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*Pages 1-20*

**Electricity Liberalization In The European Union: Balancing Benefits And Risks**

By Jacques Percebois (Professor at the University of Montpellier, Head of CREDEN)

**Abstract**

The electricity liberalization is contested by many European consumers who hold it responsible for the electricity price increase, but such a conclusion is questionable. As the various spot markets are connected, liberalization will imply a convergence of electricity prices for all European countries if any congestion is observed on the networks. We observe today that German gas power stations are often “marginal power stations”; thus the German spot market is often the price maker. High price for oil means high price for natural gas and indirectly high price for electricity. Moreover increasing interconnection of electricity markets leads to surplus transfers among European consumers and producers of electricity. But for some people the price increase observed today results also partly from a rise in the market power of electricity producers. This paper examines the position of the main European incumbents in this field.

*Pages 21-40*

**Household Energy Demand and the Equity and Efficiency Aspects of Subsidy Reform in Indonesia**

by Susan Olivia (University of California) and John Gibson (Department of Economics, University of Waikato, New Zealand)

**Abstract**

The proper design of price interventions in energy markets requires consideration of equity and efficiency effects. In this paper, budget survey data from 29,000 Indonesian

households are used to estimate a demand system for five energy sources, which is identified by the spatial variation in unit values (expenditures divided by quantities). We correct for the various quality and measurement error biases that result when unit values are used as proxies for market prices. The price elasticities are combined with tax and subsidy rates to calculate the marginal social cost of price changes for each item. The results suggest that even with high levels of inequality aversion there is a case for reducing the large subsidies on kerosene in Indonesia, supporting the reforms that have been announced recently.

*Pages 41-60*

## **The Impact of Automobile Diffusion on the Income Elasticity of Motor Fuel Demand**

By François Lescaroux (Institut Français du Pétrole, IFP, Economic Studies Division) and Olivier Rech (International Energy Agency, IEA, Economic Analysis Division)

### **Abstract**

Prompted by the recent surge in light oil product consumption, this paper analyses the demand for non-commercial motor fuel and proposes a long-run forecasting model. In doing so, our aim is to be able to reproduce a few key stylized facts observed in secular evolutions of the motor fuel intensity of GDP and related notably to the derived nature of oil demand. Using a database covering 77 countries over the 1986-1998 period, we explain sequentially the stock of private vehicles per capita and fuel consumption per vehicle. The former is expressed as an S-shaped function of real per-capita income, which takes into account the dynamics specific to the dissemination of a durable good in a population. By explicitly considering the distinct phases of the development of the automobile market, our approach enables us to propose an explanation to the space-time variability in long-run income elasticities reported in the literature – especially its decline as per-capita income increases and the resulting gap between elasticities in emerging countries compared to developed countries. Our two-equation model also enables us to reproduce the “bell” shaped curve of the motor fuel intensity of GDP as a function of per-capita income, as well as the other principal properties of resource intensity-of-use linked to the process of dematerialization which, for any country, follows the industrialization period.

*Pages 61-88*

## **Do Prices for Petroleum Products Converge in a Unified Europe with Non-Harmonized Tax Rates?**

Axel Dreher (KOF Swiss Economic Institute, ETH Zurich, Switzerland) and Tim Krieger (Department of Economics, University of Paderborn, Germany)

### **Abstract**

The paper presents panel unit root tests for price convergence of different petroleum products over the last decade. We distinguish consumer and producer price convergence and test for the absolute versus relative version of the law of one price. Comparing the speed of convergence as well as its development over time indicates that price arbitrage in the common EU markets is not sufficiently strong to level the price differentials, mainly caused by different excise taxation. We show that taxation alone leads to market segmentation and that discretionary national tax policy by EU member states is not (yet) threatened by the observable level of cross-border shopping.

*Pages 89-112*

### **Oil Risk in Oil Stocks**

by Bert Scholtens (Department of Finance, University of Groningen, The Netherlands) and Lei Wang

### **Abstract**

We assess the oil price sensitivities and oil risk premiums of NYSE listed oil & gas firms' returns by using a two-step regression analysis under two different arbitrage pricing models. Thus, we apply the Fama and French (1992) factor returns in a study of oil stocks. In all, we find that the return of oil stocks is positively associated with the return of the market, the increase of the spot crude oil price, and negatively with the firm's book-to-market ratio. The oil firms' sensitivities to the market, the oil price and the book-to-market ratio are positively priced by the market under the integrated model. However, both the size and significance of the oil risk premium are unstable. This suggests that increases in the oil price impact on expectations about the oil stocks' future return. The positive oil risk premium may disappear as investors change their perception of the effect of oil price changes on stock returns.

