and related methods play an increasingly important role in studies focusing on the causes and consequences of changes in tourism activity. Therefore, Bart Los and Bert Steenge invited researchers in this field to contribute to a special issue of ESR on this topic, which will appear in December. Below, UNWTO (the UN specialized agency for tourism, mandated to foster the development of national Systems of Tourism Statistics (STS), the international comparability of tourism statistics, and the macroeconomic analysis of tourism) officials give their opinions on the road ahead, and the way in which input-output analysis could use these to provide answers to pressing questions in the field.

Tourism is a social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal or business/professional purposes. These people are called *visitors* and tourism has to do with their activities, some of which imply tourism expenditure—the basis for defining tourism as an economic phenomenon. Tourism is thus defined by the *demand* for products coming from this special type of consumer, the visitor.

The *tourism sector* is defined (see [UNWTO's Understanding Tourism: Basic Glossary](#)) as the cluster of production units in different industries that provide goods and services typically demanded by visitors. Such industries are called *tourism industries* because visitor acquisition represents such a significant share of their supply that, in the absence of visitors, their production of these goods and services would cease to exist in meaningful quantity.

The international community's recognition of tourism as an *economic phenomenon* is relatively recent. Consequently, many issues in its measurement and analysis had to be, and continue to be, discussed and decided on in an international context. UNWTO's sustained effort in bringing the international community to agree on how to measure tourism in a way that is conceptually precise and consistent with the National Accounts has resulted in 2 updated documents, approved by the United Nations Statistical Commission, that have leveraged the understanding of tourism as an economic phenomenon:



1. The [International Recommendations for Tourism Statistics 2008](#) (IRTS 2008): the framework for developing national Systems of Tourism Statistics, that is, a set of concepts, definitions and classifications for compiling basic tourism statistics and indicators; and
2. The [Tourism Satellite Account: Recommended Methodological Framework 2008](#) (TSA:RMF 2008): the unifying framework, strictly coherent with the IRTS 2008, for measuring tourism's economic contribution in a way that is consistent National Accounts.

Together, they allow for gathering tourism statistics, economic aggregates and indicators that are reliable, internationally comparable, and relevant to not only to the tourism sector but also to the broader economic context in which tourism is embedded.

A second development is that both recommendations have been approved after a process that involved other international organizations which have, in turn, adopted them in their respective

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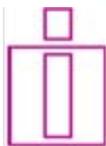
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Special Issue
in *Economic
Systems
Research*:

**Tourism Studies
and Input-Output
Analysis (see p. 8)**



statistical fronts. For example, the International Monetary Fund (IMF) clarifies the role of tourism (versus travel) in its recent revision of the Balance of Payments, and the International Labour Organization (ILO) takes them as the starting point for developing guidelines to measure employment and qualitatively related issues in the tourism industries. Furthermore, the eminent System of National Accounts 2008 now refers to the TSA:RMF 2008 as the international manual for the economic measurement of tourism.

A third force championing the recognition of tourism as an economic phenomenon has been countries' large-scale implementation of the TSA. By early 2010, some 60 countries had been identified as having already produced or currently developing a TSA exercise.

Clearly, solid economic theoretical underpinning is necessary for understanding the true magnitude of the economic impact of tourism—not only the direct effects measured in a TSA but also the indirect and induced effects that can only be calculated through modelling. This is a key priority for integrating tourism as part of economic policies and brings us to the following points we believe research(ers) should pay more attention to:

- The theoretical underpinnings of the TSA framework. As mentioned, the IRTS and TSA:RMF 2008 are perfectly integrated and harmonized with the SNA. Note that this is not yet the case for other sectors developing satellite accounts (like health, environment, etc.). Since tourism does not boast a consolidated economic theory, many empirical studies lack a proper economic theoretical framework. The 2008 recommendations help us understand tourism as part of the (macro)economy; further developing the theoretical micro foundations of tourism (behaviour), a better understanding of the demand-supply relationship, and links to macroeconomic aggregates seem very relevant in order to expose empirical relationships founded in economic theory.

- More sophisticated analysis: the TSA is an excellent statistical input. Not only is the TSA the only means to set international comparability of the direct economic contribution of tourism in

national economies, it is also a rich source of data for more sophisticated applications (models) to analyse linkages and dynamics. Therefore, it is a pity to see the continued over-reliance on arrivals data or Balance of Payments figures as approximations to tourism's economic value when more economic data is increasingly available, especially in countries with a TSA exercise.

