

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

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

Gregory B. Upton, Jr.
Assistant Professor

October 24, 2016

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 one another beg an obvious question: Is this round of cuts to the state budget due to historic lows in oil and gas prices? Or is the state still dealing with long-term systemic problems? This research will address these questions by providing perspective on the oil and gas industry's contribution to both the Louisiana economy and tax revenues, as well as provide insight into whether a decline in this industry is the culprit for the state's challenges.

As a share of total employment and state payroll, the oil and gas industry has remained relatively steady over the past 20 years or so, employing about 5 percent of Louisiana's workforce and contributing almost 10 percent of aggregate payroll. Direct mineral revenues (from severance taxes, royalties, bonuses and rentals), while experiencing significant variations from year to year, have accounted for on average between 10 and 15 percent of state tax revenues over this time period. While the recent drop in oil price has led to significant decreases in mineral revenues, it is implausible that this recent drop is the culprit for the state's current fiscal challenges.

Starting in 2002, and then again in 2008, the state legislature passed significant tax reform that has since led to historic decreases in tax revenues as a share of gross state product (GSP) and personal income (PI). An honest look at the data reveals a simple fact: Louisiana today has lower revenues as share of GSP and PI than at any time in recent history. It is these systematic changes to the state's tax code and subsequent drop in revenues that are the culprit for recent budget woes, not the recent drop in oil prices.

The oil and gas industry in Louisiana has played a pivotal role in the history of Louisiana's economy as well as in the state's budget. This report will discuss how the industry has contributed to both the state's finances and economy from a historical perspective. Next it will discuss the recent drop in oil prices and assess how this might impact the state's budget. Finally, it will take a broader look at Louisiana's revenues and assess the likely culprit for recent budgetary problems.

Results of this research have broad policy implications for Louisiana. First, Louisianans must decide what public goods we want to fund and the extent to which these should be funded. Should we go the route of Scandinavian and some European countries like Denmark, Sweden, and Belgium that collect more than 45 percent of their GDPs in taxes, but heavily invest in public goods such as public transportation, welfare programs, and universally provided health care? Or should we go the route of African countries like Chad and Libya that collect less than 5 percent of their GDPs in taxes, but have not invested in these public goods and services? Likely, the answer lies somewhere between these two extremes. There is no "right" or "wrong" answer to these questions, but once the appropriate level of public goods is decided, a tax policy needs to be constructed in a way that can collect these revenues while preserving incentives and economic freedoms.

Second, Louisianans must assess how mineral revenues should fall into this mix. As a state, we are fortunate to have oil and gas resources that have contributed significantly to our state's economy and have also helped fund state government. We need to understand historical trends of this industry's prevalence in our state, but also how its contribution to the state's coffers has evolved over time.

Third, we need to consider the most appropriate way to use these mineral revenues. Should we depend on revenues from volatile priced commodities to fund state government's recurring expenses? Or should we treat this revenue as *lagniappe*, investing these dollars with a long-term strategy so that generations of Louisianans can benefit from these natural resources?

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 avoided. While no tax code is perfect, and all taxes create economic costs, the state does need to raise revenues in a predictable and transparent fashion. The events of the past decade provide a unique opportunity for Louisiana to make changes to its tax code in a manner that is consistent with long-term goals and good tax policy.

ACKNOWLEDGMENTS

I wish to recognize faculty and staff assistance from the LSU Center for Energy Studies, especially Marybeth Pinsonneault for her editorial expertise. In addition, I would like to thank several people from diverse backgrounds that provided invaluable thoughts and critiques of my work, including:

- Greg Albrecht, Chief Economist, Legislative Fiscal Office;
- Stephen Barnes, Director, Economics & Policy Research Group, Louisiana State University;
- Don Briggs, President, Louisiana Oil & Gas Association;
- Manfred Dix, Chief Economist, Office of Planning & Budget, Louisiana Division of Administration;
- David Hoppenstedt, Economist, Louisiana Department of Revenue;
- Naci Mocan, Ourso Distinguished Chair of Economics, Department of Economics, Louisiana State University.
- Jim Richardson, Professor, Public Administration Institute and Department of Economics, Louisiana State University.

Table of Contents

1	Introduction.....	2
2	Louisiana Mineral Revenues.....	6
2.1	Tax Structure	6
2.2	History of Mineral Revenues in Louisiana	8
3	Louisiana’s Budget Challenges.....	14
4	Conclusions	19

Table of Figures

Figure 1.1:	West Texas Intermediate Spot Price	4
Figure 2.1:	History of Louisiana Severance Taxes	8
Figure 2.2:	Louisiana Mineral Revenues and Total State Tax, Licenses, and Fees.....	9
Figure 2.3:	Louisiana Oil and Gas Production.....	12
Figure 2.4:	Up-stream Oil and Gas Activity as a Share of Louisiana Labor Market.....	13
Figure 2.5:	Refining and Petrochemicals as a Share of Louisiana Labor Market	13
Figure 3.1:	Louisiana Tax Revenues.....	15
Figure 3.2:	Louisiana Taxes, Licenses and Fees as Share of Louisiana Gross State Product and Personal Income	17

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 to cut the budget, sometimes mid-year when revenues are below the forecasted levels. Over the past year, though, a new story has emerged: a historic drop in oil prices. Once again, Louisiana is forced to address its fiscal challenges head-on.

