

OKLAHOMA'S OIL AND GAS ECONOMY

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by:



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I. Oklahoma's Oil and Gas Economy

Oklahoma's Oil and Gas Cluster – Size and Composition

Oklahoma has served as a major domestic oil and gas hub for more than a century and remains home to a substantial and growing concentration of oil and gas related activity.

The largest components of state oil and gas activity remain the traditional tasks of drilling and production. However, often ignored in evaluating the state's oil and gas presence is the large and vibrant group of ancillary oil and gas-related industries that have long operated across the state. Firms in these related industries are closely tied to oil and gas production and tend to locate within or adjacent to oil and gas producing regions over time.

The combination of traditional drilling and production along with these related industries comprise the Oklahoma oil and gas *cluster*. Clusters are defined as geographic concentrations of industries related by knowledge, skills, inputs, demand, and/or other linkages.¹ The U.S. oil and gas cluster remains a key component of the national economy and has increased in importance since the revitalization of the domestic energy industry beginning in 2003. By many measures, oil and gas is also the largest and most strategic industry cluster in the Oklahoma economy.

Empirical economic research continues to demonstrate that the concentration of an industry cluster such as oil and gas can have significant positive effects on a regional economy through job creation and business formation. Cluster research continues to show that where the core of the industry is based, related firms will follow. Most firms in the non-traditional sectors of the oil and gas cluster likely would not be located within Oklahoma if traditional oil and gas drilling and production were not taking place in the state.

Cluster Industries. In defining and examining Oklahoma's oil and gas cluster, the report uses the set of industries defined by the U.S. Cluster Mapping Project.² This approach to defining regional clusters is used to establish U.S. Benchmark Cluster Definitions (BCD) which provide consistent and systematic definitions for clusters across all regions of the country.

The methodology uses an algorithm to evaluate the strength of various economic linkages between all industry sectors in identifying related industries.³ The approach measures the relatedness of industries using economic input-output linkages, patterns in labor use, co-location of employment, and proximity of establishments. Only industries which are deeply integrated with the oil and gas sector are considered for inclusion in the state's oil and gas cluster.

Throughout the report the oil and gas cluster consists of eight NAICS industry sectors at various levels of aggregation. The first three sectors include the traditional areas of oil and gas drilling, production, and support activity:

1. drilling new wells (NAICS 213111)
2. production of crude oil and natural gas (NAICS 211), and
3. support functions for drilling and production (NAICS 213112).

The remaining five sectors include industries with well-established ties to oil and gas drilling and production:

1. refineries (NAICS 324110),
2. other forms of petroleum manufacturing (NAICS 32419),
3. oil and gas field machinery and equipment manufacturing (NAICS 33313),
4. pipelines (NAICS 486), and
5. surveying and mapping (NAICS 541360).

The traditional oil and gas sectors are recognized as having very close economic ties to these related sectors. Firms in the nontraditional sectors are typically highly concentrated in those states that have large reserves of crude oil and natural gas, active drilling, and substantial ongoing production.

Firms that comprise the state's oil and gas cluster are found upstream, midstream, and downstream in the oil and gas channel. The traditional tasks of drilling and exploration are the primary upstream activities but include other related sectors such as oil and gas field equipment manufacturing, seismology, surveying, mapping, data analysis, and other sectors. Firms engaged in the midstream activities of transportation, storage, and marketing include the state's extensive pipeline and storage sectors along with many firms engaged in marketing and wholesaling of oil and gas-related products. Firms engaged in downstream activities, primarily refining and processing, include the state's refineries, processing plants, and other forms of manufacturing from petroleum products.

Profile of Oklahoma's Oil and Gas Cluster

An economic profile of Oklahoma's oil and gas cluster by sector is detailed in Figure 1. In 2018,

- 4,150 business establishments operated within the state's oil and gas cluster
- the cluster produced \$37 billion in state gross domestic product (GDP)
- firms in the cluster provided Oklahoma households with \$19.2 billion in earnings
- cluster employment totaled 135,300 wage & salary workers and self-employed proprietors
- 60,400 wage and salary workers earned \$7.75 billion in compensation, an average of \$128,200 per worker
- 74,900 self-employed proprietors earned \$11.4 billion in proprietor income, an average of \$152,600 per proprietor

Firms in the state's oil and gas cluster continue to produce an outsized share of total statewide economic activity (see Figure 2). These firms represent only 3.8% of all firms statewide but account for 5.8% of total statewide employment (both wage and salary and self-employed proprietors), 18.5% of state GDP, 15.2% of household earnings, 7.6% of all employee compensation, and 46% of all self-employed proprietors' earnings. Relative to all state industries, the oil and gas cluster produces 3.2 times more GDP per worker, 2.6 times more household earnings per employee, 2.2 times more compensation per wage and salary worker, and 3.8 times more proprietors' income per self-employed proprietor.

Figure 1. Economic Profile of Oklahoma's Oil and Gas Cluster (2018)

Cluster Industry Sectors	NAICS	Business Establish-ments	Output (\$Mil.)	Income (\$Mil.)		Employment		
			Gross Domestic Product	House- Hold Earnings	Employee Compensa- tion	Total Employ- ment	Wage & Salary Employ- ment	Proprie- tors' Employ- ment
<i>Traditional Sectors:</i>								
Oil & Gas Extraction	211	1,112	\$22,819	\$6,119	\$3,336	80,897	18,066	62,831
Oil & Gas Drilling	213111	164	774	508	547	7,020	5,143	1,877
Oil & Gas Support Activities	213112	1,998	3,328	2,184	2,351	32,203	23,593	8,610
Oil & Gas Drilling, Extraction, & Support		3,273	\$26,922	\$8,811	\$6,234	120,119	46,802	73,318
<i>Ancillary Sectors:</i>								
Refineries	324110	13	1,753	1,012	352	2,282	1,960	323
Other Petroleum & Coal Products Mfg.	32419	16	333	192	67	711	610	100
Oil & Gas Field Mach. & Equip. Mfg.	33313	204	881	602	601	7,455	7,182	273
Pipelines	486	155	6,937	8,470	425	3,222	2,913	309
Geophysical Surveying and Mapping	541360	488	100	86	70	1,506	957	549
Other Oil and Gas-Related Sectors		876	\$10,004	\$10,362	\$1,514	15,176	13,622	1,554
Oil and Gas Cluster		4,149	\$36,926	\$19,174	\$7,748	135,296	60,424	74,872

Notes: NAICS represents the North American Industry Classification System code for each industry sector.

Source: Bureau of Economic Analysis, Bureau of Labor Statistics, and RegionTrack calculations

Figure 2. Oil and Gas Cluster Share of State Economic Activity (2018)

Economic Measure	Oil and Gas Cluster	State of Oklahoma	Share of State Total
Wage & Salary Employment	60,424	1,720,632	3.5%
Proprietors' Employment	74,872	610,350	12.3%
Total Employment	135,296	2,330,982	5.8%
Gross Domestic Product	\$36.9 billion	\$200.0 billion	18.5%
GDP per Employee	\$272,926 per employee	85,790 per employee	318.1%
Household Earnings	\$19.2 billion	\$126.5 billion	15.2%
Earnings per Employee	\$141,716 per employee	54,282 per employee	261.1%
Employee Compensation	\$7.7 billion	\$101.7 billion	7.6%
Compensation per Worker	\$128,233 per worker	59,124 per worker	216.9%
Proprietors' Earnings	\$11.4 billion	\$24.8 billion	46.1%
Proprietors' Earnings per Proprietor	\$152,598 per proprietor	\$40,631 per proprietor	375.6%

Source: Bureau of Economic Analysis, Bureau of Labor Statistics, and RegionTrack calculations

Composition of the Cluster

The traditional oil and gas sectors (i.e. drilling, production, and support activities) account for most of the economic activity generated by the state's oil and gas cluster (see Figure 1). Nearly 80% (3,300) of the 4,150 business establishments in the cluster operate in the traditional sectors. These firms accounted for 73% (\$26.9 billion) of cluster GDP and 89% (120,100) of total cluster employment in 2018.

Non-Traditional Sectors. Despite the dominant role of the traditional sectors, the five non-traditional sectors produced a large and growing share of total cluster activity. As a group, the ancillary sectors included nearly 900 firms that produced \$10 billion in state GDP, \$10 billion in household earnings, and 15,200 total jobs in 2018.

Component Size. Among all eight individual sectors in the cluster, oil and gas production is the dominant component and accounted for 62% of total oil and gas cluster GDP in 2018. However, the nontraditional pipeline sector produced almost 19% of total cluster GDP, more than double the 9% share (\$3.3 billion) for oil and gas support activities. Refineries, another nontraditional sector, accounted for 5% (\$1.75 billion) of cluster GDP in 2018, more than double the 2% (\$800 million) share of drilling activity.

Wage and Salary Employment. Approximately 77% (46,800) of wage and salary workers in the cluster are in the three traditional oil and gas sectors. However, the cluster also includes 7,200 wage and salary workers in oil and gas field machinery manufacturing, 2,000 in refineries, and 2,900 in the pipeline sector. The state is also home to 1,000 wage and salary jobs in geophysical surveying and mapping and 600 additional jobs in other forms of petroleum product manufacturing.

Self-Employed Proprietors. Self-employment has become an increasingly important source of employment and income within the oil and gas cluster the past decade. There are now more self-employed proprietors than wage and salary workers in the cluster (74,900 vs. 60,400), and more self-employment earnings than wage and salary earnings paid by firms in the cluster (\$11.4 billion vs. \$7.75 billion). In 2018, nearly all (98% or 73,300) self-employed proprietors in the cluster were in the traditional drilling, extraction, and support sectors, with most (62,800) in the production (or extraction) sector. This group includes the many thousands of state residents earning self-employment income from proprietorships and partnerships involved in oil and gas production, as well as individuals receiving royalties, lease payments, and other financial payouts related to production.

Household Earnings – Traditional vs. Non-Traditional. Total household earnings in the non-traditional sectors of the cluster are playing a large role in total state economic activity. In 2018, household earnings traced to the oil and gas cluster were more concentrated in the non-traditional sectors (55% or \$10.4 billion) than the traditional oil and gas sectors (45% or \$8.8 billion). This reflects in part relatively weak financial results for oil and gas producers in 2018 coupled with strong financial results for non-traditional firms in the cluster, particularly self-employment earnings in pipelines. Proprietors' earnings in the traditional oil and gas sectors have remained relatively weak since the collapse in energy prices in 2015.

Other Related Oil and Gas Industries. In evaluating the state's oil and gas cluster, it is important to note that the approach used by the U.S. Cluster Mapping Project is quite conservative in that it captures only those ancillary industries that are typically present across all oil and gas clusters. The approach used can exclude other industry sectors that may have a more highly developed presence in some oil and gas producing regions, particularly highly developed regions such as Oklahoma.

Figure 3 details additional oil and gas-related sectors that are not included in Oklahoma's oil and gas cluster in the report. These industries are all closely tied to the state's oil and gas sector, either through buying/selling arrangements, shared workforce, proximity, or other linkages. Using standard cluster definitions, these sectors are often classified within another cluster (e.g. chemicals, utilities, or construction) rather than attributed to oil and gas. While this may be consistent with industry patterns in non-energy states, the size of these sectors is typically far larger in Oklahoma and other major oil and gas producing states yet go unaccounted for using standard cluster definitions.

To illustrate the significance of these sectors, the group of potential cluster industries detailed in Figure 3 represents wage and salary employment of approximately 25,000 workers in Oklahoma in 2018. This is nearly double the number of wage and salary jobs identified as non-traditional sectors in the state's oil and gas cluster in Figure 1. Again, the definition used throughout the report is believed to represent a highly conservative definition of the size and breadth of the oil and gas cluster. Findings from further research on the interlinkages of these sectors to the broader oil and gas sector might warrant the inclusion of some, or all, of these sectors in future evaluations of the oil and gas cluster in Oklahoma.

Figure 3. Oil and Gas-Related Sectors Excluded from the Oklahoma Oil and Gas Cluster

NAICS Code	NAICS Industry Description
221210	Natural gas distribution
237120	Oil and gas pipeline construction
325110	Petrochemical manufacturing
325120	Industrial gas manufacturing
325194	Cyclic crude, intermediate, & gum and wood chemical manufacturing
325211	Plastics and resins manufacturing
332911	Industrial valve manufacturing
333249	Other industrial machinery manufacturing
423830	Wholesale industrial machinery and equipment merchants
424710	Petroleum bulk stations and terminals
424720	Petroleum and petroleum products merchant wholesalers
454310	Fuel Dealers

Source: Bureau of Labor Statistics and RegionTrack

Historical Trends in the Cluster

Oklahoma's oil and gas cluster has surged in size since 2003 along with the revitalization of the domestic oil and gas industry. Expanded drilling and exploration and rising production of crude oil and natural gas the past decade produced significant growth in output, earnings, and employment within the state. Substantial long-run growth is visible in both the traditional drilling and production sectors and the ancillary sectors of the state's oil and gas cluster.

Industry Growth. Figures 4 and 5 provide a historical profile of economic activity in the cluster over the past two decades. Most recently, overall activity in the cluster continued to rebound in 2018 following the sharp slowdown in the industry in 2015 and 2016 under pressure from low energy prices (see Figure 4a).

GDP in the cluster rebounded to \$37 billion in 2018, the second highest output level for the cluster historically, trailing only the \$43.4 billion produced in 2014, a period of far higher energy prices. Cluster GDP in 2018 is also nearly 50% above the recent low of \$25.2 billion in 2016. Longer-term, the \$37 billion of GDP produced in 2018 represents a near tripling of the output produced by the cluster as the industry began to reemerge in 2003.

The large role played by self-employed proprietors in the cluster is evident in the relative share of both household income and employment they comprise (see Figures 4b and 4c). The share of both earnings and employment attributed to the self-employed in the cluster has exceeded the share for wage and salary workers much of the past decade.

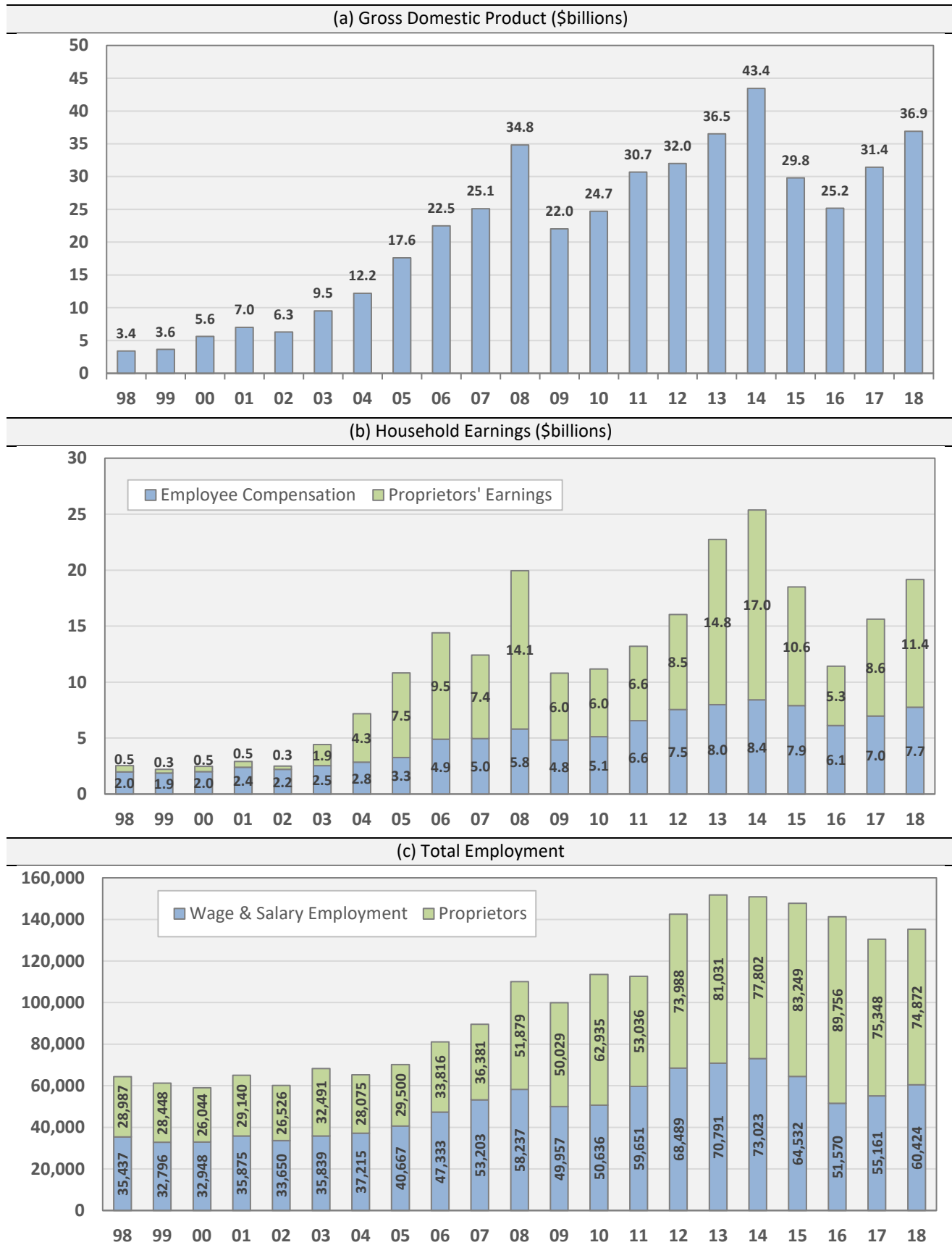
Traditional vs. Non-Traditional Sectors. GDP growth has been robust on both the traditional and non-traditional sides of the oil and gas cluster (see Figure 5a). GDP produced in the traditional drilling, extraction, and support sectors has grown from less than \$5 billion annually prior to 2003 to an average of \$21 billion annually since 2003 as the energy sector began to reemerge. In the most recent five years since 2014, cluster GDP in the traditional sectors averaged \$24 billion annually.

The non-traditional sectors similarly expanded from less than \$2 billion in annual GDP prior to 2003 to an average of \$6 billion annually since. GDP produced in the ancillary sectors in the most recent five years since 2014 has averaged \$9.5 billion annually.

Household earnings in the cluster have followed a similar growth path, both in recent years and long-term (see Figure 5b). Most recently, household earnings of \$19.2 billion in 2018 are more than 65% above the \$11.4 billion in earnings posted at the recent low in 2016. Since the industry reemerged beginning in 2003, household earnings in the cluster have increased more than four-fold from only \$4.4 billion.

Employment gains in the cluster have been proportionately smaller than output and earnings gains over time, due primarily to the shift in the industry toward less labor-intensive work processes (see Figures 5c and 5d). Nevertheless, the state's oil and gas cluster doubled the total number of wage and salary workers and self-employed proprietors between 2003 and 2018, from 68,300 to 135,300. The cluster added 24,600 wage and salary workers and 42,400 self-employed proprietors between 2003 and 2018.

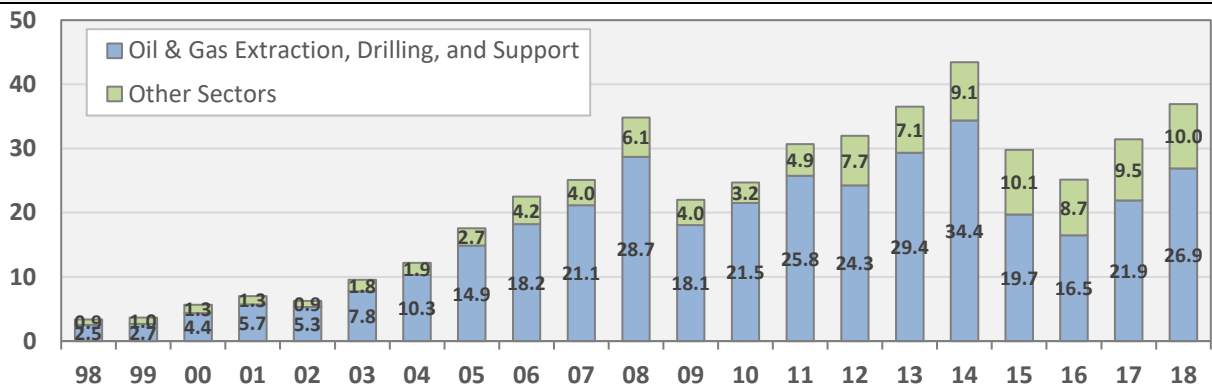
Figure 4. Historical Profile of Oklahoma's Oil and Gas Cluster



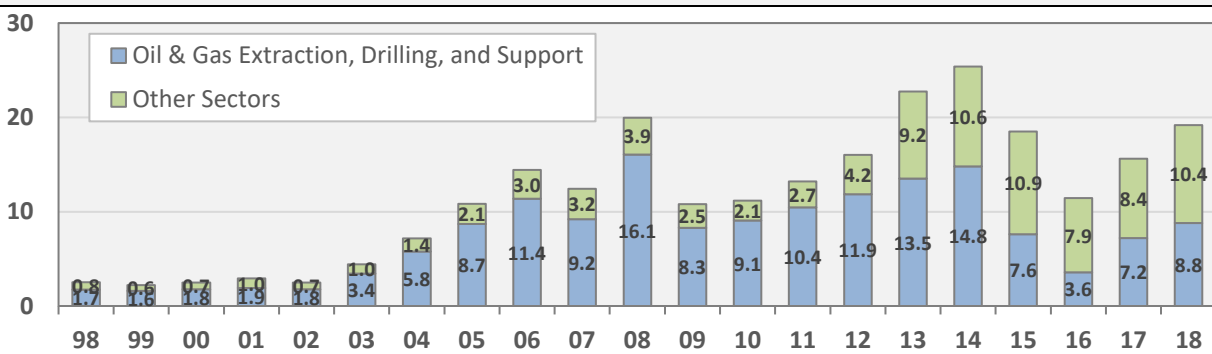
Source: Bureau of Economic Analysis and RegionTrack calculations

Figure 5. Traditional vs. Ancillary Components of Oil and Gas Cluster

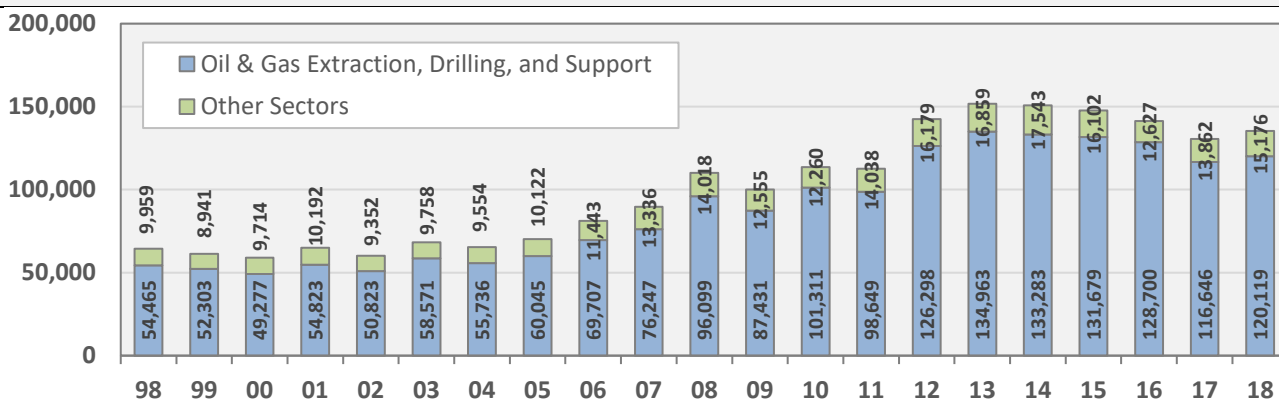
(a) Gross Domestic Product (\$billions)



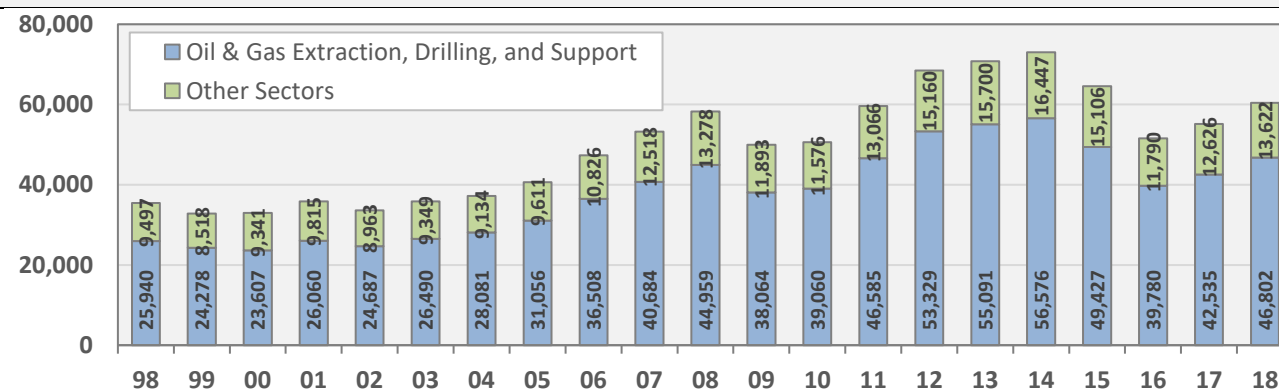
(b) Household Earnings (\$billions)



(c) Total Employment



(d) Wage and Salary Employment



Source: Bureau of Economic Analysis and RegionTrack calculations

II. Oklahoma Oil and Gas Production

Production Trends

The production of crude oil and natural gas in Oklahoma remains in a long-run expansion, driven by the widespread implementation of modern unconventional production techniques. As recently as 2003, state energy production languished at multi-decade lows with little expectation of a revival in output. The rebound, which began with natural gas and then expanded to crude oil, has been transformative for the state economy.

Oklahoma Production. State oil production reached 200.7 million barrels in 2018, the highest oil output in the state since the late 1960s and a level well above the high during the oil boom of the early 1980s (see Figure 6). State oil output is also more than triple the 61.3 million barrels produced at the recent low in 2005. However, oil production in 2018 remains about 25% below the all-time high of 278 million barrels in 1927 during the early boom days of the industry (see Figure 7).

Natural gas production has posted record levels annually since 2014, with output reaching 2.95 trillion cubic feet (Tcf) in 2018 (see Figure 6). State natural gas output is now more than 30% above the prior historical high of 2.26 Tcf set in 1989. State natural gas production is also nearly double (89% above) the recent low in production in 2003.

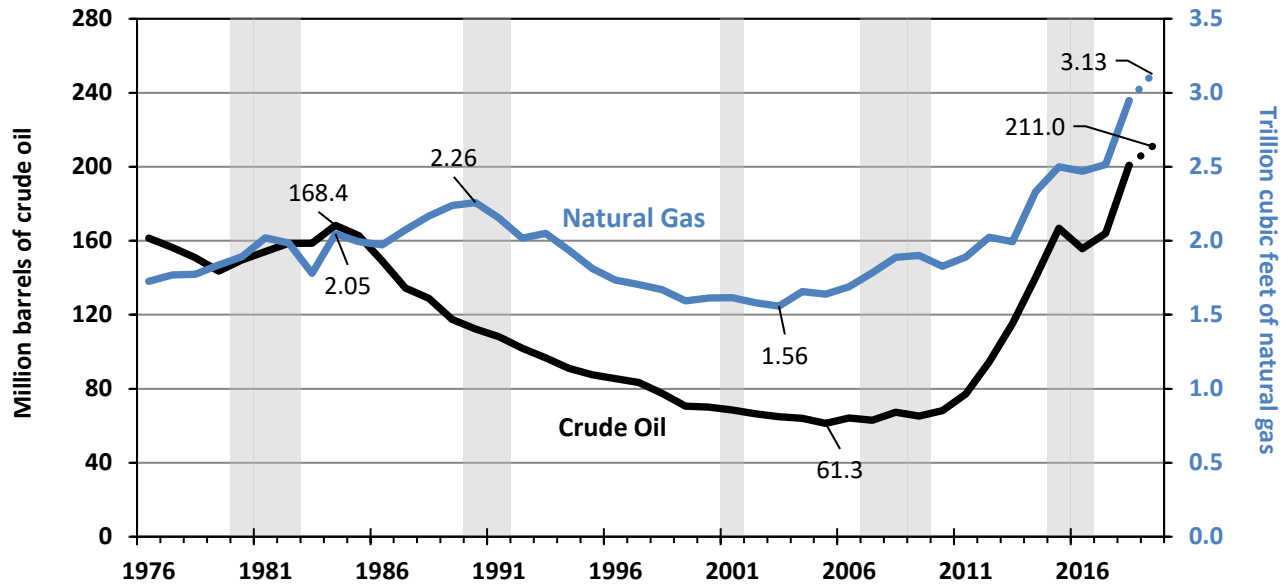
The pullback in state drilling activity beginning in late 2018 has not produced a pullback in production to date. Production levels reported by EIA through June of 2019 suggest state crude oil output is running about 5% above 2018 levels, at an annualized pace of 211 million barrels. For natural gas, annualized production through June of 2019 is equivalent to 3.13 trillion cubic feet, about 6% above 2018 production.

U.S. Production Outlook. EIA forecasts suggest U.S. crude oil production will continue to rise in the near term despite the sharp pullback in drilling activity currently underway in Oklahoma and other producing regions.⁴

EIA's most recent oil production outlook calls for an average of 12.3 million barrels per day in 2019, up nearly 12% from 2018, and an increase of more than 7% in 2020 to an annual average of 13.2 million barrels per day.

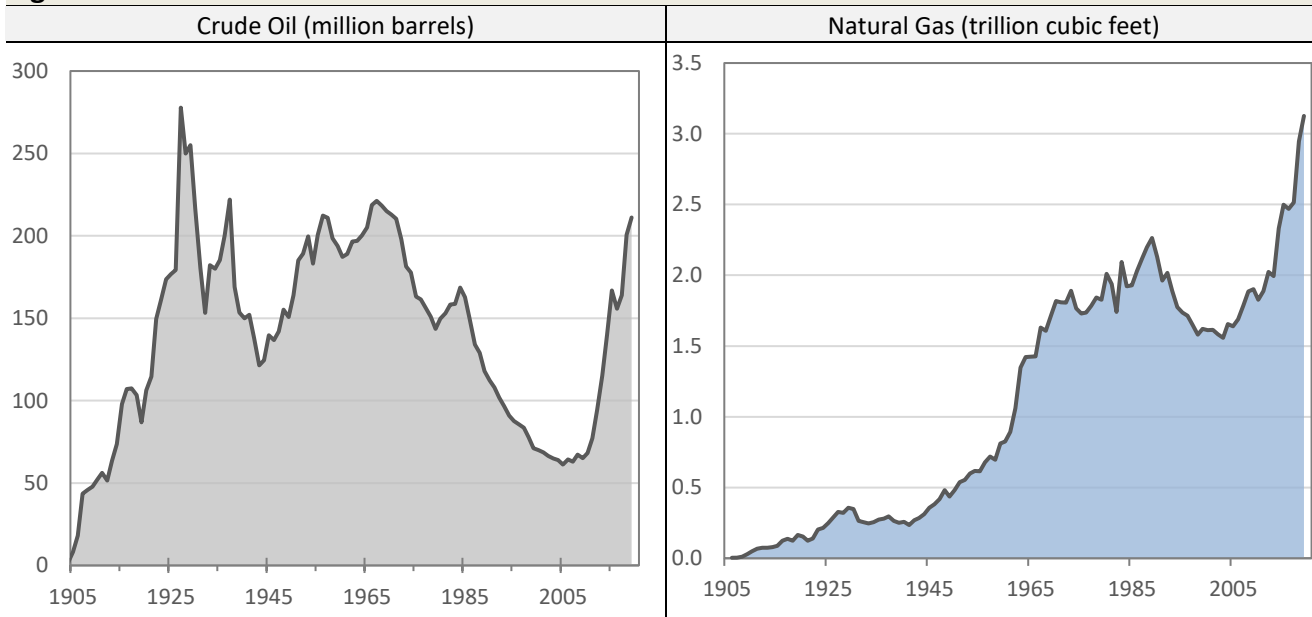
EIA forecasts for U.S. dry natural gas production suggest an average of 91.6 billion cubic feet (Bcf) per day in 2019, up 10% from 2018. EIA expects that natural gas production will grow much less in 2020 as the delayed effect of low prices in the second half of 2019 reduces natural gas-directed drilling in 2020. EIA suggests natural gas production in 2020 will average 93.5 Bcf per day, an increase of only 2% over 2019.