- Understanding the direct contribution of tourism as a function of both inbound and domestic tourism. Resident visitors bring about *domestic tourism expenditure* and non-resident visitors produce *inbound tourism expenditure*; they total to *internal tourism expenditure*—the key aggregate for measuring tourism's economic contribution from the demand side. The TSA confirms what some experts had pointed to long before: (1) that domestic tourism expenditure is usually far larger than inbound tourism expenditure, (2) that domestic trips and inbound trips have different consumption patterns, and that (3) the direct effects of inbound and outbound tourism tend to balance out from year to year resulting in fairly resilient aggregates of the contribution of tourism (like Tourism Direct GDP). For these reasons, economic analysis needs to pay additional attention to, particularly, the micro-foundations for the consumption of different forms of tourism.

- The abuse of multiplier effects and the misinformation on TSA and TSA-based analysis results. The problem here is that many studies that employ multiplier analysis do not accurately report on the type of multipliers being used, or, more generally, on the range of underlying concepts. UNWTO is of the opinion that a proper understanding of tourism re-quires transparency, particularly in methodology (both statistical and analytical), and a move towards defining certain common elements, which requires further standardization.

- The sub-national perspective. Tourism has a close link with territory and it is important to better understand the activity of visitors as they move across a territory. The application of tourism statistics and TSA to sub-national levels is on the UNWTO agenda since 2007. Now UNWTO has set up the [INRouTe](#) project (the International Network on Regional Economics, Mobility and Tourism) with the goal of designing general guidelines to foster the development of statistics and analysis of the economic contribution of tourism at the regional/

local level. In fact, some of the contributing authors to the special issue of *Economic Systems Research* are INRouTe Partners (Calvin Jones, Mara Manente, Jie Zhang). INRouTe focuses on 3 Research Areas that deserve further research and consensus:

Flows of visitors: cross-border and interregional flows, statistical use of administrative records, data from the use of new technologies, measurement and analysis tool, forecast modelling and other accounting tools.

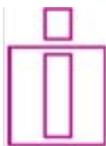
Tourism and territory: indicator systems (related to territory and sustainability), Geographic Information Systems, specific software, and the relation between tourism statistics and the environment.

Economic contributions: TSA, modelling tools (Input-Output, Social Accounting Matrix, Computational General Equilibrium models, and econometric models), and employment in tourism industries.

These should support regional/local tourism destination management to guide policy and decision making. Key topics in this respect are the definition of observation and analytical units, procedures for monitoring and evaluation, and the design of indicator systems.

- The TSA can be further adapted/elaborated to accommodate for a number of issues still under-appreciated; some are: (1) Households versus individuals. The TSA focuses on the visitor, an individual consumer, as the source of expenditure and thus of economic activity. This contrasts with the sectoral approach of the Nat. Accounts where the observation unit is the household. It would be beneficial to link the visitor to a household; it seems that the most sensible way to do this would be through the IRTS 2008 concept of 'travel party'. (2) Better identification in the TSA of investment associated with the tourism industries (Tourism Gross Fixed Capital Formation) and general government consumption (Tourism Collective Consumption; especially in countries with significant welfare initiatives for specific population segments, like the elderly); issues affirmed in the TSA:RMF 2008 as requiring further work.





Call for Nominations for IIOA Fellows

Ronald E. Miller

Secretary of the Nominations Committee, IIOA Fellows

The nomination and election of "Fellows of the IIOA" are regulated by the bylaws as revised and accepted at the Sao Paulo July 2009 Council meeting of the IIOA. These are:

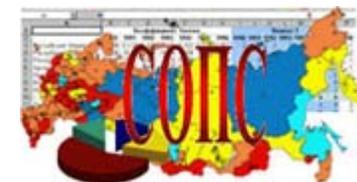
1. **Aim.** The aim of electing Fellows of the IIOA is to honor appropriate members of the IIOA for their scientific contributions to the field of input-output analysis, broadly defined.
2. **Number.** During each International Input-Output Conference the maximum number of members to be elected as new Fellows of the IIOA is equal to two. The overall maximum number of Fellows is twenty.
3. **Secretary.** After each election round, one of the Fellows will be chosen by the Fellows as Secretary and will be responsible for the organization of the next election.
4. **Nomination.** In the calendar year preceding the next International Input-Output Conference members of the IIOA, not being a Fellow, will be invited by the Secretary to nominate other members for election before December 31. Each nomination must be supported by two other members, excluding the nominee and the Fellows. Each nominee must have been a member of the IIOA for at least six years. Each nomination will include: name, current address, current email, current institution, brief curriculum vitae, list of maximally ten key-publications, and a description of the candidate's contribution to input-output analysis of 100-200 words.
5. **Election.** All Fellows will be invited to deliver their votes on the election of the new Fellows. The Secretary will inform the newly elected Fellows, the President of the IIOA, the Chair of the scientific program committee and the Chair of the local

organizing committee of the next International Input-Output Conference of their election, at least four months before the next conference.