These two events in conjunction with one another beg an obvious question: Is this round of cuts to the state budget due to historic lows in oil and gas prices, or is the state still dealing with long-term systemic problems? In February of 2016, just one month after taking office, Gov. John Bel Edwards gave a historically unprecedented 13-minute televised speech to address the looming fiscal challenge. In this address, Gov. Edwards stated:

“This year’s \$940 million budget deficit is made up of two different categories:

First, the Revenue Estimating Conference - the panel of economists and financial experts our legislature relies on - met yesterday and told us that we are \$570 million short of the revenue we originally expected for the year. That’s the first part of the problem. This is due, in part, to the drop in oil prices and a slowdown in sales and corporate tax collections. . .”

At first look, it seems plausible that at least some of the blame is due to historically low prices of crude oil and natural gas. In the 2014-2015 fiscal year (FY15) the average price of crude oil sold in Louisiana was almost \$97 per barrel.¹ By FY16 the price dropped to less than \$56 per barrel, and by January and February of 2016, crude prices had bottomed out at less than \$30 per barrel. With direct mineral revenues making up between approximately 10 and 15 percent of the state’s revenues over the past decade, it seems quite plausible that a drop in oil prices could indeed negatively impact the state’s budget. But is this the entire story? And why has the state been experiencing budget issues year after year? How could this be explained by the recent drop in prices?

Potentially, states with a large share of the economy concentrated in one industry inherently have a more volatile economy. Simply put, any given industry is more volatile

¹ Based on the average price of crude for which severance taxes were paid. Source: Louisiana Department of Natural Resources.

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 lives and business activities. On the other hand, if there is a large discovery or a new extraction technique invented, the oil price might drop. Upstream oil and gas companies might be hurt, while consumers and other businesses can benefit.

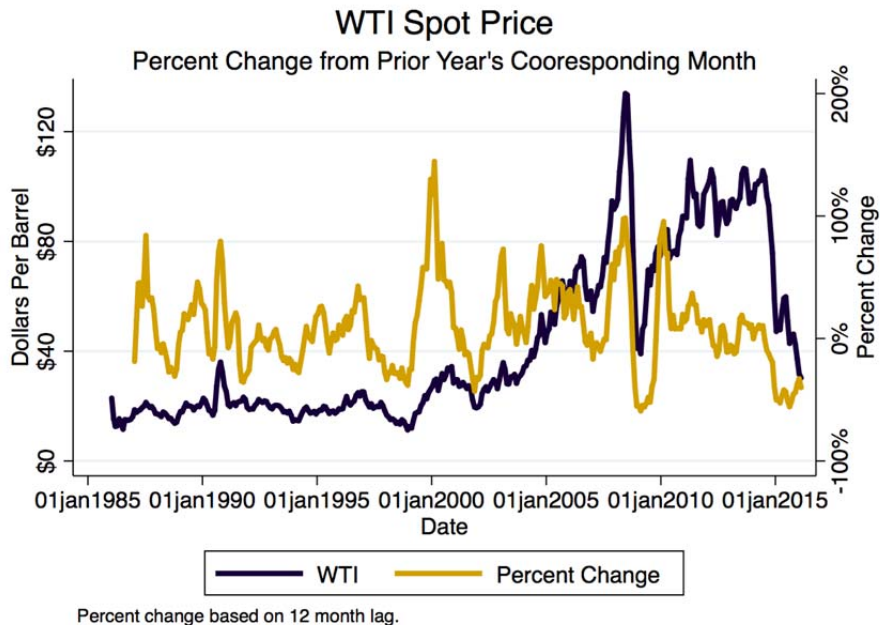


Figure 1.1: West Texas Intermediate Spot Price

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 supplied. A decrease in supply means that the quantity of oil and gas extracted, and therefore taxed, will also decline.

But mineral revenues are not the only revenues that the state receives. The state also receives substantial shares of its revenues from income and sales tax receipts. When oil field workers are laid off, they earn less income and have less money to spend. Therefore, the oil and gas price shocks can also impact these other sources of state revenues. While countervailing effects are present in the savings for consumers and businesses in the form of cheaper fuel, the conventional wisdom has been that in Louisiana historically the negative impact on the oil and gas industry trumps this benefit. Thus, economists that follow the state budget keep a close eye on both the oil and gas prices as well as the oil and gas industry.

