

**Volume 24, Issue 3**

**July, 2003**

*Pages 1-26*

## **Market Power in International Carbon Emissions Trading: A Laboratory Test**

by Björn Carlén (Researcher, Department of Economics, Stockholm University, Stockholm, Sweden)

### **Abstract**

The prospect that governments of one or a few large countries, or trading blocks, would engage in international greenhouse gas emissions trading has led several policy analysts to express concerns that trade would be influenced by market power. The experiment reported here mimics a case where twelve countries, one of which is a large buyer, trade carbon emissions on an emissions exchange (a double auction market) and where traders have quite accurate information about the underlying net demand. The findings deviate from those of the standard version of market power effects in that trade volumes are efficient and prices most of the time competitive.

*Pages 27-62*

## **The Effects of Market Reforms on Structural Change: Implications for Energy Use and Carbon Emissions in China**

by Karen Fisher-Vanden (Assistant Professor, Dartmouth College, Hanover, NH, USA)

### **Abstract**

This paper assesses the role played by market reforms in shaping the future level and composition of production, energy use, and carbon emissions in China. Arguments have been made that reducing distortions in China's economy through market reforms will lead to energy efficiency improvements and lower carbon emissions in China. However, these arguments are based on partial and not general equilibrium analyses, and therefore overlook the effects of market reforms on economic growth and structural change. The results suggest that further implementation of market reforms could result in a structural shift to less carbon-intensive production and thus lower carbon emissions per unit GDP. However, this fall in carbon intensity is not enough to compensate for the greater use of

energy as a result of market reforms due to higher economic growth and changes in the composition of production. Therefore, China's transition to a market economy could result in significantly higher economic growth, energy use, and carbon emissions. These results could have implications for other countries considering or undergoing market transition.

*Pages 63-96*

## **Unravelling Trends and Seasonality: A Structural Time Series Analysis of Transport Oil Demand in the UK and Japan**

by Lester C. Hunt (Surrey Energy Economics Centre, University of Surrey, Department of Economics, Guildford, Surrey, UK) and Yasushi Ninomiya (Institute for Global Environmental Strategies, Japan)

### **Abstract**

This paper demonstrates the importance of adequately modelling the Underlying Energy Demand Trend (UEDT) and seasonality when estimating transportation oil demand for the UK and Japan. The structural time series model is therefore employed to allow for a stochastic underlying trend and stochastic seasonals using quarterly data from the early 1970s, for both UK and Japan. It is found that the stochastic seasonals are preferred to the conventional deterministic dummies and, more importantly, the UEDT is found to be highly non-linear for both countries, with periods where it is both upward and downward sloping.

*Pages 97- 120*

## **Trade Liberalization and Carbon Leakage**

by Onno Kuik and Reyer Gerlagh (IVM/VU, Institute for Environmental Studies, Vrije Universiteit, De Boelelaan 1087, 1081 HV, Amsterdam, The Netherlands)

### **Abstract**

This paper examines the effect of trade liberalization on carbon leakage. We present quantitative estimates of carbon leakage under the Kyoto Protocol with and without freer trade by means of import tariff reductions agreed to in the Uruguay Round of multilateral trade negotiations. We find that under a plausible range of assumptions, the implementation of these import tariff reductions increases the overall rate of leakage, suggesting that previous studies may structurally have underestimated the rate of carbon leakage under the Kyoto Protocol. But we also find that the costs of abating the trade-induced leakage are modest relative to the welfare gains of freer trade. Analysis of the trade-induced carbon leakage shows large differences between leakage caused by reductions of import tariffs on energy goods and by reductions of import tariffs on non-energy goods. It also shows large differences in emission responses among developing country regions.

*Pages 121-149*

## **U.S. Midwest Gasoline Pricing and the Spring 2000 Price Spike**

by Jeremy I. Bulow (Graduate School of Business, Stanford University, Stanford, CA, USA), Jeffrey H. Fischer, Jay S. Creswell, Jr. and Christopher T. Taylor (Federal Trade Commission, Bureau of Economics, Washington, DC, USA)

### **Abstract**

Gasoline prices increased dramatically in the Midwest in the summer of 2000, generating allegations of collusion among gasoline marketers. We examine the causes of the price increase, and find no evidence to support the collusion story. Instead, a combination of industry characteristics and unanticipated problems in switching to a new, federally-mandated gasoline specification caused the spike. Once prices rose, firms responded roughly as quickly as possible to get additional supplies to affected markets.

## **BOOK REVIEWS**

*Pages 151-152*

### ***Electricity Economics: Regulation and Degregulation***

edited by Geoffrey S. Rothwell and Tomás Gómez, IEEE Press, 2003.  
(Book Review by Frank Felder)

*Pages 153-153*

### ***Power System Operations and Electricity Markets***

by Fred I. Denny and David E. Dismukes, CRC Press LLC, 2002.  
(Book Review by Frank Felder)

*Pages 154-155*

### ***Australia's Coal Exports: Prospects to 2015***

by Don Barnett, Petersfield: The McCloskey Group Ltd, 2002.  
(Book Review by Richard L. Gordon)

*Pages 155-159*

### ***Natural Gas in Asia***

by Ian Wybrew-Bond, Jonathan Stern, David Fridley, Najeeb Jung, Akira Miyamoto, and Keun-Wook Paik. Published by Oxford University Press for Oxford Institute for Energy Studies, 2002.

(Book Review by Samuel A. Van Vactor)