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Oil Prices *and the* Louisiana Budget Crisis: Culprit *or* Scapegoat?

An Analysis of the Implications of the Oil Price Drop on the Louisiana Budget

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EXECUTIVE SUMMARY

Over the past decade, Louisianans have been unable to escape repeated news of looming state budget crises. Year after year, it seems, the state tries to figure out how to cut the budget, sometimes mid-year when the revenues come in below the forecasted levels. Over the past year, though, a new story has emerged: Global oil prices have plummeted. Once again, Louisiana is forced to address its fiscal challenges head on. These two events in conjunction with

Once we decide the level of public goods and services and the share of the state's output that needs to be collected in revenues in order to fund these, we can decide on a tax code that will raise these revenues in the long run. We must acknowledge that large changes in the tax code in response to short-term economic booms and busts is not good tax policy, and therefore needs to be

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1 Introduction

Over the past decade, Louisianans have been unable to escape repeated news of looming state budget crises. Year after year, it seems, the state tries to figure out how

than the economy as a whole. In a given year, one industry might do well, while another might not. On aggregate, the U.S. has experienced remarkably consistent economic growth of about 2 to 3 percent per year for the past century. But individual industries and states have not seen such a long-run steady growth rate. In fact, this is a sign of a healthy economy, an economy in which resources, both human capital and physical capital, are transferred to different sectors of the economy as needed. This flexibility is one of the great benefits provided by the capitalistic engine that drives our economy. When there is a shortage of a good or service, the price rises, and this incentivizes more production. On the other hand, if there is a surplus, the price falls and production is reduced. But sometimes, while the boom might feel good, the bust can really hurt.

Upstream oil and gas extraction can be a particularly volatile industry as price swings are generally completely independent of local events. This is illustrated in Figure 1.1 which shows the West Texas Intermediate (WTI) spot price since the mid 1980s alongside the percent change in price from the corresponding month in the previous year. While the price has seen an upward trend in general over this time period, there have been significant changes from month to month, and year to year. In some years, the price will more than double, while in others, the price will decline by half. These dramatic price changes are largely unpredictable and can have significant implications for different areas throughout the world. Furthermore, this volatility is not a new story. On a percentage basis, the oil markets have experienced large and unpredictable swings for decades (and even since the birth of this industry).

If there is political chaos in the Middle East the price of oil might increase. This might be beneficial for local oil and gas producers' bottom line, but can negatively impact local consumers and businesses who utilize hydrocarbons in their daily 47is vol. This

Figure 1.1: West Texas Intermediate Spot Price

Thus, the differential impact of oil and gas booms and busts on a state is highly dependent upon the makeup of that state's economy. A state like Louisiana, that has historically had a relatively large share of oil and gas workers, might benefit when the oil price increases. On the other hand, states like our neighbor Mississippi, with no oil and gas activity to speak of, likely get the brunt of the increased prices at the pump when the price rises, with no benefit associated with the booming industry. Thus, while the net impact of an oil price shock on the aggregate economy can be debated (and has been debated heavily for decades), the individual impact on different regions of the country can be quite clear in many instances.

Louisiana's state budget has historically been particularly susceptible to oil and gas price shocks for two reasons. First, and most obviously, is that historically a significant share of Louisiana's tax revenues have come directly from severance taxes: the tax assessed on oil and gas severed from the ground. When the price of oil and or gas drops, two things occur. First, the actual value of the severance tax declines with the price. Both oil and gas severance taxes are indexed to the price of the resource

extracted.[2] Thus, when the price declines, so too does state tax revenues. Second, the forces of supply and demand kick in and further decrease revenues through a decrease in production. Generally, as the price of a product decreases, so too does the quantity

negotiated percent of the value of the production. These are known as mineral royalty payments and are negotiated on a contract-by-contract basis. If no drilling occurs on the land within a specified amount of time, rental payments will be made to the state.