But times have changed, and these changes can have dramatic implications. Louisiana has seen dramatic declines in state oil and gas production over the last four decades. But the industry itself has not attenuated in the same way, as much of the production has moved to federal waters more than three miles off Louisiana's shore in the Gulf of Mexico. More recently, the U.S. has seen a resurgence in onshore activities due to the advent of "shale" that has increased crude production to historic highs. Thus, in today's world, potentially, the conventional wisdom is no longer conventional. A new day in Louisiana, and in the world, might imply that we need to view Louisiana's economy and state budget situation in a new light. This paper will discuss an overview and history of oil and gas revenues, and then provide a policy perspective based on the current low price environment.

² Technically, oil is taxed at a fixed percent of the value of the resource extracted, while gas is taxed volumetrically, with the volumetric charge based on the price from the prior year.

2 Louisiana Mineral Revenues

2.1 Tax Structure

For much of Louisiana's history, mineral revenues have made up a significant share of the state's income. In fiscal year 2015 (7/2014-6/2015), mineral revenues made up approximately 10 percent of the state's tax collections—about one third of sales tax and personal income tax collections.³ These mineral revenues are primarily composed of severance taxes and royalty receipts from the extraction of crude oil and natural gas from private and public lands and water bottoms within the state's jurisdiction. Thus, production in federal waters, roughly greater than three miles from shore, is not considered within the state's jurisdiction and does not directly generate revenue for the state.⁴ Royalty receipts are not tax receipts, but instead are revenue sharing contracts between the producer and the state for production that occurs on lands and water bottoms that the state owns. Likewise, relatively small amounts of bonus payments paid to obtain the rights to drill on state lands and water bottoms, and lease payments made to maintain those rights, are included as mineral revenue but are not actually tax receipts. Production from privately owned lands and water bottoms, on the other hand, is subject to the state severance tax, and in FY 2015 severance taxes made up 70 percent of total mineral revenues, with royalty receipts and other lease payments making up 30 percent of mineral revenues. A relatively small amount of severance tax, less than 0.1 percent, is generated from timber production and from various other natural resources such as lignite, shell, and gravel. Therefore, the story of mineral revenue in Louisiana is the story of oil and natural gas production and prices.

When a company wants to drill on state lands or in state waters, the company must contract with the state in order to obtain the rights to do so. At the onset of the contract, a bonus payment is made to compensate the state for the right to drill on the land. This payment will be made regardless of whether any oil or gas is ever extracted from the land. If production occurs in the future, then the state will collect a pre-

³ Louisiana Department of Revenue.

⁴ The caveat to this rule is that for revenue derived from production in a three-mile zone of federal waters abutting state waters, the federal government must share its royalty receipts with the state. This is commonly referred to as the 8(g) zone, named after the section of federal law laying out the revenue sharing provisions.

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 in 2009 when it jumped to over 30 cents per Mcf. The natural gas tax rate then fell quite dramatically to almost half of its 2009 value from 2010 to 2012. For 2016, the natural tax rate is 9.8 cents per Mcf. Figure 2.1 shows an overview of major changes to severance tax rates for oil and gas over Louisiana's history.

⁵ Louisiana Department of Revenue.

⁶ RS 47:633

⁷ *Louisiana Severance Tax*. Department of Natural Resources. Technology Assessment Division.

⁸ *Louisiana Severance Tax*. Department of Natural Resources. Technology Assessment Division.