The strong production forecast despite the drilling pullback is due in part to the large inventory of drilled but uncompleted (DUC) wells available to the industry in maintaining production levels. EIA reports a large inventory of DUC wells in Oklahoma that will allow for the completion of additional wells in the near term. However, longer term, production trends will eventually weaken or reverse as the number of new wells drilled declines.

Figure 6. Oklahoma Oil and Gas Production Trends

Notes: 2019 production reflects an annualized estimate of production reported through June 2019.

Source: U.S. Energy Information Administration and RegionTrack calculations

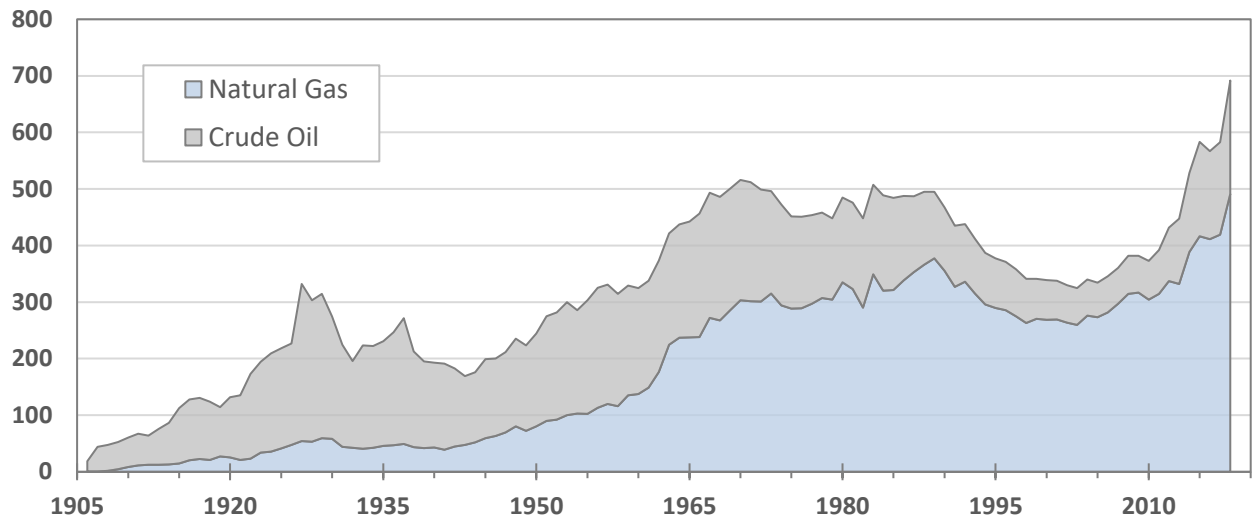
Figure 7. Oklahoma Historical Production of Crude Oil and Natural Gas

Source: U.S. Energy Information Administration

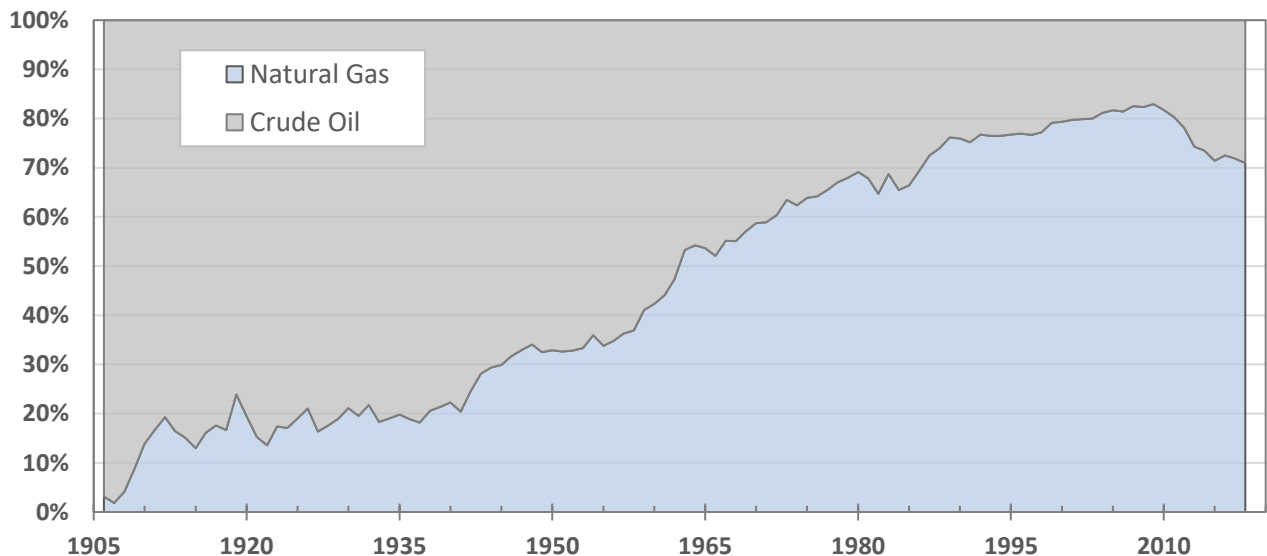
Record BOE Production. On a combined barrel-of-oil-equivalent (BOE) basis, total production of oil and gas in Oklahoma reached an all-time high of 692 million barrels equivalent in 2018 (see Figure 8a). Record BOE levels have been produced steadily since 2014. Total BOE production in 2018 was more than double the level at the recent bottom in 2003. On an annualized basis through June 2019, current year production is at a reported annual pace of 730 million BOE. This suggests a 5.5% gain for all of 2019 if the first-half pace is maintained through the remainder of the year.

Figure 8. Oklahoma Total BOE Production of Crude Oil and Natural Gas

(a) Total BOE Production (million barrels-of-oil-equivalent)



(b) Share of Total BOE Production



Notes: Natural gas is converted to barrels equivalent using 6 mcf of natural gas per barrel of oil.

Source: U.S. Energy Information Administration and RegionTrack calculations

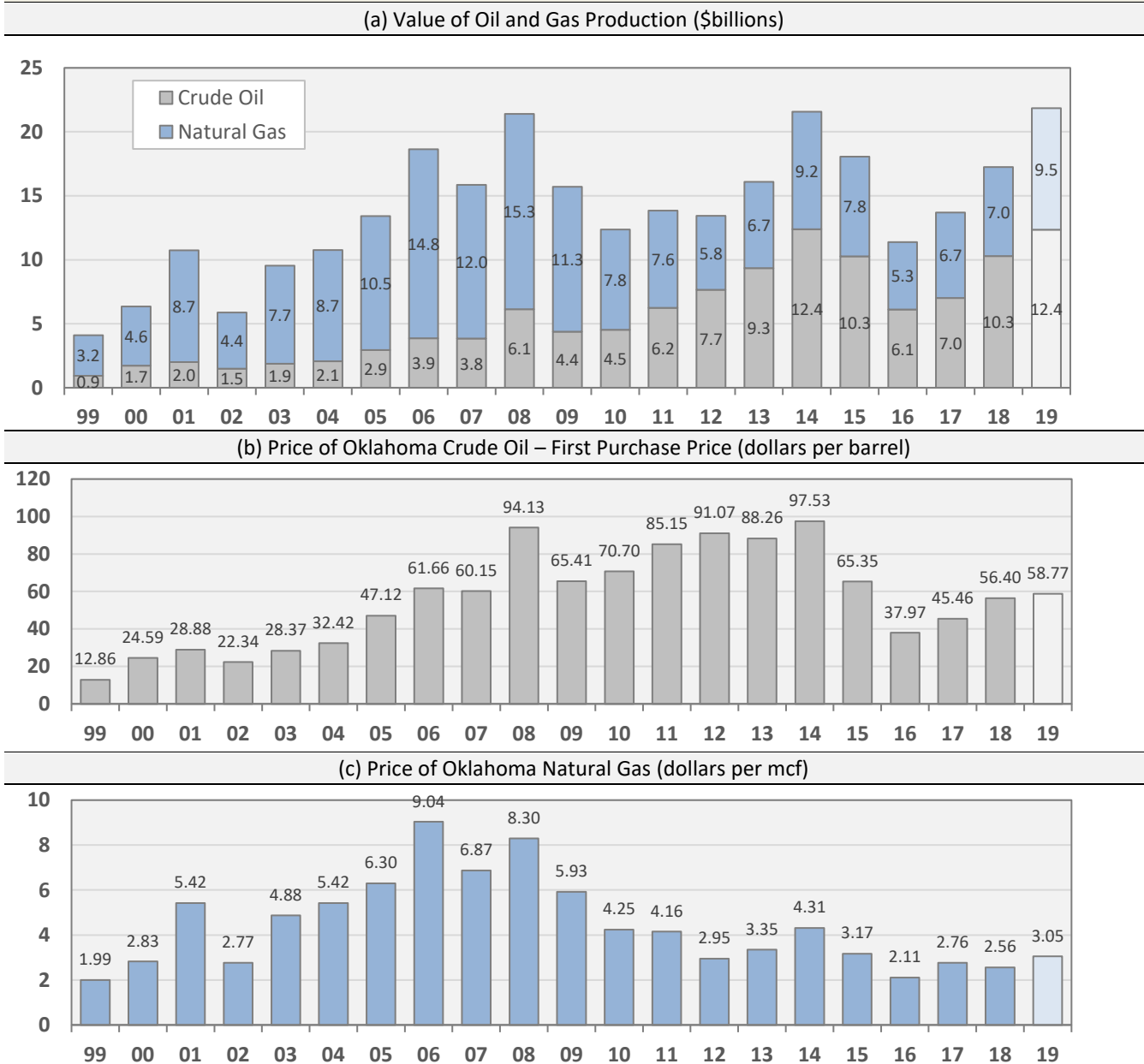
Oil vs. Gas Output Share. Natural gas remains the largest component of total state output by barrel-equivalent volume, with approximately 71% (491 million BOE) of total state output volume in 2018 (see Figure 8b). The 200.7 million barrels of crude oil produced statewide comprised the remaining 29% of BOE production.

While crude oil was the dominant fuel produced in Oklahoma in the early decades of the industry, natural gas steadily assumed the role of dominant fuel over time (see Figure 8b). Natural gas first moved above a 50% share of total volume in the early 1960s and reached a peak of 83% in 2009 as the state's natural gas industry continued to develop. However, this long-term trend began to reverse the past decade in response to sharply stronger growth in state crude oil production. Crude oil increased to its current 29% share of total state oil and gas volume on a BOE basis in 2018, up from only a 17% share as recently as 2009.

Market Value of Oil and Gas Production

Rising Market Valuations. Oklahoma oil and gas producers have faced a significantly lower market price environment since the collapse in energy prices in 2014 and 2015 (see Figures 9b and 9c). The low-price environment has offset much of the expected positive effects of strong volume gains on the total value of production. The total value of state oil and gas production dropped to a multi-year low of only \$11.4 billion in 2016, roughly half the value during the peak year of 2014 under elevated oil prices (see Figure 9a). Valuations for total state oil and gas production have since rebounded steadily, reaching \$17.3 billion in 2018.

Figure 9. Value of Crude Oil and Natural Gas Production



Notes: All production estimates are derived from EIA data. Production of crude oil is based on EIA estimates of field production. The price of oil is based on the first purchaser price at the state level. Production of natural gas is based on EIA estimates of marketed production. The price of natural gas is from EIA through 2011 and NGI from 2012 to 2019. Estimated value for 2019 is based on annualized production of crude oil and natural gas reported through June 2019 and EIA forecasted Henry Hub prices for 2019.

Source: U.S. Energy Information Administration and RegionTrack calculations

While natural gas is produced in far greater BOE volume than crude oil (approximately 70% of total volume), the value of crude oil production currently exceeds that for natural gas (approximately 60% of total value). Crude valuation first exceeded the value of natural gas in 2012 and has consistently exceeded the valuation of natural gas through 2018.

By commodity type, crude oil production in 2018 was valued at \$10.3 billion, up nearly 50% from \$7.0 billion in 2017 boosted by a combination of rising production volume and further recovery in crude oil prices (see Figure 9b). State natural gas production value reached \$7.0 billion in 2018, up about 4.5% from \$6.7 billion produced in 2017. Strong gains in production volume in 2018 were offset in part by weak natural gas prices (see Figure 9c).

Current Year Production Value. A record pace for total oil and gas production value was posted in the first half of 2019. Based on strong volume gains for both oil and natural gas through June of 2019 and forecasted rises in energy prices, total annualized production value for the first half of the year is \$21.9 billion. If the current production trend holds in the second half of 2019, the pace would represent a record valuation for state crude oil and natural gas output.

State Production Trends and Rankings

Oklahoma remains a key component of the U.S. domestic energy infrastructure and a leader among the nation's oil and gas-producing states. The state's output of 200.7 million barrels of crude oil and 2.95 Tcf of natural gas in 2018 continues to rank among the leading states (see Figure 10). Oklahoma ranked 4th in crude oil production with a 5% share of total U.S. output and 3rd in natural gas with a 9.0% share of U.S. output in 2018.

Measured by barrel-of-oil equivalent⁵ production of both crude oil and natural gas, Oklahoma ranked 3rd among the producing states in 2018 with a 7.3% share of total U.S. output. This ranks the state just behind the 11.0% share of gas-specialized Pennsylvania but well behind the 30.8% share of dominant producer Texas.

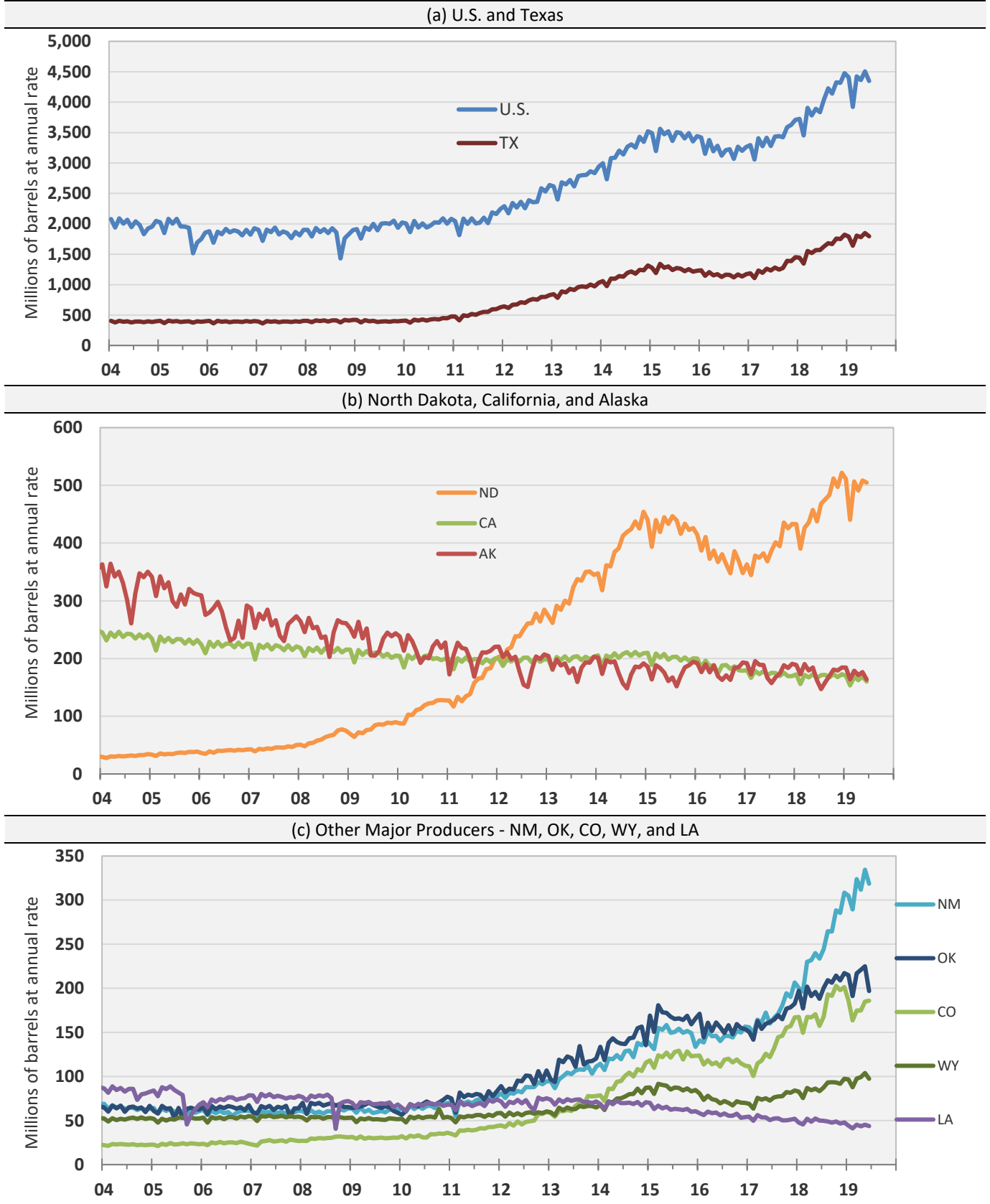
Figure 10. Leading Crude Oil and Natural Gas-Producing States (2018)

State	Crude Oil (barrels)	U.S. Share	State	Natural Gas (million cf)	U.S. Share	State	Oil & NG (BOE)	U.S. Share
1 Texas	1,609,075	40.1%	1 Texas	7,847,102	23.9%	1 Texas	2,920,007	30.8%
2 North Dakota	461,531	11.5%	2 Pennsylvania	6,210,673	18.9%	2 Pennsylvania	1,040,957	11.0%
3 New Mexico	248,958	6.2%	3 Oklahoma	2,946,117	9.0%	3 Oklahoma	691,705	7.3%
4 Oklahoma	200,685	5.0%	4 Louisiana	2,810,636	8.6%	4 North Dakota	584,652	6.2%
5 Colorado	177,817	4.4%	5 Ohio	2,409,153	7.3%	5 Louisiana	518,578	5.5%
6 Alaska	174,800	4.4%	6 Colorado	1,831,325	5.6%	6 New Mexico	496,906	5.2%
7 California	169,166	4.2%	7 West Virginia	1,799,097	5.5%	7 Colorado	482,139	5.1%
8 Wyoming	87,955	2.2%	8 Wyoming	1,640,264	5.0%	8 Ohio	420,743	4.4%
9 Louisiana	48,841	1.2%	9 New Mexico	1,485,142	4.5%	9 Wyoming	339,923	3.6%
10 Utah	37,063	0.9%	10 North Dakota	705,789	2.2%	10 West Virginia	311,468	3.3%
11 Kansas	34,714	0.9%	11 Arkansas	589,973	1.8%	11 Alaska	231,697	2.4%
12 Ohio	23,224	0.6%	12 Alaska	341,315	1.0%	12 California	202,364	2.1%
13 Montana	21,540	0.5%	13 Utah	296,810	0.9%	13 Arkansas Total	104,137	1.1%
14 Mississippi	16,953	0.4%	14 California	202,616	0.6%	14 Utah Total	86,637	0.9%
15 West Virginia	11,618	0.3%	15 Kansas	201,505	0.6%	15 Kansas Total	68,548	0.7%
U.S. Total	4,011,521		U.S. Total	32,823,295		U.S. Total	9,467,367	

Notes: Natural gas is converted to barrels equivalent using 6 mcf of natural gas per barrel of oil.

Source: U.S. Energy Information Administration

Figure 11. Crude Oil Production in Major Oil-Producing States



Source: U.S. Energy Information Administration and RegionTrack calculations

State Crude Oil Production Trends. Total U.S. crude oil production has rebounded sharply since early 2017 following the collapse in crude oil prices in 2014 and 2015. However, the trend in production varies greatly across the producing states.

Dominant producer Texas remains the key source of new domestic production, adding nearly 750 million barrels of new production since early 2017 (Figure 11a). North Dakota, the 2nd ranked oil producer, has also experienced a sharp rebound in production since early 2017, reaching a record pace of 500 million barrels annually in early 2019 (Figure 11b).

Conversely, the traditional oil-producing states of California and Alaska remain mired in a steady downtrend and have made no progress in halting their production declines in the era of unconventional production (Figure 11b). Both states are now producing at a rate of less than 175 million barrels annually and have been surpassed recently by New Mexico, Oklahoma, and Colorado in oil production.

New Mexico has experienced a tremendous surge in oil production since early 2017, more than doubling state output to more than 300 million barrels annually, and is now the 3rd ranked oil producer (Figure 11c).

Oklahoma has added about one-third to oil production since early 2017 and is now 4th among oil producers. Oklahoma trails only Texas, North Dakota, and New Mexico in crude oil production.

Colorado has closely tracked Oklahoma's production trend and is now the 5th ranked oil producing state. Alaska and California are now ranked 6th and 7th, respectively, among oil producers, well behind their 2nd and 3rd place rankings from just a decade ago.

Smaller oil producer Wyoming has seen a sharp rise in oil production since early 2017 and posted a 30-year high in annualized oil output of 100 million barrels in 2019. Louisiana continues to fall in the oil rankings as production has remained on a steady downtrend since 2013 and fallen below 50 million barrels annually.

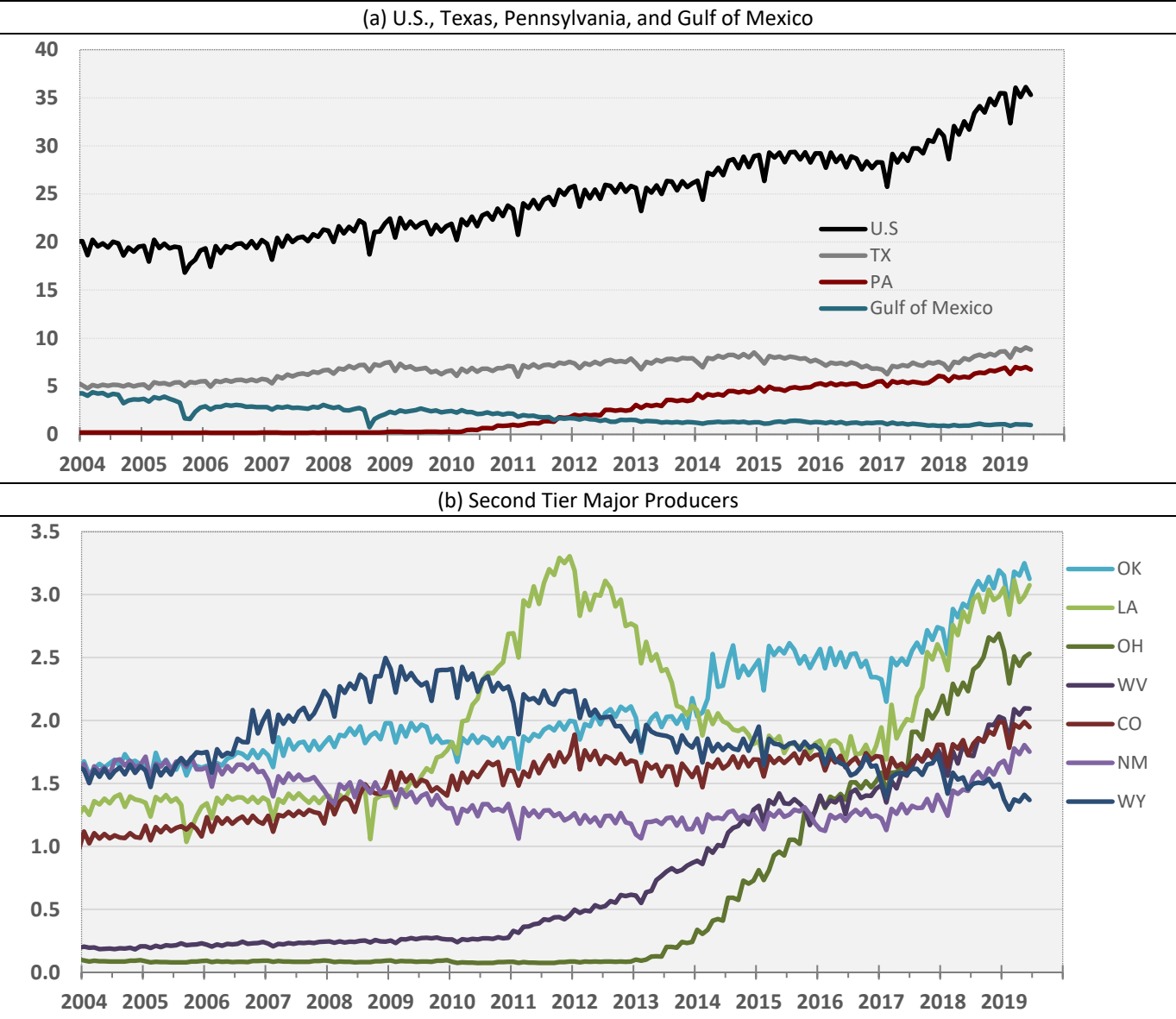
State Natural Gas Production Trends. The sharp upturn in U.S. natural gas production in place since early 2017 is reflected in rising production in most major gas-producing states, including Oklahoma. Dominant gas producers Texas and Pennsylvania remain in a steady uptrend, with Pennsylvania vying for position as the nation's largest gas-producing state (Figure 12a). In contrast to onshore activity, gas production from the Gulf of Mexico remains in a slow downtrend.

Among a second tier of major gas producers, Oklahoma (3rd) is the largest, followed closely by Louisiana (4th) (see Figure 12b). Emerging gas producer Ohio (5th) continues to gain ground relative to most producers but experienced a steep pullback in production in 2019.

Traditional gas producers Colorado, West Virginia, and New Mexico have experienced steady gains in natural gas output since early 2017 but trail the progress made in Oklahoma, Louisiana, and Ohio.

Wyoming's output remains in a steady long-run downtrend and is weakest among the major producing states.

Figure 12. Gas Production in Major Natural Gas-Producing States



Royalties Boosted by Production Gains

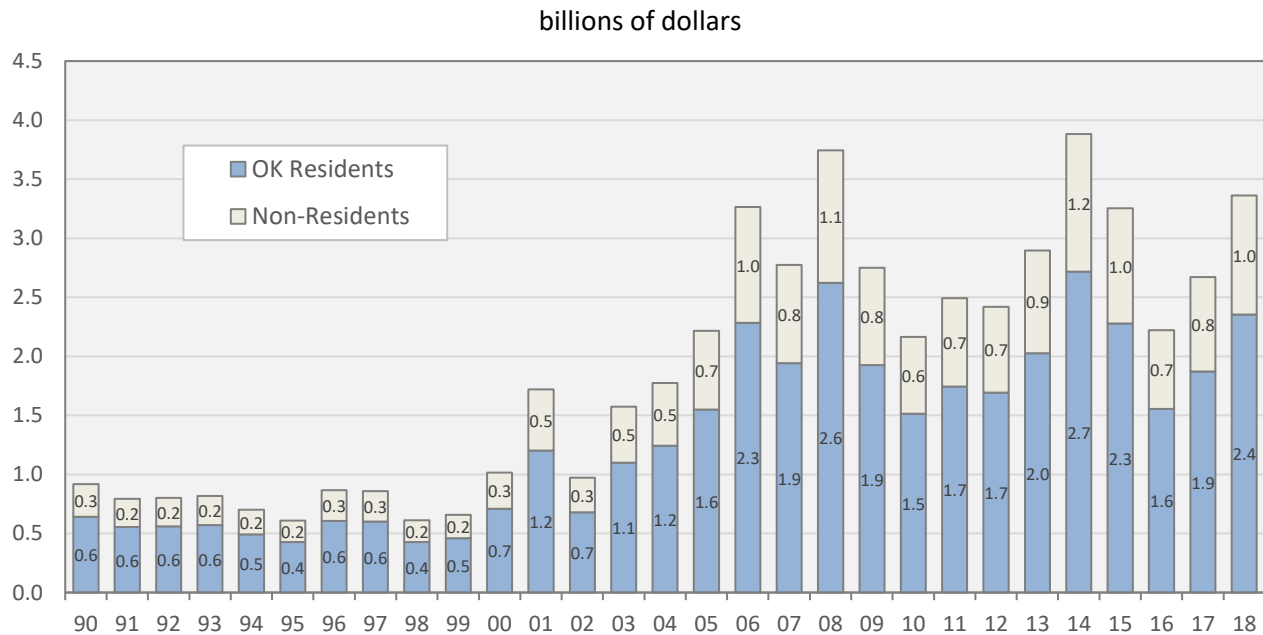
The ongoing increases in production volume and total market value for state oil and gas output continue to produce large royalty payments to mineral rights owners located both in Oklahoma and outside the state.

Total royalty payments from state oil and gas production reached an estimated \$3.4 billion in 2018 (see Figure 13). Of total payments, an estimated \$2.4 billion (70%) were received by Oklahoma-based recipients, with the remaining \$1.0 billion (30%) accruing to recipients outside the state.⁶

Royalty payments to state residents in 2018 remain below the record \$2.7 billion paid in 2014 during a period of elevated energy prices. However, payments to in-state recipients in 2018 have rebounded 50% from the recent low of only \$1.6 billion in 2016 during a period of weak production volumes and sharply falling energy prices.

Since the reemergence of the industry began in 2003, estimated royalty payments to Oklahoma residents from state production have totaled \$30.4 billion and averaged \$1.9 billion annually. For long-term comparison, current royalties of \$2.4 billion paid to Oklahoma residents in 2018 are approximately four-fold the \$610 million annual average from 1990 to 2002.

Figure 13. Royalty Payments from Oklahoma Oil and Gas Production



Source: Royalty rates and residency shares are derived from proprietary firm reports of royalty amounts and recipient addresses. Market values of production used in estimating royalty payments are shown in Figure 9.

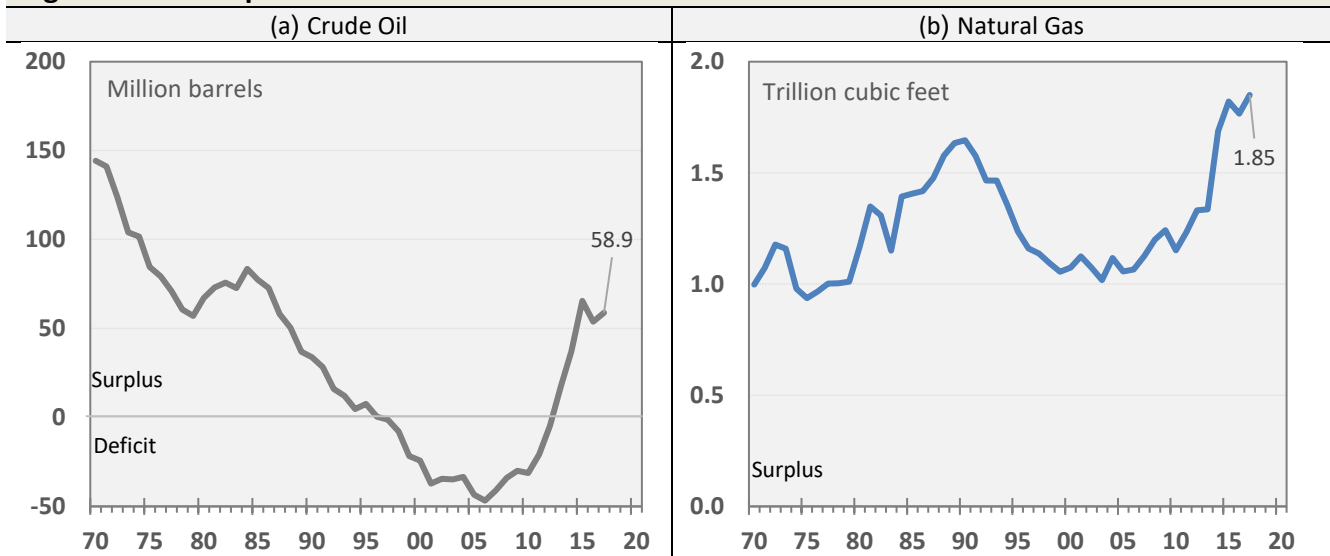
Production Gains Support Increased Oil and Gas Exports

The surge in crude oil and natural gas production in Oklahoma the past decade has highlighted the role of exports of crude oil and natural gas outside the state. From an economic policy perspective, producing exports for external consumption is a far more significant economic event for the state economy than producing for in-state consumption. This external infusion of spending into the state is the cornerstone of the economic base theory of regional growth in which industries that bring in spending from outside the region can have a far larger spillover economic effect than those producing for local consumption.