6. **Installation.** The new Fellows of the IIOA will be installed as such during one of the plenary events of this next conference. If a new Fellow is unable to attend the event in person, a representative will receive the decorations that go with the Fellowship Award on her/his behalf at the next conference.
7. **Rights.** The Fellows have the right to call themselves "Fellow of the IIOA" and have the right to free memberships in the IIOA.
8. **Obligations.** The Fellows have the obligation to further promote the development and to advocate the proper application of input-output analysis, broadly defined.

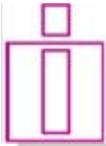
In Istanbul, 2007, the first life-time Fellows were announced: Andrew Bródy, Anne P. Carter and Karen R. Polenske. In Sao Paulo, 2009, the following additional life-time Fellows were announced: Clopper Almon, Ronald E. Miller and Graham Pyatt. In Sydney, 2010, Geoffrey J. D. Hewings and Chen Xikang were added as life-time Fellows.

We now call for nominations for up to two additional Fellows. Any current members may nominate any members of the association according to the guidelines outlined in paragraphs 1 and 4, above. For consideration during the current nomination process, all nomination materials must be received by me (remiller@sas.upenn.edu) no later than **Friday, December 31, 2010**. I will confer with the seven other Fellows after receiving the nominations, and we will then select up to two new Fellows who will join our group. An announcement will be made at the 19th International Input-Output Conference in Alexandria, Virginia, June 13-17, 2011.



International Scientific Workshop, "Current Input-Output Studies in Post-Soviet Countries" Moscow, October 28-29, 2011

On October 28 and 29, 2010, an international workshop entitled "Current Input-Output Studies in Post-Soviet Countries" was held in Moscow. The workshop was organized by three Russian institutes, i.e. the Institute of Economics and Industrial Engineering of the Siberian Branch of the Russian Academy of Sciences (IEIE SB RAS) in Novosibirsk, the Institute of Macroeconomic Forecasting of the Russian Academy of Sciences (IMF RAS) and the Council of Studies on Productive Forces (CSPF/SOPS), both in Moscow, in collaboration with the International Input-Output Association (IIOA).



Newsletter

International Input-Output Association (IIOA)

Number 12; November, 2010

The idea to organize this workshop can be traced back to a letter written by Academician Alexander Granberg to Jan Oosterhaven, then outgoing IIOA President, in late 2009. This letter outlined the aim of the workshop and also included a preliminary list of participants. In addition, it mentioned the themes to be discussed and included an invitation to participate. The objective was twofold, i.e. 1) to give an overview of I-O studies currently being done in Russia and other (Post-Soviet era) countries, and 2) to contribute to the structuring of a future IIOA conference, to be hosted in St. Petersburg.

Acad. Granberg's letter proposed CSPF as a possible venue for the workshop, including facilities for simultaneous translation, et cetera. After a positive response from Jan Oosterhaven, the matter was taken up by Bert Steenge on behalf of the IIOA and by Victor Suslov and Larisa Melnikova, both from the IEIE SB RAS at Novosibirsk. The IIOA provided a number of special facilities, including a special website for the workshop which was set up by Dabo Guan. The workshop was the first of its kind, in that it focused on I-O-related themes relevant to the former Soviet countries.



From left to right: José M. Rueda-Cantucho, Larisa Melnikova, Mark Thissen, Bert Steenge & Keisuke Nansai

As the format of the workshop, a series of thematic sessions was chosen in which participants from Post-Soviet countries and IIOA side would provide a forum for discussion. The Post-Soviet countries represented were: Russia, Ukraine, Kazakhstan, and Tadzhikistan; participants from IIOA side were from the Netherlands, Denmark, Spain, Japan, and Austria. All in all, more than twenty specialized presentations were given, covering a wide range of subjects.