The severance tax rate on crude oil in Louisiana is 12.5 percent of the value of the oil as it leaves the ground for most oil wells.[5] Oil wells that are defined as incapable wells (unable to produce on average more than 25 barrels per day during the entire month and also producing at least 50 percent salt water per day) are taxed at 6.250 percent, and oil wells defined as stripper wells (producing on average less than 10 barrels per day) are taxed at 3.125 percent.[6] These tax rates were instituted in 1974.[7] Prior to 1974, oil severance taxes were based on a volumetric charge that did not systematically vary with changes in the price of crude oil.[8]

Natural gas is taxed on a volume basis with the tax rate indexed to changes in the price of natural gas. The tax on natural gas was 7 cents per thousand cubic feet (Mcf) from 1974 through 1989; this volumetric tax was not a function of the price of natural gas. It was then indexed to the price of natural gas in 1990 and the tax rate has moved with the price, though with a lag. The rate peaked in 2006 at 37.3 cents per Mcf, dropped to between 25 and 30 cents per Mcf from 2007 to 2008, and then peaked again

Figure 2.1: History of Louisiana Severance Taxes

Source: Adapted and updated; based on *Louisiana's Fiscal Alternatives. Finding Permanent Solutions to Recurring Budget Crises*. Edited by James A Richardson. 1988.

2.2 History of Mineral Revenues in Louisiana

In many ways, the history of Louisiana's budget woes can be explained by large swings in mineral revenues. This is illustrated in Figure 2.2, which shows mineral revenues as a share of total state taxes, licenses, and fees (hereafter simply referred to as "state revenues" or "TLF"). Mineral revenues have been quite volatile over the past half-century. From the mid-1960s to the late 1970s, mineral revenues increased fairly steadily from about $250 million in 1965 to about $650 million in 1979. During this time period, though, mineral revenues as a percent of state revenues were quite volatile, ranging between 30 to 40 percent of total state revenues. Mineral revenues were a fairly stable source of revenues over this period relative to other more volatile tax revenues, which is what created the large fluctuation in mineral revenues' share of total state revenues. In the 1980s, this story started to change when mineral revenues increased drastically from about $750 million in 1980 to over $1.3 billion in 1983, and then dropped acutely to below its 1980 level by 1988.

During the 1990s, mineral revenues stabiliz

a percent of total state revenues reached an all-time low, hitting its lowest level in 1999 at 8 percent of tax revenues. From the turn of the century onward, mineral revenues have been more volatile than at any point in history, ranging from less than $700 million in revenues in 2000, peaking at more than $1.8 billion in 2008, and then dropping sharply about $1.3 billion per year from 2010-2013. While the levels of mineral revenues showed significant volatility during this past decade and a half, mineral revenues as a percent of total state revenues has not experienced near the volatility observed in the 1980s. At mineral revenues' peak during this past decade, they made up about 16 percent of revenues in 2008, down to about 10 percent in 2015.

Figure 2.2: Louisiana Mineral Revenues and Total State Tax, Licenses, and Fees

In order to understand the underlying reasons for these changes in revenues, next we examine the trends in both production as well as crude oil and natural gas prices. Figure 2.3 illustrates state production of both crude oil and natural gas since 1945. Oil and gas production experienced steady increases for more than a quarter of a century—from 1945 to the early 1970s. These steady increases ended in 1970—the year that Louisiana saw its highest levels of both crude oil and natural gas production in the state's history. For the