Crude Exports. Historically, Oklahoma crude output shifted steadily from net exports of approximately 150 million barrels per year in the early 1970s to a deficit position by 1997. The state began importing net amounts of crude oil beginning in 1997 and reached a deficit of 50 million barrels annually by 2006 (see Figure 14a). The subsequent rebound in state crude oil production reversed this trend and returned the state to a positive net export position by 2013. In the most recently available data for 2017, the state produced a net 58.9 million barrels of oil for export, 36% of the 163.9 million barrels produced.

Natural Gas Exports. Natural gas has remained a far more consistent export product for the state the past several decades but similarly weakened beginning in 1990, with net exports falling from 1.6 Tcf to a little more than 1.0 Tcf by 1998. Exports of natural gas remained relatively flat between 1998 and 2008 at approximately 1.1 Tcf. Gas exports, however, increased sharply beginning in 2008 as state production increased, reaching 1.85 Tcf in 2017. The state's natural gas export share is approximately 75% of total state natural gas output.

Figure 14. Net Exports of Crude Oil and Natural Gas - Oklahoma



Notes: Net exports are measured as state production minus state consumption as defined by EIA.
Source: U.S. Energy Information Administration and RegionTrack calculations

Export Value. Crude oil and natural gas have once again become critical export products of the state. The market value of oil and gas exports from Oklahoma in 2017 totaled an estimated \$7.8 billion.⁷ The 58.9 million barrels of exported oil valued at \$2.68 billion are a little more than one-third of the total export value. The 1.85 Tcf of state natural gas exports

are valued at \$5.1 billion and represent approximately two-thirds of the total value of oil and gas exports from the state.

Production Gains Lead to Pipeline Expansion

Increased production of crude oil and natural gas in Oklahoma has prompted a significant expansion in pipeline capacity across the state. EIA databases⁸ suggest that 60 pipeline projects involving pipeline or pipeline processing facilities are either completed, under construction, or announced since 2009.

Figures 15 and 16 provide a detailed listing of all reported natural gas and crude/liquids pipeline projects in Oklahoma since 2009. The projects include new pipeline construction, expansion of existing pipelines, pipeline conversion or reversal, addition of lateral lines to and from the mainline, and improvements to equipment that enhance pipeline capacity. The projects also include intrastate, state-to-state, and multi-state configurations.

Natural Gas Pipeline Projects. Since 2009, 13 natural gas pipeline projects have either been completed or are underway in Oklahoma (see Figure 15). Projects include the construction of six new pipelines, expansion of five existing pipelines, and lateral additions to two existing lines. Five projects involve intrastate pipelines moving natural gas within the state. The remaining eight projects are tied to interstate transmission, primarily for additional takeaway, or outflow, gas capacity from the state. All thirteen of the natural gas pipeline projects either begin in Oklahoma or are fully located within the state. Among interstate projects, connections are made to Texas, Louisiana, Arkansas, and Mississippi.

Crude Oil and NGL Pipeline Projects. The development of pipelines to carry crude oil and natural gas liquids has progressed at a faster pace than for natural gas the past decade (see Figure 16). EIA databases indicate that 47 pipeline projects related to crude and liquids delivery have been completed, started, or announced since 2009. Thirteen new crude/liquids pipelines have been completed, one is under construction, and four are announced. Since 2009, a total of 29 projects involve the expansion, conversion, or reversal of existing crude/liquids pipelines, with three projects under construction and three announced.

Figure 15. Oklahoma Natural Gas Pipeline Projects (2009-2019)

Project Name	Project Type	Status	Product Type	Year In Service	State(s)	Pipeline Type	Beg State	End State	Miles	Added Capacity (MMcf/d)
MarkWest Arkoma Connector Project	Lateral	Completed	Natural Gas	2009	OK	Interstate	OK	OK	50.0	638
CEGT Tontitown Project	New Pipeline	Completed	Natural Gas	2009	OK,AR	Interstate	OK	AR	16.0	132
Gulf Crossing Pipeline Project	New Pipeline	Completed	Natural Gas	2009	OK,TX,LA	Interstate	OK	LA	353.0	1,726
Midcontinent Express Pipeline	New Pipeline	Completed	Natural Gas	2009	OK,TX,LA,MS,AL	Interstate	OK	AL	507.3	1,533
Midcontinent Express Pipeline Expan.	Expansion	Completed	Natural Gas	2010	OK,TX,LA	Interstate	OK	LA	-	1,500
Canton Pipeline	New Pipeline	Completed	Natural Gas	2017	OK	Intrastate	OK	OK	50.0	200
Project Wildcat	New Pipeline	Completed	Natural Gas	2018	OK,TX	Interstate	OK	TX	140.0	400
Allen Compressor Station Modification	Expansion	Completed	Natural Gas	2018	OK	Interstate	OK	OK	-	20
Blue Mountain Chisholm Trail Project	Lateral	Completed	Natural Gas	2018	OK	Intrastate	OK	OK	4.7	150
Cana STACK Expansion Project	Expansion	Completed	Natural Gas	2018	OK	Intrastate	OK	OK	-	205
ONEOK Eastbound Expansion	Expansion	Completed	Natural Gas	2019	OK	Intrastate	OK	OK	-	150
ONEOK Westbound Expansion	Expansion	Completed	Natural Gas	2019	OK	Intrastate	OK	OK	-	100
Cheniere MIDSHIP Pipeline Project	New Pipeline	Construction	Natural Gas	2019	OK	Interstate	OK	OK	233.0	1,440

Source: U.S. Energy Information Administration

Figure 16. Oklahoma Crude Oil and Liquids Pipeline Projects (2009-2019)

Project Name	Project Type	Status	Product Type	Year In Service	State(s)	Pipeline Type	Beg State	End State	Miles	Added Capacity (bbls)
Hawthorn Pipeline	New	Completed	Crude	2010	OK	Intrastate	OK	OK	18	90,000
Keystone Pipeline Cushing extension	Expansion	Completed	Crude	2011	NE,KS,OK	Interstate	NE	OK	298	156,000
White Cliffs Pipeline line 1 expansion	Expansion	Completed	Crude	2011	CO,KS,OK	Interstate	CO	OK	527	40,300
Sterling I expansion	Expansion	Completed	NGLs	2011	OK,TX	Interstate	OK	TX		15,000
Arbuckle I Pipeline expansion	Expansion	Completed	NGLs	2012	KS,OK,TX	Interstate	KS	OK	440	60,000
Seaway Pipeline reversal	Reversal	Completed	Crude	2012	OK,TX	Interstate	OK	TX	500	150,000
Great Salt Plains Pipeline	New	Completed	Crude	2012	OK	Intrastate	OK	OK	115	20,000
Basin Pipeline expansion 1	Expansion	Completed	Crude	2012	TX,OK	Interstate	TX	OK	520	50,000
Seaway Pipeline expansion	Expansion	Completed	Crude	2013	OK,TX	Interstate	OK	TX	500	250,000
Southern Hills Pipeline	New	Completed	NGLs	2013	KS,OK,TX	Interstate	KS	TX	800	150,000
Mississippian Lime Crude Oil Project	New	Completed	Crude	2013	OK	Intrastate	OK	OK	135	175,000
Sterling I conversion	Conversion	Completed	NGLs	2013	OK,TX	Interstate	OK	TX		
Front Range Pipeline	New	Completed	NGLs	2014	CO,OK,TX	Interstate	CO	TX	435	150,000
Glass Mountain Pipeline	New	Completed	Crude	2014	OK	Intrastate	OK	OK	210	140,000
Southern Hills Pipeline expansion 1	Expansion	Completed	NGLs	2014	KS,OK	Interstate	KS	OK	140	25,000
Keystone Gulf Coast Expansion	Expansion	Completed	Crude	2014	OK,TX	Interstate	OK	TX	485	700,000
Sterling III Pipeline	New	Completed	NGLs	2014	OK,TX	Interstate	OK	TX	550	190,000
Sterling II conversion	Conversion	Completed	NGLs	2014	OK,TX	Interstate	OK	TX		
White Cliffs Pipeline line 2	Expansion	Completed	Crude	2014	CO,KS,OK	Interstate	CO	OK	527	74,000
Flanagan South Pipeline	New	Completed	Crude	2014	IL,MO,KS,OK	Interstate	IL	OK	593	585,000
Granite Wash Extension	New	Completed	Crude	2014	TX,OK,TX	Interstate	TX	TX	200	70,000
Seaway Pipeline twin/loop	Expansion	Completed	Crude	2014	OK,TX	Interstate	OK	TX	512	450,000
Mississippian Lime Crude Oil exten.n	Expansion	Completed	Crude	2014	KS,OK	Interstate	KS	OK	55	75,000
Pony Express Pipeline	Conv./Expan.	Completed	Crude	2014	WY,NE,CO,NE,KS,OK	Interstate	WY	OK	760	320,000
Hutchinson-to-Medford NGL Pipeline	New	Completed	NGLs	2015	KS,OK	Interstate	KS	OK	95	120,000
Saddlehorn/Grand Mesa Pipeline	New	Completed	Crude	2016	CO,KS,OK	Interstate	CO	OK	538	340,000
Red River Pipeline	New	Completed	Crude	2016	OK,TX	Interstate	OK	TX		150,000
White Cliffs Pipeline line 2 expansion	Expansion	Completed	Crude	2017	CO,KS,OK	Interstate	CO	OK	527	65,000
Diamond Pipeline	New	Completed	Crude	2017	OK,AR,TN	Interstate	OK	TN	440	200,000
STACK Pipeline expansion	Expansion	Completed	Crude	2017	OK	Intrastate	OK	OK	90	150,000
Ozark Pipeline expansion	Expansion	Completed	Crude	2018	OK,MO,IL	Interstate	OK	IL	433	130,000
Spearhead Pipeline	Other	Completed	Crude	2018	IL,MO,KS,OK	Interstate	IL	OK	650	190,000
Pony Express pump upgrades	Expansion	Completed	Crude	2018	WY,NE,CO,NE,KS,OK	Interstate	WY	OK	760	80,000
Southern Hills Pipeline expansion 2	Expansion	Completed	NGLs	2018	OK	Intrastate	OK	OK	940	17,000
Sterling III expansion	Expansion	Completed	NGLs	2018	OK,TX	Interstate	OK	TX	570	60,000
Seaway Pipeline expansion 2	Expansion	Completed	Crude	2019	OK,TX	Interstate	OK	TX	500	100,000
Front Range Pipeline expansion	Expansion	Construction	NGLs	2019	CO,OK,TX	Interstate	CO	TX	435	100,000
Grand Prix Extension—Southern OK	Expansion	Construction	NGLs	2019	OK,TX	Interstate	OK	TX	320	200,000
White Cliffs conversion	Conversion	Construction	NGLs	2019	CO,KS,OK	Interstate	CO	OK	564	90,000
Arbuckle II Pipeline	New	Construction	NGLs	2020	OK,TX	Interstate	OK	TX	530	400,000
Diamond Pipeline expansion	Expansion	Announced	Crude	2020	OK,AR,TN	Interstate	OK	TN	440	200,000
Pony Express Pipeline expansion	Expansion	Announced	Crude	2020	WY,NE,CO,NE,KS,OK	Interstate	WY,CO	OK	760	300,000
Bluestem Pipeline	New	Announced	NGLs	2020	KS,OK	Interstate	KS	OK	188	120,000
Red Oak Pipeline	New	Announced	Crude	2020	OK,TX	Interstate	OK	TX		400,000
Voyager Pipeline	New	Announced	Crude	2020	OK,TX	Interstate	OK	TX	500	300,000
Arbuckle II Pipeline expansion	Expansion	Announced	NGLs	2021	KS,OK,TX	Interstate	KS	OK	120	100,000
Seahorse Pipeline	New	Announced	Crude	2021	OK,TX,AR,LA	Interstate	OK	LA	700	800,000

Source: U.S. Energy Information Administration

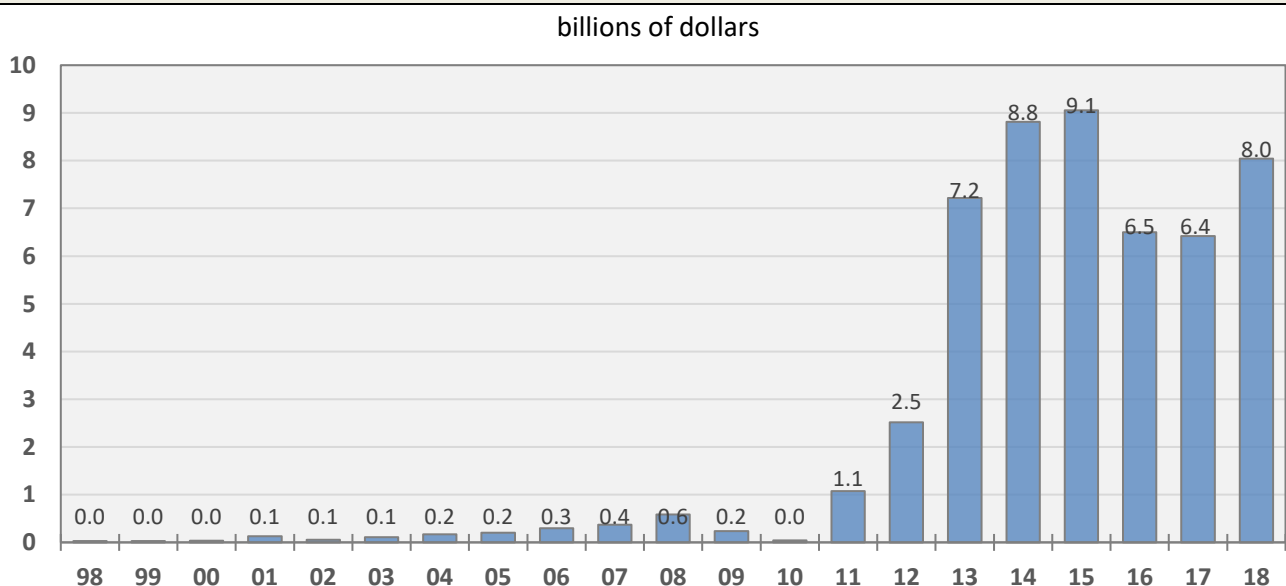
Pipeline Industry Economic Contribution. The economic linkage from rising energy production to added pipeline capacity underscores the need to evaluate the full oil and gas cluster when examining the economic role of oil and gas-related activity in Oklahoma. In 2018, the pipeline sector consisted of 155 firms that produced \$6.9 billion in state gross domestic product (see Figure 1). Despite the large economic scale of the sector, pipeline firms in the state go largely unnoticed given little visible reminder of their operations.

The numerous partnerships and other business entities operating pipelines across the state employed more than 3,200 total employees in 2018 (see Figure 1). These include 2,900 wage and salary workers earning an average of \$145,700 in compensation and approximately 300 self-employed proprietors with \$8 billion in earnings from their ownership interest in pipeline firms.

Pipelines accounted for the second largest share of GDP produced in the state's oil and gas cluster in 2018, trailing only oil and gas extraction (NAICS 211). Longer-term, the pipeline sector has posted a more than 20-fold increase in GDP since the state's oil and gas industry began to reemerge in 2003.

Pipeline Proprietor Earnings. The strong gain in proprietor earnings among the non-traditional sectors of the oil and gas cluster is traced almost entirely to the state's growing pipeline sector. While traditionally making a large contribution to household earnings in Oklahoma, earnings paid to self-employed proprietors in the pipeline sector accelerated sharply beginning in 2013 and have averaged \$7.7 billion annually through 2018 (see Figure 17). The surge in earnings of pipeline proprietors has provided a significant boost to overall state household income gains the past decade.⁹ Self-employment earnings in the non-traditional sectors have also eclipsed those earned in the traditional sectors of the cluster since 2013. This outperformance in proprietor earnings by the non-traditional sectors is traced in part to the weak financial results for traditional oil and gas firms in the state since energy prices collapsed in 2014 and 2015.

Figure 17. Proprietors' Earnings – Oklahoma Pipeline Sector



Source: Bureau of Economic Analysis

III. Drilling and Exploration Activity

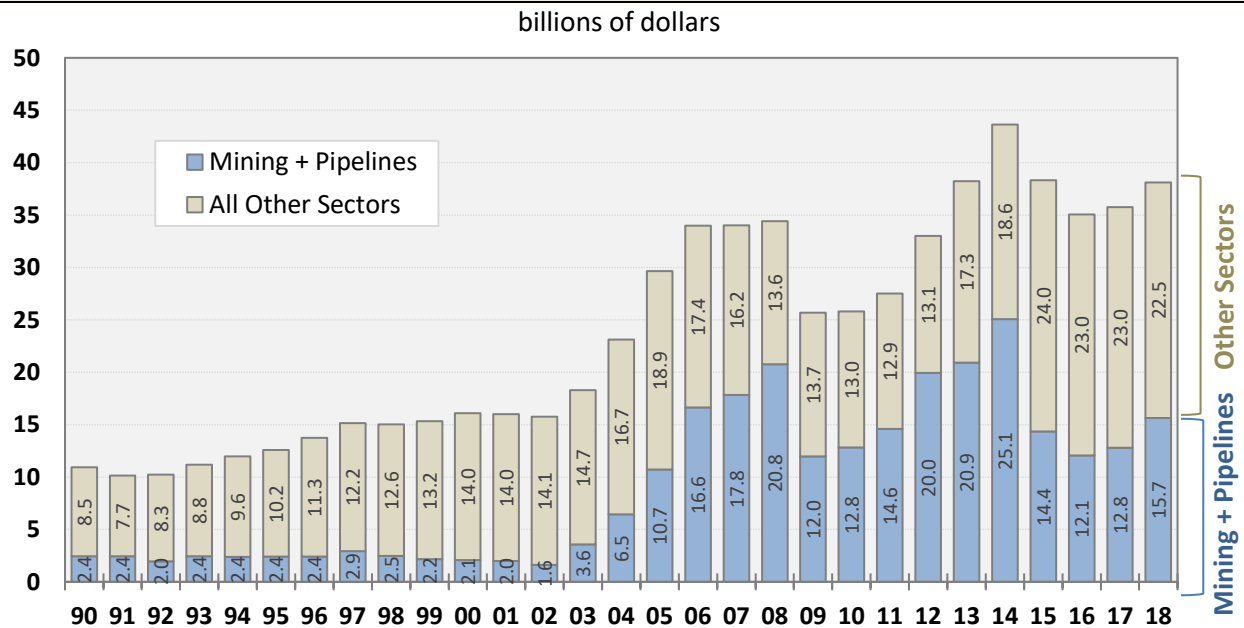
Many segments of the state oil and gas cluster are historically highly capital-intensive and become increasingly so in recent years. The investment activity in the oil and gas cluster can easily sway overall statewide capital investment activity. Within the cluster, most investment in recent years is tied to either traditional drilling and production activity or the development of pipelines. The remaining sectors in the state's oil and gas cluster account for far smaller amounts of ongoing fixed private investment.

Investment in the Oil and Gas Cluster

Data on fixed private investment is generally not available at the state level and must be estimated from national data. We follow the common approach of apportioning national data on private fixed investment to the states using industry level data on a region's share of national earnings.¹⁰ A similar approach is used by the Bureau of Economic Analysis in deriving gross domestic product estimates at the state and metro area levels.

State-level estimates for all major industry sectors in Oklahoma are formed in the 1990 to 2018 period. Estimates for the mining and pipeline sectors are combined and shown relative to all sectors statewide in Figure 18. The broader mining sector is used in the estimates rather than the traditional oil and gas sector for greater consistency with national databases on fixed investment. However, approximately 97% of mining sector activity in Oklahoma is within the traditional oil and gas sectors of the cluster.

Figure 18. Annual Private Fixed Investment – Oklahoma



Notes: Fixed investment includes structures, equipment, and intellectual property. State-level capital at the industry level is estimated using the approach of Garofalo and Yamarik (see endnotes).

Source: U.S. Bureau of Economic Analysis and RegionTrack calculations

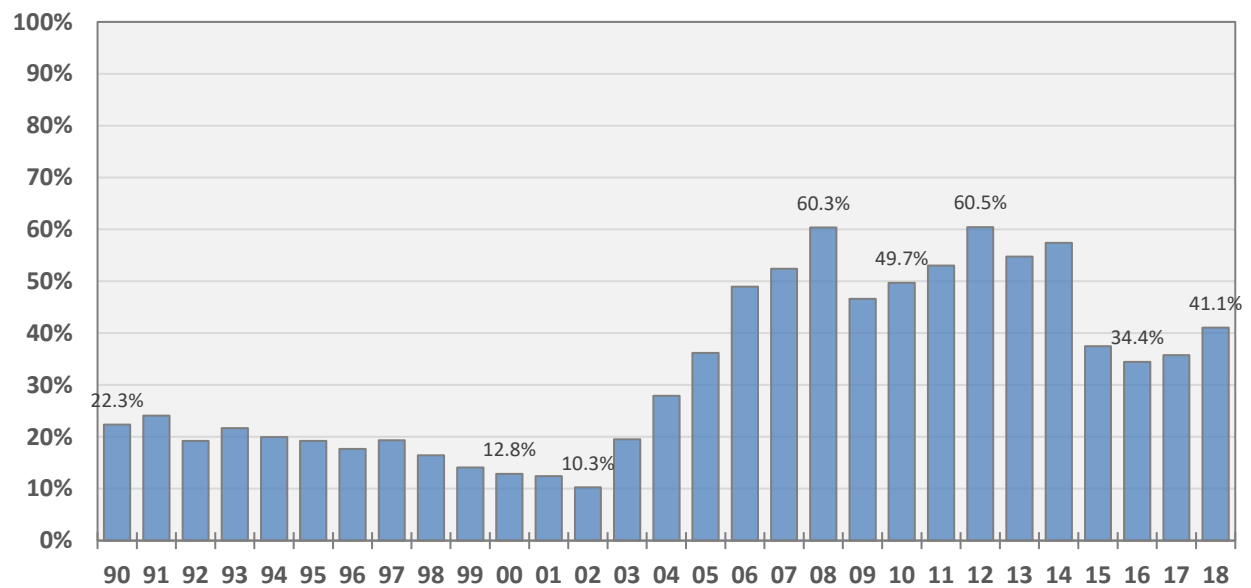
The estimates indicate that of the \$38.2 billion in total private investment made in the state in 2018, \$15.7 billion (41%) was made by firms in the state's mining and pipeline sectors (see Figure 18). All other state industries combined made investments totaling \$22.5 billion in 2018, or slightly more than half of total state investment (59%).

Capital investment in the mining and pipeline sectors has increased sharply since the revival of growth in the oil and gas industry beginning in the early 2000s. Total investment spending in these two sectors averaged only about \$2 to \$3 billion annually in the 1990 to 2002 period. Since 2003 as the industry began to reemerge, the mining and pipeline sectors of the oil and gas cluster in Oklahoma have made cumulative investments of an estimated \$236.2 billion, or an average of \$14.8 billion annually. This is consistent with Oklahoma capturing a roughly 8-12% share of total domestic investment in traditional oil and gas activity and pipelines in recent years.¹¹

The contribution share of the mining and pipeline sectors to total statewide investment has increased since the industry reemerged as well (see Figure 19). The share of statewide investment coming from the oil and gas cluster averaged only 18% prior to 2003, versus 45% of total state investment spending since 2003. In recent years of peak energy prices (2008 and 2012), investment in the mining and pipeline sectors exceeded 60% of total statewide private investment. The current 41% share is up substantially from the recent low of 34% in 2016 following the collapse in oil prices in 2014 and 2015.

In short, the state's oil and gas cluster, primarily through the mining and pipeline sectors, remains the largest single source of capital spending in Oklahoma, by a substantial margin.¹²

Figure 19. Mining and Pipeline Share of Total State Private Fixed Investment



Notes: Fixed investment includes structures, equipment, and intellectual property. State-level capital at the industry level is estimated using the approach of Garofalo and Yamarik (see endnotes above). The oil and gas cluster share includes the mining and pipeline sectors.

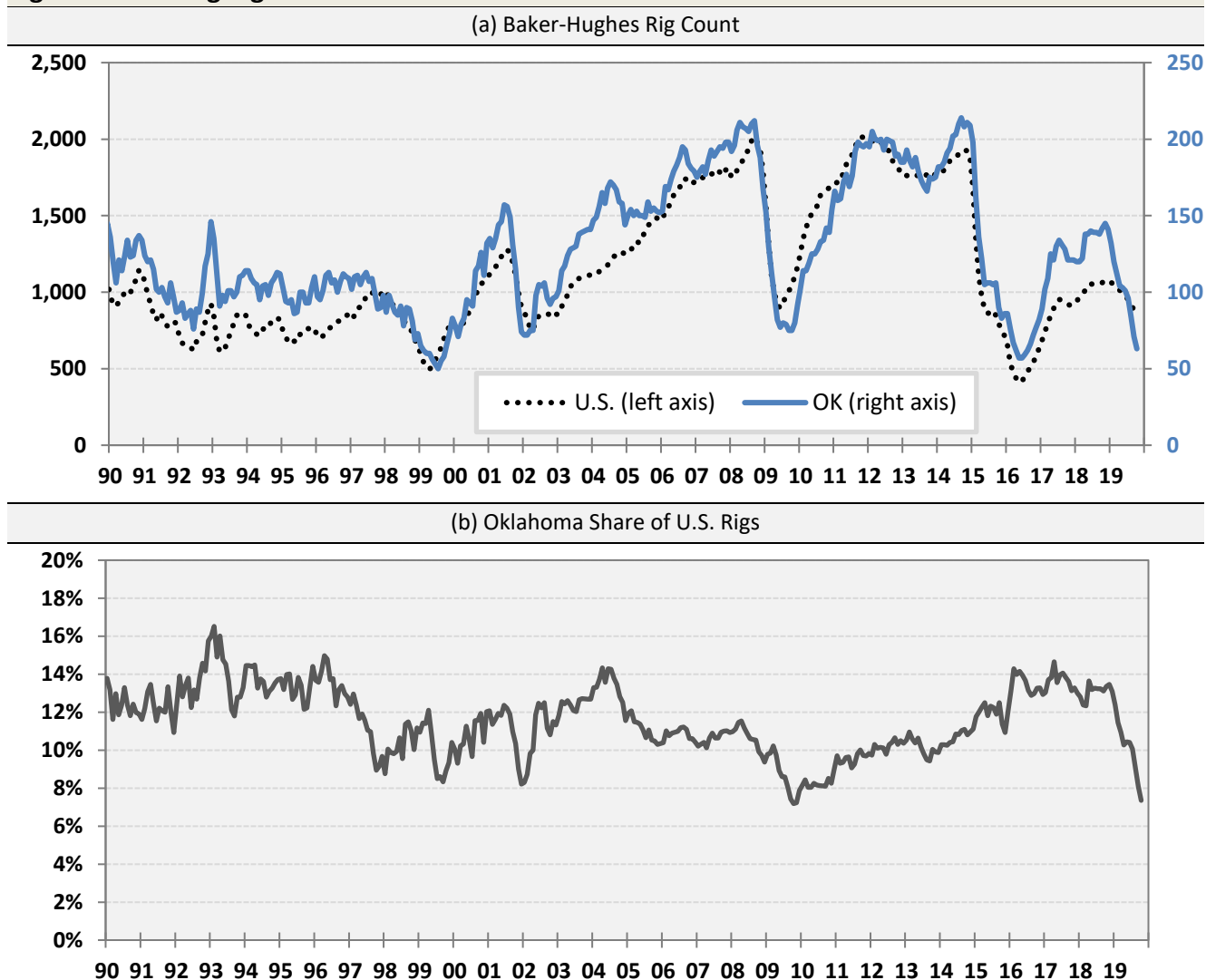
Source: U.S. Bureau of Economic Analysis and RegionTrack calculations

Drilling and Completion Activity

Oklahoma remains a top-tier drilling and exploration state and is home to several key drilling regions and formations. The state has long supplied approximately 8-14% of total rigs operating domestically (see Figure 20).

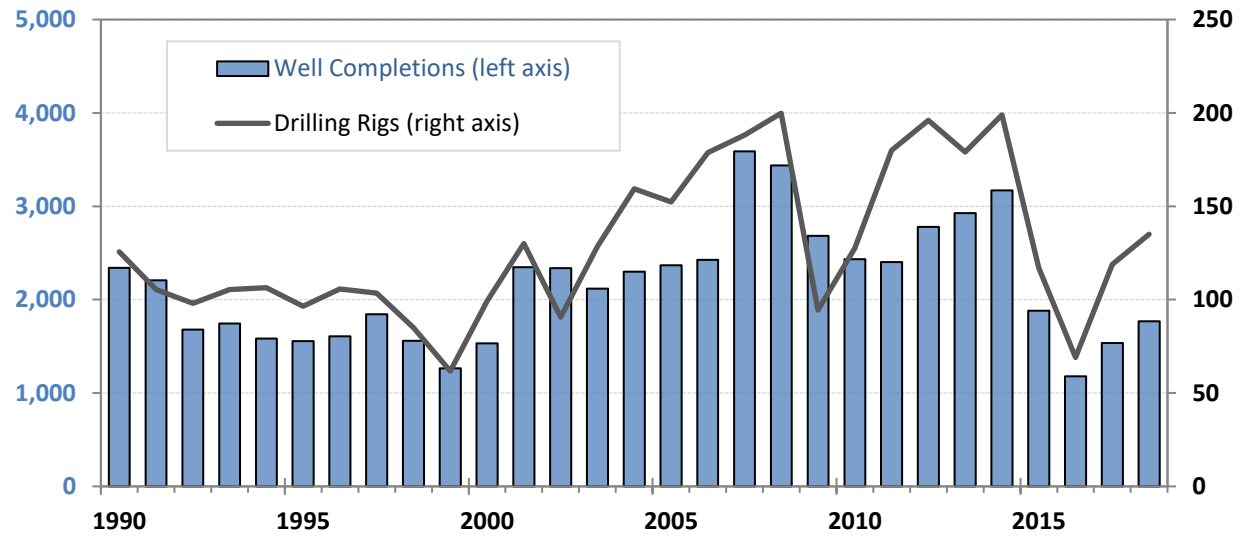
Rig Counts. Most recently, the number of drilling rigs operating in Oklahoma slowed sharply from an average of 135 in 2018 to approximately 50 by late 2019. Currently, the state's 7.4% share of U.S. rigs is near historical lows after hovering near historical highs of approximately 14% in the 2016 to 2018 period.

Figure 20. Drilling Rig Count – OK vs. U.S.



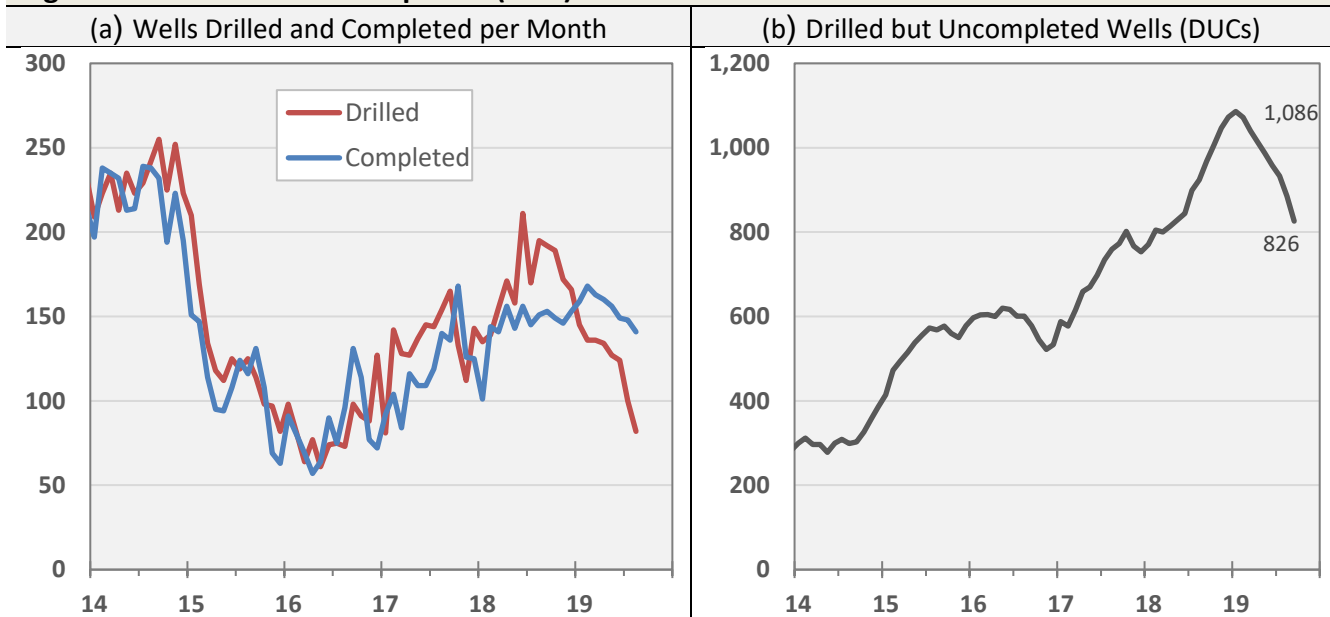
Source: Baker-Hughes and RegionTrack calculations

Completions. The number of wells completed (within twelve months of first drilling) in Oklahoma totaled 1,769 in 2018, up by 50% from the recent bottom of 1,178 completions in 2016 during a period of very low energy prices (see Figure 21).¹³ Completions closely follow the movement of rig counts with a slight lag typically averaging 2-3 months in stable market conditions.

