The Effects of the Shale Revolution on Local Governments

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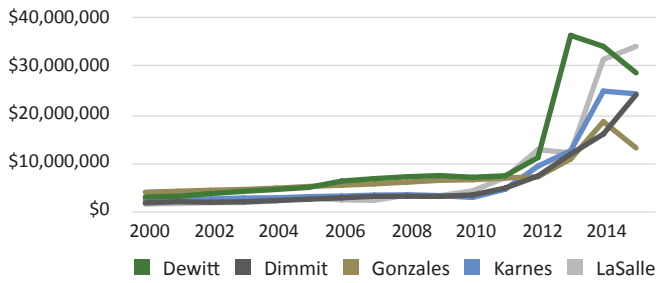
Increased natural gas and oil production has affected local government revenues and services in over a dozen US states. In some locations, particularly rural regions such as the Bakken, Permian, and Eagle Ford plays, these effects have been dramatic. In other, more economically diverse and densely populated regions such as the Barnett or Denver-Julesburg plays, the effects have been more modest. This issue brief describes the impacts of the shale revolution on local governments, and highlights strategies to plan for the future.

Higher, but More Volatile Revenues

Local government revenues are affected by oil and gas development both directly and indirectly. In most states, local governments apply ad valorem property taxes to oil and gas property, including the oil and gas itself. Additionally, many states allocate a share of state-collected production, or "severance," taxes to local governments. Finally, local governments may lease publicly-owned land for oil and gas development, generating leasing "bonuses" and royalties.

Indirect revenues are often led by sales taxes, which in-crease as industry activity leads to population growth and increased economic activity. However, when drilling activity slows due to a downturn in oil or gas prices, sales tax revenues can rapidly shrink. Similarly, property taxes tied to the value of oil and gas property can be highly volatile, as the figure illustrates (showing property tax revenues for five counties in the Eagle Ford region). Despite this volatility (discussed in more detail below), oil and gas development has led to higher revenues for most local governments, even after the downturn in oil prices in late 2014. For many rural local governments in regions including the Bakken, Eagle Ford, Marcellus, Permian, and Utica regions, revenues have more than doubled due to oil- and gas-related revenue growth.

Property Tax Revenues for Select TX Counties



Data source: Texas Comptroller's Office

Increased Demand for Services

Growing oil and gas development has also increased demand for a variety of local government services. Local road networks have been the most widespread challenge, particularly for rural county governments

RFF's Alan Krupnick, Isabel Echarte, and Lucija Muehlenbachs published *Local Government Impacts of Unconventional Oil and gas Development* (www.rff.org/oilgasgov), which reviews this literature. Local public finance research finds large heterogeneity in impacts across localities, even those in the same state. Most local governments are able to meet increased demand for services and address costs related to development. Rural, undiversified areas are less able to effectively respond to these challenges.

* This is one of a series issue briefs based on *The Fracking Debate: The Risks, Benefits, and Uncertainties of the Shale Revolution* (Columbia University Press, 2017) by Daniel Raimi. Raimi is a senior research associate at Resources for the Future.

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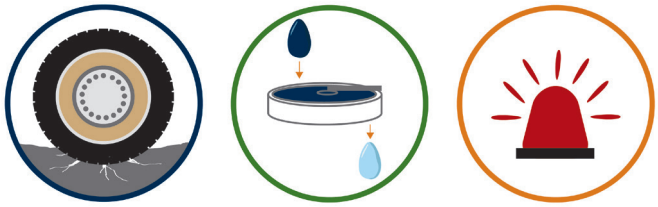
maintaining widespread networks of unpaved roads. In a smaller number of cases, cities have also faced large road costs, particularly rural cities needing to expand their road networks to accommodate industry-driven population growth (as in Williston, ND), or when substantial oil and gas development occurs within city limits (as in Fort Worth, TX).

A small number of cities, again in rural regions experiencing rapid population growth, have needed to expand their water and wastewater infrastructure. These projects cost tens of millions of dollars, and are often financed through debt.

For many local governments, increased demand for law enforcement and emergency services has accompanied shale development. Rates of violent crime have increased in a number of shale regions, and local law enforcement has in some regions struggled to keep pace with demand during "boom" periods. In addition, increased vehicle traffic, particularly large trucks, has increased the number of vehicle accidents and associated demand for emergency services. At the same time, workforce retention has been a challenge for many local governments, as public employees seek out higher pay in the oil and gas industry.



Overall Impacts

Together with RFF President Richard Newell, we documented the net fiscal impacts of oil and gas development for 163 local governments in 16 US states through on-site structured interviews with local government officials and analysis of local financial records. This work, dubbed the Shale Public Finance project, found that revenues have outweighed increased demand for services for 74% of local governments, with 14% reporting roughly neutral impacts, and 12% reporting net negative fiscal impacts.

Planning for the Future

Along with these near-term benefits, many local governments face new challenges managing uncertainty. Because oil and gas prices are unpredictable and sometimes highly volatile, public revenues driven by industry activity are subject to wide swings. And because local governments typically cannot put surplus revenues into long-term savings funds, they must make decisions about large-scale capital expenditures without clear knowledge of likely revenues 5, 10, or 20 years in the future. In a small number of cases (such as in Rifle, CO), local governments experiencing an unexpected "bust" in industry activity have needed to substantially increase tax rates and fees to service long-term debt, raising costs for long-term residents.

Driven by rapid population growth, cities in rural regions such as the Bakken, Eagle Ford, and Permian have invested in large new capital projects predicated on revenues flowing from continued strength in the oil and gas sector. While most local governments do not anticipate major problems financing the debt incurred by these investments, a prolonged downturn in commodity prices (or any other factor that substantially reduces industry activity) could introduce major fiscal challenges. On the other side of the coin, the return of high commodity prices and rapid growth in drilling activity could force local governments to invest further in public services, heightening the risks of a future downturn.

State policymakers can help local governments manage these upside and downside risks. First, rural regions experiencing large scale "booms" will likely require fiscal support to expand public services. This support can be delivered through allocations of state-collected oil and gas revenues in the form of grants, low-interest loans, or formulas that distribute a share of revenue to localities based on industry activity levels. Second, states can help manage the risks of "busts" by reducing revenue volatility for local governments. This can be achieved by providing local governments greater flexibility in setting tax rates, allowing them to save surplus revenues, and helping to diversify local and regional economies, reducing the reliance on a single industry with a history of volatility.