The workshop opened with a tribute to Alexander Granberg by Victor Suslov and Jan Oosterhaven (see also the August 2010 Newsletter for an extended obituary of Acad. Granberg). There were four introductory presentations, i.e.:



- A discussion of challenges in I-O research (Bert Steenge),
- The use of I-O balances as a basis for the Navigator Model of Management Processes (Saylaw Bayzakov),
- The role of I-O models in analyzing the financial-economic state of affairs at the macro level (Victor Ivanter), and
- The role of I-O tables in economic forecasting (Lyubov' Strighkova).

This was followed by four sessions which constituted the remainder of the workshop. Session 1 was devoted to national and regional accounting and the compilation of I-O tables, while Session 2 dealt with regional issues, with a focus on modeling and competitiveness issues. Session 3 focused on environmental

aspects and footprints. In Session 4, specific applications and modeling issues were discussed. In a special presentation, Naimdjon Ibragimov discussed systems for the teaching of young researchers. For details of the sessions we refer to the included List of Presentations.

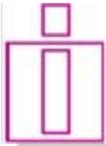
The workshop ended with an evaluation round, and a discussion of how to continue. One option would be to develop focused initiatives on a regular basis, analogous to earlier initiatives in the East-Asian and the Spanish-speaking parts of the world. An impression of views from Russian participants is given below.

Dr. Shirov noted that, unfortunately, there has been no clear platform so far for the exchange of ideas and opinions in Russia. Russian I-O researchers more often meet each other abroad than in their own country. This is a situation that obviously does not contribute to the development and improvement of I-O methodology in Russia.

He further noted that during the workshop, talks were given by representatives of most Russian I-O centers. So, the workshop did achieve its general purpose in that it reflected the current situation in I-O studies and revealed the key problems involved in the practical use of I-O computations for decision-making in economic policy. For future work on Russia's I-O tables for 2011 it will be essential to stimulate contacts between different groups of researchers in order to improve the methodology. For this reason, contacts with the international I-O community are of vital importance.

If the workshop becomes a regular event, it will serve to stimulate the future involvement of new generations of researchers in I-O studies, as well as contribute to the popularization of I-O tools.

Prof. Baranov noted that he had the impression that relatively little was known abroad about the state of I-O studies in Siberia. In his opinion, the promotion of such contacts as workshops or conferences is likely to stimulate the exchange of information on I-O studies between Western countries and Russia, which would naturally contribute greatly to the development of multisector-based economics.



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Yury Ershov expressed regret that due to the intensive format of the workshop, involving many fairly brief presentations, there was no room to present computational work in detail in a number of studies.

Mr. Ershov stated that he would be interested in more extensive information on the figures that were presented. He proposed to make the format of any future workshop “more workable” by either reducing the number of presentations, or increasing the number of working days.



Prof. Suslov commented that he intends to organize the next workshop in 2011 “on his own territory” in Siberia, either in ‘Academic town’ (Akademgorodok) near Novosibirsk, or in some other place in Siberia that could be of interest. Other Siberian scientists from Irkutsk and Khabarovsk will also be invited. For the future, a rotation of Russian institutions is planned as the basis for the workshop.

Larisa Melnikova & Bert Steenge



PROGRAMME OF THE SCIENTIFIC INTERNATIONAL WORKSHOP

INTRODUCTION

In Memoriam Alexander Granberg,
Victor Suslov & Jan Oosterhaven

Challenges in Current I-O Research, *Albert E. Steenge*

I-O Balance as a Basis of the Economic Navigator Model System of Management Processes, *Saylaw Bayzakov*

I-O models in the analysis of the financial-economic state of the national economy, *Victor Ivanter*

I-O table in the system of forecast calculations, *L'ubov' Strighkova*

SESSION 1 NATIONAL AND REGIONAL ACCOUNTING AND THE COMPILATION OF I-O TABLES

National Accounts and I-O tables: Selected Issues, *Bent Thage*

Russian Input-Output Tables for 2011 and problems of their compilation, *Irina Masakova*

World Input-Output Database (WIOD): Construction, Challenges and Applications, *Umed Temurshoev*

Updating Russian symmetric input-output tables with cross-entropy minimization methods, *Natalia Turdyeva*

The construction of input-output tables: a definite solution?, *José M. Rueda-Cantuche*