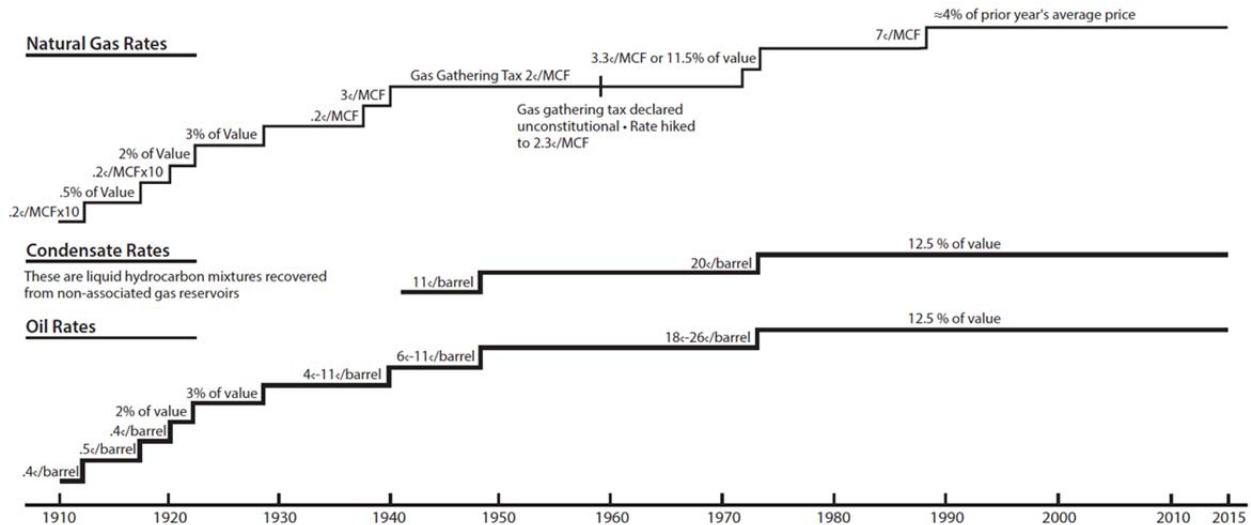


Figure 2.1: History of Louisiana Severance Taxes

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 stabilized to levels approximately equal to revenue levels of the late 1970s in nominal dollars, but by this time mineral revenues as

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.

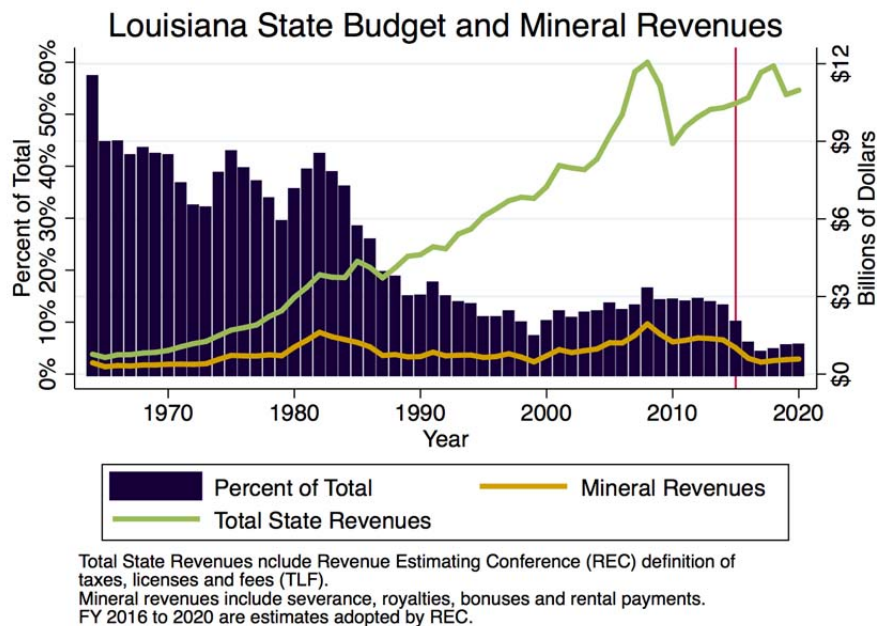


Figure 2.2: Louisiana Mineral Revenues and Total State Tax, Licenses, and Fees

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 next three plus decades, this trend reversed itself; both crude

oil and gas production declined steadily. This steady decline is a common characteristic of a maturing basin and has been observed in other oil and gas producing states.⁹ A close comparison of production in Figure 2.3 to the historic mineral revenues presented in Figure 2.2 reveals that these two do not track each other closely. The large increase in mineral revenues observed from 1979 to 1982 was associated with a decrease in both oil and gas production each year during this time period. By the time mineral revenues peaked in 1982 at more than \$1.4 billion, crude oil and natural gas production was approximately 60 percent below the peak production experienced in 1970. We observed a similar pattern in the early 2000s. From 2000 to 2010, mineral revenues were up more than 75 percent, while crude oil production was down more than 35 percent, and natural gas production was relatively flat.

This comparison of oil and gas production also illustrates how technology can dramatically alter production. Oil and gas production in Louisiana followed a very similar trend for the past half century—both increasing steadily in the 1940s to 1960s, peaking in the early 1970s, and declining steadily since. This changed in 2009, when natural gas production increased drastically while oil production continued along its past trend. This increase in natural gas production is due to the horizontal drilling activity in the Haynesville Shale formation, located in northwestern Louisiana.¹⁰ Essentially all of the increase in natural gas production seen in the state since 2008 is a result of this shale play.

But as Louisiana state production has continued along a steady decline curve, Figure 2.3 shows that offshore oil and gas activity experienced a sharp increase in the 1960s through 1980s and has therefore offset some of this decline in state oil production. Figure 2.3 also combines state production and federal production in the Gulf of Mexico off of Louisiana's shores. Thus, when federal production is included, the data paints a very different picture. While there have still been declines in production since

⁹ *Energy Information Administration*. U.S. Field Production of Crude Oil.

¹⁰ Kaiser, M.J. and Y. Yu. Louisiana Haynesville shale—1: Characteristics, production potential of Haynesville shale wells described. *Oil & Gas Journal* 109(19):68-79, 109.