Figure 21. Oklahoma Annual Well Completions and Average Drilling Rigs

Source: Oklahoma Corporation Commission, Baker-Hughes, IHS Energy, and RegionTrack

Activity Shifts to Wells Drilled but Uncompleted (DUCs). The steady pullback in the state rig count since late 2018 has sharply reduced the number of wells drilled in Oklahoma in 2019. Measured using EIA data for drilling in the Anadarko Basin (which includes the most active drilling counties in western Oklahoma and the north tip of the Texas Panhandle), the number of wells drilled per month dropped from approximately 200 in the late 2018 to only 82 in September 2019, the most recent data available (see Figure 22a).

Figure 22. Drilled But Uncompleted (DUC) Wells – Anadarko Basin

Notes: The Anadarko Basin as defined and tracked by EIA contains counties primarily located in the SCOOP and STACK formations, west central Oklahoma, two counties in the Oklahoma Panhandle, and five counties in the northeast tip of the Texas panhandle.

Source: U.S. Energy Information Administration

In contrast to the sharp drilling pullback, well completions in the Anadarko Basin have dropped only slightly since late 2018 (see Figure 22a) and remain approximately 150 per

month as firms shifted to completing the large inventory of drilled but uncompleted (DUC) wells in the basin (see Figure 22b).

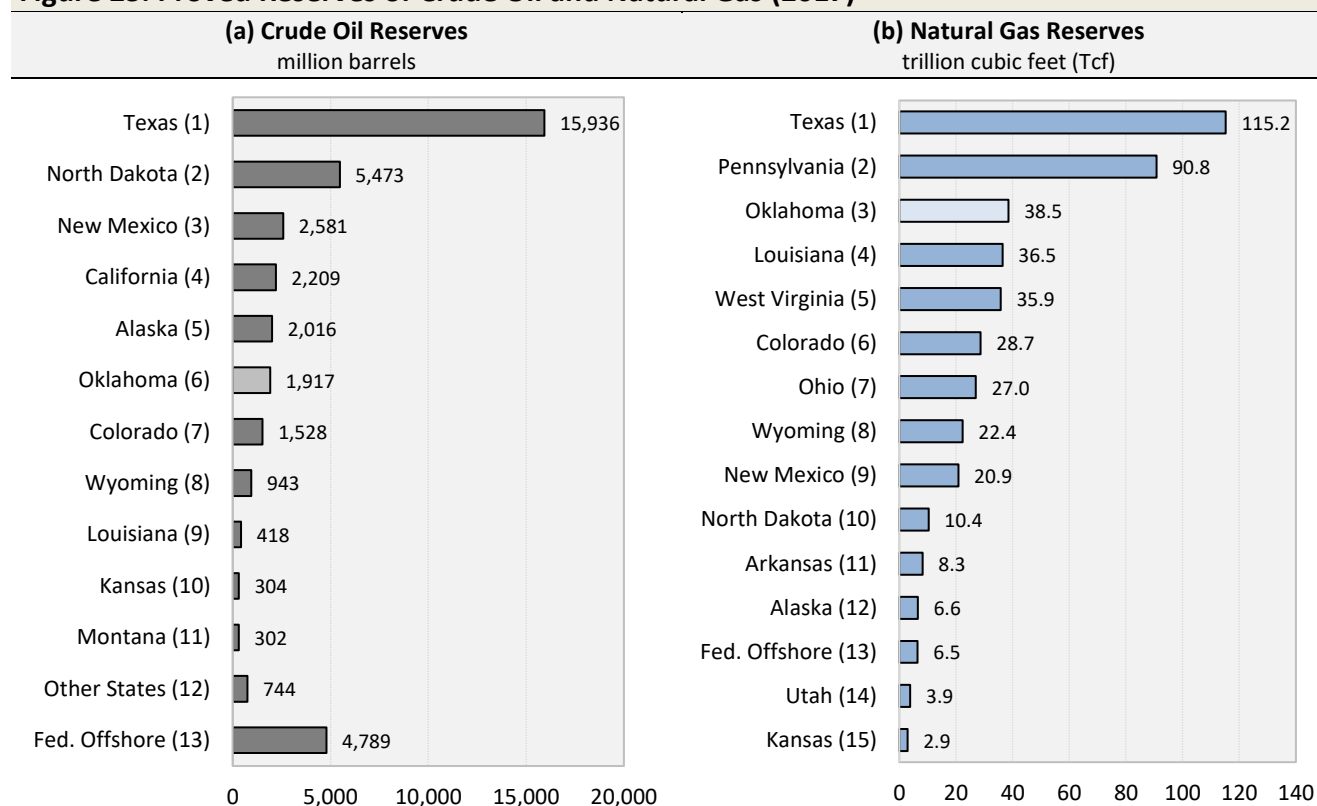
The industry began building a large inventory of DUC wells in late 2016 as energy prices stabilized, with the expansion in DUC inventory extending through late 2018. The number of DUC wells in the Anadarko region reached a record high of 1,086 in late 2018 and has since fallen steadily to 826 in September 2019. The continued completion of DUC wells underlies much of the relatively strong trend in state oil and gas production so far in 2019, despite relatively soft oil and natural gas prices and a pullback in drilling activity.

Proved Reserves

Oklahoma remains home to substantial reserves of both crude oil and natural gas. Figure 23 provides the most recent EIA estimates of the level of proved reserves in Oklahoma versus other top producing states.

For crude oil, Oklahoma now ranks 6th among the states with 1.9 billion barrels in proved reserves (see Figure 23a). This slightly trails traditional large crude producers Alaska and California and is well ahead of traditional oil producers Colorado, Wyoming, Louisiana, and Kansas. State production of 200.7 million barrels in 2018 represents about 10.5% of the state's proved oil reserves.

Figure 23. Proved Reserves of Crude Oil and Natural Gas (2017)



Notes: Crude oil reserves include both crude oil and lease condensate. Natural gas reserves include both dry gas and liquids.

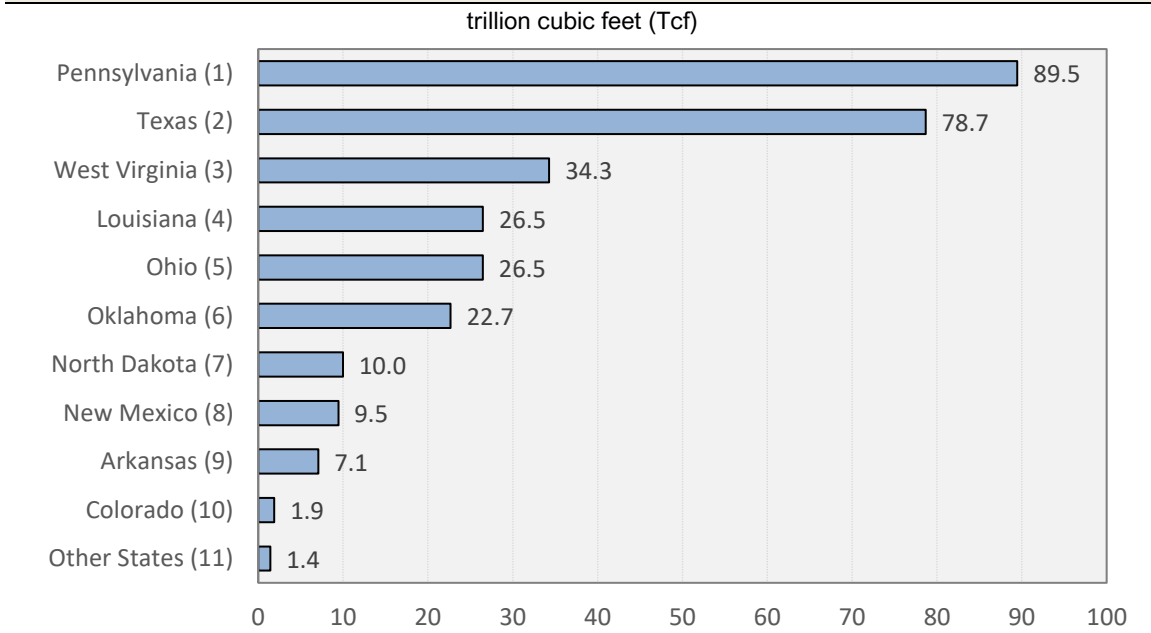
Source: U.S. Energy Information Administration

Oklahoma's 38.5 Tcf of natural gas reserves ranks 3rd among the major producing states (see Figure 23b). Only dominant gas producers Texas and Pennsylvania are home to greater

proved natural gas reserves. Oklahoma ranks ahead of major gas producers Louisiana, West Virginia, and Colorado. State production of 2.95 trillion cubic feet of natural gas in 2018 represents about 7.5% of the state's proved reserves.

In terms of natural gas reserves in shale formations, Oklahoma ranks 6th among the producing states with 22.7 Tcf in proved reserves in 2017 (see Figure 24). Shale gas represents nearly 60% of the total proved natural gas reserves in Oklahoma.

Figure 24. Shale Gas Reserves by State (2017)



Source: U.S. Energy Information Administration

IV. Oil and Gas Cluster Share of Total State Economic Activity

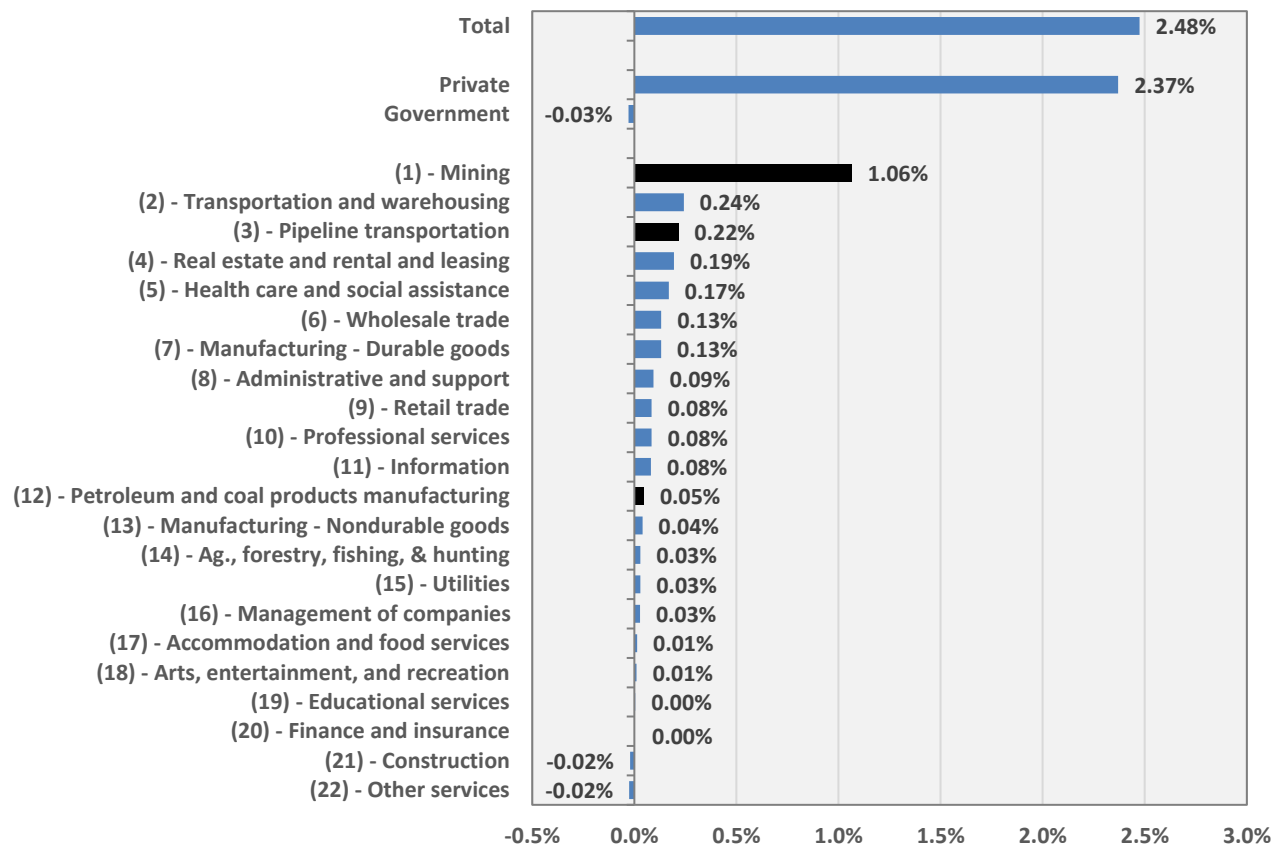
The Oklahoma oil and gas cluster continues to make an outsized economic contribution to the Oklahoma economy. This section of the report evaluates two key measures of the economic influence of the sector. The first evaluates the contribution of the oil and gas cluster to state real GDP growth over time. The second measures the share of total household earnings paid by firms operating in the cluster in recent years.

Oil and Gas Cluster Contribution to State GDP Growth

Since the reemergence of the domestic oil and gas industry beginning in 2003, the oil and gas cluster has been the largest contributor to economic growth in Oklahoma across all major sectors, by far. Figure 25 summarizes BEA industry-level measures of the contribution of each major NAICS sector to real GDP growth in Oklahoma from 2003 through 2018.

Figure 25. Industry Level Contributions to Real GDP Growth – Oklahoma

average annual percent change in the 2003–2018 period



Notes: The mining sector is used in this section to represent traditional oil and gas activity because the Bureau of Economic Analysis makes these calculations readily available only for major NAICS sectors; however, oil and gas represents nearly all mining sector GDP in Oklahoma.

Source: Bureau of Economic Analysis

The evaluation period stretches back to the initial stages of the reemergence of the industry in 2003 and extends through the most recently available data for 2018. The three major components of the oil and gas cluster – mining (i.e. the traditional oil and gas sectors), pipelines, and refineries – are highlighted in Figure 25 to illustrate the relative rankings and contributions of these components of the oil and gas cluster to total state growth.

Across the full period, the Oklahoma economy posted average real GDP growth of 2.48% annually. The private sector contributed 2.37% of total growth. Remarkably, the mining sector alone contributed 43% (1.06% annually) of all real growth in the state in the period.

The pipeline industry produced the 3rd largest contribution to real GDP growth in the period, with a 0.22% annual contribution. Refineries (i.e. petroleum and coal products manufacturing in Figure 25) contributed an additional 0.05% to annual real state GDP growth in the period.

Combined, the mining, pipeline, and refinery sectors across the state contributed an average of 1.33% per year to real state GDP since 2003. This represents 54% of total real growth in the state in the period. All other sectors combined contributed only 1.15% annually in the period. Again, the major components of the state's oil and gas cluster – mining, pipelines, and refineries – accounted for more than half (54%) of the total increase in real GDP in Oklahoma since the reemergence of the oil and gas sector in 2003.

The state's mining sector far outpaced the contribution of all other major sectors. The GDP produced in mining far exceeded the contribution of the 2nd ranked Transportation and Warehousing (0.24% annually) sector, as well as the 4th ranked sector Real Estate (0.19% annually) sector by a factor of more than four. All remaining sectors other than Health Care (0.17% annually) contributed less than 0.15% annually, with many industries contributing negligible amounts to overall state real GDP growth in the period.

Oil and Gas Share of Household Earnings

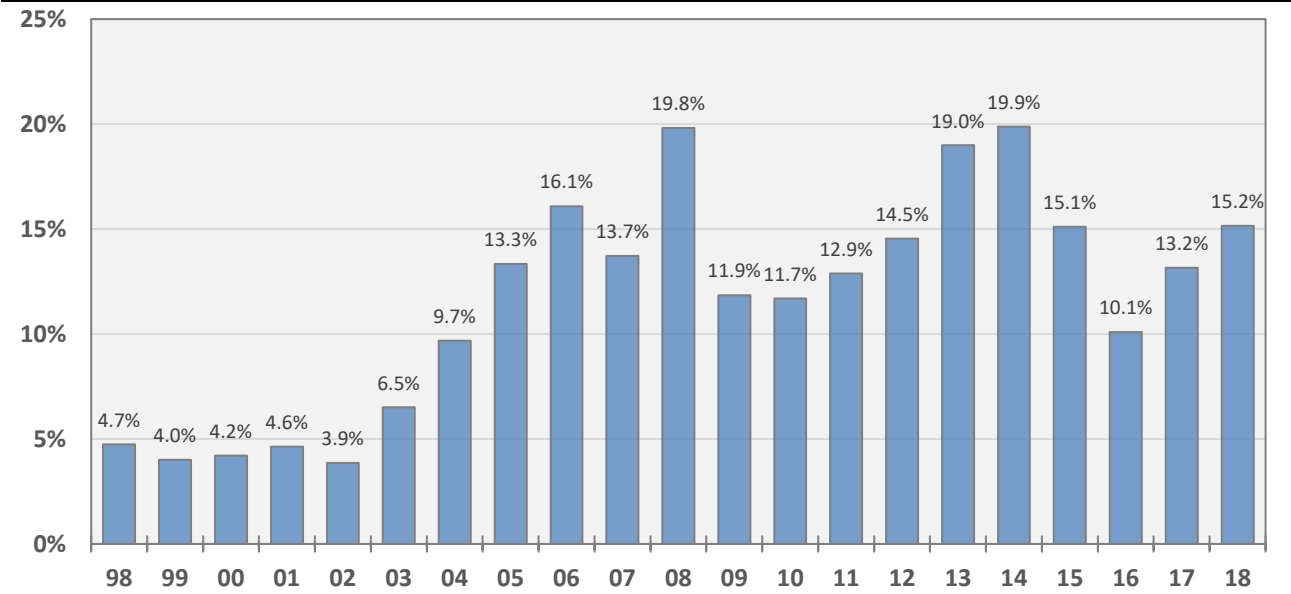
The influence of oil and gas activity on the state economy is also traced to the high share of total household earnings derived directly from the state's oil and gas cluster. Figure 26 illustrates the increased share of total statewide household earnings paid by firms in the cluster directly to Oklahoma households the past two decades. Household earnings includes both the compensation paid to wage and salary workers and income received by self-employed proprietors and participants in oil and gas partnerships.

Most recently, the share of household earnings in Oklahoma derived from the oil and gas cluster rebounded to 15.2% in 2018. For perspective on the outsized contribution of the cluster to household earnings, the cluster represents only 3.8% of all firms statewide and 5.8% of total statewide employment but accounts for 15.2% of total household income.

The 2018 share marks the second consecutive annual gain in share since the recent state-level oil and gas recession of 2015 and 2016. During the recent slowing, household earnings received from the oil and gas cluster collapsed to only 10.1% of statewide earnings in 2016. The share in 2016 was the lowest since the 9.4% share posted in 2004 at the early stages of the domestic energy sector revival.

Remarkably, the share of earnings derived from oil and gas cluster peaked near 20% in both 2008 and 2014 in high energy price environments. The cluster's share of household earnings has averaged 13.9% of total statewide household earnings in the full 2003 to 2018 reemergence period.

Figure 26. Share of State Household Earnings Derived from Oil and Gas Cluster



Notes: Household earnings is defined by Bureau of Economic Analysis as employee compensation plus proprietors’ income. Proprietor’s income consists primarily of the income of sole proprietors and partnerships.
Source: Bureau of Economic Analysis and RegionTrack calculations

V. Economic Spillovers from Oil and Gas

The direct activity taking place within the state's oil and gas cluster produces a substantial economic contribution to the state economy. In 2018, the 4,150 firms in the cluster produced \$37 billion in gross domestic product, \$19.2 billion in household earnings, and employed 135,300 wage and salary and self-employed workers. Like all industry sectors, the state's oil and gas cluster has a strong degree of economic interdependence with the other components of the state economy. In this section, we provide estimates of the economic spillover activity and gross contribution of the oil and gas cluster to the overall state economy.

Modeling Regional Linkages. The direct production within the oil and gas cluster creates measurable spillover activity that can be measured in the form of GDP (or value added), employment, and household earnings created in other sectors of the economy. Estimates of the economic spillover effects from the cluster are formed using RIMS II input-output multipliers produced by the U.S. Bureau of Economic Analysis (BEA).¹⁴ RIMS II multipliers provide model-based estimates of the impact that a local final demand shock has on total value added, earnings, and employment within a region.¹⁵ The multipliers can also be used to estimate an industry's total (or gross) contribution to the state economy.

The approach uses the direct activity of firms operating within the cluster along with a model of the flow of expenditures between businesses, households, and the government sector within the state.¹⁶ The indirect, or spillover, activity occurs as producers purchase goods and services from firms in other sectors of the economy. In other words, the multipliers provide a convenient method for estimating the spillover effects that a change in *GDP*, *employment*, or *earnings* within an industry sector may have on broader state economic activity.

To accommodate the various activities taking place within the oil and gas cluster, data for each component of the cluster are matched by natural business segment to the RIMS II industry structure. The individual effects of each sector of the cluster are estimated and aggregated to determine the overall cluster effect.¹⁷

Figure 27. Gross Economic Contribution - Oklahoma Oil and Gas Cluster (2018)

Cluster Sector	Direct Effects			Indirect & Induced Effects			Total Effects		
	GDP	Household Earnings	Total Employment	GDP	Household Earnings	Total Employment	GDP	Household Earnings	Total Employment
Oil & Gas Extraction	\$22,819	\$6,119	80,897	\$17,600	\$5,134	137,550	\$40,420	\$11,253	218,447
Oil & Gas Drilling	774	508	7,020	597	426	11,936	1,371	934	18,955
Oil & Gas Support Activities	3,328	2,184	32,203	4,288	1,601	42,649	7,616	3,785	74,852
Refineries	1,753	1,012	2,282	2,479	1,054	5,173	4,233	2,066	7,455
Other Petroleum & Coal Prod. Mfg.	333	192	711	471	200	1,611	804	393	2,321
Oil & Gas Field Mach. & Equip. Mfg.	881	602	7,455	875	682	12,671	1,756	1,284	20,126
Pipelines	6,937	8,470	3,222	2,092	8,470	9,021	9,029	16,940	12,243
Geophysical Survey. Mapping	100	86	1,506	95	49	1,236	195	135	2,743
Oil and Gas Cluster – Total	\$36,926	\$19,174	135,296	\$28,498	\$17,617	221,846	\$65,423	\$36,790	357,142
Traditional Oil and Gas Sectors	\$26,922	\$8,811	120,119	\$22,486	\$7,162	192,134	\$49,407	\$15,973	312,254
Ancillary Sectors	\$10,004	\$10,362	15,176	\$6,012	\$10,455	29,712	\$16,016	\$20,817	44,889

Source: Bureau of Economic Analysis: RIMS and RegionTrack calculations

Gross Economic Contribution of the Oil and Gas Cluster.¹⁸ Gross economic spillover impacts resulting from the operation of the state's oil and gas cluster in 2018 are detailed in Figure 27. Included are estimates of the amount of statewide employment, household earnings, and value added (GDP) supported by firms in the oil and gas cluster, both directly and through spillover effects.¹⁹

The overall results in Figure 27 suggest that the operations of the oil and gas cluster along with its spillover effects have a sizeable influence on the broader state economy. In total, the state's oil and gas cluster supported an estimated \$65.4 billion in state GDP, \$36.8 billion in household earnings, and 357,100 jobs in 2018.

GDP. The \$65.4 billion in total state GDP is the broadest measure of the total economic contribution of the cluster and can be partitioned into direct, indirect, and induced effects.²⁰ The *direct* effect includes \$36.9 billion in GDP generated directly by the cluster. The direct output of the cluster in turn supports an incremental \$28.5 billion in indirect and induced output in other industries statewide. In other words, each dollar of direct output within the cluster supports an additional \$0.77 in estimated GDP statewide. The *indirect* effect is the economic output generated in the state resulting from spending by firms in the cluster on goods and services for production or to fund capital expenditures. The *induced* effect reflects the economic output generated in other sectors of the state economy resulting from new household spending in the state out of household earnings received as part of the direct and indirect effects. The \$65.4 billion in estimated state GDP supported by the activity of firms in the oil and gas cluster represents 32.7% of total statewide GDP in 2018.

Household Earnings. The total impact of \$36.8 billion in household earnings supported by the cluster's activities and expenditures can also be partitioned into direct, indirect, and induced effects. The *direct* effect is the \$19.2 billion in earnings paid directly to employees and self-employed proprietors in the cluster. The direct earnings support an incremental \$17.6 billion in indirect and induced earnings for workers in other industries statewide. Each dollar of direct earnings by cluster employees and proprietors supports an additional \$0.92 of household earnings statewide. The *indirect* effect is the earnings paid in the state resulting from expenditures on goods and services by the cluster. The *induced* effect reflects the earnings paid in other sectors of the state economy resulting from new household spending in the region out of earnings received as part of the direct and indirect effects. The \$36.8 billion in estimated gross household earnings supported by the activity of firms in the oil and gas cluster represents 29.1% of total statewide household earnings paid in 2018.

Employment. Measured by direct employment, 135,300 employees worked as either wage and salary workers or self-employed proprietors in the Oklahoma oil and gas cluster in 2018. This employment supports an additional 221,850 jobs statewide through estimated indirect and induced effects. The *indirect* effect is the employment generated across the state as a result of spending by the cluster on goods and services. The *induced* effect reflects the employment generated in other sectors of the economy resulting from new household spending in the state out of household earnings received as part of the direct and indirect effects. In total, the operations of the oil and gas cluster directly and indirectly support more than 357,100 jobs statewide. The estimated 357,100 workers supported by the activity of firms in the oil and gas cluster represent 15.3% of total statewide employment in 2018.

VI. Tax Contributions of the Oil and Gas Industry

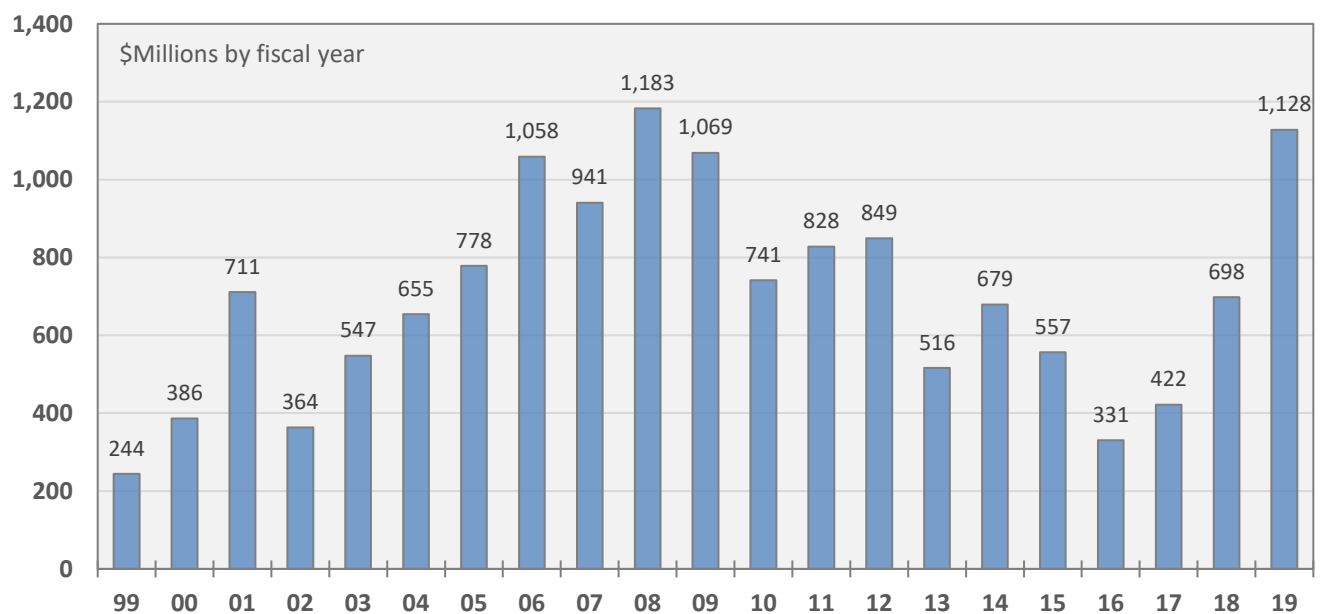
Oklahoma's oil and gas cluster continues to make significant contributions to state and local taxes. These contributions continue to grow as the cluster expands over time. The most visible of the tax contributions is the traditional gross production tax. Firms in the cluster also pay significant ad valorem taxes on assets located in the state. These taxes are used for many dedicated state and local expenditures, primarily public education. The cluster also pays a high share of all business taxes paid in the state. These tax contributions are reviewed throughout this section of the report.

Gross Production Taxes

Gross production revenue increased sharply in 2018 as a result of increased production, rebounding energy prices, and higher tax rates. The state posted a third consecutive year of sharply rising gross production revenue, totaling \$1.13 billion in FY2019 (see Figure 28). This is more than triple the \$331 million collected in FY2016 at the recent bottom following the collapse in oil prices. Current severance tax revenue is also nearly triple the level from FY2017 and 60% above the nearly \$700 million collected in FY2018.

Rising Tax Rates. The effect of increased gross production tax rates is visible in the sharp rise in FY2018 collections. Gross production tax rates in Oklahoma increased most recently in 2018 under House Bill 1010XX. Beginning July 1, 2018, production of crude oil and natural gas from all new wells and all existing wells taxed at the previous 2% rate will be taxed at a new 5% rate for the first 36 months of production. All wells revert to a 7% rate after 36 months of production. No general oil and gas production incentives remain available to Oklahoma producers.

Figure 28. Net Annual Oil and Gas Gross Production Tax Receipts – Oklahoma



Source: Oklahoma Tax Commission document Annual Reports

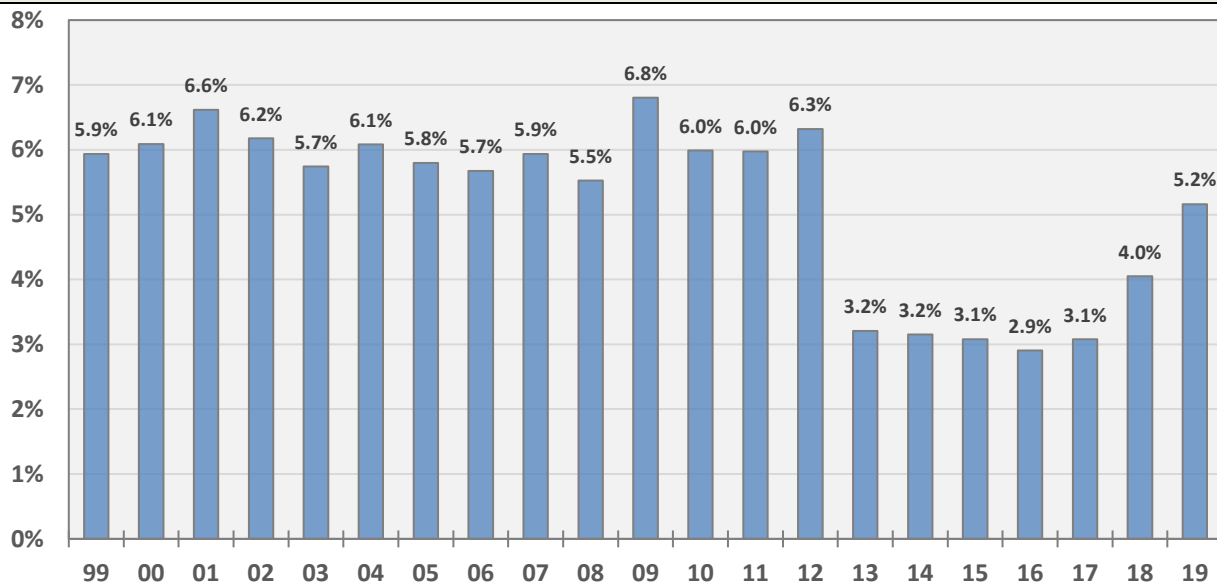
Notes: Includes both severance taxes and the 0.095% petroleum excise tax. Receipts are net of refunds.

