

The Effect of Community Reinvestment Funds on Local Acceptance of Unconventional Gas Development

Naveed Paydar^{a*}, Olga Schenk^a, Ashley Bowers^a, Sanya Carley^a, John Rupp^a and John D. Graham^a

Motivation

In the last decade, new technologies for Unconventional Gas Development (UGD) have caused a sharp increase in production of natural gas. While technical and commercial factors influence the market penetration of emerging technologies, the “social license” to operate an emerging technology is also critical. Some state legislators and public officials have responded to public concerns about UGD by reinvesting a portion of the revenue earned from development for general use in the state or—in some jurisdictions—in communities where UGD is occurring. Despite these emerging trends in public finance and energy policy, the role of revenue reinvestment in shaping levels of public support for UGD is not well understood.

Research performed

A survey (N=2,700) with an embedded experimental design is employed to determine whether local public support for a UGD project is influenced by a policy that commits a portion of private revenues from UGD to the state or local government. The public opinion survey oversamples residents living in counties of six states where UGD is technically feasible or underway: New York, Illinois, California, Pennsylvania, Ohio, and Texas.

We first compare general attitudes toward fracking with support for a hypothetical local fracking project. Those who indicate that they support fracking in general and oppose it in the

^a School of Public & Environmental Affairs, Indiana University. 1315 East Tenth Street, Bloomington, IN 47405

^{**} Corresponding author. Email: npaydar@indiana.edu, Tel: 317-442-4095, Address: 1315 East Tenth Street, Bloomington, IN 47405, Room 452.

a
a
a
a
a

hypothetical scenario respond in a manner consistent with NIMBY behavior, and we calculate a reinvestment effect for this subsample, which is the difference between the proportion of respondents who support the hypothetical project in the control group (with no reinvestment) and the proportion of respondents who support the hypothetical project in the treatment groups (with state or community reinvestment). We follow the same procedure for participants who indicate that they were initially opposed to fracking in general and support it in the hypothetical scenario. Second, we evaluate support for a hypothetical local fracking project by comparing the proportion of respondents who support the hypothetical project across all arms of the experiment. The difference in the share of people who support the fracking project across subgroups is an estimate of the effect of receiving reinvestment. Third, we employ a multivariate probit model and calculate the average marginal effects of receiving reinvestment at the state and community level of government.

Main conclusions

We found that proposing a hypothetical UGD site about two miles from where the resident lives decreases support for local UGD, but this effect is attenuated when residents are informed that their community or state will receive benefits from “reinvestment” of a portion of the revenues generated by a developer. Further, the level of government receiving the reinvestment funds influences the level of local public support for UGD, such that reinvestment in local government is a much stronger predictor of public support than reinvestment in state government.

Policy implications

Our findings have implications for understanding the social feasibility of UGD and can have implications for how reinvestment policies should be designed to influence local community attitudes. The study’s findings suggest that public acceptance of local UGD projects may be improved by adopting and communicating community reinvestment schemes for affected communities. The study’s findings on local community reinvestment are consistent with the view that citizens have more confidence in their local government than in higher levels of government. Alternatively, the more tentative results for state-level reinvestment can be interpreted as a rational-choice judgment that the state may spend much of the revenues in ways that will not benefit a respondent’s local community.