Kaiser, M.J. and Y. Yu. Louisiana Haynesville shale—2: Economic Operating Envelopes Characterized for Haynesville Shale. *Oil & Gas Journal* 110(1A):70-74, 87.

Kaiser, M.J. and Y. Yu. shale-3 (conclusion): Operating envelope of Haynesville shale wells' profitability described. *Oil & Gas Journal* 110(2):60-67.

peak production in the early 1970s, total oil and gas production has leveled off somewhat with significant fluctuations from year to year.

We have seen that state oil and gas production, and therefore mineral revenues as a share of total state revenues in Louisiana, have declined over time. But during this time of decline, there has been a movement away from state lands and waters further out into the Gulf of Mexico. Figure 2.4 and Figure 2.5 show Louisiana payroll and employment associated with oil and gas activities over the past 20 years. While production on state lands and the relative importance of oil and gas activity on the state's budget through mineral revenues has attenuated over time, the share of the oil and gas activity's importance for the state's labor market has remained strong over the past two decades. Upstream oil and gas activity has accounted for about 4 and 5 percent of total state payroll and between 2 and 3 percent of total state employment. While refining and petrochemicals have experienced increases in state employment and payroll, this industry has attenuated as a share of total state payroll and employment until the last several years.

Over these past 20 years, in total, the oil and gas industry has directly accounted for about 4.5 percent of state employment and more than 9 percent of state payroll. In 2015, the most recent year of data availability, the industry accounted for approximately the same share of employment and payroll as this long-run average. This tells us two things. First, this industry pays above-average wages, and these above-average wages have persisted throughout recent history. Second, as production has moved increasingly offshore, the importance of this industry for Louisiana citizens has continued to remain strong, despite mineral revenues' attenuation as a share of the state budget.

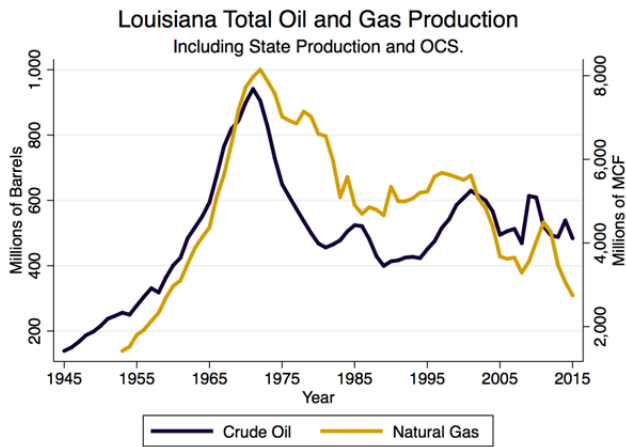
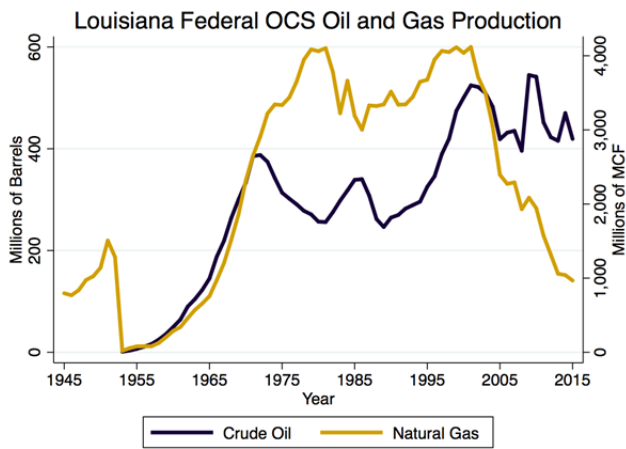
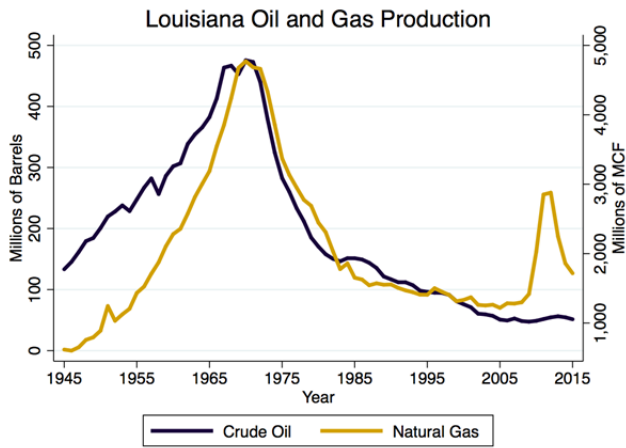