SESSION 2 REGIONAL MODELING AND REGIONAL COMPETITIVENESS

Regional and Interregional I-O tables and Models, *Jan Oosterhaven*

I-O models in the analysis of the spatial development of the economy, *Victor Suslov*

Revealed Competition and Benchmarking of European NUTS2 Regions using Regional Supply and Use Tables, *Mark Thissen*

Basic goals, problems and results of interregional I-O studies, *Yury Ershov*

Social Accounting Matrices for the Russian Regions, *Nadezhda Mikheeva*

Households Sector In Regional Input-Output Tables, *Rustam Ishbulatov, Alsu Sayapova*

Elaboration of the System of Calculated Input-Output Tables in the Nomenclature of Economic Activity Types for 1980-2008, *Marat Uzyakov*

SESSION 3 ENVIRONMENTAL ASPECTS AND FOOTPRINTS

Environmental restrictions of Russian industries competitiveness, *Vadim Gilmundinov, Tatyana Tagaeva*

Modeling the Japanese Carbon Footprint Structure, *Keisuke Nansai*

CO₂ Emissions Reduction from Eliminating Energy Subsidies in Ukraine, *Iulia Ogarenko and Klaus Hubacek*

SESSION 4 APPLICATIONS AND MODELING

Estimation of R&D Spillovers in the Ukrainian Economy, *Alexander Chebanov*

Modeling of Russian Economy Structure with DSGE-IO Approach, *Vadim Gilmundinov*

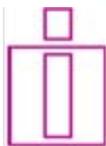
System of inter-industry calculations on the base of business-statistics, *Alexander Shirov*

Forecasting of Russian Economy Development Using the Dynamic Input-Output Model with Balance of Payments Block, *Alexander Baranov, Darya Bykova, Victor Pavlov*

Leontief's Classical Roots, *Christian Lager*

Problems of Training Young Researchers, *Naimdjon Ibragimov*

More information about the papers presented are available at [the IIOA website](http://www.iioa.org)



In Memory of Peter Ritzmann

We mourn for Peter Ritzmann who was one of the top input-output experts in Europe. He died on August 10, 2010 in a motorcycle accident near Trier in Germany. Riding a motorcycle was his hobby that suddenly ended his life.

At Eurostat Peter Ritzmann was in charge of collecting and harmonizing supply, use and input-output tables for the European Union. The last 10 years he worked with great success in Directorate C (National and European Accounts) of the Statistical Office of the European Union.

Peter's most important contribution to input-output analysis is related to the Eurostat Manual of Supply, Use and Input-Output tables, published in 2008, where he acted as chief editor of the manual. The manual became a great success and we all appreciate his work. An initial version of this document was drafted by a group of European experts. The release of the 2008 edition was written by Joerg Beutel in close cooperation with Peter Ritzmann. He was an excellent partner to work with. The terrible accident in August 2010 suddenly ended a wonderful collaboration.

Peter Ritzmann initiated another important contribution for applied research in input-output analysis. Some time ago the European Commission instructed in a Council Regulation all member countries of the European Union to submit annual supply and use tables and five-yearly input-output tables for the national accounts.

First transmissions of tables started in 2007. By now, a very impressive collection of supply, use and input-output tables of all member countries can be extracted free of charge from the official website of Eurostat.

The time series is covering tables for 1995-2008 of 27 EU countries and 3 candidate countries (Macedonia, Norway, Turkey). Peter Ritzmann organized this enormous assignment with his colleagues Joseph Heuschling, Isabelle Rémond-Tiedrez, Anne Foltete and Gerard Hanney in the best possible way.

In another important project Peter Ritzmann, José Manuel Rueda-Cantuche and I were engaged in an IPTS project of compiling aggregate input-output tables for the European Union (EU27). The Institute for Prospective Technological Studies (IPTS) is one of the seven scientific institutes of the European Commission's Joint Research Centre (JRC), located in Seville, Spain. A huge task of the project was to compile a set of supply and use tables at basic prices for 1995-2006 as a complement to the existing tables at purchasers' prices. This task was at last accomplished in July 2010 when Peter suddenly died. His death shocked us for many weeks. But life must go on. We hope to present the aggregate input-output tables for the European Union by the end of this year. The tables will be dedicated to Peter.

In March 2010 Peter gave his last official presentation at the Input-Output Workshop for Germany, Austria and Switzerland organized by the Halle Institute for Economic Research in Halle, Germany. He presented the Paper "Consolidated supply, use and input-output tables for the European Union and the Euro area" which was well received by the audience.

