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Pages 1-22

Motor Vehicle Fuel Efficiency and Traffic Fatalities

by Robert B. Noland (Center for Transport Studies, Department of Civil and Enivronmental Engineering, Imperial College of Science, Technology and Medicine, London, United Kingdom)

Abstract

This paper analyzes the impact of changes in average fuel efficiency on traffic-related fatalities while controlling for other confounding effects. These other effects include population, per capita income, per capita alcohol consumption, existence of safety-belt laws (and safety-belt usage), and age cohorts in the population. State-level time-series data over 24 years is used with a fixed effect negative binomial regression model that accounts for both the distributional properties of accident count data and heterogeneity. Other studies of this issue have not used either panel data in this way nor have they used appropriate statistical methods for count data. Results vary with the selection of the time series used. Overall results suggest that while there may have been an association between fleet fuel efficiency improvements and traffic fatalities in the 1970s, this has largely disappeared. There are suggestions that variance in the composition of the vehicle fleet may have adverse safety impacts.

Pages 23-40

Estimating the Volatility of Wholesale Electricity Spot Prices in the US

by Lester Hadsell (School of Business, University at Albany, New York, USA), Achla Marathe (Modeling, Algorithms and Informatics Group, Los Alamos National Laboratory, NM, USA) and Hany A. Shawky (School of Business, University at Albany, NY, USA)

Abstract

This paper examines the volatility of wholesale electricity prices for five US markets. Using data covering the period from May 1996 to September 2001, for the California-Oregon

Border, Palo Verde, Cinergy, Entergy, and Pennsylvania-New Jersey-Maryland markets, we examine the volatility of electricity wholesale prices over time and across markets. We estimate volatility using a TARCH model to study the differences among markets and the seasonal characteristics of each market. For all markets, we find strong evidence for a downward trend in the ARCH term and a significant negative asymmetric effect over the sample period. We also document important differences among the regional electricity markets not only with respect to wholesale price volatility and seasonal variations, but also with respect to asymmetric properties and persistence of volatility.

Pages 41-65

Trends and Breaks in Per-Capita Carbon Dioxide Emissions, 1870-2028

by Markku Lanne (School of Business and Economics, University of Jyväskylä, Finland) and Matti Liski (Helsinki School of Economics, Helsinki, Finland and MIT-CEEPR)

Abstract

We consider per-capita carbon dioxide emission trends in 16 early industrialized countries over the period 1870-2028. Using a multiple-break time series method we find more evidence for very early downturns in per-capita trends than for late downturns during the oil price shocks of the 1970s. Only for two countries do downturns in trends imply downward sloping stable trends. We also consider trends in emission composition and find little evidence for in-sample peaks for emissions from liquid and gaseous fuel uses. These results lead us to reject the oil price shocks as events causing permanent breaks in the structure and level of emissions, a conclusion often made in analyses using shorter postwar data.

Pages 67-90

Does OPEC Matter? An Econometric Analysis of Oil Prices

by Robert K. Kaufmann (Center for Energy & Environmental Studies, Boston University, Boston MA, USA), Stephane Dees, Pavlos Karadeloglou, and Marcelo Sanchez (European Central Bank, Frankfurt am Main, Germany)

Abstract

We assess claims that OPEC's ability to influence real oil prices has diminished and that the relationship between real oil prices and OPEC production can be used to test competing hypotheses about OPEC behavior. An econometric analysis indicates that there is a statistically significant relationship among real oil prices, OPEC capacity utilization, OPEC quotas, the degree to which OPEC exceeds these production quotas, and OECD

stocks of crude oil. These variables "Granger cause" real oil prices but real oil prices do not "Granger cause" these variables. These results imply that OPEC influences oil prices and that previous models cannot be used to test competing models for OPEC production behavior. The effect of OECD oil stocks on real oil prices indicates that there may be an important externality in private decisions regarding optimal crude oil stocks.

Pages 91-114

Climate Policy and the Steel Industry: Achieving Global Emission Reductions by an Incomplete Climate Agreement

by Lars Mathiesen (Norwegian School of Economics and Business Administration, NHH, Bergen, Norway) and Ottar Maestad (Institute for Research in Economics and Business Administration SNF, Bergen, Norway)

The steel industry is one of the largest sources of global CO_2 emissions and hence a candidate for climate policies. A carbon tax on emissions in industrialized countries, however, will cause relocation of steel production to non-industrialized countries, and because of their relatively high emission intensities the effect on total emissions is ambiguous. Using a partial equilibrium model of the steel industry, this paper finds that global emissions from this industry are likely to decline substantially. This is primarily due to factor substitution within the integrated steel mills in the industrialized countries, and to some extent a shift between steel making technologies. Such effects are not well accounted for in economy wide models, which typically lump individual industries into aggregates. Furthermore, it is shown that border taxes on steel products are potentially useful instruments for achieving a given reduction in global emissions with less restructuring of domestic steel industry in the industrialized countries.

BOOK REVIEWS

Pages 115-134

Pipe Dreams: Greed, Ego, and the Death of Enron
by Robert Bryce. New York: Public Affairs, 2002
(Book Review by Carol Dahl)

Anatomy of Greed: Unshredded Truth from an Enron Insider
by Brian Cruver. NY: Carroll & Graf Publishers, 2002
(Book Review by Carol Dahl)

Enron the Rise and Fall
by Loren Fox. Hoboken, NJ: Wiley, 2002
(Book Review by Carol Dahl)