Figure 2.3: Louisiana Oil and Gas Production

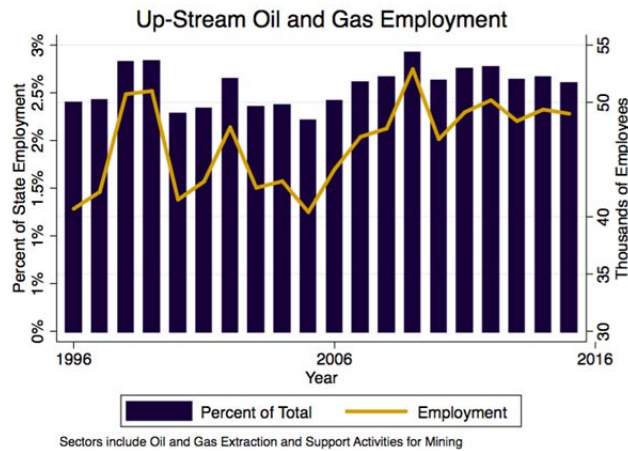
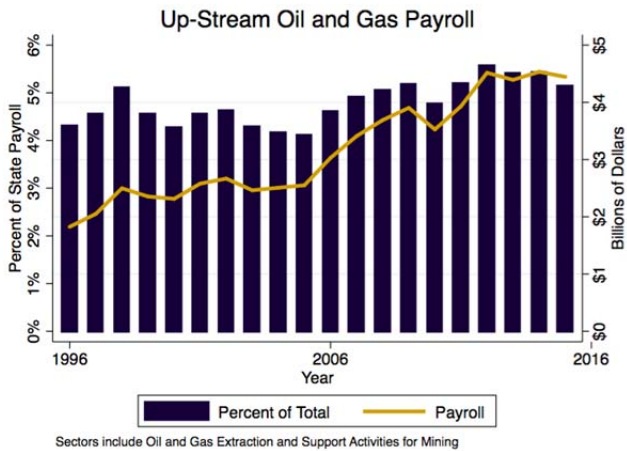


Figure 2.4: Up-stream Oil and Gas Activity as a Share of Louisiana Labor Market

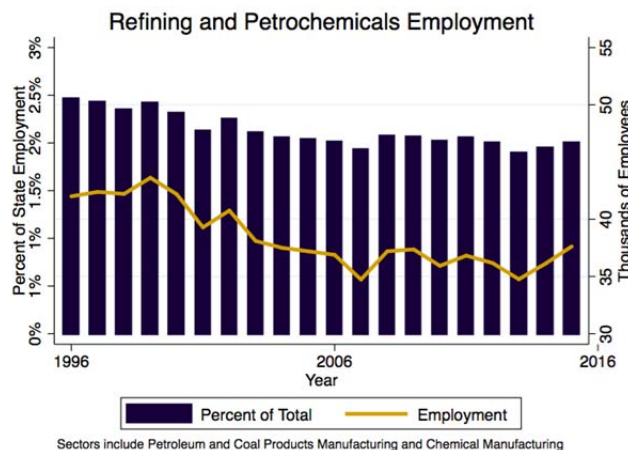
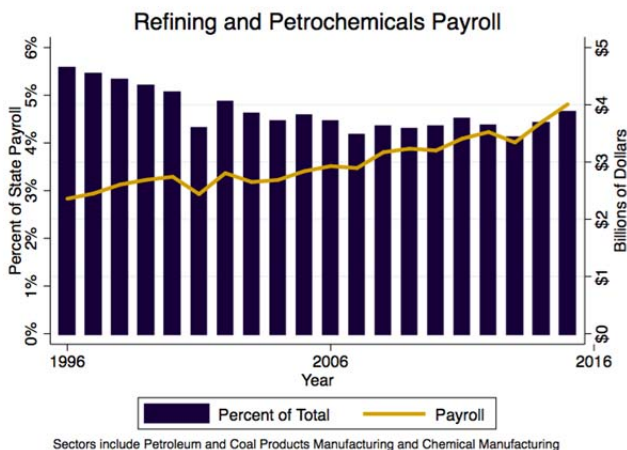


Figure 2.5: Refining and Petrochemicals as a Share of Louisiana Labor Market

3 Louisiana's Budget Challenges

Ask anyone in Louisiana about state government, and you'll likely get some eye-rolling in remembrance of the past decade's seemingly constant budget debacles. Starting in April of 2016, Louisiana implemented a one-cent increase in the state's sales tax, making Louisiana the highest combined state and local sales tax state in the country. And yet, going into this past legislative session, the legislature was still facing more than a half-billion dollar shortfall for the upcoming fiscal year. The legislature eventually filled this budget gap through a combination of tax increases and a significant cut to the state's scholarship program, TOPS. Could the recent drop in oil price be the culprit for this crisis?