Who was Peter? He was born July 27, 1955 in Halle (Saale), Germany. In 1974 he graduated from the Thomas-Morus Gymnasium of Oelde and started to study mechanical engineering at the Technical University of Hannover. After one year at Hannover he moved to the University of Muenster to study economics. From 1983 until 1987 he was research assistant at the Institute for Housing Economics of the University of Muenster.

His Ph.D. dissertation "Determinants of owner occupied housing" was supervised by Prof. Dr. Ernst Helmstaedter, who was also engaged in input-output analysis for a long time. Peter's other research activities were municipal economic planning, regional development, macroeconomic models and input-output analysis.

During 1987-1988 Peter became an expert for mid-term and long-term analysis and projections of economic development at the German Federal Ministry of Economy in Bonn. From 1988-1996 he moved back to Muenster as the department head of Computer Science Services at the District Government of Muenster. From 1996 until 1999 he became a national expert at the European Commission in Brussels for interchange of data between administrations. During 1999-2000 he returned to the District Government of Muenster and worked as an expert in the Department of Regional Planning. In 2000 Peter Ritzmann became an official of the European Commission, first in Brussels and very soon at Eurostat in Luxembourg.

The input-output community lost a talented scientist. José and I much appreciated working with him, his sense of humour, his vitality and his sharp intellect. We lost a dear colleague and friend. Peter was such a gentle person.

Prof. Dr. Joerg Beutel
Konstanz University of Applied Sciences
Konstanz, Germany

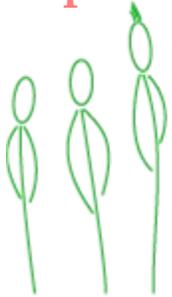


Newsletter

International Input-Output Association (IIOA)

Number 12; November, 2010

Upcoming conferences



**ESEE
2011**
June 14-17
2011

9th International
Conference of the
European Society for
Ecological Economics
**Boğaziçi University
ISTANBUL**

Ecological Economics recognises the interconnections and interdependence of the economic, biophysical and social worlds, and focuses on the human economy both as a social system and a system embodied in the bio-physical universe. Reflecting on the identity of ecological economics, the 9th conference of the European Society will investigate how ecological economics can broaden the available range of methods and tools for policy support, and increase its relevance for the real-world problems. Please take a few minutes to browse our site. I think you will find plenty of opportunities to build strong and lasting relationships with a diverse group of scholars at the cutting edge of urban and regional research. We pride ourselves on the unique networking opportunities we offer to scholars and practitioners interested in socio-economic phenomena in a regional context. Our annual conference is the meeting of scholars hailing from all quarters of the world. Our website provides information concerning the North American conference, which will be held in Denver, Colorado, November 10-13, 2010, and links to regional and international Regional Science organizations.

Abstract deadline: December 24, 2010

<http://www.esee2011.org/>



19th International Input-Output Conference
Alexandria, Virginia, USA
(in metropolitan Washington, DC)
13 -17 June, 2011

The International Input-Output Association announces that the 19th International Input-Output Conference will be held on 13-17 June, 2011 in Alexandria, Virginia. The goal of the conference is to promote and stimulate the worldwide exchange of ideas among economists between them and government officials, policy makers, engineers, national accountants and managers with interests in input-output analysis and related methods.

**Abstract deadline:
December 31, 2010**

More information at:

[19th International I-O Conference](#)



**6th International
Conference on Industrial
Ecology,
Berkeley, California, US
June 7-10, 2011**

The International Society for Industrial Ecology promotes industrial ecology as a way of finding innovative solutions to complicated environmental problems, and facilitates communication among scientists, engineers, policymakers, managers and advocates who are interested in better integrating environmental concerns with economic activities. The mission of the ISIE is to promote the use of industrial ecology in research, education, policy, community development, and industrial practices.

See more information at: <http://isie2011.berkeley.edu/>

[international society for industrial ecology](#)

Abstract deadline: December 31, 2010

In the next ESR issue

Economic Systems Research – Journal of the IIOA

Volume 22 Number 4 December 2010

Los B and Steenge A. E. *Tourism Studies and Input-Output Analysis: Introduction to a Special Issue*

Madsen B. and Zhang J. *Towards a New Framework for Accounting and Modelling the Regional and Local Impacts of Tourism*

We identify four different approaches to estimate the regional and local impacts of tourism based on national accounts and economic modeling: The supply approach, the simple demand or commodity approach, the simple satellite account approach involving tourism satellite accounts based on social accounting, and the extended satellite account approach. Based upon a general interregional quantity model for tourism, empirical evidence on the impacts of tourism on 98 Danish municipalities is presented. We conclude that the four approaches give very different results, both in absolute and in relative terms.

