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Study: Tax incentives don’t increase natural resource extraction

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By Pam Kasey - email

Tax incentives aimed at encouraging natural resources companies to increase their production don't really do that.

Their main effect is lower tax revenues.

That's the conclusion of the brief, "Do Tax Subsidies Influence Domestic Oil Production?," released this month by Headwaters Economics.

Montana-based Headwaters describes itself as an independent nonprofit research group with a mission of improving community development and land management decisions in the western U.S.

The brief mainly compares the experience of Montana and North Dakota, which have competed through incentives to increase the production of oil and natural gas.

Three charts illustrate the data.

In the first, tax holidays for the first 18 months of production in effect since January 2000 in Montana and intermittently from 2007 through 2009 in North Dakota are plotted with crude oil production in both states.

The tax incentives appear to have no effect on production. Montana's production rises slowly to a peak in 2006, then slowly declines; North Dakota's begins rising in about 2006 and mostly rises from there — both independent of the tax holidays.

After North Dakota's tax holiday became inactive in November 2009 because the price of oil hit a high-price trigger, production more than doubled through February 2012, while in Montana, where the tax holiday remained in effect, production dropped 14 percent over the same period.

"The main lesson is that despite Montana's more favorable tax policies relative to North Dakota … the state has not been able to overcome geology," the brief's authors wrote. "Most drilling and production remains in North Dakota where the oil resource is better."

The oil industry simply is resource-dependent, they wrote, unable to move production to seek lower labor costs or greater tax concessions.

They also pointed out that income tax incentives come too late in the business cycle — after exploration, proving of reserves, acquisition of leases, and drilling — to affect production.

"Once reserves are proven, price is the largest driver of drilling activity and production," they wrote.

That conclusion is backed up by a second chart that plots major turning points in the prices of oil and natural gas with total drilling rig activity for oil and, separately, for natural gas in Colorado, Montana, North Dakota and Wyoming.

When natural gas prices went up in 2003, rig activity for gas relative to oil shot up.

Rig activity for both dropped with lower prices in 2009.

But when the price of gas later stayed low while the price of oil rose, rig activity switched to oil.

The main outcome of tax incentives, the authors further observed, is to delay and reduce revenues that could help the state and the affected communities mitigate the impacts of the activity.

A third chart shows that Montana will collect $800,000 less per well over the first three years of production than North Dakota does, and collects almost nothing for nearly two years.

"Despite dramatically different tax structures, tax rates, and incentives, states have been unable to overcome geology in determining the location of production, or the influence of technology and price in changing the pace of development," the brief concludes. "The main outcome of tax deductions and incentives is lower tax revenue that makes it more challenging for communities to facilitate and mitigate the impacts of an oil boom."

These conclusions agree with the understanding of Ted Boettner, executive director of the West Virginia Center on Budget and Policy, which has published on this issue in its October 2011 "Marshall University Natural Gas Tax Study Proves Virtually Nothing" and, in December 2011, "Investing in the Future: Making the Severance Tax Stronger for West Virginia."

"Decisions on where to produce are tied to where the resource is located, regardless of tax burdens and various incentives," Boettner said. "Other factors such as price, access to markets, infrastructure (such as) pipelines, and technology all have more significant effects on industry activity. Also minor variations in wages, utilities, and transportation costs can have a greater impact than major changes in taxes."

If West Virginia's severance tax and the low-gas-price environment keep companies from drilling in the state, he said, they'll come back when prices rise — "and the state will benefit more from that investment."

Headwaters' funding comes from diverse sources including federal agencies, nonprofit organizations and partners on specific projects, according to the organization's website; researchers maintain independence with regard to its interpretations, the website says.

The current study does not say how it was funded.

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