To understand our current situation, we first need some historical context. In 2002, the Legislature passed the "Stelly Plan," pioneered by Rep. Vic Stelly. Without getting into tedious details of tax policy, the big picture is relatively straightforward. The plan *decreased* sales taxes and simultaneously *increased* income taxes in a manner that was meant to be *revenue neutral* at the date it was passed.¹¹

Now fast-forward to 2008. Louisiana was just two years behind major hurricanes Katrina and Rita that both made landfall in the fall of 2005 (fiscal year 2006). As shown in Figure 3.1, there was a noticeable increase in revenues in the post-storm years. Three factors contributed to this. First, there was an increase in income tax revenues associated with both the Stelly Plan and the post-hurricane boom. Second, there was a modest increase in sales taxes associated with the hurricane boom, despite the sales tax decrease. Third, mineral revenues peaked in 2008 due to historically high oil and gas prices. It was during this revenue surge that the largest permanent tax decrease in the state's history was implemented. In 2008, the state decreased the income tax, similar to the pre-Stelly level, while keeping sales tax untouched. Thus, we now had lower income taxes compared to 2003-2008 *and* lower sales taxes compared to the pre-Stelly era. In addition, other tax reductions on the books were just being fully realized—

¹¹ It should be noted, that while revenue neutrality was the goal at the date it was passed, the long-term goal was revenue growth.

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.

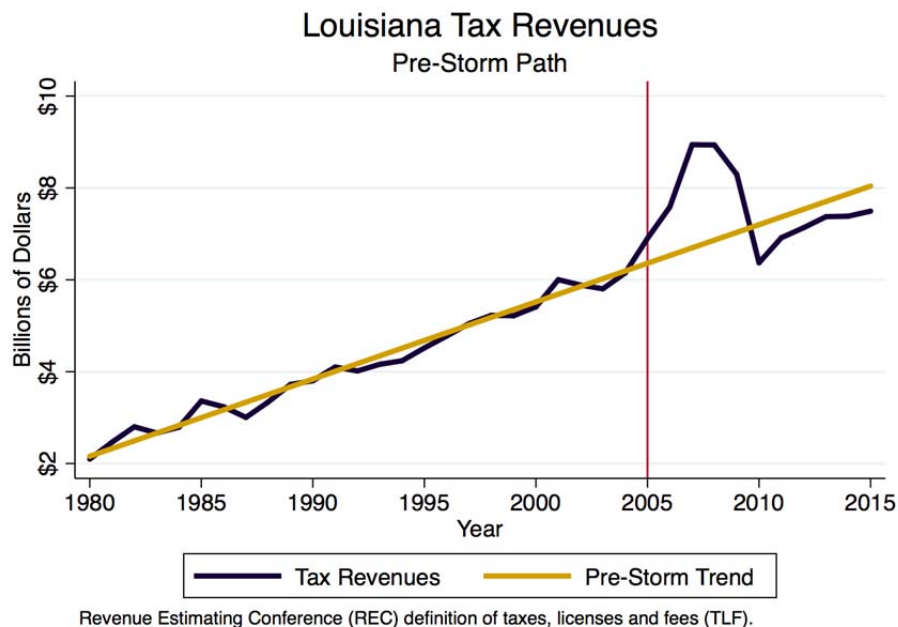


Figure 3.1: Louisiana Tax Revenues

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 the share of GSP and personal income (PI) that is collected in taxes. Second, instead of extending a trend line from 2005 (the “storm year”) forward, the trend is extended from 2002 (the year of the initial Stelly Plan) forward.

Two items are notable. First, from 1980 until 2002, revenues were on average growing relative to Louisiana’s GSP, but were declining slightly relative to Louisiana’s PI. More specifically, from 1980 to 2002, tax revenues as a share of GSP grew from about 4.6 percent to 5.6 percent. This is a 1-percentage point (or 22 percent) increase in tax revenues as a share of the Louisiana economy over these two decades. Relative to personal income, though, the state’s revenues declined from about 8 percent in 1980 to less than 7 percent in 2002.

After 2002, a structural shift occurs, and by 2005 revenues as a share of GSP declined to 4.6 percent—back to the level observed in the early 1980s. This suggests that the enactment of the Stelly Plan might not have created a revenue neutral shift, rather it appears to have reduced share of tax collections out of state GSP. But when the same comparison is conducted relative to personal income, this story no longer holds. While revenues relative to personal income did decline slightly after Stelly’s enactment in 2002, revenues did not deviate significantly from the long-term trend.