Effective Severance Tax Rate

Figure 29 provides updated historical effective severance tax rates for oil and gas production in Oklahoma from FY1999 through FY2019. The effective rate is calculated as total gross production tax receipts (net of refunds) divided by the estimated market value of crude oil and natural gas production.²¹

The effective rate on production in Oklahoma has increased sharply from a recent low of 2.9% in FY2016 to 5.2% in FY2019. The effective rate in Oklahoma in FY2019 is now less than one percentage point below the 6.0% average rate in effect from FY1997 to FY2012 period. The steep decline in the effective rate from FY2012 to FY2013 reflects, in part, the shift in severance tax policy from the use of a refunded rebate to a reduced severance tax rate. Prior to FY2011, severance taxes were collected and then returned to taxpayers in arrears as rebates, while the replacement legislation collects revenue from non-exempt production only. The effective rate is expected to approach 5.5% in FY2020 as all production moves out of the historical 2% production bracket.

Figure 29. Effective Severance Tax Rate – Oklahoma (Fiscal Year)



Source: Oklahoma Tax Commission, Energy Information Administration, NGI, and RegionTrack calculations

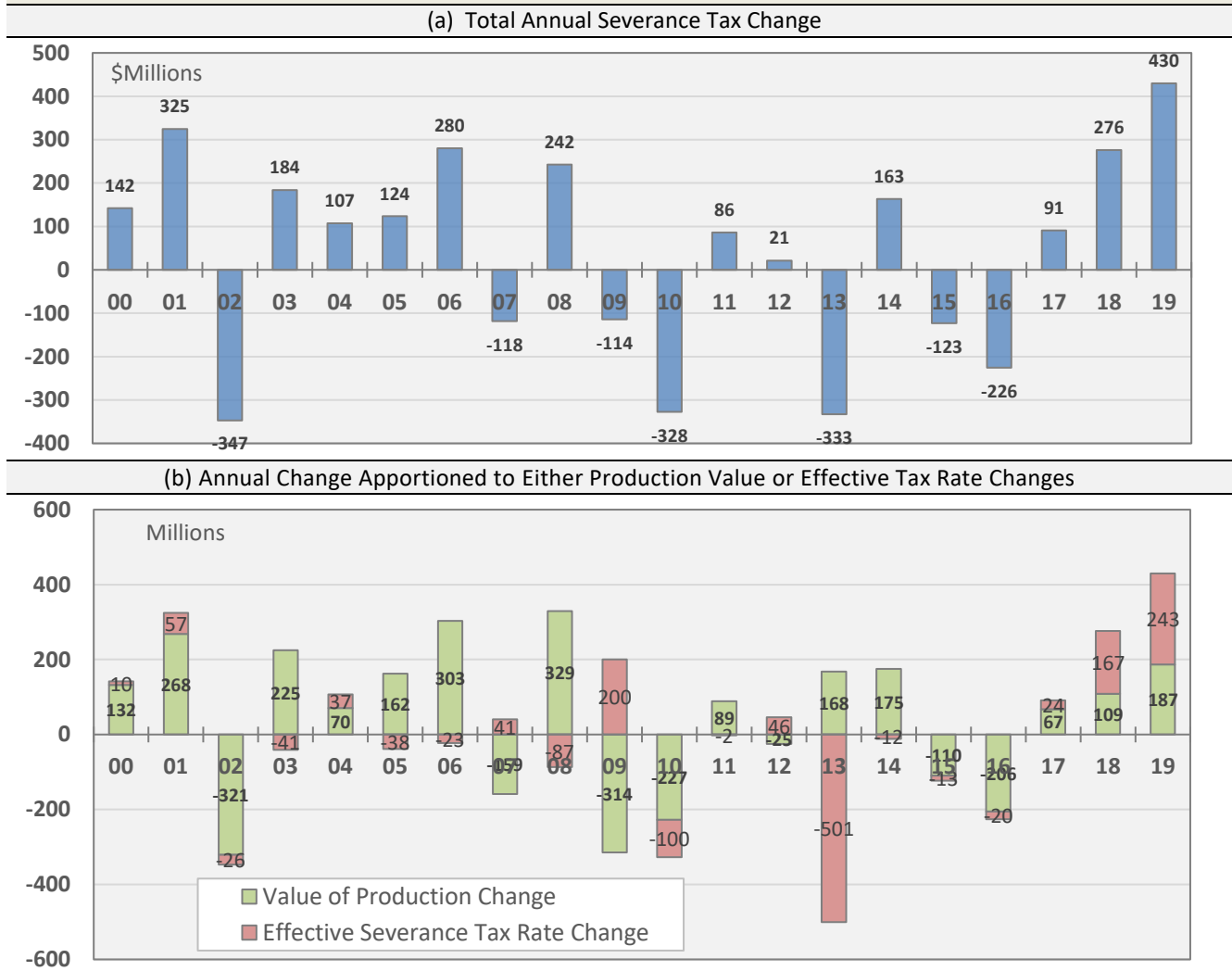
Severance Tax Gains - Tax Rate vs. Production Gains

Annual changes in severance tax collections can be apportioned to either a change in the effective severance tax rate or a change in the taxable value of production. Annual changes in collections since FY2000 are apportioned to changes in either the effective tax rate or production value in Figure 30a.

Most recently, of the cumulative three-year \$797 million increase in annual severance tax collections in the FY2017 to FY2019 period, a total of \$434 million (54%) is attributed to the rise in the effective gross production tax rate while the remaining \$363 million (46%) is traced to increased production value of crude oil and natural gas (see Figure 30b). This is in sharp contrast to conditions from FY2014 to FY2016 when changes in severance tax collections

were tied almost exclusively to production changes with little change resulting from tax rate changes.

Figure 30. Oklahoma Severance Tax – Source of Annual Changes (Fiscal Years)



Source: Oklahoma Tax Commission and RegionTrack calculations

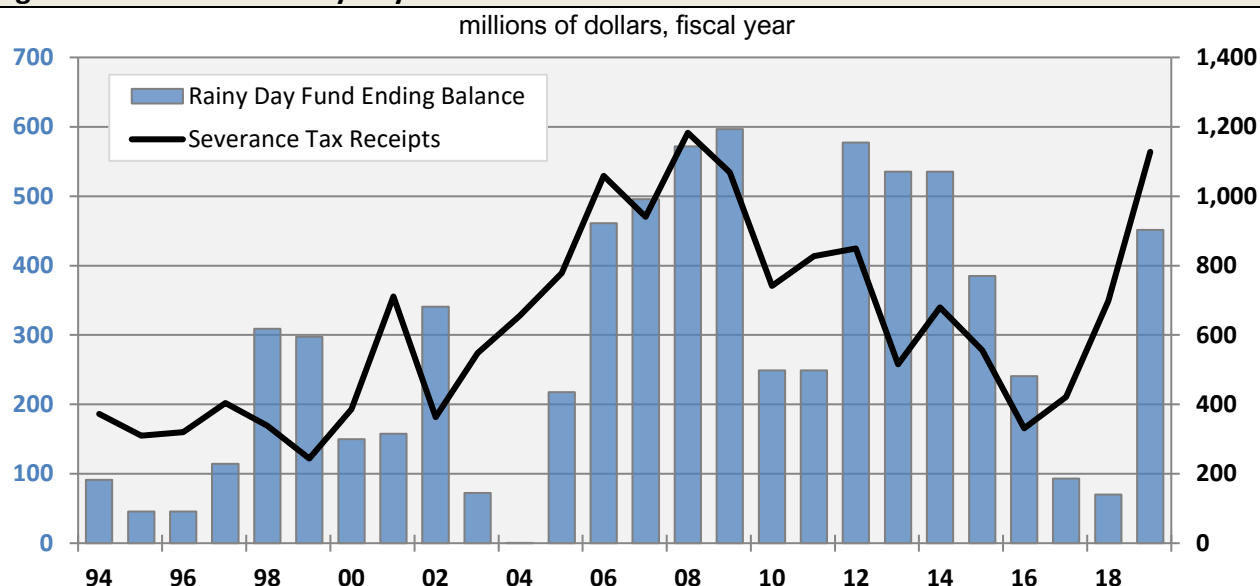
Severance Taxes Play Key Role in Budget Stabilization

It is also important to recognize the critical historical role played by severance taxes as a buffer against recessions and the state's energy-price sensitive economic cycle. Historically, most national recessions are accompanied by elevated energy prices which tend to raise severance taxes to the state and increase the share of the budget supported by oil and gas production. This countercyclical budget support is especially evident in the 1973-75, 1980-83, 2001, and 2007-09 periods. Similar but smaller budget support is found in earlier recessions in 1954 and 1957. Continued volatility in oil and gas prices and the rising value of oil and gas production suggest that severance taxes are likely to continue to transmit volatility to state tax collections going forward.

Severance tax revenue has long played a key role in budget stabilization through the state's Rainy Day Fund.²² Historically, deposits to the Fund are highly correlated with years when severance tax receipts exceed budget projections. Figure 31 compares the Rainy Day Fund balance with severance tax receipts in the FY1994 to FY2019 period. Even after refunds, severance taxes have supported large contributions to the Fund to stabilize the state budget.

During the recent state slowdown in 2015 and 2016, the state entered the slowdown with a Rainy Day Fund balance of more than \$535 million. Appropriations totaling \$465 million were made from the fund for spending in FY 2015 through FY2018. Most recently, a deposit of \$382 million was made for FY2019, supported by near record severance tax receipts.

Figure 31. Oklahoma Rainy Day Fund Balance and Severance Tax Collections



Source: FY2020 Executive Budget for the State of Oklahoma and Oklahoma Tax Commission

Ad Valorem Tax Payments

Along with severance taxes, most producing states assess some form of ad valorem, or property, tax tied to the production of crude oil and natural gas. The tax is typically applied to the value of either minerals in the ground or the equipment used above ground for extraction and production, or both.²³

In Oklahoma, the severance tax is levied in lieu of a local property tax on the value of minerals in the ground and the equipment that is essential to the production of a well. Local governments in the state do, however, have authority to assess the value of other oil and gas-related equipment and infrastructure. This includes gathering lines, processing equipment, and other assets. In addition to firms in the traditional drilling and production sectors, ad valorem tax also extends to assets owned by other sectors of the state's oil and gas cluster, primarily pipelines and refineries.

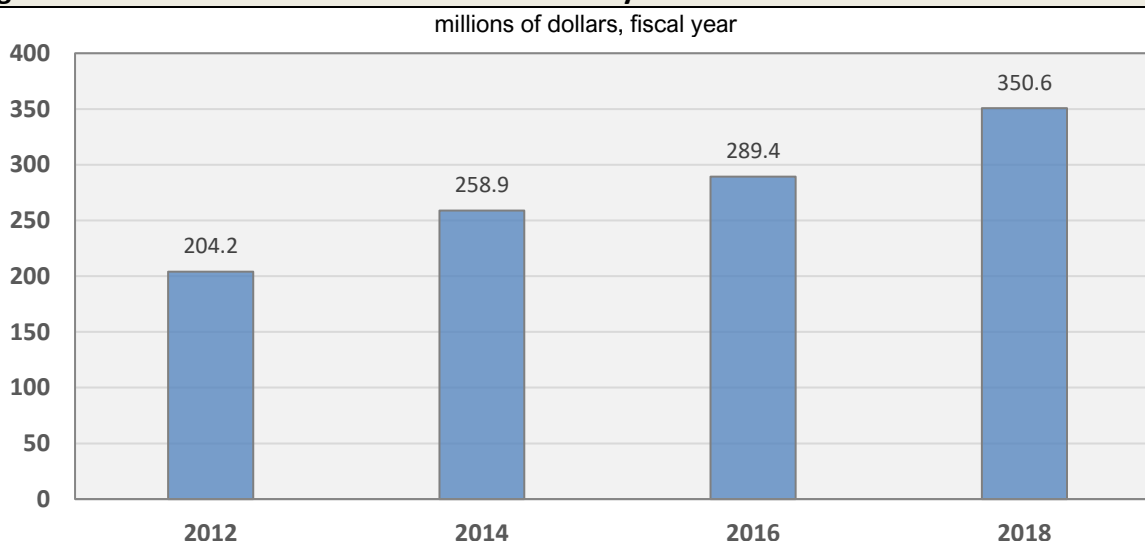
Oklahoma Taxes. Readily available statewide data on oil and gas-related property tax payments in Oklahoma is sparse. Statewide data are available from the Oklahoma Tax Commission for 2012, 2014, 2016, and 2018 based on valuations as of November 1 for the stated calendar year. For the state's oil and gas cluster, taxes on five categories of oil and

gas-related property available that are identified in Tax Commission reports are used in the analysis. These include: 1) Refineries, Gas Plants, Gathering & Compression; 2) Other Oil, Gas & Mining Property; 3) Distribution Pipeline Companies; 4) Fluid Pipeline Companies; and 5) Gas Pipeline Companies. All pipelines represent centrally assessed property. The remaining categories are taxed as business personal property.

It is important to note that the use of these five property classes to represent the oil and gas cluster substantially understates the total property tax payments made by firms in the cluster. The total excludes buildings and other structures and all other forms of real property, as well as significant personal property used in the operations of oil and gas firms across the state.

Figure 32 illustrates annual Oklahoma ad valorem tax payments related to the five components of oil and gas activity from FY2012 to FY2018. Firms in Oklahoma's oil and gas cluster continue to contribute significant and rising amounts of ad valorem tax revenue at the local level. Payments totaled \$350.6 million in FY2018, up 21% from FY2016 and up 72% from \$204.2 million in FY2012.

Figure 32. Oil and Gas Cluster Ad Valorem Tax Payments



Notes: Estimates for each fiscal year above are based on assessed valuations and effective millage rates for each county. Selected sectors include Refineries, Gas Plants, Gathering & Compression; Other Oil, Gas & Mining Property; Distribution Pipeline Companies; Fluid Pipeline Companies; and Gas Pipeline Companies.

Source: Oklahoma Tax Commission - Ad Valorem Stat Book (various issues)

Oil and gas-related ad valorem tax payments by both asset type and county for FY2018 are detailed in Figure 33. The largest component of ad valorem payments in FY2018 is \$122.2 million traced to refineries, gas plants, gathering, and compression. Fluid pipelines accounted for \$98.4 million, followed by \$87 million for other oil, gas, and mining property. Distribution and gas pipelines accounted for a combined \$42.4 million in FY2018.

Ad valorem taxes were paid by firms in the oil and gas cluster in 76 of the state's 77 counties. Fifty-four counties received at least \$1 million in ad valorem payments.

The largest payments totaled approximately \$20 million or more in five counties – Canadian, Garfield, Lincoln, Payne, and Tulsa. Six counties received approximately \$10 million to \$20 million – Blaine, Carter, Garvin, Grady, Kingfisher, and Oklahoma. Sixteen additional counties

Figure 33. OK Oil and Gas Cluster - Selected Ad Valorem Tax Payments (FY2018)

County	Centrally Valued Property			Personal Property		Total Selected Ad Valorem Payments
	Distribution Pipeline Companies	Fluid Pipeline Companies	Gas Pipeline Companies	Refineries, Gas Plants, Gathering & Compression	Other Oil, Gas & Mining Property	
Adair	0	0	0	0	0	0
Alfalfa	29,352	728,015	130,203	2,755,376	967,101	4,610,047
Atoka	19,958	877,690	629,203	449,174	305,680	2,281,705
Beaver	178	725,264	1,099,446	1,481,253	240,052	3,546,193
Beckham	97,457	121,295	1,206,330	1,004,329	0	2,429,411
Blaine	32,436	444,938	153,863	1,616,154	7,261,027	9,508,418
Bryan	113,973	3,697,106	2,100,736	120,763	0	6,032,578
Caddo	89,749	293,513	711,442	84,969	20,264	1,199,937
Canadian	501,806	500,742	394,609	15,368,992	3,124,064	19,890,213
Carter	171,165	2,393,884	341,524	4,612,983	2,085,562	9,605,118
Cherokee	109	0	0	0	0	109
Choctaw	42,333	0	5,171	0	0	47,504
Cimarron	0	631,240	350,579	201,535	44,190	1,227,544
Cleveland	1,026,946	1,053,342	273,958	2,538,475	0	4,892,721
Coal	38,778	1,199,784	854,388	1,654,266	1,472,574	5,219,790
Comanche	339,832	49,562	95,149	83,772	471	568,786
Cotton	18,018	185,014	10,589	0	0	213,621
Craig	29,649	188,996	31,197	0	21,245	271,087
Creek	488,252	1,678,981	2,194,732	202,052	324,218	4,888,235
Custer	114,490	59,883	810,387	5,007,076	496,386	6,488,222
Delaware	8,599	94,180	0	0	38	102,817
Dewey	478	327,651	174,081	1,828,125	2,506,208	4,836,543
Ellis	17,851	602,904	115,144	1,938,932	1,518,682	4,193,513
Garfield	248,276	2,198,398	353,876	16,627,374	3,533,202	22,961,126
Garvin	96,344	1,815,444	149,940	4,298,189	4,559,988	10,919,905
Grady	131,655	385,206	747,980	798,155	16,400,458	18,463,454
Grant	16,152	1,864,876	308,141	1,592,212	1,783,063	5,564,444
Greer	13,095	44,554	34,074	9,470	137	101,330
Harmon	27,066	165,592	249	0	0	192,907
Harper	12,615	454,034	136,160	686,937	23,622	1,313,368
Haskell	33,148	444,503	197,940	263,440	289,305	1,228,336
Hughes	45,877	1,335,995	1,205,311	1,423,828	2,432,461	6,443,472
Jackson	92,948	140,473	19,340	0	0	252,761
Jefferson	21,874	592,729	30,916	41,638	403	687,560
Johnston	14,893	1,805,408	52,881	403,692	143,868	2,420,742
Kay	214,246	4,578,273	451,481	364,964	862,204	6,471,168
Kingfisher	92,611	2,176,920	272,815	3,377,630	6,621,335	12,541,311
Kiowa	41,918	494,645	104,778	2,277	12,809	656,427
Latimer	33,387	0	703,834	645,436	694,863	2,077,520
LeFlore	237,086	502,662	363,515	525,347	140,647	1,769,257
Lincoln	90,473	16,582,683	196,266	1,047,065	5,109,700	23,026,187
Logan	249,824	1,990,915	1,855,092	2,461,724	120,077	6,677,632
Love	16,267	248,571	60,369	730,512	108,023	1,163,742
McClain	144,702	501,396	470,310	54,053	1,549,012	2,719,473
McCurtain	71,248	0	64,395	0	0	135,643
McIntosh	48,451	259,353	55,323	151,990	52,294	567,411
Major	27,825	2,338,474	297,801	2,716,310	490,655	5,871,065
Marshall	31,437	14,329	24,142	434,411	361,653	865,972
Mayes	41,756	378,922	39,879	0	0	460,557
Murray	39,941	191,029	9,564	9,808	26,788	277,130
Muskogee	296,274	582,000	461,822	0	244,871	1,584,967

Figure 33. (Cont.) OK Oil and Gas Cluster - Selected Ad Valorem Tax Payments (FY2018)

County	Centrally Valued Property			Personal Property		Total Selected Ad Valorem Payments
	Distribution Pipeline Companies	Fluid Pipeline Companies	Gas Pipeline Companies	Refineries, Gas Plants, Gathering & Compression	Other Oil, Gas & Mining Property	
Noble	26,331	3,614,050	160,023	207,684	396,937	4,405,025
Nowata	19,048	26,870	37,031	143,200	2,600	228,749
Okfuskee	33,748	809,304	247,237	610,512	83,950	1,784,751
Oklahoma	3,466,373	1,819,064	688,716	134,492	5,418,821	11,527,466
Okmulgee	146,480	794,167	153,808	430	564	1,095,449
Osage	148,711	4,935,731	379,484	686,439	289,895	6,440,260
Ottawa	72,364	316,800	32,585	0	0	421,749
Pawnee	30,996	1,076,386	86,172	54,140	24,321	1,272,015
Payne	265,352	8,690,290	79,452	10,755,460	4,757	19,795,311
Pittsburg	154,544	162,576	305,926	3,048,642	2,894,666	6,566,354
Pontotoc	174,491	2,861,725	635,980	17,675	1,096,673	4,786,544
Pottawatomie	366,593	2,578,821	236,296	133,035	29,875	3,344,620
Pushmataha	9,995	0	59,990	3,957	3,317	77,259
Roger Mills	7,656	491,368	266,585	4,963,476	0	5,729,085
Rogers	314,462	419,132	209,078	162,649	0	1,105,321
Seminole	77,346	3,432,517	308,707	412,307	90,212	4,321,089
Sequoyah	91,563	0	8,044	30,667	18	130,292
Stephens	124,804	1,191,841	147,250	4,296,013	0	5,759,908
Texas	91	68,188	407,671	1,719,065	259,389	2,454,404
Tillman	49,753	97,727	8,338	0	0	155,818
Tulsa	3,499,475	4,272,505	533,386	8,581,050	4,323,092	21,209,508
Wagoner	311,811	119,555	48,776	178,269	19	658,430
Washington	244,212	1,390,786	170,385	129,729	1,065	1,936,177
Washita	41,355	89,653	344,081	1,842,916	248,634	2,566,639
Woods	36,004	441,865	682,742	2,677,641	5,419,687	9,257,939
Woodward	97,163	719,192	444,666	1,771,696	1,114,038	4,146,755
Totals	15,423,519	98,361,481	27,033,333	122,175,835	87,651,730	350,645,896

Source: Oklahoma Tax Commission - Ad Valorem Stat Book (2018)

– Bryan, Cleveland, Coal, Creek, Custer, Dewey, Grant, Hughes, Kay, Logan, Major, Osage, Pittsburg, Roger Mills, Stephens, and Woods – received approximately \$5 million to \$10 million in ad valorem payments. Twenty-six counties received \$1 million to \$5 million.

How are Oklahoma oil and gas severance tax revenues used?

Over the past decade, the state's oil and gas sector has contributed \$6.6 billion in gross production tax revenue (\$663 million annually) to the funding of Oklahoma state government (see Figure 34).²⁴

Gross production revenue is first apportioned by statute for several dedicated purposes, primarily local government and public education, with the remainder deposited in the general revenue fund.²⁵

Of the \$6.6 billion in gross production revenue paid the past decade, \$3.1 billion (47%) went to dedicated uses, with the remaining \$3.5 billion (53%) transferred to the state's general revenue fund. General revenue fund contributions from severance taxes (after allocations to dedicated uses) averaged \$349 million annually the past decade.

Current Severance Tax Apportionment

Most recently, severance taxes paid by state oil and gas producers in FY2019 totaled \$1.1 billion. FY2019 dedicated uses include \$103.8 million returned to counties for roads, \$103.8 million to local school districts, \$47.0 million to the common education technical fund, \$47.0 million to the higher education capital fund, \$47.0 million to the Oklahoma student aid revolving fund, and \$34.0 million to other dedicated uses. Of the total \$1.1 billion in gross production tax revenue in FY2019, \$382.6 million was apportioned to off-the-top dedicated uses. The remaining \$726 million was distributed to the general revenue fund in FY2019.

Education-Related Distributions

A total of \$245 million in severance tax was apportioned to education-related dedicated funds in FY2019. Recipients include both common and higher education. Over the past decade, \$2.1 billion in gross production tax revenue was apportioned for educational purposes, an average of \$208 million annually in the period.

Common education is the largest direct beneficiary of gross production tax revenue. Over the past decade, gross production revenue received by local school districts and the common education technical fund²⁶ totaled \$1.18 billion, or \$118 million annually. Common education's share of gross production taxes reached \$150.8 million in FY2019, the largest amount received the past decade.

Higher education remains a significant recipient as well, receiving \$94 million in FY2019 through the higher education capital fund and the Oklahoma student aid revolving fund. Contributions of gross production taxes to higher education totaled \$902 million the past decade, or \$90.2 million annually.

Gross Production Tax Distribution by Region. A portion of the gross production tax generated from oil and gas production in each county is allocated back to the county for distribution on an average daily attendance basis among the county's independent school districts. Figure 35 provides a county-level breakdown of severance taxes distributed to school districts statewide in the FY2008 to FY2018 period.

Figure 34. Distribution of Oklahoma Severance Taxes

Fiscal Year	Total Apportionment	General Revenue Fund	Dedicated Uses						Total Education-Related Distributions*
			Returned to Counties for Roads	To School Districts	Common Education Technical Fund	Higher Education Capital Fund	Oklahoma Student Aid Revolving Fund	Other*	
2010	732,151,105	444,359,631	60,899,931	60,899,931	47,372,299	47,372,299	47,372,299	23,874,715	203,016,828
2011	817,535,694	509,858,904	68,749,447	68,749,447	47,372,299	47,372,299	47,372,299	28,060,999	210,866,344
2012	835,987,836	430,478,292	70,326,434	70,326,434	47,372,298	47,372,298	47,372,298	122,739,753	212,443,328
2013	513,576,262	221,610,957	62,542,178	62,542,178	47,372,298	47,372,298	47,372,298	24,764,055	204,659,072
2014	665,570,660	333,239,402	80,971,420	80,971,420	47,372,295	47,372,296	47,372,295	28,271,533	223,088,306
2015	542,074,273	213,359,735	81,878,193	81,878,193	47,372,290	47,372,290	47,372,290	22,841,280	223,995,064
2016	319,784,759	95,011,360	55,965,659	55,965,659	33,890,977	33,890,977	33,890,977	11,169,150	157,638,590
2017	411,219,672	157,437,279	62,893,884	62,893,884	38,404,347	38,404,347	38,404,347	12,781,585	178,106,924
2018	682,072,596	353,386,508	83,861,652	83,861,652	47,371,864	47,371,864	47,371,864	18,847,192	225,977,244
2019	1,108,442,208	725,874,440	103,758,080	103,758,080	47,017,214	47,017,214	47,017,214	33,999,966	244,809,722
10-year Total	\$6,628,415,064	\$3,484,616,508	\$731,846,878	\$731,846,878	\$450,918,181	\$450,918,182	\$450,918,181	\$327,350,228	\$2,084,601,423
10-year Average	\$662,841,506	\$348,461,651	\$73,184,688	\$73,184,688	\$45,091,818	\$45,091,818	\$45,091,818	\$32,735,023	\$208,460,142

Source: Historical issues of *Apportionment of Statutory Revenues by the Oklahoma Tax Commission*.

* "Other" includes but is not limited to: Community Water Infrastructure Development Revolving Fund, Conservation Commission Infrastructure Revolving Fund, County Bridge and Road Fund, OK Water Resources Board, Tourism & Recreation Capital Expenditure Revolving Fund, and the Statewide Circuit Engineering District Revolving Fund. Funds not included here received only a one-time payment from Severance Taxes.

Figure 35. Gross Production Tax Revenue Returned to School Districts

County	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	10-year Average
ADAIR	1,565	32	346	0	993	442	0	0	4	0	0	182
ALFALFA	318,482	316,249	317,137	349,751	706,616	1,733,355	3,737,264	6,675,851	4,415,648	4,753,655	4,189,147	2,719,467
ATOKA	412,273	592,286	351,202	381,449	292,346	178,799	153,328	130,222	92,847	110,791	107,118	239,039
BEAVER	2,178,315	2,071,842	1,277,279	1,096,382	1,391,075	1,293,302	2,151,798	1,643,232	723,908	629,900	628,172	1,290,689
BECKHAM	4,428,907	4,182,256	1,612,723	1,319,599	1,443,981	1,660,075	1,781,381	2,243,343	1,505,923	1,351,987	1,171,866	1,827,313
BLAINE	1,372,051	1,253,826	640,918	775,485	962,220	896,125	1,785,561	1,252,261	680,358	1,311,146	4,645,585	1,420,348
BRYAN	139,704	150,153	87,840	96,197	70,534	80,793	95,655	78,492	42,156	33,957	48,319	78,410
CADDO	4,050,424	4,361,425	2,464,365	2,494,773	2,699,846	1,475,751	1,764,750	1,520,317	907,452	966,132	1,115,978	1,977,079
CANADIAN	1,980,702	1,985,570	1,533,999	2,415,220	3,229,388	2,251,677	4,155,784	4,940,761	3,649,425	4,211,583	7,258,212	3,563,162
CARTER	3,222,150	3,495,192	2,998,076	3,855,089	5,058,388	3,792,832	5,665,667	4,888,488	3,635,591	2,441,572	2,964,337	3,879,523
CHEROKEE	0	0	36	69	0	0	0	0	0	0	0	11
CHOCTAW	0	0	0	0	0	0	0	0	0	0	0	0
CIMARRON	104,065	108,945	70,646	77,372	83,952	55,041	59,823	74,699	65,155	70,075	74,718	74,043
CLEVELAND	296,504	258,222	247,018	279,950	276,820	250,231	259,126	205,330	121,629	121,614	139,537	215,948
COAL	708,760	1,249,858	1,169,991	1,932,895	1,702,949	1,024,043	1,280,895	1,097,825	940,992	1,092,211	1,259,411	1,275,107
COMANCHE	123,113	175,697	127,716	109,482	131,338	76,328	86,526	62,250	33,565	30,983	36,536	87,042
COTTON	54,271	52,179	47,181	60,152	91,007	61,966	78,413	54,373	26,751	22,434	24,276	51,873
CRAIG	23,431	22,565	6,201	5,936	3,375	2,263	2,837	2,208	1,183	1,825	1,138	4,953
CREEK	1,058,243	1,163,030	984,512	1,115,881	869,072	1,286,504	1,041,695	865,392	559,952	541,782	615,499	904,332
CUSTER	2,535,412	2,562,699	1,324,703	1,380,650	1,587,679	931,034	889,602	829,663	517,971	594,576	985,927	1,160,451
DELAWARE	0	0	0	0	0	0	43	173	95	0	393	70
DEWEY	1,433,346	1,279,714	727,986	1,025,293	1,426,228	1,316,012	1,999,118	1,773,299	930,933	1,100,734	1,684,940	1,326,426
ELLIS	1,782,754	2,143,793	1,579,717	1,939,793	2,889,377	3,276,044	3,918,098	3,579,806	1,820,449	1,941,727	2,136,857	2,522,566
GARFIELD	674,733	684,863	468,800	503,770	463,229	452,173	943,272	1,355,773	1,630,831	1,783,840	1,550,454	983,700
GARVIN	2,504,794	2,605,609	2,056,948	2,407,925	3,009,522	2,098,126	2,715,211	3,061,771	1,958,364	2,373,972	2,957,959	2,524,541
GRADY	4,608,915	4,356,461	2,676,356	2,961,954	2,857,572	2,381,265	3,405,966	4,384,743	3,893,360	4,911,477	8,417,367	4,024,652
GRANT	535,897	453,148	387,754	464,762	519,630	940,730	2,030,543	2,412,169	1,125,695	859,422	672,844	986,670
GREER	5,013	7,477	3,959	1,984	1,756	2,029	1,882	1,419	989	864	2,291	2,465
HARMON	3,151	5,888	1,662	2,610	2,970	1,603	1,517	1,329	568	483	751	1,938
HARPER	947,486	826,054	577,897	592,870	702,110	630,990	568,348	429,364	304,393	219,912	240,808	509,275
HASKELL	1,165,731	1,009,081	446,095	335,516	239,256	144,526	153,834	117,807	61,382	115,650	109,071	273,222
HUGHES	704,640	1,097,469	1,176,551	1,676,932	1,462,553	787,398	849,219	701,956	742,177	1,020,270	1,312,273	1,082,680
JACKSON	40,435	37,298	37,226	71,513	43,753	36,418	125,034	108,221	63,740	34,482	43,668	60,135
JEFFERSON	166,298	162,166	146,911	183,039	258,301	180,253	256,430	124,358	22,020	33,632	39,154	140,626
JOHNSTON	12,247	22,644	94,204	113,052	230,318	172,641	278,385	354,839	315,043	255,799	284,619	212,155
KAY	469,246	533,373	523,481	661,636	879,618	652,819	923,799	1,047,164	825,443	494,490	450,751	699,257
KINGFISHER	1,356,121	1,498,490	972,345	1,145,790	1,173,485	892,829	1,190,708	1,874,411	1,871,157	4,256,329	9,545,509	2,442,105
KIOWA	87,344	84,930	104,035	70,893	66,780	36,214	33,769	24,945	19,660	19,469	28,215	48,891
LATIMER	4,936,641	4,233,625	2,291,456	1,882,566	1,134,710	802,517	773,336	311,814	263,635	452,560	519,815	1,266,603

