Does Fracking Fluid Disclosure Regulation Inhibit Natural Gas Production?
Evidence from 25 American States
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Background
- Hydraulic fracturing, or "fracking," has quickly become a prominent method of natural gas extraction in the United States in recent years.
- Recent technological innovations have streamlined the process and made it possible to frack deeper geological formations.
- However, an underdeveloped regulatory environment has paved the way for public concern. These concerns include:
  - Chemical Contamination
  - Impacts on Human Health, Ecosystems, and Surrounding Communities
  - A Perceived Lack of Transparency
  - Water Availability
  - Waste Water Disposal
- As a result, many states have begun to develop more stringent fracking regulation, including fracking fluid disclosure regulation.

Fluid Disclosure Regulation
- Fracking fluid disclosure regulation is a relatively new phenomenon.
- Existence and stringency varies across states.
- Regulators in each state specify their own set of standards regarding fracking procedure and reporting requirements.
- A major point of contention is whether the natural gas industry should disclose fracking fluid trade secrets.
- Recent studies have shown that most states protect fracking fluid trade secrets, however, there are some states that do not specify trade secret protection.

Map of Fracking Fluid Disclosure Requirements

Hypothesis
- States with fracking fluid disclosure regulation are less likely to produce as many rigs per month as states without such regulation.

Data
- State Level, Monthly Panel Data
- Sample includes 25 states that have significant shale gas reserves or where industry has shown interest in shale gas development.

Variables
- Policy/Political – Disclosure, Renewable Portfolio Standard, Commissioner Appointment, Governor Partisanship
- Economic – Unemployment Rate, Average Citygate Price
- Demographic – Capacity, Seasonality, Rural Population Size, Region

Results
- The results produced by each model were consistent with the hypothesized outcome.
- Altogether, a state adopting fracking fluid disclosure regulation decreases the predicted probability of producing a new rotary rig by 0.4.

Case Study
- A comparison of Michigan and Pennsylvania, two states that have taken very different approaches towards developing their natural gas, provides for an interesting case study.
- Pennsylvania has taken a more aggressive approach towards developing their natural gas, with less consideration for potential consequences.
- On the other hand, Michigan has taken a more cautious approach towards developing its natural gas reserves while assessing potential consequences.
- Despite the varying approaches of the two states, disclosure regulation has had roughly the same effect on the probability of producing a new rotary rig.

Implications
- Many states have come to realize that natural gas fracking is a process that cannot be left to the market.
- Without regulation, there is a possibility that natural gas companies will use unsafe practices that may endanger the public.
- Although this may be true, states proposing to adopt fracking fluid disclosure regulation should carefully consider the implication this may have on their current and future rig production.