Jones C. and Munday M. *Tourism Satellite Accounts for Regions? A Review of Development Issues and an Alternative*

The extension of the tourism satellite account (TSA) to the regional scale is an opportunity for regional policymakers to undertake consistent and defensible analyses of the tourism economy and its interconnections based upon high quality and comparable data. However, limitations in the TSA structure will need to be resolved before policy useful analysis can become the rule rather than the exception. The paper reviews the development of TSAs at sub-national levels and goes on to examine their usefulness to policymakers, and how far problems with the framework can be overcome in a practical manner.

Steenge A.E. and van de Steeg A. *Tourism Multipliers for a Small Caribbean Island State; The Case of Aruba*

In this paper we study the importance of tourism for Aruba, a small Caribbean island state within the Kingdom of The Netherlands. We present an input-output table based on the National Accounts and the Tourism Satellite Account for Aruba, with inbound tourism explicitly included, for the year 1999. Several types of multipliers are discussed. Each multiplier is relevant within a particular framework, but the choice between them is not always obvious. This paper tries to clarify a number of issues in their usage as they present themselves in the context of the study of tourism in Aruba.

Cline S. and Seidl A. *Combining Non-Market Valuation and Input-Output Analysis for Community Tourism Planning: Open Space and Water Quality Values in Colorado, USA*

We use a combination of nonmarket valuation and input-output approaches to inform community scale planning for natural resource based tourism development in rural Colorado. Contingent behavior and trip expenditure information are used in conjunction with IMPLAN input-output software to simulate the likely regional economic effects of changes in local environmental attributes. Visitor surveys reveal sensitivity to the amount of ranch open space and local water quality resulting in discernable regional economic effects should these valuable dimensions of the local environment change. The likely total, direct, indirect, and induced effects and implications on local residents and tourists of a sales tax, mill levy, and hotel occupancy ('bed') tax to preserve ranch open space and maintain local water quality are simulated. The losses offset from maintaining environmental quality are found to significantly outweigh the regional impacts of any of the tax policies.

Manente M. and Zanette M. *Macroeconomic Effects of a VAT reduction in the Italian Hotels & Restaurants Industry*

The paper tests the effects on the Italian economy of a fiscal measure aimed at lowering the VAT rate from 10% to 5% in the Italian "Hotels and Restaurants" sector. The analysis focuses first

first on the impacts in terms of tourism consumption, investments of the sector and public budget. Thereafter, by means of a multiregional-multisectoral input-output model, the increase on the total employment levels by sector and by region has been estimated. Based on a tourism demand elasticity of -1.06 and a supply elasticity of 2.0, tourist nights would increase by a maximum of 3.15% and total tourism consumption by 4.4%, while gross fixed investments by the sector would increase by 2.17%. As for the budget constraint, we have calculated the final "cost" of the fiscal measure for the Treasury. Concerning the macroeconomic effects in terms of employment, the fiscal measure would produce a total increase of almost 100,000 jobs (expressed in fulltime equivalents).

Sun Y. and Wong K. *An Important Factor in Job Estimation: A Nonlinear Jobs-to-Sales Ratio with Respect to Capacity Utilization*

Many tools for economic impact evaluation, such as input-output models and computable general equilibrium models, rely on the jobs-to-sales ratio (JSR) to convert direct, indirect and induced effects of sales of final products into employment. For service sectors, this ratio is strongly influenced by capacity utilization and exhibits a non-linear pattern, especially for short-term tourism applications that involve dramatic demand fluctuations as a consequence of mega events, natural disasters or societal instability. The purpose of this study is to decompose the relationship between capacity utilization and the JSR so that the underlying factors which cause the instability of JSR can be identified. Time-series data from the Taiwanese tourist hotels and aviation sectors are adopted to discuss the strength of the relations between price per unit and capacity utilization, total employee numbers and utilization, service capacity and utilization, and labor efficiency and utilization, respectively. The main factor leading to changing JSRs is the inelasticity of the total employee number.