Figure 35. (Cont.) Gross Production Tax Revenue Returned to School Districts

County	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	10-year Average
LE FLORE	1,081,147	1,211,358	606,002	515,352	337,151	224,295	254,881	159,348	74,810	171,403	183,300	373,790
LINCOLN	1,173,033	1,390,014	978,508	1,200,952	914,626	660,523	816,076	517,498	511,173	629,477	764,139	838,299
LOGAN	822,616	732,155	473,988	506,125	445,654	515,335	834,859	1,928,341	1,468,921	748,259	1,178,218	883,186
LOVE	273,493	280,540	209,015	283,179	311,526	334,263	631,590	450,998	357,391	840,944	1,076,173	477,562
MAJOR	2,396,206	2,555,227	1,771,312	1,952,959	1,992,499	1,290,035	1,426,478	1,241,155	713,755	642,011	1,002,938	1,458,837
MARSHALL	263,441	320,791	283,507	330,351	460,979	683,666	690,129	790,834	532,368	394,431	492,489	497,955
MAYES	9,642	9,436	9,164	8,356	9,610	1,456	2,209	1,451	754	5,424	4,977	5,284
MCCLAIN	1,119,974	1,074,843	784,410	919,805	1,008,003	806,392	1,087,165	841,289	569,802	528,141	1,025,035	864,488
MCCURTAIN	0	74	0	0	0	0	0	0	0	0	0	7
MCINTOSH	248,429	271,973	131,780	120,973	84,402	42,201	37,660	28,384	15,218	26,184	23,085	78,186
MURRAY	111,676	109,492	118,508	169,237	155,750	154,251	142,269	98,378	42,630	50,320	60,887	110,172
MUSKOGEE	34,703	35,673	32,784	38,897	27,991	32,444	32,287	25,780	9,811	15,356	20,620	27,164
NOBLE	679,426	839,647	636,122	741,719	699,912	541,371	1,010,959	1,181,970	878,254	391,166	483,759	740,488
NOWATA	274,842	280,548	147,022	114,622	182,214	108,321	151,457	60,378	50,629	65,324	53,106	121,362
OKFUSKEE	224,343	260,373	197,614	276,172	178,349	267,436	293,464	288,259	181,914	174,142	181,331	229,905
OKLAHOMA	1,314,602	1,381,829	1,247,181	1,623,545	1,351,368	1,512,883	1,298,260	1,243,317	714,323	762,404	865,854	1,200,096
OKMULGEE	203,832	226,779	191,541	228,118	160,845	169,142	169,518	161,138	79,193	83,486	105,794	157,555
OSAGE	986,361	1,316,441	1,320,186	1,275,266	1,922,188	1,318,157	1,674,914	927,242	536,404	770,994	796,678	1,185,847
OTTAWA	0	0	0	0	0	0	0	0	0	0	0	0
PAWNEE	185,565	200,661	193,574	227,863	261,078	292,457	435,824	365,755	166,718	173,099	162,630	247,966
PAYNE	468,543	452,174	351,346	417,277	347,070	436,780	749,948	1,559,140	1,203,840	770,496	1,008,185	729,626
PITTSBURG	2,686,523	2,749,425	1,828,185	1,890,575	1,945,531	1,645,193	2,048,865	1,610,941	1,073,776	1,435,756	1,596,083	1,782,433
PONTOTOC	963,949	1,036,410	834,074	1,189,213	526,000	1,780,615	1,313,868	1,378,858	698,472	509,936	660,924	992,837
POTTAWATOMIE	1,063,973	985,987	636,746	833,716	514,900	915,667	749,400	757,488	404,091	285,668	371,754	645,542
PUSHMATAHA	430,653	417,903	151,171	78,103	31,021	50,470	40,758	43,693	19,682	26,053	39,165	89,802
ROGER MILLS	6,129,753	5,613,200	2,645,881	2,314,300	2,619,050	2,778,536	4,037,314	4,650,795	2,808,447	2,295,090	2,383,313	3,214,593
ROGERS	70,880	52,586	24,338	34,812	37,215	22,480	30,632	14,264	9,318	11,371	11,004	24,802
SEMINOLE	1,288,107	1,613,825	1,094,008	1,453,345	1,001,150	1,565,123	1,453,713	1,171,253	779,374	705,342	797,917	1,163,505
SEQUOYAH	107,043	95,638	67,878	52,005	37,519	20,254	17,000	11,996	10,591	16,200	13,130	34,221
STEPHENS	4,282,090	4,564,150	2,881,052	3,177,345	3,595,768	2,307,879	3,508,388	4,232,663	3,806,159	3,717,711	4,749,720	3,654,083
TEXAS	3,241,159	3,406,616	2,524,650	2,733,181	2,409,774	1,903,532	1,599,903	1,069,640	669,419	1,162,719	1,153,518	1,863,295
TILLMAN	24,974	27,222	49,904	112,518	112,608	85,899	228,010	182,442	59,435	38,295	43,284	93,962
TULSA	867,059	792,076	741,192	777,329	964,958	851,060	944,567	408,454	241,427	359,497	373,511	645,407
WAGONER	16,617	22,882	22,122	28,579	35,216	24,293	31,088	34,271	18,109	13,953	13,142	24,366
WASHINGTON	288,450	312,469	229,775	136,336	265,647	140,185	183,097	70,409	50,804	80,899	76,587	154,621
WASHITA	2,734,727	3,576,536	2,641,466	4,576,312	6,269,982	2,890,848	2,730,115	2,527,183	1,266,496	1,044,176	1,063,382	2,858,650
WOODS	1,222,346	1,551,338	1,587,806	1,837,739	2,597,269	1,724,824	3,460,533	5,120,367	2,788,893	3,163,986	3,094,947	2,692,770
WOODWARD	1,865,074	1,822,656	998,701	911,752	886,079	545,542	460,027	491,661	297,811	264,761	412,473	709,146
All Counties	\$83,598,414	\$86,635,053	\$58,177,785	\$66,876,156	\$72,663,646	\$60,498,956	\$79,735,839	\$83,877,100	\$56,880,656	\$60,535,813	\$81,606,568	\$70,748,757

Source: Oklahoma State Department of Education – Oklahoma Cost Accounting System

County-Level Distributions. Since some counties have large amounts of oil and gas production and others very little, there is substantial variation in the revenues received.

School districts in five counties received distributions averaging more than \$3 million annually the past decade - Grady (\$4.0 million), Carter (\$3.9 million), Stephens (\$3.7 million), Canadian (\$3.6 million), and Roger Mills (\$3.2 million). All five counties are traditionally large oil and gas producers.

School districts in seven additional counties received distributions averaging between \$2 million and \$3 million annually. This group includes Alfalfa, Caddo, Ellis, Garvin, Kingfisher, Washita, and Woods, all traditional oil and gas producing counties.

Districts in 15 additional counties received distributions averaging between \$1 million and \$2 million annually. These counties include Beaver, Beckham, Blaine, Coal, Custer, Dewey, Hughes, Latimer, Major, Oklahoma, Osage, Pittsburg, Pontotoc, Seminole, and Texas.

In total, districts in 27 counties received at least \$1 million or more annually from oil and gas severance taxes the past decade.

School districts in only 15 counties – Adair, Cherokee, Choctaw, Craig, Delaware, Greer, Harmon, Kiowa, Mayes, McCurtain, Muskogee, Ottawa, Rogers, Sequoyah, and Wagoner – received less than \$50,000 annually in gross production revenue in the ten-year period. Historically, these counties are home to very little crude oil and natural gas production.

Gross production taxes paid in FY2018 were much more concentrated outside the three largest counties in the state – Oklahoma (\$866,000 million), Tulsa (\$374,000), and Cleveland (\$140,000).

School District Distributions. Gross production tax receipts by individual school district the past decade are detailed in Figure 36. Larger school districts located in traditional oil and gas producing regions of the state tend to receive the largest distributions.

Eleven individual school districts received more than \$1 million annually in gross production revenue between FY2009 and FY2018 - Alva (\$1.98 million), Duncan (\$1.70 million), Mustang (\$1.45 million), Ardmore (\$1.32 million), Cherokee (\$1.27 million), Guymon (\$1.19 million), Yukon (\$1.17 million), Chickasha (\$1.16 million), Elk City (\$1.06 million), Shattuck (\$1.04 million), and Cheyenne (\$1.03 million).

Thirty-five additional districts received between \$500,000 and \$1 million annually in the period. Thirty-six districts received between \$250,000 and \$500,000 annually. Eighty-five districts received between \$100,000 and \$250,000 annually. Fifty-one districts received between \$50,000 and \$100,000 annually.

In total, 218 of the 553 individual school districts in Oklahoma received \$50,000 or more annually in gross production revenue between FY2009 and FY2018.

The state's charter schools do not share in school district distributions of gross production tax revenue.

Figure 36. Gross Production Tax Distribution by County/District

County	District Name	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	10-year Average
ADAIR	CAVE SPRINGS	0	2	20	0	993	19	0	0	0	0	0	103
ADAIR	DAHLONEGAH	350	0	0	0	0	0	0	0	0	0	0	0
ADAIR	GREASY	0	0	0	0	0	0	0	0	0	0	0	0
ADAIR	MARYETTA	0	0	0	0	0	0	0	0	0	0	0	0
ADAIR	PEAVINE	0	0	0	0	0	0	0	0	0	0	0	0
ADAIR	ROCKY MOUNTAIN	0	0	0	0	0	0	0	0	0	0	0	0
ADAIR	STILWELL	0	15	156	0	0	194	0	0	2	0	0	37
ADAIR	WATTS	0	4	44	0	0	56	0	0	1	0	0	11
ADAIR	WESTVILLE	1,216	11	125	0	0	173	0	0	2	0	0	31
ADAIR	ZION	0	0	0	0	0	0	0	0	0	0	0	0
ALFALFA	BURLINGTON	61,152	60,998	68,274	83,287	165,371	377,123	782,657	1,252,508	830,532	947,167	872,314	544,023
ALFALFA	CHEROKEE	145,538	142,729	133,586	141,524	294,164	779,185	1,711,859	3,134,063	2,076,783	2,302,327	1,999,822	1,271,604
ALFALFA	TIMBERLAKE	111,792	112,523	115,277	124,939	247,081	577,047	1,242,748	2,289,280	1,508,332	1,504,161	1,317,011	903,840
ATOKA	ATOKA	206,864	298,977	180,527	183,862	141,980	85,830	71,453	60,667	44,555	55,237	53,675	117,676
ATOKA	CANEY	61,713	84,310	49,209	50,299	39,212	26,302	21,987	18,815	12,844	15,246	13,777	33,200
ATOKA	HARMONY	0	0	0	0	0	0	0	0	0	0	0	0
ATOKA	LANE	0	0	0	0	0	0	0	0	0	0	0	0
ATOKA	STRINGTOWN	43,373	58,534	31,970	56,544	35,486	20,022	19,603	17,993	12,981	14,887	14,336	28,235
ATOKA	TUSHKA	100,323	150,466	89,497	90,744	75,669	46,646	40,285	32,747	22,468	25,421	25,329	59,927
BEAVER	BALKO	251,710	227,726	144,919	135,112	192,291	189,101	320,259	232,112	102,068	89,990	90,859	172,444
BEAVER	BEAVER	722,906	717,569	450,852	383,926	473,306	430,580	688,962	549,383	247,967	203,747	206,342	435,264
BEAVER	FORGAN	371,786	329,289	201,954	178,603	226,316	207,157	337,687	227,332	93,519	88,554	84,909	197,532
BEAVER	TURPIN	831,913	797,258	479,554	398,741	499,162	466,465	804,889	634,405	280,354	247,610	246,062	485,450
BECKHAM	ELK CITY	2,684,868	2,520,077	958,026	793,286	872,917	983,653	1,042,960	1,281,889	835,794	728,343	626,939	1,064,388
BECKHAM	ERICK	295,944	272,680	108,713	84,453	92,336	111,042	120,302	145,449	95,611	94,230	79,316	120,413
BECKHAM	MERRITT	625,373	587,817	236,568	191,839	211,414	266,436	295,290	397,510	288,648	272,778	242,516	299,082
BECKHAM	SAYRE	822,722	801,683	309,416	250,022	267,314	298,944	322,828	418,495	285,869	256,636	223,095	343,430
BLAINE	CANTON	262,721	241,175	121,814	155,567	201,982	183,215	355,450	250,530	141,602	269,115	959,232	287,968
BLAINE	GEARY	291,317	269,571	137,209	164,404	208,789	193,998	384,560	267,420	144,527	269,315	919,831	295,962
BLAINE	OKEENE	253,361	235,687	117,803	136,797	163,394	155,358	300,736	214,506	117,678	228,614	871,190	254,176
BLAINE	WATONGA	564,651	507,392	264,092	318,717	388,055	363,554	744,815	519,806	276,551	544,101	1,895,332	582,242
BRYAN	(ILC) CHOCTAW NATION	0	0	0	0	0	0	0	0	0	0	0	0
BRYAN	ACHILLE	9,083	9,768	5,183	5,352	3,666	3,733	4,097	3,250	1,699	1,412	2,132	4,029
BRYAN	BENNINGTON	5,399	5,918	3,202	3,480	2,569	3,115	3,471	2,909	1,631	1,338	2,042	2,968
BRYAN	CADDO	8,357	9,721	5,594	6,484	4,859	5,411	6,266	4,975	2,618	2,169	3,122	5,122
BRYAN	CALERA	12,311	13,010	7,712	8,342	6,106	7,031	8,336	6,976	3,871	3,128	4,683	6,920
BRYAN	COLBERT	16,249	16,871	10,131	11,406	8,495	9,536	11,452	9,319	4,648	3,653	5,147	9,066
BRYAN	DURANT	63,295	68,707	40,955	44,921	32,882	38,278	44,962	37,246	20,159	16,328	22,725	36,716
BRYAN	ROCK CREEK	10,534	10,952	6,282	6,334	4,598	5,123	6,295	5,109	2,716	2,086	2,956	5,245
BRYAN	SILO	14,476	15,206	8,782	9,877	7,359	8,568	10,776	8,707	4,813	3,844	5,512	8,344
CADDO	ANADARKO	1,286,699	1,366,717	763,292	779,054	844,981	480,247	575,733	490,078	288,794	298,251	337,765	622,491
CADDO	BINGER-ONEY	229,735	253,435	137,411	139,119	152,236	79,845	109,128	101,398	60,929	59,823	66,188	115,951
CADDO	BOONE-APACHE	407,429	451,524	244,695	252,107	266,764	142,927	165,391	150,332	90,423	94,104	108,190	196,646
CADDO	CARNEGIE	410,082	452,063	257,003	251,236	275,892	141,187	170,794	145,503	87,552	94,058	111,447	198,674

Figure 36. (Cont.) Gross Production Tax Distribution by County/District

County	District Name	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	10-year Average
CADDO	CEMENT	180,803	201,652	119,618	114,804	116,551	62,228	76,535	62,062	35,991	41,458	45,371	87,627
CADDO	CYRIL	277,727	259,110	143,174	147,598	157,844	87,206	100,561	88,418	57,482	62,826	73,593	117,781
CADDO	FORT COBB-BROXTON	242,455	248,162	140,127	142,955	157,843	86,150	104,941	85,479	50,403	55,888	64,617	113,657
CADDO	GRACEMONT	120,869	133,680	75,850	72,379	73,920	40,578	44,189	38,423	22,784	24,047	31,702	55,755
CADDO	HINTON	405,161	472,711	286,277	300,516	321,721	171,911	204,242	177,059	105,687	117,632	137,499	229,526
CADDO	HYDRO-EAKLY	319,703	340,539	195,729	197,177	218,541	120,604	140,094	113,882	65,950	74,083	87,830	155,443
CADDO	LOOKEBA SICKLES	169,764	181,832	101,189	97,828	113,553	62,867	73,142	67,681	41,456	43,961	51,775	83,528
CANADIAN	BANNER	0	0	0	0	0	0	0	0	0	0	0	0
CANADIAN	CALUMET	26,421	27,504	21,180	28,895	41,880	30,392	56,298	59,673	41,066	43,755	67,960	41,860
CANADIAN	DARLINGTON	0	0	0	0	0	0	0	0	0	0	0	0
CANADIAN	EL RENO	242,587	235,376	177,656	275,698	362,206	246,125	439,575	494,601	370,168	430,547	729,604	376,156
CANADIAN	MAPLE	0	0	0	0	0	0	0	0	0	0	0	0
CANADIAN	MUSTANG	792,660	797,334	612,828	971,306	1,289,535	904,331	1,676,378	2,009,382	1,505,389	1,743,160	2,992,039	1,450,168
CANADIAN	PIEDMONT	214,718	221,730	187,316	302,885	408,128	288,304	546,680	663,684	500,233	593,648	1,051,638	476,424
CANADIAN	RIVERSIDE	0	0	0	0	0	0	0	0	0	0	0	0
CANADIAN	UNION CITY	25,789	27,553	20,032	33,275	44,935	28,399	51,713	60,677	43,302	48,421	86,157	44,447
CANADIAN	YUKON	678,527	676,073	514,986	803,161	1,082,704	754,126	1,385,140	1,652,744	1,189,267	1,352,053	2,330,813	1,174,107
CARTER	(ILC) TRI-COUNTY	0	0	0	0	0	0	0	0	0	0	0	0
CARTER	ARDMORE	1,080,208	1,187,964	1,018,497	1,311,835	1,719,929	1,273,849	1,937,201	1,672,348	1,248,995	817,692	973,629	1,316,194
CARTER	DICKSON	462,240	501,465	420,967	565,581	762,671	579,930	831,107	725,584	534,264	368,660	451,951	574,218
CARTER	FOX	120,487	133,814	114,251	145,419	172,599	127,380	190,584	170,950	128,591	83,244	103,892	137,073
CARTER	HEALDTON	209,128	224,828	191,584	237,113	295,258	216,126	337,362	300,088	212,069	141,040	178,238	233,371
CARTER	LONE GROVE	581,752	616,162	515,346	663,931	881,493	665,095	959,732	800,986	606,420	412,314	492,972	661,445
CARTER	PLAINVIEW	509,308	552,680	482,599	616,532	825,215	621,097	952,951	825,058	624,343	427,626	533,896	646,200
CARTER	SPRINGER	71,342	81,563	79,902	106,630	137,585	99,906	147,016	118,285	83,727	59,924	78,403	99,294
CARTER	WILSON	197,142	206,992	183,002	216,784	270,170	216,230	316,759	281,120	200,036	134,113	155,558	218,076
CARTER	ZANEIS	0	0	0	0	0	0	0	0	0	0	0	0
CHEROKEE	BRIGGS	0	0	0	0	0	0	0	0	0	0	0	0
CHEROKEE	CHEROKEE IMMERSION CHARTER SCH	0	0	0	0	0	0	0	0	0	0	0	0
CHEROKEE	GRAND VIEW	0	0	0	0	0	0	0	0	0	0	0	0
CHEROKEE	HULBERT	0	0	14	8	0	0	0	0	0	0	0	2
CHEROKEE	KEYS	0	0	22	13	0	0	0	0	0	0	0	3
CHEROKEE	LOWREY	0	0	0	0	0	0	0	0	0	0	0	0
CHEROKEE	NORWOOD	0	0	0	0	0	0	0	0	0	0	0	0
CHEROKEE	PEGGS	0	0	0	0	0	0	0	0	0	0	0	0
CHEROKEE	SHADY GROVE	0	0	0	0	0	0	0	0	0	0	0	0
CHEROKEE	TAHLEQUAH	0	0	0	48	0	0	0	0	0	0	0	5
CHEROKEE	TENKILLER	0	0	0	0	0	0	0	0	0	0	0	0
CHEROKEE	WOODALL	0	0	0	0	0	0	0	0	0	0	0	0
CHOCTAW	BOSWELL	0	0	0	0	0	0	0	0	0	0	0	0
CHOCTAW	FORT TOWSON	0	0	0	0	0	0	0	0	0	0	0	0
CHOCTAW	HUGO	0	0	0	0	0	0	0	0	0	0	0	0
CHOCTAW	SOPER	0	0	0	0	0	0	0	0	0	0	0	0
CHOCTAW	SWINK	0	0	0	0	0	0	0	0	0	0	0	0

Figure 36. (Cont.) Gross Production Tax Distribution by County/District

County	District Name	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	10-year Average
CIMARRON	BOISE CITY	64,850	70,905	46,978	50,574	54,227	33,811	38,783	48,151	42,000	43,221	43,893	47,254
CIMARRON	FELT	19,372	18,864	10,331	12,231	14,813	11,230	11,841	14,805	12,210	14,301	17,039	13,767
CIMARRON	KEYES	19,843	19,175	13,338	14,567	14,912	10,000	9,198	11,743	10,945	12,553	13,786	13,022
CLEVELAND	LEXINGTON	8,206	7,361	6,440	7,365	7,068	6,224	6,559	5,331	3,179	3,008	3,334	5,587
CLEVELAND	LITTLE AXE	9,392	8,222	7,201	8,302	8,073	6,897	6,915	5,774	3,417	3,342	3,788	6,193
CLEVELAND	MOORE	154,133	140,188	127,796	147,740	147,126	133,426	138,113	110,612	65,379	64,250	73,753	114,838
CLEVELAND	NOBLE	20,120	18,717	17,174	19,628	18,963	16,489	16,770	13,541	7,913	7,601	8,606	14,540
CLEVELAND	NORMAN	104,653	83,733	88,407	96,915	95,590	87,196	90,768	70,072	41,741	43,413	50,056	74,789
CLEVELAND	ROBIN HILL	0	0	0	0	0	0	0	0	0	0	0	0
COAL	COALGATE	520,068	908,539	867,429	1,389,483	1,249,306	756,628	952,521	803,163	691,230	794,672	910,515	932,349
COAL	COTTONWOOD	0	0	0	0	0	0	0	0	0	0	0	0
COAL	TUPELO	188,692	341,319	302,561	543,412	453,643	267,415	328,374	294,662	249,762	297,539	348,895	342,758
COMANCHE	BISHOP	0	0	0	0	0	0	0	0	0	0	0	0
COMANCHE	CACHE	8,841	12,209	9,585	8,405	10,468	6,440	7,947	5,416	3,005	2,851	3,536	6,986
COMANCHE	CHATTANOOGA	1,619	2,159	1,690	1,465	1,694	1,009	1,134	700	365	343	431	1,099
COMANCHE	ELGIN	8,517	12,441	9,462	8,653	11,302	7,122	9,153	6,300	3,549	3,420	4,160	7,556
COMANCHE	FLETCHER	2,668	3,851	3,075	2,494	2,883	1,649	2,024	1,440	773	726	810	1,973
COMANCHE	FLOWER MOUND	0	0	0	0	0	0	0	0	0	0	0	0
COMANCHE	GERONIMO	1,881	2,808	2,023	1,714	2,208	1,220	1,499	1,071	552	495	591	1,418
COMANCHE	INDIAHOMA	1,210	720	1,859	1,857	1,298	835	997	645	358	330	362	926
COMANCHE	LAWTON	96,077	138,151	97,503	82,774	98,913	56,520	61,848	45,398	24,287	22,187	25,928	65,351
COMANCHE	STERLING	2,299	3,357	2,518	2,120	2,572	1,534	1,923	1,280	675	630	718	1,733
COTTON	BIG PASTURE	11,745	10,788	9,309	11,596	17,495	11,211	14,603	10,528	4,954	4,146	4,645	9,927
COTTON	TEMPLE	10,851	10,533	9,385	11,455	18,196	12,181	13,086	8,135	4,184	3,731	4,391	9,528
COTTON	WALTERS	31,675	30,858	28,486	37,101	55,316	38,574	50,723	35,711	17,614	14,557	15,241	32,418
CRAIG	BLUEJACKET	1,430	1,514	428	363	238	179	230	164	85	148	91	344
CRAIG	KETCHUM	5,028	4,267	1,271	1,136	753	503	607	500	266	405	261	997
CRAIG	VINITA	12,110	12,415	3,404	2,853	1,877	1,289	1,631	1,279	688	1,038	647	2,712
CRAIG	WELCH	3,227	3,072	831	710	430	293	368	266	145	233	139	649
CRAIG	WHITE OAK	1,635	1,297	267	874	76	0	0	0	0	0	0	251
CREEK	ALLEN-BOWDEN	0	0	0	0	0	0	0	0	0	0	0	0
CREEK	BRISTOW	152,942	169,043	143,007	161,545	129,303	193,393	158,775	131,755	85,117	85,318	98,034	135,529
CREEK	DEPEW	32,971	34,954	31,105	38,044	28,463	42,373	37,494	30,821	18,945	18,135	21,643	30,198
CREEK	DRUMRIGHT	59,601	67,355	55,388	63,498	48,422	70,851	56,170	46,809	29,332	27,143	28,845	49,381
CREEK	GYPSY	0	0	0	0	0	0	0	0	0	0	0	0
CREEK	KELLYVILLE	108,898	119,534	103,469	115,262	90,202	131,708	104,191	85,755	54,302	50,816	55,153	91,039
CREEK	KIEFER	33,816	40,136	36,622	47,256	40,039	65,601	58,594	51,814	35,296	35,661	43,393	45,441
CREEK	LONE STAR	0	0	0	0	0	0	0	0	0	0	0	0
CREEK	MANNFORD	140,122	159,276	128,677	143,546	116,258	172,735	138,144	118,224	77,675	76,605	85,074	121,621
CREEK	MOUNDS	68,021	74,384	56,857	69,021	51,640	69,134	54,982	46,242	28,800	28,004	31,920	51,098
CREEK	OILTON	31,320	34,923	27,773	30,952	22,383	32,626	27,165	20,313	13,547	13,818	15,937	23,944
CREEK	OLIVE	38,321	40,195	34,343	40,144	30,169	45,515	35,641	29,661	18,524	17,067	19,830	31,109

Figure 36. (Cont.) Gross Production Tax Distribution by County/District

County	District Name	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	10-year Average
CREEK	PRETTY WATER	0	0	0	0	0	0	0	0	0	0	0	0
CREEK	SAPULPA	392,230	423,230	367,271	406,614	312,191	462,567	370,540	303,998	198,415	189,215	215,670	324,971
CUSTER	ARAPAHO-BUTLER	164,222	207,075	93,962	94,719	115,538	66,871	64,770	61,704	38,237	47,733	83,742	87,435
CUSTER	BUTLER	47,844	0	0	0	0	0	0	0	0	0	0	0
CUSTER	CLINTON	1,070,826	1,102,983	587,948	616,517	697,852	419,973	389,469	358,965	219,591	248,584	401,672	504,355
CUSTER	THOMAS-FAY-CUSTER UNIFIED DIST	280,034	271,509	134,532	142,334	154,967	87,627	81,585	73,654	46,801	51,762	89,631	113,440
CUSTER	WEATHERFORD	972,485	981,132	508,262	527,080	619,322	356,564	353,779	335,340	213,342	246,498	410,881	455,220
DELAWARE	CLEORA	0	0	0	0	0	0	0	0	0	0	0	0
DELAWARE	COLCORD	0	0	0	0	0	0	5	17	10	0	39	7
DELAWARE	GROVE	0	0	0	0	0	0	18	73	41	0	167	30
DELAWARE	JAY	0	0	0	0	0	0	12	50	25	0	111	20
DELAWARE	KANSAS	0	0	0	0	0	0	6	26	15	0	60	11
DELAWARE	KENWOOD	0	0	0	0	0	0	0	0	0	0	0	0
DELAWARE	LEACH	0	0	0	0	0	0	0	0	0	0	0	0
DELAWARE	MOSELEY	0	0	0	0	0	0	0	0	0	0	0	0
DELAWARE	OAKS-MISSION	0	0	0	0	0	0	2	7	4	0	16	3
DEWEY	SEILING	688,739	643,850	372,495	512,388	723,690	667,246	1,003,402	893,240	480,027	553,990	873,555	672,388
DEWEY	TALOGA	201,240	140,215	62,010	107,813	176,044	150,076	179,398	145,694	80,455	126,016	167,048	133,477
DEWEY	VICI	543,367	495,649	293,481	405,091	526,494	498,690	816,317	734,365	370,451	420,728	644,337	520,560
ELLIS	ARNETT	395,889	454,527	329,303	389,700	601,280	760,588	921,882	806,414	442,310	489,587	537,569	573,316
ELLIS	FARGO	511,982	612,570	435,115	529,331	780,038	798,889	947,555	860,587	435,816	630,656	626,885	665,744
ELLIS	GAGE	280,872	314,268	215,516	258,872	379,106	366,622	422,503	374,037	150,304	0	0	248,123
ELLIS	SHATTUCK	594,011	762,428	599,782	761,891	1,128,952	1,349,945	1,626,158	1,538,767	792,019	821,484	972,404	1,035,383
GARFIELD	CHISHOLM	64,381	65,684	43,768	47,301	43,070	39,600	84,212	122,074	152,732	165,720	154,219	91,838
GARFIELD	COVINGTON-DOUGLAS	20,230	20,291	13,805	15,614	13,634	12,764	24,904	34,946	40,314	43,292	38,151	25,771
GARFIELD	DRUMMOND	19,078	19,702	16,886	17,327	15,378	14,640	29,427	41,562	47,157	49,577	47,890	29,955
GARFIELD	ENID	463,604	469,840	317,068	342,999	318,244	314,911	661,586	953,881	1,152,354	1,259,820	1,079,476	687,018
GARFIELD	GARBER	24,603	25,209	17,561	16,922	15,642	14,975	33,188	45,170	55,262	59,743	51,236	33,491
GARFIELD	KREMLIN-HILLSDALE	18,909	18,754	13,775	14,789	14,085	14,640	29,342	39,359	43,994	50,408	42,123	28,127
GARFIELD	PIONEER-PLEASANT VALE	38,923	41,327	29,042	30,823	27,137	25,505	50,269	71,785	80,493	88,362	75,817	52,056
GARFIELD	WAUKOMIS	25,005	24,055	16,896	17,996	16,039	15,138	30,344	46,995	58,525	66,917	61,543	35,445
GARVIN	ELMORE CITY-PERNELL	259,065	267,755	220,778	252,936	311,248	210,058	273,734	305,144	188,712	237,108	304,806	257,228
GARVIN	LINDSAY	578,708	599,976	486,410	566,764	708,741	510,030	646,313	738,902	481,845	579,571	719,895	603,845
GARVIN	MAYSVILLE	230,695	231,806	167,905	203,866	248,619	162,528	204,481	223,155	139,153	158,749	194,346	193,461
GARVIN	PAOLI	137,011	141,368	107,319	124,810	158,741	104,215	134,576	158,755	98,226	116,467	155,450	129,993
GARVIN	PAULS VALLEY	675,187	715,778	566,379	648,758	792,965	544,340	707,136	789,607	506,609	622,294	763,632	665,750
GARVIN	STRATFORD	288,537	298,269	248,625	298,772	381,492	280,373	364,983	418,404	273,360	331,737	410,904	330,692
GARVIN	WHITEBEAD	0	0	0	0	0	0	0	0	0	0	0	0
GARVIN	WYNNEWOOD	335,592	350,657	259,532	312,020	407,717	286,582	383,988	427,803	270,458	328,047	408,925	343,573
GRADY	ALEX	221,109	201,234	120,563	126,653	114,230	84,161	125,507	164,361	141,042	182,420	308,923	156,909
GRADY	AMBER-POCASSET	255,530	244,220	149,484	163,294	161,380	137,234	195,029	257,155	223,193	274,681	478,022	228,369
GRADY	BRIDGE CREEK	695,548	683,141	424,315	486,824	470,411	401,159	586,042	753,462	681,203	871,120	1,552,787	691,046
GRADY	CHICKASHA	1,445,525	1,320,172	817,976	885,531	835,769	686,697	990,323	1,254,293	1,109,739	1,379,966	2,302,247	1,158,271
GRADY	FRIEND	0	0	0	0	0	0	0	0	0	0	0	0

