Consumer Views on the Biofuel Industry: Does Proximity Matter?

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Economic and political factors have led the United States, and particularly the state of Iowa, to a renewed interest in biorenewable fuels. Proponents hailed the rapid development of ethanol as the beginning of a new "bioeconomy". Energy independence, a reduction in greenhouse gas emissions, improvements in rural development related to ethanol and biodiesel plants, and farm income support motivated major increases in biofuel subsidies (Rubin, Carriquiry & Hayes, 2008). Iowa's ethanol production capacity skyrocketed—increasing 5-fold between 2002 and 2008. Ethanol production capacity grew during this period from 440 million to nearly 2.4 billion gallons. With 31 ethanol refineries in production and 13 plants under construction or expansion, Iowa ranks first among the states in ethanol production (Iowa Renewable Fuels Association, 2008).

Subsequent analytic work and media reports have countered this enthusiasm with critical questions about ethanol mandates, environmental concerns and ripple effects of rising commodity prices. The purpose of this project is to assess Iowans' views on energy policy alternatives and local biofuel initiatives. Although information exists on preferences of agricultural producers and industry professionals, little research has assessed consumer viewpoints.

Study Objectives and Design

We hypothesized that issues of energy policy and the bioeconomy would be more salient in communities hosting biofuel plants. Our objectives were to assess (1) knowledge and policy opinions regarding the bioeconomy and (2) the impact of proximity (and other individual and community characteristics) on local support for the biofuels industry. A stratified random sample telephone survey of 378 adults living in four Iowa counties was conducted in early 2008. The four counties included one metro and one nonmetro county with a biofuel plant, and one metro and one nonmetro county without a biofuel plant.

Results

Most Iowans (89%) in these counties viewed biofuel plants as an economic stimulus for rural communities that should be supported by the state. Nearly 9 in 10 (88%) also favored policies that promote alternative energy sources such as wind, solar and hydrogen and 86% favored expansion of mass transit. Two–thirds (67%) of the population in these counties supported the expansion of the biofuel industry in their own county . Adults were far less supportive of nuclear power (45% supported increased use of this power source) and only 35% supported tax incentives for oil exploration.

To test the hypothesis that proximity to a biofuel plant affects support for Iowa's bioeconomy initiatives, we used a probit model. Our results suggested that Iowans with higher incomes and positive views of bioeconomy initiatives were more likely to support local expansion of biofuel-related industries. However, proximity to existing plants (defined as residing in a county that hosts a biofuel plant) and expressed environmental concerns did not seem to matter.

Conclusions

Iowans appear to be quite remarkably of "one mind" on several key energy policy issues and on views of the positive effects of the bioeconomy on rural communities and job expansion. Support for further expansion of the bioeconomy appears broad based; proximity to biofuel-related industries does not seem to matter in Iowa. There is strong support for alternative technologies and strong belief that there is a clear role for Iowa in the production of biofuels. Solid support for Iowa's current role in the bioeconomy bodes well for state policy development, but may go against the tide of public opinion nationwide. National data would allow us to test this "proximity" hypothesis.

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References

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Endnotes

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