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Factors Affecting an Economy's Tolerance and Delay of Response to the Impact of a Positive Oil Price Shock

By *Bwo-Nung Huang* (Department of Economics, West Virginia University and Department of Economics and Center for IADF, National Chung Cheng University, Chia-yi 621, Taiwan.)

Abstract

This paper applies a multivariate threshold model to estimate a country's threshold level of economic tolerance (c) and delay of response (d) to the impact of a positive price change and its shock. Regression analysis is employed to investigate the factors affecting c and d . We find: (1) as a country becomes more advanced in economic development and acquires a lower ratio of energy use in its industry and transportation sectors, the threshold of tolerance is greater as evidenced by the positive impact of an oil price change and its shock; (2) if a country has a lower ratio of energy use in the industry sector, a lower energy import ratio and is more advanced in economic development, it will have a longer delay; and (3) as an economy becomes more advanced, the length of the response time from the impact of the shock of an oil price change will be longer.

Pages 35-52

High Frequency Export and Price Responses in the Ontario Electricity Market

by Angelo Melino (Department of Economics, University of Toronto and RCEA) and Nash Peerbocus (Market Evolution, Analysis and Research, Independent Electricity System Operator)

Abstract

Export responses to unanticipated price shocks can be a key contributing factor to the rapid mean reversion of electricity prices, a phenomenon often seen in electricity mar-

kets. In this paper, we use event analysis to demonstrate how hourly export transactions respond to negative supply shocks in the Ontario electricity market. Although event analysis has been used for many years in other applications, particularly finance, to our knowledge this is the first time that this technique has been applied to price response analysis in the electricity market. The analysis clearly demonstrates the sensitivity of export volume to price changes, and more generally, the responses of prices and quantities to an unexpected supply shock.

Pages 53-78

Efforts and Efficiency in Oil Exploration: A Vector Error-Correction Approach

By Klaus Mohn (University of Stavanger, Department of Industrial Economics, Norway)

Abstract

High oil prices and gradual resource depletion have raised global concerns for security of energy supply. Successful exploration activity is a critical factor for future oil production. Based on standard neoclassical producer behavior and modern time series econometrics, this study reveals new insights into the process of oil and gas exploration. I find that reserve additions are enhanced by an increase in the oil price, due to responses both in effort and efficiency of exploration. Moreover, oil companies accept higher exploration risk in response to an oil price increase, implying lower success rates and higher expected discovery size.

Pages 79-96

Threshold Cointegration Analysis of Crude Oil Benchmarks

By Shawkat M. Hammoudeh (LeBow College of Business, Drexel University, Philadelphia, PA), Bradley T. Ewing (Rawls College of Business, Texas Tech University, Lubbock, TX) and Mark A. Thompson (Hull College of Business, Augusta State University, Augusta, GA)

Abstract

The paper examines the dynamic relationship between pairs of four oil benchmark prices (i.e., West Texas Intermediate, Brent, Dubai, and Maya), which have different physical properties and locations. The results indicate that there is a long-run equilibri-

um relationship between different benchmarks, regardless of their properties and locations. More importantly, there is asymmetry in the adjustment process that is specifically modeled and implications are discussed.

Pages 97-122

An Empirical Analysis of Urban Form, Transport, and Global Warming

by Fabio Grazi (International Research Centre on the Environment and Development (CIRED, umr CNRS/EHESS), France. Paris Institute of Technology, Paris, France), Jeroen C.J.M. van den Bergh (ICREA, and Institute of Environmental Science and Technology & Department of Economics and Economic History, Autonomous University of Barcelona, Spain. Department of Spatial Economics, Faculty of Economics and Business Administration, The Netherlands) and Jos N. van Ommeren (Department of Spatial Economics, Faculty of Economics and Business Administration, The Netherlands)

Abstract

Does urban form affect travel choices and thus CO₂ emissions by individuals? If this is the case, then urban form and policies that influence it deserve serious attention in the context of long-term climate policy. To address this issue, we examine the impact of urban density on commuting behavior, and the consequences for CO₂ emissions. The empirical investigation is based on an instrumental variable approach (IV), so as to take account of endogeneity of residence location. We decompose travel demand into components related to modal split and commuting distance by each mode.

Pages 123-144

Economies of Scale and Scope in Multi-Utilities

By Mehdi Farsi, Aurelio Fetz and Massimo Filippini (Technology and Economics, ETH Zurich, Zurichbergstr. 18, CH-8032 Zurich, Switzerland)

Abstract

This paper explores the economies of scale and scope in the electricity, gas and water utilities. These issues have a crucial importance in the actual policy debates about unbundling the integrated utilities into separate entities, a policy which has often been supported by the ongoing reforms in the deregulation of network industries. This paper

argues that the potential improvements in efficiency through unbundling should be assessed against the loss of scope economies. Several econometric specifications including a random-coefficient model are used to estimate a cost function for a sample of utilities distributing electricity, gas and/or water to the Swiss population. The estimates of scale and scope economies are compared across different models and the effect of heterogeneity among companies are explored. While indicating considerable scope and scale economies overall, the results suggest a significant variation in scope economies across companies due to unobserved heterogeneity.

Pages 145-164

Identifying the Rebound: Evidence from a German Household Panel

By Manuel Frondel, Jörg Peters, and Colin Vance (Rheinisch-Westfälisches Institut für Wirtschaftsforschung (RWI Essen))

Abstract

Using a panel of household travel diary data collected in Germany between 1997 and 2005, this study assesses the effectiveness of fuel efficiency improvements by estimating the rebound effect, which measures the extent to which higher efficiency causes additional travel. Following a theoretical discussion outlining three alternative definitions of the rebound effect, the econometric analysis generates corresponding estimates using panel methods to control for the effects of unobservables that could otherwise produce spurious results. Our results, which range between 57% and 67%, indicate a rebound that is substantially larger than obtained in other studies, calling into question the efficacy of policies targeted at reducing energy consumption via technological efficiency.

BOOK REVIEWS

Pages 165-167

Electricity and Energy Policy in Britain, France and the United States since 1945

by Martin Chick (Cheltenham and Northampton: Edward Elgar, 2007)
(Book Review by Richard L. Gordon)

Pages 167-168

The Strategic Petroleum Reserve: U.S. Energy Security and Oil Politics, 1975-2005

by Bruce A. Beaubouef (College Station, Texas: Texas A & M Press, 2007)
(Book Review by Peter Van Doren)

Pages 168-170

A Handbook of Primary Commodities in the Global Economy

by Marian Radetzki (Cambridge University Press: 2008)
(Book Review by Roberto F. Aguilera)