Figure 36. (Cont.) Gross Production Tax Distribution by County/District

County	District Name	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	10-year Average
GRADY	MIDDLEBERG	0	0	0	0	0	0	0	0	0	0	0	0
GRADY	MINCO	308,304	290,324	177,116	197,830	194,639	165,978	231,409	307,952	268,206	328,151	577,413	273,902
GRADY	NINNEKAH	262,808	244,586	149,901	179,098	180,048	145,356	204,357	274,353	249,287	312,401	522,423	246,181
GRADY	PIONEER	0	0	0	0	0	0	0	0	0	0	0	0
GRADY	RUSH SPRINGS	336,331	321,454	193,837	211,056	205,526	171,362	241,613	308,372	259,469	329,930	530,737	277,336
GRADY	TUTTLE	900,150	879,985	548,548	616,954	601,155	509,442	723,587	932,217	840,941	1,076,910	1,882,956	861,269
GRADY	VERDEN	183,609	171,347	94,615	94,713	94,414	79,876	108,098	132,579	120,281	155,898	261,859	131,368
GRANT	DEER CREEK-LAMONT	134,018	117,219	95,975	116,277	126,184	232,550	459,856	524,299	250,133	193,062	151,186	226,674
GRANT	MEDFORD	153,246	132,420	112,005	134,929	199,197	340,906	763,590	885,819	391,832	293,665	239,222	349,358
GRANT	POND CREEK-HUNTER	199,113	163,194	141,195	171,330	194,248	367,273	807,097	1,002,050	483,731	372,694	282,436	398,525
GRANT	WAKITA	49,520	40,315	38,579	42,226	0	0	0	0	0	0	0	12,112
GREER	GRANITE	1,378	2,012	1,053	536	462	549	502	397	287	235	596	663
GREER	MANGUM	3,635	5,465	2,906	1,448	1,294	1,480	1,380	1,022	702	628	1,696	1,802
HARMON	HOLLIS	3,151	5,888	1,662	2,610	2,970	1,603	1,517	1,329	568	483	751	1,938
HARPER	BUFFALO	345,156	293,351	215,340	227,917	263,746	236,799	218,472	168,222	111,546	78,626	89,288	190,331
HARPER	LAVERNE	602,329	532,702	362,557	364,953	438,364	394,191	349,875	261,142	192,847	141,286	151,520	318,944
HASKELL	KEOTA	234,213	200,498	86,615	65,141	44,867	27,710	31,083	22,711	11,664	23,091	20,296	53,368
HASKELL	KINTA	90,963	87,058	39,245	30,322	23,415	13,745	14,013	10,284	5,435	10,659	9,575	24,375
HASKELL	MCCURTAIN	154,428	125,507	51,374	38,428	26,121	15,930	16,147	12,933	6,419	11,872	11,402	31,613
HASKELL	STIGLER	685,873	595,900	268,860	201,625	144,854	87,140	92,591	71,879	37,864	70,028	67,799	163,854
HASKELL	WHITEFIELD	254	118	0	0	0	0	0	0	0	0	0	12
HUGHES	CALVIN	53,138	81,743	83,880	111,081	112,195	55,983	59,590	51,500	56,255	68,879	89,685	77,079
HUGHES	HOLDENVILLE	322,612	507,992	549,505	775,282	668,658	362,853	411,447	334,797	345,490	495,166	639,290	509,048
HUGHES	MOSS	78,738	129,108	129,475	200,485	174,118	88,231	96,582	83,802	95,286	123,466	165,728	128,628
HUGHES	STUART	89,038	134,698	141,975	191,508	158,391	93,591	100,834	81,758	92,757	125,699	155,785	127,700
HUGHES	WETUMKA	121,428	196,737	210,620	322,244	294,791	163,811	180,767	150,100	152,390	207,061	261,784	214,031
JACKSON	ALTUS	30,729	28,356	28,283	58,683	32,779	27,415	94,148	81,518	47,582	25,741	32,221	45,673
JACKSON	BLAIR	2,216	1,981	1,978	2,962	2,639	2,149	7,951	6,600	3,981	2,202	2,770	3,521
JACKSON	DUKE	1,576	1,412	1,309	1,951	1,599	1,447	5,090	4,193	2,655	1,376	1,717	2,275
JACKSON	NAVAJO	3,636	3,543	3,588	5,046	4,215	3,334	11,030	9,968	6,308	3,563	5,073	5,567
JACKSON	OLUSTEE-ELDORADO	0	0	0	0	0	0	0	0	0	0	0	0
JEFFERSON	RINGLING	69,808	67,370	59,610	80,792	97,678	71,334	99,723	49,315	8,532	13,272	15,826	56,345
JEFFERSON	RYAN	35,892	35,366	31,086	36,350	60,820	41,610	59,551	30,434	5,326	7,750	8,401	31,669
JEFFERSON	TERRAL	0	0	0	83	0	0	0	0	0	0	0	8
JEFFERSON	WAURIKA	60,598	59,429	56,215	65,814	99,803	67,308	97,156	44,609	8,162	12,609	14,927	52,603
JOHNSTON	COLEMAN	1,427	2,743	11,065	13,336	28,019	22,021	33,126	38,893	35,986	26,328	27,414	23,893
JOHNSTON	MANNSVILLE	0	0	0	0	0	0	0	0	0	0	0	0
JOHNSTON	MILBURN	1,548	2,537	11,093	13,366	26,670	19,794	31,318	40,572	32,960	29,984	32,179	24,047
JOHNSTON	MILL CREEK	1,052	1,897	8,737	10,744	20,696	14,417	22,376	30,113	28,557	24,456	28,148	19,014
JOHNSTON	RAVIA	0	0	0	0	0	0	0	0	0	0	0	0
JOHNSTON	TISHOMINGO	6,518	12,411	50,184	60,102	123,776	93,984	153,210	196,523	173,114	138,244	154,309	115,586
JOHNSTON	WAPANUCKA	1,702	3,057	13,125	15,503	31,158	22,425	38,355	48,739	44,426	36,788	42,568	29,614
KAY	BLACKWELL	88,634	101,027	98,165	129,011	163,044	116,178	162,131	182,009	140,975	83,808	75,062	125,141
KAY	BRAMAN (Consolidated)	0	0	0	0	934	0	0	0	0	0	0	93

Figure 36. (Cont.) Gross Production Tax Distribution by County/District

County	District Name	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	10-year Average
KAY	KILDARE	0	0	0	0	0	0	0	0	0	0	0	0
KAY	NEWKIRK	40,829	46,205	46,519	49,794	83,652	66,842	95,781	110,189	88,014	52,428	48,503	68,793
KAY	PECKHAM	0	0	0	0	0	0	0	0	0	0	0	0
KAY	PONCA CITY	286,034	326,835	321,095	411,152	549,320	410,166	584,005	663,490	522,852	313,621	283,596	438,613
KAY	TONKAWA	46,325	52,101	51,784	64,548	82,668	59,634	81,882	91,477	73,602	44,633	43,591	64,592
KINGFISHER	CASHION	206,857	233,904	149,469	176,979	182,506	126,148	166,555	268,318	261,753	595,211	1,346,823	350,767
KINGFISHER	DOVER	105,161	112,021	72,645	79,991	77,474	57,611	66,091	100,722	92,382	197,970	401,227	125,813
KINGFISHER	HENNESSEY	343,323	375,712	241,075	280,808	277,043	215,733	289,496	467,583	471,463	1,059,249	2,344,552	602,271
KINGFISHER	KINGFISHER	509,110	551,731	360,407	426,815	450,769	360,307	492,967	748,585	746,100	1,692,524	3,842,242	967,245
KINGFISHER	LOMEGA	80,499	93,324	62,477	75,403	77,629	57,265	76,647	124,977	124,927	303,429	644,730	164,081
KINGFISHER	OKARCHE	111,171	131,797	86,272	105,794	108,064	75,765	98,952	164,225	174,532	407,946	965,935	231,928
KIOWA	HOBART	41,663	40,805	50,473	34,245	32,495	17,677	16,665	12,770	10,259	9,696	14,118	23,920
KIOWA	LONE WOLF	5,554	5,154	6,954	4,258	3,858	1,776	1,678	1,462	1,025	1,462	2,143	2,977
KIOWA	MOUNTAIN VIEW-GOTEBO	13,734	12,787	14,449	10,380	9,402	5,609	5,340	3,917	3,069	2,987	4,247	7,219
KIOWA	SNYDER	26,392	26,183	32,158	22,011	21,025	11,153	10,086	6,795	5,306	5,324	7,707	14,775
LATIMER	BUFFALO VALLEY	532,438	452,366	246,733	194,450	121,378	87,226	89,152	36,236	27,253	43,365	53,150	135,131
LATIMER	PANOLA	839,497	731,568	379,800	302,109	169,070	115,658	105,506	40,727	27,785	46,504	52,074	197,080
LATIMER	RED OAK	592,388	541,728	289,849	259,171	162,302	120,737	121,386	50,751	47,582	88,504	110,179	179,219
LATIMER	WILBURTON	2,972,318	2,507,963	1,375,074	1,126,836	681,959	478,896	457,291	184,100	161,015	274,187	304,412	755,173
LE FLORE	ARKOMA	42,436	49,541	22,301	19,021	13,127	9,193	11,082	6,831	3,379	7,391	8,320	15,019
LE FLORE	BOKOSHE	30,690	33,298	15,310	12,356	7,768	4,899	5,972	3,438	1,740	4,054	4,309	9,314
LE FLORE	CAMERON	50,651	53,457	25,817	20,222	12,980	7,563	8,646	5,347	2,300	5,062	6,059	14,745
LE FLORE	FANSHAWE	0	0	0	0	0	0	0	0	0	0	0	0
LE FLORE	HEAVENER	112,172	129,290	67,832	59,812	40,513	25,561	30,230	18,918	8,738	19,783	20,896	42,157
LE FLORE	HODGEN	0	0	0	0	0	0	0	0	0	0	0	0
LE FLORE	HOWE	52,728	60,768	30,467	24,472	18,426	12,696	13,945	8,949	4,642	11,088	11,907	19,736
LE FLORE	LE FLORE	30,114	31,655	14,019	12,125	7,880	5,256	6,303	3,816	1,737	4,283	4,501	9,157
LE FLORE	MONROE	0	0	0	0	0	0	0	0	0	0	0	0
LE FLORE	PANAMA	88,753	98,566	49,868	41,412	25,762	16,450	19,280	12,690	6,034	13,940	14,580	29,858
LE FLORE	POCOLA	115,701	117,011	56,886	47,908	30,834	20,859	22,695	14,416	6,677	15,644	17,252	35,018
LE FLORE	POTEAU	256,579	295,543	147,369	129,365	84,727	57,934	64,765	40,440	19,009	44,028	46,543	92,972
LE FLORE	SHADY POINT	0	0	0	0	0	0	0	0	0	0	0	0
LE FLORE	SPIRO	143,700	161,997	79,786	68,282	43,783	29,405	33,171	19,833	9,078	20,684	21,800	48,782
LE FLORE	TALIHINA	69,735	82,885	44,798	37,312	23,680	15,796	17,636	10,882	4,973	11,338	11,801	26,110
LE FLORE	WHITESBORO	21,960	24,529	13,005	11,130	6,824	4,931	5,460	3,577	1,691	3,768	4,396	7,931
LE FLORE	WISTER	65,929	72,819	38,544	31,936	20,846	13,750	15,696	10,213	4,812	10,339	10,937	22,989
LINCOLN	AGRA	88,786	102,002	70,459	87,981	68,513	50,941	65,977	40,937	37,648	38,360	46,860	60,968
LINCOLN	CARNEY	42,779	52,550	37,390	46,129	33,629	25,171	34,082	20,223	20,310	27,103	36,131	33,272
LINCOLN	CHANDLER	245,639	292,943	200,374	246,532	185,994	131,120	163,567	106,649	109,632	137,646	165,026	173,948
LINCOLN	DAVENPORT	81,081	94,302	64,393	80,837	59,089	41,044	51,718	35,511	34,878	43,975	52,554	55,830
LINCOLN	MEEKER	181,965	213,947	150,151	184,790	143,099	103,965	128,646	79,228	77,910	97,345	120,846	129,993
LINCOLN	PRAGUE	214,927	258,985	186,949	226,658	177,557	127,733	150,845	95,360	97,067	117,277	147,636	158,607
LINCOLN	STROUD	174,966	212,320	152,367	187,229	140,608	102,203	123,814	76,792	74,634	93,978	109,829	127,377
LINCOLN	WELLSTON	142,890	162,966	116,424	140,795	106,138	78,347	97,427	62,799	59,093	73,794	85,257	98,304

Figure 36. (Cont.) Gross Production Tax Distribution by County/District

County	District Name	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	10-year Average
LINCOLN	WHITE ROCK	0	0	0	0	0	0	0	0	0	0	0	0
LOGAN	COYLE	67,821	63,411	39,285	38,684	33,705	37,770	59,266	119,696	95,034	51,456	86,484	62,479
LOGAN	CRESCENT	120,688	104,002	73,535	73,319	61,119	72,099	114,783	273,145	205,781	100,785	155,483	123,405
LOGAN	GUTHRIE	589,176	527,958	335,522	366,495	325,805	376,658	614,402	1,435,606	1,092,243	556,215	870,018	650,092
LOGAN	MULHALL-ORLANDO	44,931	36,785	25,646	27,626	25,025	28,808	46,408	99,894	75,863	39,804	66,234	47,209
LOVE	GREENVILLE	0	0	0	0	0	0	0	0	0	0	0	0
LOVE	MARIETTA	169,749	172,259	126,328	174,216	190,173	206,630	394,549	281,646	220,844	517,902	675,088	295,963
LOVE	THACKERVILLE	52,500	54,068	42,090	56,462	59,015	58,431	111,673	81,298	67,638	167,833	208,471	90,698
LOVE	TURNER	51,245	54,213	40,598	52,500	62,338	69,202	125,368	88,055	68,909	155,209	192,614	90,901
MAJOR	ALINE-CLEO	242,549	254,325	180,198	224,097	216,373	135,219	134,128	120,492	70,402	64,972	97,265	149,747
MAJOR	CIMARRON	448,240	479,629	332,912	381,593	388,563	253,553	266,260	222,166	121,740	108,944	157,386	271,275
MAJOR	FAIRVIEW	1,093,996	1,133,399	788,826	836,594	861,333	565,298	658,658	573,755	334,344	298,354	483,074	653,364
MAJOR	RINGWOOD	611,421	687,873	469,377	510,675	526,230	335,964	367,432	324,741	187,268	169,741	265,214	384,452
MARSHALL	KINGSTON	99,324	123,406	107,098	123,764	176,114	263,576	273,594	317,545	218,028	160,901	200,622	196,465
MARSHALL	MADILL	164,117	197,385	176,409	206,587	284,864	420,091	416,535	473,288	314,341	233,530	291,867	301,490
MAYES	ADAIR	1,356	1,348	1,351	1,104	1,295	212	332	225	117	827	780	759
MAYES	CHOUTEAU-MAZIE	1,383	1,296	1,221	975	1,138	179	272	188	98	689	640	670
MAYES	LOCUST GROVE	2,285	2,183	2,101	1,722	1,985	317	489	311	156	1,129	1,021	1,141
MAYES	OSAGE	0	0	0	0	0	0	0	0	0	0	0	0
MAYES	PRYOR	3,435	3,413	3,328	2,736	3,246	565	849	554	292	2,110	1,912	1,900
MAYES	SALINA	1,182	1,196	1,165	1,819	1,946	184	268	173	90	670	623	813
MAYES	WICKLIFFE	0	0	0	0	0	0	0	0	0	0	0	0
MCCLAIN	BLANCHARD	269,171	254,262	188,479	220,784	246,777	201,168	271,705	210,786	145,282	134,101	263,518	213,686
MCCLAIN	DIBBLE	118,078	114,501	82,174	93,426	97,919	78,409	104,431	78,215	50,616	44,461	83,597	82,775
MCCLAIN	NEWCASTLE	245,934	246,482	184,132	221,244	243,371	194,501	272,906	216,787	150,447	144,360	284,772	215,900
MCCLAIN	PURCELL	249,366	233,090	167,623	192,730	208,964	165,762	217,756	163,654	107,054	98,476	187,592	174,270
MCCLAIN	WASHINGTON	156,837	146,821	106,089	123,810	136,321	108,283	144,336	111,270	75,517	70,146	136,400	115,899
MCCLAIN	WAYNE	80,588	79,685	55,914	67,811	74,650	58,270	76,030	60,577	40,886	36,597	69,157	61,958
MCCURTAIN	BATTIEST	0	3	0	0	0	0	0	0	0	0	0	0
MCCURTAIN	BROKEN BOW	0	21	0	0	0	0	0	0	0	0	0	2
MCCURTAIN	DENISON	0	0	0	0	0	0	0	0	0	0	0	0
MCCURTAIN	EAGLETOWN	0	3	0	0	0	0	0	0	0	0	0	0
MCCURTAIN	FOREST GROVE	0	0	0	0	0	0	0	0	0	0	0	0
MCCURTAIN	GLOVER	0	0	0	0	0	0	0	0	0	0	0	0
MCCURTAIN	HAWORTH	0	7	0	0	0	0	0	0	0	0	0	1
MCCURTAIN	HOLLY CREEK	0	0	0	0	0	0	0	0	0	0	0	0
MCCURTAIN	IDABEL	0	17	0	0	0	0	0	0	0	0	0	2
MCCURTAIN	LUKFATA	0	0	0	0	0	0	0	0	0	0	0	0
MCCURTAIN	SMITHVILLE	0	4	0	0	0	0	0	0	0	0	0	0
MCCURTAIN	VALLIANT	0	13	0	0	0	0	0	0	0	0	0	1
MCCURTAIN	WRIGHT CITY	0	6	0	0	0	0	0	0	0	0	0	1
MCINTOSH	CHECOTAH	121,668	132,077	63,152	57,602	38,889	20,013	17,879	13,587	7,673	13,184	11,511	37,557
MCINTOSH	EUFULA	96,827	108,601	54,860	47,598	33,095	15,663	13,885	10,526	5,940	10,036	9,049	30,925
MCINTOSH	HANNA	8,289	9,062	3,820	8,042	6,542	3,669	3,203	2,025	521	899	703	3,848

Figure 36. (Cont.) Gross Production Tax Distribution by County/District

County	District Name	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	10-year Average
MCINTOSH	MIDWAY	21,644	22,233	9,948	7,730	5,876	2,856	2,693	2,247	1,084	2,064	1,822	5,855
MCINTOSH	RYAL	0	0	0	0	0	0	0	0	0	0	0	0
MCINTOSH	STIDHAM	0	0	0	0	0	0	0	0	0	0	0	0
MURRAY	DAVIS	44,581	43,813	48,156	70,207	65,988	65,433	59,522	40,823	17,337	20,461	26,217	45,796
MURRAY	SULPHUR	67,095	65,678	70,352	99,030	89,762	88,817	82,747	57,555	25,293	29,859	34,670	64,376
MUSKOGEE	BOYNTON-MOTON	353	311	243	240	0	0	0	0	0	0	0	79
MUSKOGEE	BRAGGS	585	653	532	648	438	483	457	359	137	206	293	421
MUSKOGEE	FORT GIBSON	4,825	5,194	4,470	5,367	3,881	4,580	4,559	3,786	1,411	2,079	2,993	3,832
MUSKOGEE	HASKELL	2,369	2,550	2,192	2,582	1,890	2,165	2,121	1,694	609	928	1,381	1,811
MUSKOGEE	HILLDALE	4,626	4,926	4,379	5,257	3,796	4,449	4,457	3,729	1,409	2,107	3,031	3,754
MUSKOGEE	MUSKOGEE	16,451	15,925	15,773	18,329	13,213	15,222	15,130	11,665	4,526	7,438	9,129	12,635
MUSKOGEE	OKTAHA	1,746	1,948	1,659	2,128	1,552	1,835	1,916	1,543	570	821	1,227	1,520
MUSKOGEE	PORUM	1,335	1,477	1,257	1,513	1,088	1,207	1,185	984	376	567	805	1,046
MUSKOGEE	WAINWRIGHT	0	0	0	0	0	0	0	0	0	0	0	0
MUSKOGEE	WARNER	1,688	1,923	1,656	2,059	1,539	1,801	1,768	1,483	574	890	1,321	1,501
MUSKOGEE	WEBBERS FALLS	725	763	623	774	593	702	694	536	199	321	441	565
NOBLE	BILLINGS	37,378	41,234	29,766	36,921	31,498	20,783	33,490	35,229	26,629	13,633	16,429	28,561
NOBLE	FRONTIER	120,098	147,267	105,860	113,639	107,428	85,328	167,782	200,069	154,068	68,493	82,362	123,230
NOBLE	MORRISON	156,342	200,367	159,510	192,759	181,439	144,211	262,735	304,506	219,029	102,978	133,738	190,127
NOBLE	PERRY	365,608	450,779	340,987	398,401	379,548	291,048	546,952	642,166	478,528	206,063	251,229	398,570
NOWATA	NOWATA	147,207	146,931	77,493	65,560	93,089	56,113	76,943	30,518	25,273	32,490	25,943	63,035
NOWATA	OKLAHOMA UNION	88,165	90,700	48,465	34,790	62,904	37,127	53,583	20,961	18,237	23,399	19,592	40,976
NOWATA	SOUTH COFFEYVILLE	39,469	42,917	21,064	14,272	26,222	15,080	20,930	8,899	7,119	9,434	7,570	17,351
OKFUSKEE	BEARDEN	0	0	0	0	0	0	0	0	0	0	0	0
OKFUSKEE	BOLEY	5,147	575	0	0	0	0	0	0	0	0	0	57
OKFUSKEE	GRAHAM-DUSTIN	0	0	0	0	0	0	160,465	173,153	23,241	16,410	17,096	39,037
OKFUSKEE	MASON	27,301	30,285	22,597	29,501	19,136	19,717	20,653	17,645	23,854	24,321	25,252	23,296
OKFUSKEE	OKEMAH	98,895	112,801	90,394	130,185	80,633	71,577	63,900	54,592	76,810	73,956	76,148	83,100
OKFUSKEE	PADEN	29,807	33,367	23,639	32,344	21,661	19,752	18,931	16,780	21,521	22,660	24,015	23,467
OKFUSKEE	WELEETKA	50,719	56,613	42,660	58,335	37,678	34,380	29,514	26,090	36,488	36,795	38,819	39,737
OKLAHOMA	(ILC) POOLED INVESTMENT	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	ASTEC CHARTERS	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	BETHANY	18,218	18,971	17,335	22,502	18,217	21,912	17,686	16,876	9,776	10,434	11,852	16,556
OKLAHOMA	CHOCTAW-NICOMA PARK	56,912	60,719	53,771	69,865	56,239	77,766	78,471	76,110	32,888	33,552	38,722	57,810
OKLAHOMA	CROOKED OAK	12,328	13,130	11,349	14,858	11,774	14,126	11,882	11,013	6,511	7,413	8,084	11,014
OKLAHOMA	CRUTCHO	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	DEER CREEK	34,755	39,339	37,476	50,505	41,375	55,684	48,302	50,075	30,776	34,440	40,721	42,869
OKLAHOMA	EDMOND	235,151	248,296	224,389	294,519	236,684	287,168	236,422	226,758	133,152	144,365	166,821	219,857
OKLAHOMA	EPIC BLENDED LEARNING CHARTER	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	EPIC ONE ON ONE CHARTER SCHOOL	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	HARRAH	27,642	28,644	25,235	31,645	24,628	28,218	22,504	20,712	11,815	12,773	14,976	22,115
OKLAHOMA	INSIGHT SCHOOL OF OKLAHOMA	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	JOHN W REX CHARTER ELEMENTARY	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	JONES	12,797	13,790	12,269	16,276	12,898	15,248	12,025	11,218	6,285	6,789	7,773	11,457

Figure 36. (Cont.) Gross Production Tax Distribution by County/District

County	District Name	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	10-year Average
OKLAHOMA	LUTHER	9,800	9,578	16,190	11,899	9,685	11,116	9,228	9,179	5,267	5,241	5,378	9,276
OKLAHOMA	MIDWEST CITY-DEL CITY	171,321	179,965	158,302	202,113	160,774	188,441	152,195	141,847	82,279	86,264	96,208	144,839
OKLAHOMA	MILLWOOD	12,335	12,873	11,087	13,973	11,654	13,605	9,447	10,032	5,577	5,401	5,866	9,951
OKLAHOMA	OAKDALE	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	OKC CHARTER SANTA FE SOUTH	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	OKC CHARTER: DOVE SCIENCE ACAD	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	OKC CHARTER: HARDING CHARTER	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	OKC CHARTER: HARDING FINE ARTS	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	OKC CHARTER: HUPFELD/W VILLAGE	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	OKC CHARTER: INDEPENDENCE MS	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	OKC CHARTER: KIPP REACH COLL.	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	OKC CHARTER: SEEWORTH ACADEMY	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	OKLAHOMA CITY	465,433	488,737	441,445	589,555	521,416	505,764	461,756	444,176	260,004	278,520	314,769	430,614
OKLAHOMA	OKLAHOMA CONNECTIONS ACADEMY	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	OKLAHOMA VIRTUAL CHARTER ACAD	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	OKLAHOMA YOUTH ACADEMY	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	PUTNAM CITY	219,937	227,559	201,661	257,800	206,784	246,295	200,119	189,167	108,953	115,377	131,286	188,500
OKLAHOMA	WESTERN HEIGHTS	37,972	40,227	36,672	48,036	39,240	47,542	38,222	36,154	21,041	21,835	23,397	35,237
OKMULGEE	BEGGS	34,098	38,935	34,268	41,733	29,609	31,398	31,682	29,962	14,655	15,049	18,932	28,622
OKMULGEE	DEWAR	13,103	15,118	13,355	16,709	10,673	11,218	11,445	10,026	5,065	5,448	7,136	10,619
OKMULGEE	HENRYETTA	37,946	43,158	36,719	43,694	31,005	32,962	32,986	32,183	15,455	16,337	20,859	30,536
OKMULGEE	MORRIS	31,654	34,623	28,736	34,553	24,263	26,660	27,266	27,237	13,273	14,063	18,270	24,894
OKMULGEE	OKMULGEE	54,242	57,889	48,061	56,466	39,636	39,922	40,350	38,795	18,937	19,754	24,568	38,438
OKMULGEE	PRESTON	16,877	20,181	16,906	20,124	14,809	15,330	14,237	13,335	7,184	7,914	9,545	13,957
OKMULGEE	SCHULTER	6,456	6,597	5,425	6,103	4,317	4,872	4,507	3,669	1,768	1,880	2,283	4,142
OKMULGEE	TWIN HILLS	0	0	0	0	0	0	0	0	0	0	0	0
OKMULGEE	WILSON	197,142	206,992	183,002	216,784	270,170	216,230	316,759	281,120	200,036	134,113	155,558	218,076
OSAGE	(ILC) OSAGE COUNTY	0	0	0	0	0	0	0	0	0	0	0	0
OSAGE	ANDERSON	0	0	0	0	0	0	0	0	0	0	0	0
OSAGE	AVANT	0	0	0	0	0	0	0	0	0	0	0	0
OSAGE	BARNSDALL	140,859	164,332	171,399	168,461	285,783	161,104	217,162	114,767	62,908	106,329	106,448	155,869
OSAGE	BOWRING	0	0	0	0	0	0	0	0	0	0	0	0
OSAGE	HOMINY	187,708	228,393	243,187	241,767	332,405	227,620	297,738	148,645	84,802	145,934	151,644	210,213
OSAGE	MCCORD	0	0	0	0	0	0	0	0	0	0	0	0
OSAGE	OSAGE HILLS	0	0	0	0	0	0	0	0	0	0	0	0
OSAGE	PAWHUSKA	285,146	467,902	413,781	407,672	604,651	422,032	560,251	343,685	196,425	231,061	235,096	388,256
OSAGE	PRUE	105,982	164,915	153,322	145,655	201,565	151,141	189,180	127,423	75,444	90,597	98,140	139,738
OSAGE	SHIDLER	72,952	83,023	113,375	95,430	142,850	89,923	126,522	59,375	36,181	58,733	62,892	86,830
OSAGE	WOODLAND	146,815	152,493	170,950	164,084	231,918	158,850	217,252	104,489	63,576	109,423	111,215	148,425
OSAGE	WYNONA	46,898	55,384	54,172	52,197	123,018	107,486	66,810	28,858	17,069	28,917	31,243	56,515
OTTAWA	AFTON	0	0	0	0	0	0	0	0	0	0	0	0
OTTAWA	COMMERCE	0	0	0	0	0	0	0	0	0	0	0	0
OTTAWA	FAIRLAND	0	0	0	0	0	0	0	0	0	0	0	0
OTTAWA	MIAMI	0	0	0	0	0	0	0	0	0	0	0	0

Figure 36. (Cont.) Gross Production Tax Distribution by County/District

County	District Name	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	10-year Average
OTTAWA	QUAPAW	0	0	0	0	0	0	0	0	0	0	0	0
OTTAWA	TURKEY FORD	0	0	0	0	0	0	0	0	0	0	0	0
OTTAWA	WYANDOTTE	0	0	0	0	0	0	0	0	0	0	0	0
PAWNEE	CLEVELAND	130,493	140,936	136,351	160,738	183,321	206,169	302,307	247,373	113,796	120,355	114,047	172,539
PAWNEE	JENNINGS	0	0	0	0	0	0	0	0	0	0	0	0
PAWNEE	PAWNEE	55,071	59,725	57,222	67,124	77,757	86,287	133,516	118,382	52,922	52,744	48,583	75,426
PAYNE	(ILC) FIVE-STAR	0	0	0	0	0	0	0	0	0	0	0	0
PAYNE	CUSHING	85,480	82,015	62,551	71,932	59,922	76,045	128,886	266,698	203,117	129,247	170,887	125,130
PAYNE	GLENCOE	17,111	14,928	12,430	13,706	11,047	13,822	24,298	50,519	38,892	25,531	31,131	23,630
PAYNE	OAK GROVE	0	0	0	0	0	0	0	0	0	0	0	0
PAYNE	PERKINS-TRYON	63,160	61,278	48,096	57,931	48,676	60,270	104,856	215,874	168,895	108,477	141,793	101,615
PAYNE	RIPLEY	21,754	20,721	16,329	19,384	16,649	20,382	33,866	68,406	51,942	33,622	43,850	32,515
PAYNE	STILLWATER	255,218	248,310	192,821	231,898	193,671	246,697	424,725	888,725	691,259	443,097	580,933	414,214
PAYNE	YALE	25,820	24,921	19,119	22,425	17,106	19,564	33,317	68,918	49,735	30,521	39,591	32,522
PITTSBURG	CANADIAN	178,786	179,543	115,158	126,527	128,285	104,520	140,335	116,058	73,653	100,101	126,906	121,109
PITTSBURG	CARLTON LANDING ACADEMY	0	0	0	0	0	0	0	0	0	0	0	0
PITTSBURG	CROWDER	178,251	189,168	110,265	131,633	135,231	116,794	149,626	116,098	75,741	102,740	105,633	123,293
PITTSBURG	FRINK-CHAMBERS	0	0	0	0	0	0	0	0	0	0	0	0
PITTSBURG	HAILEYVILLE	198,076	192,128	126,775	130,117	118,771	94,632	115,149	88,315	58,423	76,628	75,928	107,687
PITTSBURG	HARTSHORNE	303,361	332,793	217,184	229,297	234,424	204,050	231,041	183,839	127,482	168,769	191,361	212,024
PITTSBURG	HAYWOOD	0	0	0	0	0	0	0	0	0	0	0	0
PITTSBURG	INDIANOLA	138,253	128,186	79,386	75,920	73,097	57,435	70,925	56,948	35,689	48,196	55,983	68,176
PITTSBURG	KIOWA	122,279	120,205	78,204	80,557	81,603	68,421	98,078	76,307	50,106	68,195	76,899	79,857
PITTSBURG	KREBS	0	0	0	0	362	0	0	0	0	0	0	36
PITTSBURG	MCALESTER	1,119,489	1,154,945	767,883	806,830	828,020	724,479	919,802	720,558	490,927	653,650	719,190	778,628
PITTSBURG	PITTSBURG	64,419	66,367	84,923	41,823	74,182	40,581	43,704	34,753	22,856	34,208	35,370	47,877
PITTSBURG	QUINTON	209,735	213,494	145,777	154,537	157,084	140,336	170,794	122,494	77,463	103,202	115,508	140,069
PITTSBURG	SAVANNA	173,874	172,596	102,631	113,335	114,472	93,946	109,411	95,572	61,437	80,068	93,304	103,677
PITTSBURG	TANNEHILL	0	0	0	0	0	0	0	0	0	0	0	0
PONTOTOC	ADA	380,252	411,750	323,198	466,672	200,513	680,106	491,473	516,053	263,491	187,949	242,690	378,390
PONTOTOC	ALLEN	63,657	67,527	52,558	74,503	33,078	110,470	83,911	89,809	47,197	35,514	47,623	64,219
PONTOTOC	BYNG	242,345	255,018	212,882	299,161	132,142	450,435	334,591	343,957	173,070	127,207	165,924	249,439
PONTOTOC	LATTA	101,088	112,914	91,131	123,020	54,986	203,009	159,167	172,171	83,956	62,227	79,614	114,219
PONTOTOC	ROFF	45,482	47,931	38,962	59,430	25,468	83,381	63,844	69,445	33,685	23,129	30,078	47,535
PONTOTOC	STONEWALL	56,884	62,785	50,681	70,910	32,787	108,493	81,360	85,796	44,902	34,312	43,216	61,524
PONTOTOC	VANOSS	74,240	78,485	64,662	95,515	47,025	144,721	99,522	101,627	52,172	39,598	51,779	77,510
POTTAWATOMIE	ASHER	22,122	18,599	12,477	16,506	11,494	19,661	16,629	17,699	9,399	6,472	9,253	13,819
POTTAWATOMIE	BETHEL	124,863	117,837	76,215	97,948	61,658	109,336	90,423	87,672	47,316	34,342	44,562	76,731
POTTAWATOMIE	DALE	67,518	63,580	41,296	53,303	31,201	55,356	46,668	47,630	26,666	19,640	26,397	41,174
POTTAWATOMIE	EARLSBORO	23,362	20,088	13,058	16,859	11,212	18,107	15,036	15,033	8,516	6,399	8,948	13,326
POTTAWATOMIE	GROVE	0	0	0	0	0	0	18	73	41	0	167	30
POTTAWATOMIE	MACOMB	33,260	30,579	19,730	27,263	17,148	29,412	21,598	21,109	10,235	7,309	9,001	19,338
POTTAWATOMIE	MAUD	30,861	27,829	18,181	24,123	13,371	25,674	21,131	21,661	11,700	8,092	10,098	18,186
POTTAWATOMIE	MCCLOUD	165,582	153,149	100,396	131,761	80,386	145,774	117,946	120,106	64,963	46,597	59,310	102,039

