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Pages 1-15

Are Regional Oil Markets Growing Closer Together?: An Arbitrage Cost Approach

by Andrew N. Kleit (Department of Energy, Environmental and Mineral Economics, The Pennsylvania State University, PA, USA)

Abstract

A large number of papers published in the last decade have attempted to show that energy markets have grown more integrated. These articles attempt to infer that various markets have become more "unified" because the correlation (in various forms) of prices between markets has increased during the last several years. This article suggests that a more appropriate modeling technique based on the theory of arbitrage as presented in Spiller and Wood (1988a and b), is better suited to answering this question. In this paper, the arbitrage technique is extended and applied to light crude oil markets in the 1990s. Arbitrage costs between markets are estimated. In addition, the hypothesis that crude oil markets have converged during this period is tested. Substantial though mixed support is gained for this hypothesis.

Pages 17-34

The Impact of Agency Costs on Regulator Compensation and the Size of Electric Utility Commissions

by Franklin G. Mixon, Jr. (Department of Economics, The University of Southern Mississippi, Hattiesburg, MS, USA)

Abstract

The current study examines the impact of the selection of electric utilities regulators on their compensation and the size of the regulatory commissions they lead. Much like the CEOs of regulated enterprises, managers of politically supported enterprises and bureaucracies might be expected to pursue increases in the size of administration budgets, the number of support staff and compensation packages (i.e., engage in expense preference behavior). In the case of public utility commissions, the principal-agent model used to describe private firms applies. However, within politically-appointed regulatory regimes, utilities commissioners are the agents of politicians instead of the population at large. In elected regimes, regulators are the agents of the population at large. Statistical models presented in this paper point toward greater levels of expense preference behavior (or expected utility maximization) by commissions(ers) within appointed regulatory regimes, as public choice models and models of the firm would suggest.

Pages 35-75

International Comparisons of Sectoral Carbon Dioxide Emissions Using a Cross-Country Decomposition Technique

by Lee Schipper (International Energy Agency, Paris, France), Scott G. Murtishaw (Lawrence Berkeley National Laboratory, Berkeley, CA, USA) and Fridtjof Unander (International Energy Agency, Paris, France)

Abstract

Discerning which sources contribute most to differences in per capita carbon emissions and why presents a daunting task for analysts, since several underlying factors affect emissions from hundreds of end-uses. This paper provides details of an international comparison methodology and carries out the comparison on a number of International Energy Agency (IEA) member countries. These calculations show where differences in the components of emissions lead to large gaps among countries. The data, from national sources, are the most extensive and disaggregated ever compiled for this kind of international analysis. Overall, activity differences account for the largest part of the gap in per capita emissions among IEA countries. If we normalize emissions to GDP, then transport activity levels, energy intensities, and utility carbon intensity share about equally in explaining the differences in carbon/GDP ratios among countries. Most of the structural variations arise in the freight, services, and household sectors—sectors less sensitive to international competition than manufacturing.

Pages 77-105

Economic Development and End-Use Energy Demand

by Kenneth B. Medlock III (James A. Baker III Institute for Public Policy, Rice University, Houston, TX, USA) and Ronald Soligo (Department of Economics, Rice University, Houston, TX, USA)

Abstract

We examine the relationship between economic development and energy demand. The paper identifies the development patterns that characterize particular economic sectors, and analyzes the effect of sector-specific energy demand growth rates on the composition of final energy demand. We also examine some of the associated policy implications. Industrial energy demand increases most rapidly at the initial stages of development, but growth slows steadily throughout the industrialization process. Energy demand for transportation rises steadily, and takes the majority share of total energy use at the latter stages of development. Energy demand originating from the residential and commercial sector also increases to surpass industrial demand, but long term growth is not as pronounced as it is in the transport sector. These results have implications for the primary energy demand of an economy as it develops, and thus, for domestic energy security and global geopolitical relationships.

Pages 107-126

The Determinants of Sulfur Emissions from Oil Consumption in Swedish Manufacturing Industry, 1976-1995

by Henrik Hammar and Åsa Löfgren (Department of Economics, Göteborg University, P.O. Box 640, SE 405 30, Göteborg, Sweden)

Abstract

Using a structural decomposition analysis, we analyze the causes of a reduction in sulfur emissions originating from oil consumption in the manufacturing industry in Sweden during 1976-1995. The Swedish case is of interest since Sweden has pursued an ambitious policy to combat the precursors of acid rain. Between 1989 and 1995, about 59 percent of the reduction in sulfur emissions from manufacturing can be attributed to the announcement and implementation of a Swedish sulfur tax. Two thirds of the reduction during 1976-1995 is captured by substitution between oil and other energy sources. The price of electricity also has had a significant effect via substitution between oil and electricity. Furthermore, one third of the reduction during 1976-1995 is explained by decreased energy intensity.

BOOK REVIEW

Pages 127-128

Energy Economics: A Modern Introduction by Ferdinand E. Banks. Kluwer Academic Publishers, 2000.
(Book review by Richard L. Gordon)