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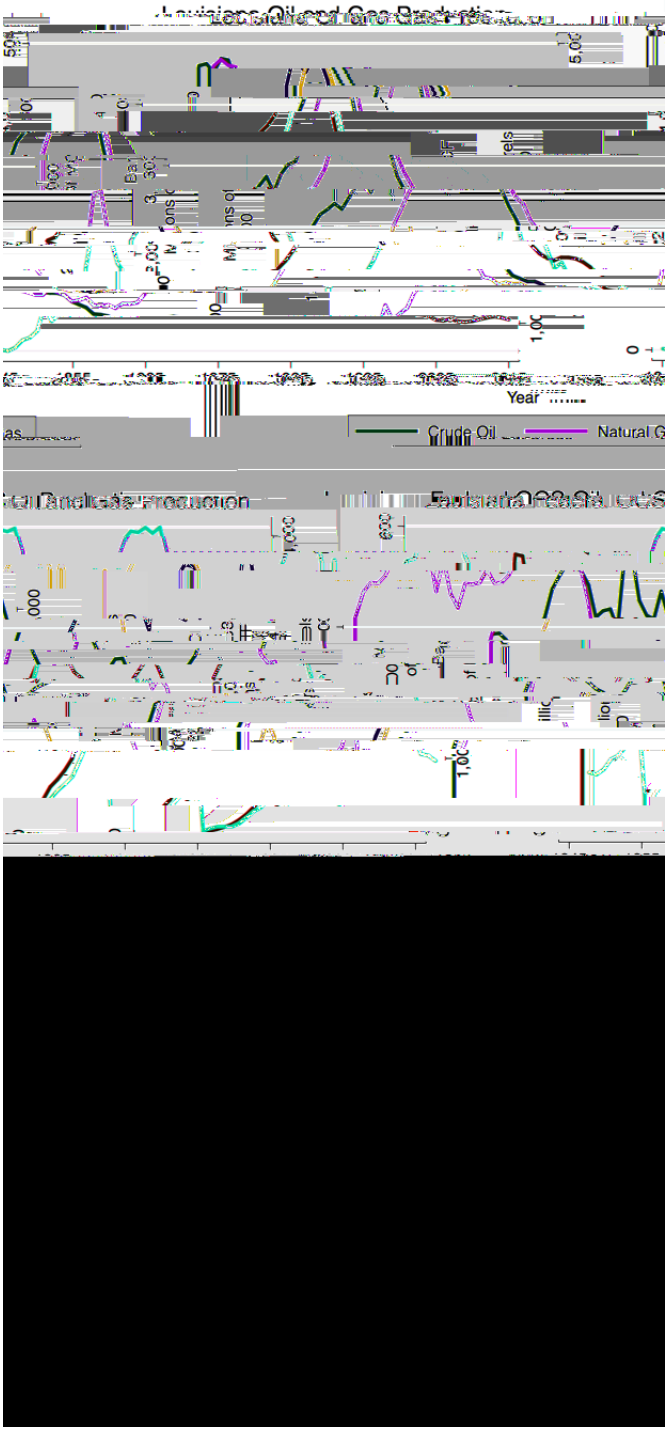

Figure 2.3: Louisiana Oil and Gas Production

Figure 2.4: Up-stream Oil and Gas Activity as a Share of Louisiana Labor Market

elimination of the sales tax on machinery and equipment, elimination of the corporate franchise tax on debt, and significant increases in the inventory ad valorem tax credit.

In 2009 and 2010, Louisiana woke up with a major hangover from the feel-good tax decreases passed in 2008; we came off the hurricane boom and oil and gas prices were falling. This narrative has become the conventional wisdom for why Louisiana has experienced yearly budgetary crises ever since.