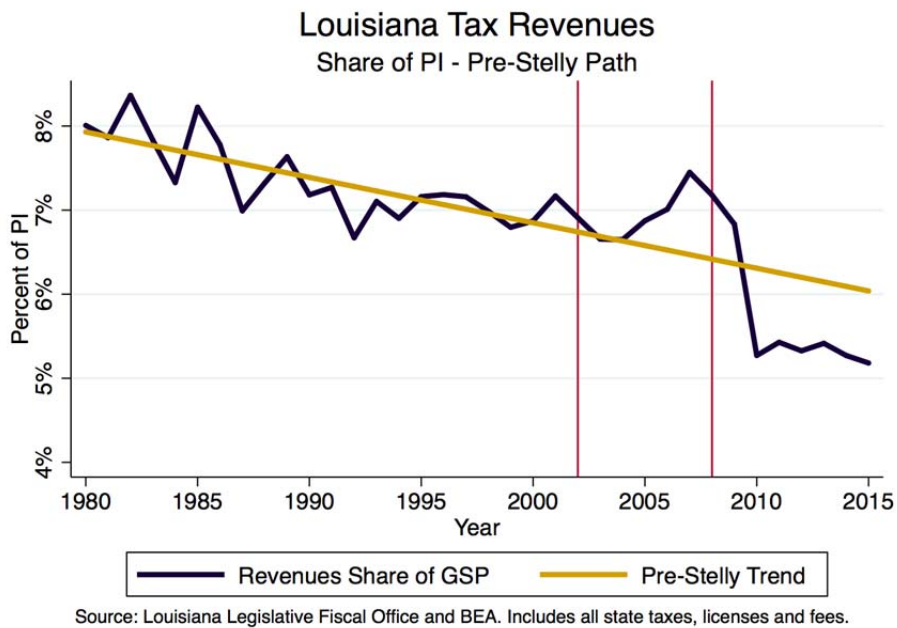
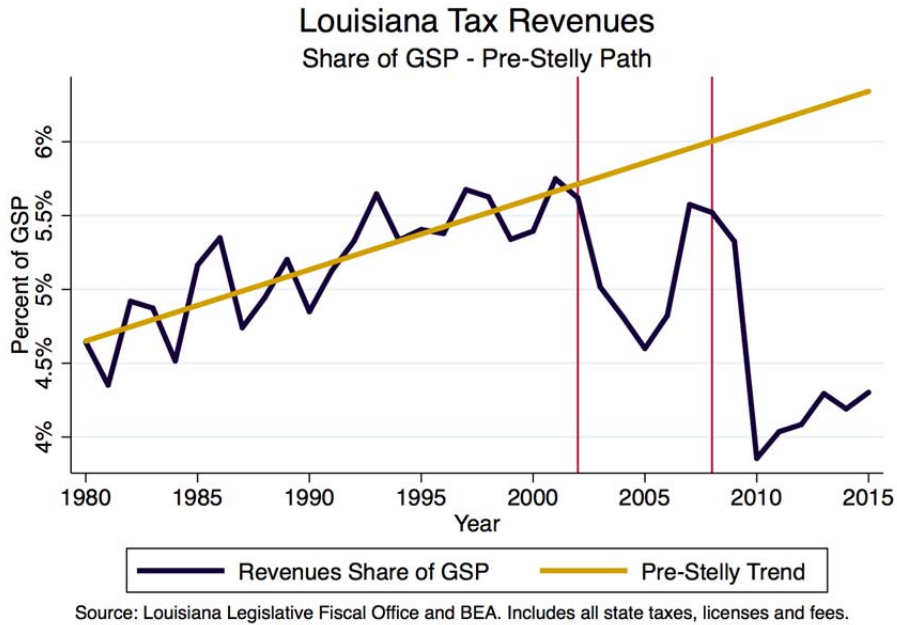


Figure 3.2: Louisiana Taxes, Licenses and Fees as Share of Louisiana Gross State Product and Personal Income

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 these revenues has naturally attenuated over time. While direct mineral revenues as a share of state revenues has declined over time, the industry is still very important for the state's economy. Over the past two decades, the industry has consistently accounted for about 10 percent of payroll in Louisiana and about 5 percent of employment. But today, direct mineral revenues account for about 10 percent of the state's tax revenues, not including income and sales taxes collected as a result of these activities. This is down from its peak of more than 40 percent observed in the early 1980s.

But the fiscal challenges that Louisiana has faced over the past decade are not due to the oil and gas industry. These challenges are a result of systematic changes to the tax code that have decreased revenues as a share of economic activity. Two major tax changes have occurred in recent history. First, the Stelly Plan in 2002, that was meant to be revenue neutral and second a large tax decrease implemented during the post-Katrina boom in 2008. In the most recent fiscal year, fiscal year 2015, Louisiana's revenues accounted for less than 4.5 percent of the gross state product (GSP) and less than 5.5 percent of the state's personal income; these are lower levels than at any point in recent history.

Oil is a globally traded commodity, and therefore the price can fluctuate significantly from year to year due to global events that are completely out of the control of Louisiana's government. For this reason, funding recurring state expenses on inherently volatile revenues is not sound tax policy for Louisiana. Due to the realities of long-term declining state production and the movement towards extraction in federal waters in the Gulf of Mexico, Louisiana has weaned off of oil and gas revenues as its primary source

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.