



# Editor's Introduction

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**T**he Federal Reserve Bank of St. Louis co-hosted a one-day conference, “Economics of Ethanol: Costs, Benefits, and Future Prospects of Biofuels,” on November 14, 2008. Cohosts included the Weidenbaum Center on the Economy, Government, and Public Policy and the International Center for Advanced Renewable Energy & Sustainability at Washington University in St. Louis. The conference provided a nontechnical description of the major issues surrounding ethanol in the United States.<sup>1</sup> Academics, industry leaders, and policy experts shared opposing views on the role of government in the ethanol industry, the long-run viability of the industry, and the economic costs and benefits of increased ethanol production. The conference format consisted of presentations by academic scholars and a panel discussion involving policy experts and industry leaders. This issue of *Regional Economic Development* contains the papers, discussions, and panelist remarks from the conference.

## THE U.S. ETHANOL INDUSTRY

Mark Stowers, vice president of research and development for POET, a company that produces ethanol, provides the keynote address. Stowers discusses the growth in the ethanol industry over the past several decades and the current status of the industry, the economic benefits of ethanol, the

effect of government policy on ethanol and competing energy markets, and the prospects for alternative ethanol sources in addition to corn ethanol. He concludes with five factors critical to the widespread use of ethanol in the United States, including research and development, government support, and industry infrastructure.

## THE PROFITABILITY OF CORN ETHANOL PROCESSING

In the first paper of the conference, Paul Gallagher examines issues critical to the profitability of corn ethanol processing, including the production and scale of corn ethanol processing and efficient production processes. Gallagher discusses how government policy and technological development can lead to a mature and profitable corn ethanol industry. He also describes several ways that reorganization of the ethanol industry could lead to greater profitability over the next several decades. Lastly, Gallagher outlines several strategies ethanol producers can use to reduce costs or increase revenues to maintain profitability.

In her discussion, Martha Schlicher describes the characteristics of a “perfect” fuel and suggests that ethanol has these characteristics. Schlicher discusses the evolution of the ethanol and alternative energy markets over the past several decades and argues that various government policies have contributed to the slow adoption of alternative fuels such as ethanol. Schlicher concludes by outlining several ways that changes in government support

<sup>1</sup> Additional information about the conference can be found at <http://research.stlouisfed.org/conferences/ethanol/index.html>.

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would lead to a more viable and sustainable ethanol industry in the United States.

## **THE ECONOMIC CONSEQUENCES OF CORN ETHANOL AS A FUEL SOURCE**

Douglas Tiffany examines the environmental effects of ethanol production, ethanol's energy balance with fossil fuels, the impact of ethanol production on food prices, and the effect of ethanol on farmers' production decisions. Tiffany also compares the subsidy rate of corn ethanol with that of other fuels and discusses changing land-use patterns as a result of ethanol production. He argues that production of corn ethanol and an increased demand for corn can pose environmental challenges if care is not exercised when bringing additional lands back into crop production.

In his discussion, Max Schulz acknowledges the validity of many points raised by Tiffany, but argues that the large government subsidies for ethanol do not create enough benefits to justify their cost. Specifically, Schulz questions the use of ethanol mandates because it is doubtful that significant volumes of our national oil consumption can be displaced with ethanol. He further cites a global increase in food prices and greenhouse gas emissions as reasons the benefits of our ethanol policies are not worth their costs.

## **THE IMPACT OF THE ETHANOL BOOM ON RURAL AMERICA**

Jason Henderson explores the impact of the ethanol boom on rural communities. Although the large ethanol subsidies have increased economic growth and development in rural agricultural communities, the question remains whether ethanol is a viable strategy for continued economic development in rural areas. Henderson presents evidence that although crop prices have risen, the ethanol boom explains only some of the national increase in crop prices, net returns, and land values. The geographic concentration of ethanol production has led to some spatial changes in crop prices and livestock

production. Henderson argues that the ethanol industry has helped nonfarm economic growth, but the gains have been less than initially claimed.

In his discussion, Seth Meyer focuses on the effects of ethanol production on commodity prices and the role that federal policy plays in the market for ethanol and other biofuels. He points out that measuring the effect of ethanol production on commodity prices is more difficult than some acknowledge. It is clear that ethanol and other biofuels have had an effect on commodity prices, but estimates vary considerably from a negligible impact to attributing most of the rise in prices to increased ethanol and biofuel production. Thus, the impact of ethanol on rural communities is deserving of more research. Meyer also argues that the success of ethanol as a viable industry is dependent on appropriate federal policies.

## **PANEL DISCUSSION: THE FUTURE OF BIOFUEL**

The final session of the conference, a panel discussion, focuses on the future of biofuels. The panelists are Jerry Taylor from the Cato Institute, Rick Tolman from the National Corn Growers Association, and Nicholas Kalaitzandonakes from the University of Missouri–Columbia. They discuss the political economy of ethanol subsidies and regulation, whether ethanol can be a viable industry in the United States, and the prospects for other biofuels, such as those made from switchgrass and algae. The panelists represent different views on the role of government in ethanol production and the long-term viability of the industry. The panelists' remarks and opposing viewpoints sparked lively audience discussion.

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