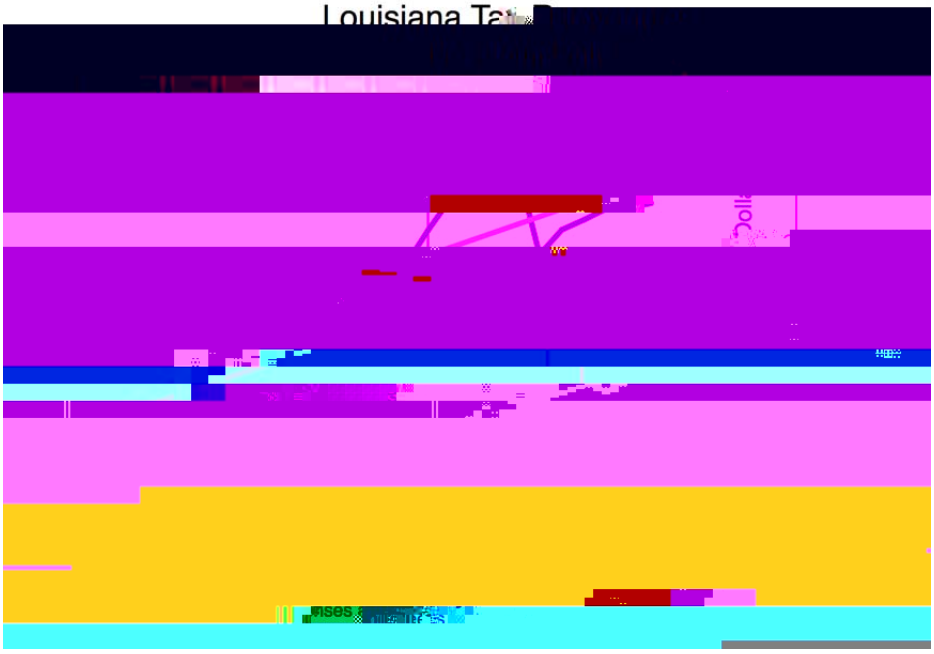

Figure 3.1: Louisiana Tax Revenues

But let's back up and think about tax policy in general. When assessing the level of taxes, it is important to consider tax revenues in comparison to the amount of the economic activity, not just total revenues. One widely used measure is revenues as a share of the total gross state product (GSP). In other words, economists ask *what share of the value of goods and services produced are collected in taxes?* Another measure is total personal income within the state. Economists also ask, *what share of income is collected in taxes?* While different economists will have different views on the appropriate ratio of revenues to economic activity, in general we can agree that once this ratio is decided, a tax policy should be constructed with the goal that government revenues grow at approximately the same rate as the economy.

Figure 3.2 is similar to Figure 3.1, with a few notable exceptions. First, instead of focusing on tax revenues, Figure 3.2 shows t

Figure 3.2: Louisiana Taxes, Licenses and Fees as Share of Louisiana Gross State Product and Personal Income

Starting in 2006, the fiscal year of hurricanes Katrina and Rita, revenues started to pick up once again both as a share of GSP and PI. By the time the 2007 peak was reached, revenues as a share of GSP were back to pre-Stelly levels, and revenues as a share of PI were at levels not seen since around 1990. But when tax cuts occurred in 2008, state revenues began to drop significantly relative to both GSP and PI. Revenues as a share of GSP dropped from its peak of around 5.5 percent to less than 4 percent while revenues as a share of PI dropped from over 7 percent to less than 5.5 percent.

So is the global oil price drop to blame for this significant drop in revenues as a share of both GSP and PI? Such an explanation is implausible. Louisiana's current fiscal woes are due to structural changes in tax policies that led to significant reductions in revenues as a share of total state production and income, not the decline of one industry. To see this, consider a few facts. First, as shown in Figure 2.4 and Figure 2.5, the oil and gas industry as a share of total employment and payroll for the state has remained relatively constant over the last two decades. So, it is implausible that this industry has experienced a systematic decrease in personal income and corporate income taxes payments. Second, as shown in Figure 2.2, direct mineral revenues as a share of the total state budget is relatively small today compared to historical standards. Thus, while the recent drop in oil price certainly does have a negative impact on the state's budget in the current year, this recent drop is just that, recent, and cannot explain a decade's worth of financial woes for Louisiana.

Different people will have different opinions on the appropriate share of value created in the economy that should be collected as taxes. Some might think taxes are currently *too high* while others might think they are *too low*. But regardless of your political views, one thing is clear: A structural shift in Louisiana's tax revenues has occurred due to structural changes in Louisiana's tax code. In addition, while the current drop in oil price is not welcome news when the state is experiencing such severe declines in revenue, it is simply not the culprit for these problems.

4 Conclusions

This report provides an overview of Louisiana's mineral revenues as well as provides historical context for the oil and gas industry's contribution to state tax revenues. Historically, this industry has been a very important component of the state's economy and budget. In fact, during the 1960s to early 1980s, direct mineral revenues were the largest single source of income for the state. But as state production has declined, and new frontiers have been found in federal waters outside of Louisiana's taxing jurisdiction, the state's reliance on t

of revenues and now depends primarily on sales and income taxes. As a result of this shift, an oil price drop today, even a large one, is simply not as draconian for the state budget as a similar drop was in the 1980s. Louisiana has successfully diversified its tax base, and this is the positive story of the recent price drop. But make no mistake, the oil and gas industry is still hurting in Louisiana. At the time of this writing, rig counts are at historic lows and offshore production that is typically resilient to transitory price shocks is also declining. Thus, this is a difficult time for this industry, and therefore for the state of Louisiana. But this should not be mistaken with the systematic budgetary problems the state has faced over the past decade that are not a result of oil and gas prices. Simply put, changes to the state's tax code, not oil and gas prices, are the culprit for these yearly budgetary crises.