*Pages 113-134*

### **Evidence of a Shift in the Short-Run Price Elasticity of Gasoline Demand**

by Jonathan E. Hughes (Institute of Transportation Studies, University of California, Davis), Christopher R. Knittel (Department of Economics, University of California, Davis; University of California Energy Institute; Institute of Transportation; and NBER) and Daniel Sperling (Institute of Transportation Studies, University of California, Davis)

### **Abstract**

Understanding the sensitivity of gasoline demand to changes in prices and income has important implications for policies related to climate change, optimal taxation and national security. The short-run price and income elasticities of gasoline demand in the United States during the 1970s and 1980s have been studied extensively. However, transportation analysts have hypothesized that behavioral and structural factors over the past several decades have changed the responsiveness of U.S. consumers to changes in gasoline prices. We compare the price and income elasticities of gasoline demand in two periods of similarly high prices from 1975 to 1980 and 2001 to 2006. The short-run price elasticities differ considerably: and range from -0.034 to -0.077 during 2001 to 2006, versus -0.21 to -0.34 for 1975 to 1980. The estimated short-run income elasticities range from 0.21 to 0.75 and when estimated with the same models are not significantly different between the two periods.

*Pages 135-150*

### **Modelling the Health Related Benefits of Environmental Policies and Their Feedback Effects: A CGE Analysis for the EU Countries with GEM-E3**

By Inge Mayeres (Belgian Federal Planning Bureau and K.U.Leuven, Centre for Economic Studies) and Denise Van Regemorter (K.U. Leuven, Centre for Economic Studies)

### **Abstract**

A number of recent studies on taxation in the presence of externalities in a second-best framework consider the implications of taking into account the feedback effects of environmental quality. This paper explores by means of GEM-E3, a computable general equilibrium model for the EU countries, the importance of the feedback effects of the health related benefits from an environmental policy. The modelling framework implemented in GEM-E3 allows for three channels through which the feedback can occur: a decrease in medical expenditure, an increase in the consumers' available time and an increase of labour productivity in the production sectors. The results show that the explicit modelling of the health related effect of air pollution on consumers and producers allows for a more precise evaluation of the impact of environmental policies on private consumption and employment. Relative to the included benefits the feedback effects are large. However, in terms of global effect, the impacts of the feedback are small, compared to the standard GEM-E3 model where the health related benefits are evalu-

ated ex-post.

*Pages 151-172*

## **Large Oil Shocks and the US Economy: Infrequent Incidents with Large Effects**

By Marc Gronwald (Hamburg University, Department of Economics)

### **Abstract**

This paper considers the macroeconomics of the oil price for the United States. It investigates the impact of large oil price hikes in a standard VAR framework by introducing a new Markov switching based oil price specification. The explanatory power of this new specification is compared to that of a number of prominent non-linear specifications. The key findings are: (1) the new oil price specification is appropriate in both empirical and theoretical terms and allows for a well-founded distinction between “large” and “normal” oil price increases. (2) The observed impact of oil price shocks on real GDP growth is largely attributable to no fewer than three large oil price increases, namely those of 1973-74, 1979 and 1991, while variables such as consumer and import prices are also affected by normal oil price increases.

### **BOOK REVIEWS**

*Pages 173-175*

## **Hacia El Futuro: Energy, Economics and the Environment in 21st Century Mexico**

by Maria Eugenia Ibararán and Roy Boyd (Dordrecht, The Netherlands, Springer  
2006)

(Book Review by Edward J. Balistreri)

*Pages 175-177*

## **Electric Choices: Deregulation and the Future of Electric Power**

edited by Andrew N. Kleit (Lanham, MD: Rowman & Littlefield Publishers, Inc., 2006)  
(Book Review by Frank Felder)

*Pages 177-179*

## **The Economics of Public Utilities**

by Ray Rees (Cheltenham and Northampton, Edward Elgar, 2006)

## **The Political Economy of Regulation**

Edited by Thomas P. Lyon (Cheltenham and Northampton, Edward Elgar, 2007)

(Book Review by Richard L. Gordon)