Palm V. *Book review of S Suh, Handbook of Input-Output Economics in Industrial Ecology, Series: Eco-Efficiency in Industry and Science, Vol. 23.*

Highlights in journals

Wood R., Lenzen M., & Foran B., "A Material History of Australia : Evolution of Material Intensity and Drivers of Change (p 847-862)", *Journal of Industrial Ecology* 13(6), pp. 847-862, December 2009

This article presents an analysis of the material history of Australia in the period 1975–2005. The values of economy-wide indicators of material flow roughly trebled since 1975, and we identify the drivers of this change through structural decomposition analysis. The purpose of this work is to delve beneath the top-level trends in material flow growth to investigate the structural changes in the economy that have been driving this growth. The major positive drivers of this change were the level of exports, export mix, industrial structure, affluence, and population. Only improvements in material intensity offered retardation of growth in material flow. Other structural components had only small effects at the aggregate level. At a more detailed level, however, the importance of the mineral sectors became apparent. Improvements in mining techniques have reduced material requirements, but increased consumption within the economy and increased exports have offset these reductions. The full roll out of material flow accounting through Australian society and business and a systematic response to its implications will require change in the national growth focus of the last two generations, with serious consideration needed to reverse the current volume-focused growth of the economy and also to recast neoliberal and globalized trade policies that have dominated the globe for the past decades.

Baboulet O. and Lenzen M., "Evaluating the environmental performance of a university," *Journal of Cleaner Production* 18, pp. 1134-1141, 2010.

An increasing number of organisations are moving towards assessing and reporting their environmental performance in a supply-chain context. Not only are such "footprint"-type assessments seen as more rigorous than sustainability reports created in-house, they also offer more abatement options than

assessments limited to an organisation's premises. Hybrid life-cycle assessment methods combining input-output analysis and process analysis are ideally suited to enumerate organisational footprints, because they were developed to enable overall complete results whilst being application-specific. We apply one of these hybrid methods, the Path Exchange Method to the task of planning for a sustainable campus at the University of Sydney in Australia.

We show how this method can be used by an environmental or procurement officer for exploring environmental performance and abatement options across supply chains. We also show how parts of an organisation, for example University faculties, can be assessed and compared against each other. Whilst tools like ones used in this work enable quantitative decision support for procurement and operations policies, it takes staff awareness, engagement and training to successfully put such tools into practice.

Mukhopadhyay, K. & Thomassin, P.J., "Impact of Regional Economic Integration in East Asia," *International Economic Journal*, 24(2), pp. 125-153, June 2010

The current study evaluates the economy wide impact of trade liberalization in the ASEAN region along with China, Japan and Korea (ASEAN+3) by the year 2020 using the GTAP framework. The study also assesses the environmental impact of the trade liberalization in the region focusing on the seven environmental indicators (CO₂, CH₄, N₂O, BOD, COD, Suspended Solid and Industrial Waste). The result shows that the countries under agreement (ASEAN+3) will benefit with increased output, expansion of trade and welfare due to trade reforms. Further, the integration will increase the global welfare, although the regions not under agreement in the world will show a decline in output growth. Vietnam will be gaining with the highest output growth among the ASEAN region; however, the impact on the environment would not be favourable. The environmental impact reveals a mixed outcome for participating countries under the agreement. The paper provides useful insight in pursuing greater trade liberalization among the countries under the study.

Yang L and Lahr M.L., "Sources of Chinese labor productivity growth: A structural decomposition analysis, 1987–2005," *China Economic Review*, 21, pp. 557–570

We decompose labor productivity growth from 1987 to 2005 by examining six partial factors (both supply and demand) changes in value-added coefficients, labor inputs, shares of sectoral demands that are fulfilled domestically, input mix, and the intra-sectoral shares and intersectoral mix of final demand. Our analysis confirms that simply by virtue of its size and extremely low level of labor productivity, China's farm sector continues to weigh heavily in China's overall economic advances. Labor savings have levied the largest influence on the labor productivity on all sectors across all three study subperiods. We find that this transition is highly correlated with capital deepening that accompanies China's opening up process. Still, changes in the intra-sectoral shares and the intersectoral mix of China's final demand also have become quite strong, especially in recent periods. Due to ever-increasing competitive pressures as China continues to open, changes in industries value-added coefficients have tended to counteract some of the positive benefits of labor savings for most sectors. The effects on changes in labor productivity of technology change and changes in the use of imports have been comparatively negligible and any variation in their sectoral effects waning over time.

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