Figure 36. (Cont.) Gross Production Tax Distribution by County/District

County	District Name	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	10-year Average
POTTAWATOMIE	NORTH ROCK CREEK	0	0	0	0	0	0	0	0	0	0	0	0
POTTAWATOMIE	PLEASANT GROVE	0	0	0	0	0	0	0	0	0	0	0	0
POTTAWATOMIE	SHAWNEE	360,693	334,071	217,181	287,376	177,946	320,307	262,922	264,274	138,925	96,401	127,342	222,674
POTTAWATOMIE	SOUTH ROCK CREEK	0	0	0	0	0	0	0	0	0	0	0	0
POTTAWATOMIE	TECUMSEH	213,757	200,479	125,819	163,277	100,094	175,304	143,326	148,736	79,734	55,949	71,728	126,445
POTTAWATOMIE	WANETTE	21,955	19,776	12,392	15,302	10,390	16,735	13,719	13,566	6,638	4,468	5,115	11,810
PUSHMATAHA	ALBION	0	0	0	0	0	0	0	0	0	0	0	0
PUSHMATAHA	ANTLERS	223,983	211,211	77,480	40,250	16,121	25,173	20,366	21,851	9,948	12,923	19,573	45,490
PUSHMATAHA	CLAYTON	68,306	65,952	22,864	11,896	4,042	7,773	6,237	6,580	2,848	3,858	6,016	13,807
PUSHMATAHA	MOYERS	33,275	34,536	11,872	6,470	2,753	4,685	3,859	4,545	2,069	2,728	3,619	7,714
PUSHMATAHA	NASHOBA	0	0	0	0	0	0	0	0	0	0	0	0
PUSHMATAHA	RATTAN	105,090	106,204	38,954	19,487	8,104	12,838	10,296	10,717	4,818	6,545	9,956	22,792
PUSHMATAHA	TUSKAHOMA	0	0	0	0	0	0	0	0	0	0	0	0
ROGER MILLS	CHEYENNE	1,998,060	1,749,676	836,435	719,448	825,803	860,609	1,280,806	1,539,143	918,218	749,671	800,589	1,028,040
ROGER MILLS	HAMMON	1,538,709	1,477,376	699,657	607,084	654,410	684,145	1,005,491	1,129,816	658,432	515,712	545,010	797,713
ROGER MILLS	LEEDEY	1,411,873	1,180,580	532,520	469,196	552,997	562,917	835,085	891,961	555,625	483,859	481,175	654,591
ROGER MILLS	REYDON	737,646	676,833	340,759	311,906	361,051	403,284	511,374	540,407	352,443	258,787	255,047	401,189
ROGER MILLS	SWEETWATER	443,465	528,735	236,510	206,667	224,789	267,581	404,559	549,469	323,729	287,062	301,492	333,059
ROGERS	CATOOSA	11,507	8,253	3,828	4,891	5,861	3,669	4,876	2,233	1,455	1,770	1,719	3,856
ROGERS	CHELSEA	5,300	3,794	1,680	2,275	2,677	1,555	2,155	989	629	785	721	1,726
ROGERS	CLAREMORE	20,875	15,780	7,276	9,483	11,073	6,726	9,245	4,265	2,806	3,410	3,267	7,333
ROGERS	FOYIL	3,661	2,698	1,269	1,557	1,760	1,043	1,402	607	384	447	435	1,160
ROGERS	INOLA	6,722	4,912	2,235	3,288	3,662	2,171	3,021	1,480	968	1,172	1,149	2,406
ROGERS	JUSTUS-TIAWAH	509	0	0	2,781	0	0	0	0	0	0	0	278
ROGERS	OOLOGAH-TALALA	9,236	7,106	3,338	4,306	5,026	3,029	4,138	1,932	1,256	1,538	1,483	3,315
ROGERS	SEQUOYAH	6,988	5,358	2,510	3,277	3,768	2,251	3,008	1,451	950	1,164	1,143	2,488
ROGERS	VERDIGRIS	6,081	4,685	2,202	2,955	3,388	2,036	2,787	1,306	870	1,085	1,087	2,240
SEMINOLE	(ILC) SEMINOLE COUNTY	0	0	0	0	0	0	0	0	0	0	0	0
SEMINOLE	BOWLEGS	92,324	109,670	72,984	96,325	63,447	97,366	81,714	65,549	44,580	39,623	44,697	71,596
SEMINOLE	BUTNER	76,450	85,708	51,650	67,124	40,018	65,947	64,189	56,312	37,109	34,860	42,299	54,522
SEMINOLE	JUSTICE	0	0	0	0	0	0	0	0	0	0	0	0
SEMINOLE	KONAWA	199,417	244,198	162,513	217,156	155,680	220,464	207,594	167,500	110,562	102,335	113,770	170,177
SEMINOLE	NEW LIMA	77,827	94,996	65,681	85,404	56,973	87,343	78,741	66,542	45,126	43,308	50,527	67,464
SEMINOLE	SASAKWA	57,421	76,904	55,023	73,434	49,629	74,557	62,123	47,880	34,061	30,998	32,172	53,678
SEMINOLE	SEMINOLE	436,796	553,008	379,075	516,380	362,977	575,169	530,700	414,347	275,209	251,197	277,682	413,574
SEMINOLE	STROTHER	89,728	117,197	82,982	110,573	78,042	119,999	117,297	104,202	66,069	61,659	72,411	93,043
SEMINOLE	VARNUM	78,469	106,702	64,380	73,451	51,987	95,204	85,655	68,403	46,075	41,683	49,335	68,288
SEMINOLE	WEWOKA	179,676	225,440	159,720	213,497	142,395	229,073	225,701	180,517	120,583	99,678	115,025	171,163
SEQUOYAH	BELFONTE	0	0	0	0	0	0	0	0	0	0	0	0
SEQUOYAH	BRUSHY	0	0	0	0	0	0	0	0	0	0	0	0
SEQUOYAH	CENTRAL	7,194	6,379	4,886	3,489	4,362	1,457	1,240	904	797	1,196	985	2,570
SEQUOYAH	GANS	5,524	5,108	3,801	2,801	2,057	1,120	909	658	638	1,023	854	1,897
SEQUOYAH	GORE	8,138	7,058	2,604	4,152	2,370	1,455	1,236	857	718	1,063	958	2,247
SEQUOYAH	LIBERTY	771	862	729	805	720	996	725	589	317	308	340	639

Figure 36. (Cont.) Gross Production Tax Distribution by County/District

County	District Name	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	10-year Average
SEQUOYAH	MARBLE CITY	0	0	0	0	0	0	0	0	0	0	0	0
SEQUOYAH	MOFFETT	0	0	0	0	0	0	0	0	0	0	0	0
SEQUOYAH	MULDROW	24,356	21,695	15,927	11,970	8,195	4,596	3,795	2,681	2,323	3,584	2,854	7,762
SEQUOYAH	ROLAND	18,111	16,114	11,485	8,193	5,610	3,164	2,666	1,852	1,617	2,425	1,901	5,503
SEQUOYAH	SALLISAW	29,301	26,230	19,434	14,350	10,026	5,665	4,750	3,386	2,956	4,644	3,783	9,522
SEQUOYAH	VIAN	14,420	13,053	9,740	7,050	4,900	2,796	2,403	1,658	1,542	2,265	1,795	4,720
STEPHENS	BRAY-DOYLE	248,755	266,199	166,325	175,287	183,539	119,889	156,110	213,250	176,828	173,738	216,322	184,749
STEPHENS	CENTRAL HIGH	219,743	242,727	154,339	173,639	187,620	119,674	189,461	234,842	208,931	195,648	246,245	195,313
STEPHENS	COMANCHE	600,301	650,655	410,578	442,281	496,410	315,998	485,139	564,310	507,713	490,283	638,833	500,220
STEPHENS	DUNCAN	1,958,511	2,083,259	1,336,941	1,503,759	1,711,106	1,093,600	1,668,919	1,985,018	1,765,284	1,715,726	2,158,124	1,702,174
STEPHENS	EMPIRE	295,317	313,449	188,092	204,637	223,959	141,662	213,696	262,358	229,150	238,955	331,899	234,786
STEPHENS	GRANDVIEW	0	0	0	0	0	0	0	0	0	0	0	0
STEPHENS	MARLOW	720,559	755,336	466,600	508,334	596,588	394,593	603,179	732,763	689,413	676,076	874,547	629,743
STEPHENS	VELMA-ALMA	238,903	252,526	158,177	169,408	196,546	122,463	191,885	240,122	228,840	227,284	283,750	207,100
TEXAS	GOODWELL	160,685	171,256	129,866	136,261	113,677	87,359	77,766	52,241	36,357	60,290	59,052	92,413
TEXAS	GUYMON	2,034,386	2,153,872	1,598,488	1,752,897	1,568,303	1,225,257	1,021,596	682,685	425,328	750,968	749,849	1,192,924
TEXAS	HARDESTY	88,505	89,290	61,757	62,929	47,179	34,258	29,288	22,109	14,184	22,685	23,690	40,737
TEXAS	HOKER	441,614	468,655	351,443	361,891	318,476	252,815	225,939	152,514	96,259	172,801	167,143	256,794
TEXAS	OPTIMA	0	0	0	0	0	0	0	0	0	0	0	0
TEXAS	STRAIGHT	0	0	0	0	0	0	0	0	0	0	0	0
TEXAS	TEXHOMA	222,130	224,246	164,125	184,616	155,966	132,719	103,708	66,990	41,918	64,656	63,623	120,257
TEXAS	TYRONE	194,836	196,918	146,002	156,036	138,434	109,956	94,889	61,269	36,554	60,601	58,170	105,883
TEXAS	YARBROUGH	99,004	102,378	72,969	78,551	67,739	61,170	46,716	31,833	18,820	30,718	31,991	54,288
TILLMAN	DAVIDSON	1,779	2,030	3,634	5,900	8,063	5,396	12,774	9,344	2,797	1,676	0	5,161
TILLMAN	FREDERICK	14,358	15,445	27,695	79,307	60,306	46,641	126,536	102,917	34,061	22,790	27,133	54,283
TILLMAN	GRANDFIELD	4,022	4,474	8,304	12,795	18,652	14,018	37,503	30,566	9,755	6,413	7,293	14,977
TILLMAN	TIPTON	4,814	5,273	10,270	14,517	25,588	19,844	51,197	39,614	12,822	7,416	8,859	19,540
TULSA	BERRYHILL	1,579	1,726	1,528	1,702	1,463	2,002	1,583	1,333	722	711	763	1,353
TULSA	BIXBY	5,440	6,104	5,708	6,439	5,978	8,384	6,776	5,867	3,304	3,413	3,824	5,580
TULSA	BROKEN ARROW	19,763	21,951	19,863	22,346	20,034	27,650	21,250	18,512	10,295	10,423	11,556	18,388
TULSA	COLLINSVILLE	2,902	3,293	3,096	3,525	3,215	4,367	3,310	2,727	1,518	1,518	1,723	2,829
TULSA	DEBORAH BROWN (CHARTER)	0	0	0	0	0	0	0	0	0	0	0	0
TULSA	DOVE SCHOOLS OF TULSA	0	0	0	0	0	0	0	0	0	0	0	0
TULSA	GLENPOOL	2,932	3,229	2,896	3,243	2,855	3,912	2,996	2,602	1,464	1,514	1,670	2,638
TULSA	JENKS	12,324	13,696	12,386	13,850	12,152	17,429	13,534	11,451	6,391	6,500	7,345	11,473
TULSA	KEYSTONE	0	0	0	0	0	0	0	0	0	0	0	0
TULSA	LANGSTON HUGHES ACAD ARTS-TECH	0	0	0	0	0	0	0	0	0	0	0	0
TULSA	LIBERTY	771	862	729	805	720	996	725	589	317	308	340	639
TULSA	OWASSO	10,758	11,876	10,770	12,269	11,032	15,241	11,745	9,682	5,454	5,444	6,045	9,956
TULSA	SAND SPRINGS	6,697	7,284	6,592	7,235	6,109	8,516	6,530	5,442	2,948	2,900	3,153	5,671
TULSA	SANKOFA MIDDLE SCHL (CHARTER)	0	0	0	0	0	0	0	0	0	0	0	0
TULSA	SKIATOOK	3,170	3,438	3,053	3,429	3,051	4,173	3,165	2,598	1,426	1,414	1,545	2,729
TULSA	SPERRY	731,075	643,213	607,388	627,904	831,544	667,699	803,536	289,633	175,826	293,727	301,007	524,148
TULSA	TULSA	51,626	55,376	49,199	54,347	48,929	66,321	50,539	42,071	22,990	22,747	24,866	43,738

Figure 36. (Cont.) Gross Production Tax Distribution by County/District

County	District Name	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	10-year Average
TULSA	TULSA CHARTER: COLLEGE BOUND	0	0	0	0	0	0	0	0	0	0	0	0
TULSA	TULSA CHARTER: COLLEGIATE HALL	0	0	0	0	0	0	0	0	0	0	0	0
TULSA	TULSA CHARTER: HONOR ACADEMY	0	0	0	0	0	0	0	0	0	0	0	0
TULSA	TULSA CHARTER: KIPP TULSA	0	0	0	0	0	0	0	0	0	0	0	0
TULSA	TULSA CHARTER: SCHL ARTS/SCI.	0	0	0	0	0	0	0	0	0	0	0	0
TULSA	TULSA LEGACY CHARTER SCHL INC	0	0	0	0	0	0	0	0	0	0	0	0
TULSA	UNION	18,022	20,028	17,985	20,236	17,877	24,372	18,878	15,947	8,774	8,878	9,672	16,265
WAGONER	COWETA	7,848	10,841	10,811	13,813	16,939	11,904	15,311	16,978	9,086	6,944	6,506	11,913
WAGONER	OKAY	1,262	1,673	1,614	2,012	2,369	1,667	1,953	2,057	1,121	852	842	1,616
WAGONER	PORTER CONSOLIDATED	1,367	1,874	1,746	2,346	2,960	2,064	2,735	2,984	1,517	1,175	1,066	2,047
WAGONER	WAGONER	6,140	8,495	7,951	10,408	12,948	8,658	11,088	12,252	6,385	4,982	4,728	8,790
WASHINGTON	BARTLESVILLE	207,036	226,114	167,193	99,111	192,502	101,727	125,391	47,435	36,354	58,837	55,614	111,028
WASHINGTON	CANEY VALLEY	28,967	29,697	20,846	12,264	24,877	12,998	16,333	5,983	4,635	7,582	7,431	14,265
WASHINGTON	COPAN	11,683	12,141	8,056	4,887	9,154	4,561	14,420	7,060	2,283	2,378	2,240	6,718
WASHINGTON	DEWEY	40,765	44,517	33,680	20,073	39,113	20,899	26,953	9,931	7,532	12,102	11,303	22,610
WASHITA	BURNS FLAT-DILL CITY	846,403	1,076,680	787,977	1,351,371	1,878,492	897,058	836,684	758,414	385,820	299,451	303,554	857,550
WASHITA	CANUTE	372,635	530,741	444,815	831,386	1,232,722	582,364	541,036	502,299	256,061	215,259	225,734	536,242
WASHITA	CORDELL	908,088	1,208,303	884,116	1,719,565	2,213,411	985,186	923,997	875,767	427,991	360,969	367,808	996,711
WASHITA	SENTINEL	395,937	544,687	404,070	673,990	945,357	426,241	428,398	390,703	196,625	168,497	166,286	434,485
WASHITA	WASHITA HEIGHTS	211,663	216,124	120,486	0	0	0	0	0	0	0	0	33,661
WOODS	ALVA	898,301	1,138,085	1,128,780	1,291,557	1,942,963	1,271,109	2,572,076	3,735,639	2,030,610	2,349,039	2,356,914	1,981,677
WOODS	FREEDOM	75,010	106,025	163,932	218,698	168,171	102,734	201,513	326,085	174,265	187,275	169,465	181,816
WOODS	WAYNOKA	249,035	307,228	295,093	327,483	486,134	350,980	686,945	1,058,644	584,018	627,672	568,568	529,277
WOODWARD	FORT SUPPLY	69,640	69,799	43,842	37,239	31,942	18,599	14,843	14,925	10,145	9,797	14,756	26,589
WOODWARD	MOORELAND	262,269	250,512	140,070	129,254	131,452	76,561	62,738	66,729	38,971	36,585	58,238	99,111
WOODWARD	SHARON-MUTUAL	139,185	145,743	79,711	71,827	71,687	44,423	37,872	37,847	22,544	20,810	31,754	56,422
WOODWARD	WOODWARD	1,393,980	1,356,602	735,077	673,432	650,998	405,959	344,573	372,161	226,150	197,570	307,725	527,025

Source: Oklahoma State Department of Education – Oklahoma Cost Accounting System

Total Business Tax Burden

In addition to large severance tax payments, the state's oil and gas cluster is well known for paying significant amounts of state and local taxes across all major tax streams. This section of the report examines the dataset on tax payments by industry maintained by the Bureau of Economic Analysis (BEA) to evaluate the total tax contribution of firms operating within Oklahoma's oil and gas cluster.

BEA Database on Business Taxes. The BEA data collection program for Gross Domestic Product (GDP)²⁷ at the state level provides the most widely used comparative measure of federal, state, and local business taxes paid by industry sector within each state.²⁸ The dataset provides a comprehensive and consistent tabulation of business taxes paid on goods and services produced or imported by firms in 81 NAICS industry sectors at the state level. While data is not available at highly disaggregated industry levels, the dataset captures the tax payments of the major components of the state's oil and gas cluster – primarily the mining, pipeline, and refinery sectors.

The BEA dataset is especially useful for the purposes of this report in calculating the 'business' tax contribution of firms within an industry because it captures all federal, state, and local taxes paid by firms that are deductible for tax purposes. As a result, the dataset captures nearly all taxes paid except corporate income taxes and employer social security contributions.²⁹ It is important to note that the BEA dataset excludes tax payments by households on the compensation of wage and salary workers. Taxes paid on self-employment or proprietors' earnings are likewise excluded.³⁰

Although not broken down into detail by individual type of tax, the dataset is unique in that it divides total state tax payments into the industry sectors making the payments. A comprehensive set of state and local taxes are covered including sales and use taxes, motor fuel, property, severance, motor vehicle, state payroll, and others.³¹ The data is of further value for assessing tax burden in this report because approximately 90% of the taxes are paid to state and local governments, with only about 10% going to federal government (primarily excise taxes and custom duties).

BEA tax estimates for the mining sector are combined with the taxes paid by refineries and pipelines operating in the state. This captures most taxes paid by firms operating in the state's oil and gas cluster.

Based on the BEA dataset, Oklahoma establishments in the oil and gas cluster paid a total of \$2.44 billion in business taxes in 2017, the most recent year available (see Figure 37a). Again, state and local taxes comprise most of the payments with federal payments only a small share. The \$2.44 billion in taxes paid in 2017 is well below the recent peak of more than \$3 billion in 2013 and 2014 but is only slightly below the \$2.61 billion average across the latest decade from 2008 to 2017.

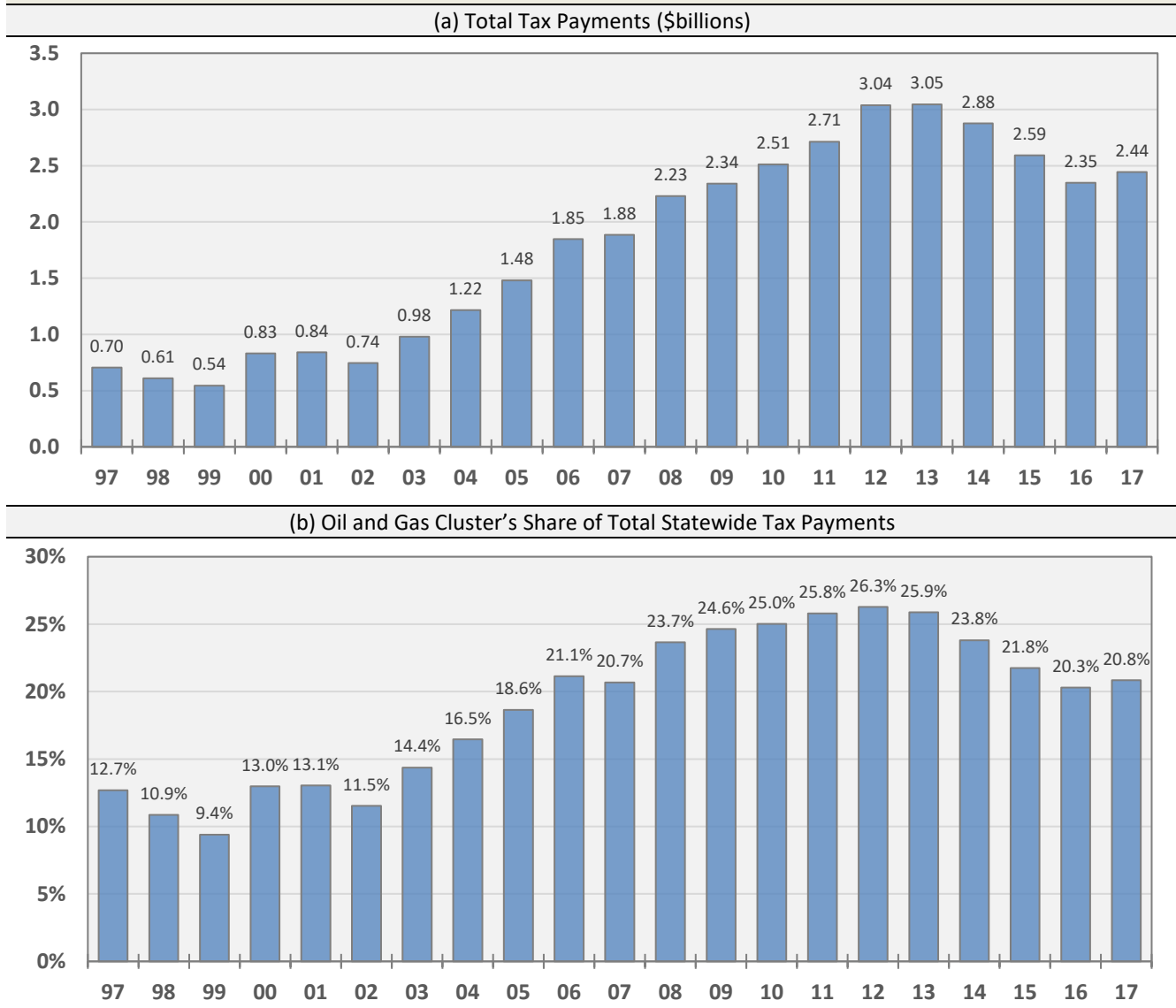
The reemergence of the oil and gas sector beginning in 2003 is highly visible in the tax data. Total business tax payments from firms in the oil and gas cluster in Oklahoma have more than tripled from less than \$750 million annually from 1997 and 2003 to current collections of \$2.44 billion in 2017.

Oil and Gas Cluster Pays a High Share of Total Oklahoma Business Taxes

Firms in the state's oil and gas cluster account for a large share of total business taxes paid by all firms in the state. BEA reports a total of \$11.73 billion in total business taxes paid by firms across all industries in Oklahoma in 2017. This suggests that tax payments by the major components of the state's oil and gas cluster accounted for 20.8% of total business taxes paid statewide in 2017.

This share is down sharply from the recent high of 26.3% in 2012 under elevated energy prices. The 20.8% share in 2017 reflects the first year of recovery following sharply falling shares in both 2015 and 2016 as the oil and gas industry experienced collapsing oil prices.

Figure 37. Federal, State, & Local Tax Payments – Oklahoma Oil and Gas Cluster



Notes: Tax payments include federal, state, and local tax payments on production and imports. Payments are in calendar years.

Source: Bureau of Economic Analysis and RegionTrack calculations

Oil and Gas Cluster vs. Other Major Industries in Oklahoma

The share of total state business taxes paid by firms in the oil and gas cluster is higher than all other major sectors in the state. The mining sector alone accounts for 96% of total cluster tax payments, with pipelines and refineries paying a combined 4% of total cluster taxes.

The oil and gas cluster pays a higher share than the state's two key sales tax conduit sectors, Wholesale Trade (18.5%) and Retail Trade (16.9%), both of which collect and forward significant taxes but produce relatively little GDP (their combined GDP is less than the mining sector).

The share of total statewide business taxes paid is far lower in the state's other key high-tax-share sectors including Finance and Insurance (\$602 million, 5.1% share), Accommodations and Food Service (\$543 million, 4.6% share), Utilities (\$422 million, 3.6% share), Arts, Entertainment, and Recreation (\$264 million, 2.3% share), and Transportation and Warehousing (\$256 million, 2.2% share). Combined, these five high-tax industries paid only \$2.1 billion in total taxes in 2017, or 17.8% of total statewide business taxes paid, far below the 20.8% share paid by the oil and gas cluster.

Figure 38. Federal, State, & Local Tax Payments by Major Sector – Oklahoma (2017)

Industry Sector	(\$millions) Total Taxes	Share of Total
Agriculture, forestry, fishing and hunting	\$166	1.4%
Mining, quarrying, and oil and gas extraction	2,349	20.3%
Utilities	422	3.6%
Construction	62	0.5%
Manufacturing	344	2.9%
Durable goods manufacturing	122	1.0%
Nondurable goods manufacturing	222	1.9%
Petroleum and coal products manufacturing	34	0.3%
Wholesale trade	2,171	18.5%
Retail trade	1,986	16.9%
Transportation and warehousing	256	2.2%
Pipeline transportation	60	0.5%
Information	257	2.2%
Finance and insurance	602	5.1%
Real estate and rental and leasing	1,336	11.4%
Professional, scientific, and technical services	214	1.8%
Management of companies and enterprises	108	0.9%
Administrative and support and waste management	170	1.5%
Educational services	28	0.2%
Health care and social assistance	247	2.1%
Arts, entertainment, and recreation	264	2.3%
Accommodation and food services	543	4.6%
Other services	138	1.2%
All industry total	\$11,727	100.0%

Notes: Major component sectors of the state's oil and gas cluster are highlighted.

Source: Bureau of Economic Analysis and RegionTrack calculations

VII. Endnotes

¹ For an in-depth discussion of the economic role of clusters in regional economic development, see:

<http://www.clustermapping.us/resource/defining-clusters-related-industries>

² For a detailed description of the U.S. Cluster Mapping Project, see: <http://www.clustermapping.us/about>

³ The procedure used to identify clusters is detailed in the following methodology report published by the National Bureau of Economic Research:

<http://www.clustermapping.us/sites/default/files/files/resource/Defining%20Clusters%20of%20Related%20Industries%20-%20NBER%20Working%20Paper%2020375.pdf>

⁴ EIA Short Term Energy Outlook. Release Date: October 8, 2019. <https://www.eia.gov/outlooks/steo/>

⁵ Natural gas is converted to barrels-of-oil-equivalent (BOE) using a ratio of 6 mcf of natural gas per barrel of oil.

⁶ Both royalty percentages and the share of royalties paid to nonresidents are calculated using historical royalty payment rosters provided by several oil and gas operators in Oklahoma. Royalties are deemed paid to a resident if the receiving postal address is in Oklahoma.

⁷ Net exports are measured as state production minus state consumption as defined by EIA in the State Energy Data System (SEDS). Available online at: <http://www.eia.gov/state/seds/>

⁸ For crude oil and liquids pipelines, see: <https://www.eia.gov/todayinenergy/detail.php?id=39672>. For natural gas pipelines, see: <https://www.eia.gov/naturalgas/data.php#pipelines>

⁹ Much of the increased earnings are traced to the conversion of corporate pipeline operating entities to various types of partnerships in recent years. This has shifted income from corporate taxation to treatment as income for individuals.

¹⁰ State-level capital at the industry level is estimated using the approach of Garofalo and Yamarik as described in: Yamarik, Steven, 2013. "State-Level Capital and Investment: Updates and Implications." *Contemporary Economic Policy*, Vol. 31, Issue 1, pp. 62-72; and in Garofalo, Gaspar A. and Steven Yamarik. 2002. "Regional Convergence: Evidence from a New State-by-State Capital Stock Series." *Review of Economics and Statistics*, 84:2, pp.316-323. The approach apportions state-level estimates from national investment data using state level earnings by industry. The regional earnings data at the industry level used to partition the national data contain missing and suppressed values. We estimate the missing values using a large-scale RAS approach. Priors for the estimation process are determined using either disclosed values across the full period or national industry ratios.

¹¹ For additional information on U.S. fixed investment by industry, see the National Income and Product Accounts (NIPA) available online at Bureau of Economic Analysis (www.bea.gov), Table 5.3.5 Private Fixed Investment by Type.

¹² By individual commodity, total spending on construction in Oklahoma is roughly equal in size to capital spending by the oil and gas industry. However, construction expenditures are traced to a variety of industries, as well as the household sector, rather than to just a single industry. Manufacturing is the most capital-intensive industry nationally, with oil and gas second. However, the high concentration of oil and gas in the state tips the balance well in favor of oil and gas in Oklahoma.

¹³ Well completions are tabulated from the W27 file maintained by the Oklahoma Corporation Commission. Only wells drilled within 12 months of completion are counted. Well recompletions are counted only if the well was initially drilled within 12 months of recompletion. Disposal, service, and other non-productive well types are excluded.

¹⁴ RIMS (Regional Input-Output Modeling System) II multipliers are discussed in detail at: <https://apps.bea.gov/regional/rims/rimsii/>. Multipliers used in the report are based on the 2017 regional update of the 2012 U.S. input-output model underlying the RIMS II estimates.

¹⁵ Caution must always be used when using input-output multipliers to assess the total 'contribution' or total economic activity 'supported' by an existing industry or firm. Input-output multipliers are intended to predict the change in economic activity that results from an incremental change in the current state of a regional economy. More specifically, the estimates provided for the oil and gas cluster reflect predictions from the RIMS II input-output model of the incremental impact that would result if cluster GDP expanded incrementally. The actual realized impact is determined by the unique adjustment process that would take place in the state as oil and gas activity changed.

¹⁶ While the input-output approach provides a useful way to measure the extent of the economic interlinkages within a regional economy, the approach is not without shortcomings. The primary criticisms of the approach are misapplication of

the models and the failure of the largely static approach to account for changes in other areas of the economy such as prices, wages, and traded activity. Despite these criticisms, careful application of the models can provide useful estimates of the total gross economic activity attributable to an individual industry, firm, or institution within a region. Input-output analysis is most appropriate when the policy change or stimulus does not alter production patterns, product prices, input prices, wage rates, or cost of capital. It is generally most useful when there are no capital or labor constraints.

¹⁷ The three-step process of matching the components of the cluster to sectors, modeling the individual effects, and then aggregating the individual contributions of the components is often termed analysis-by-parts. It is technically equivalent to modeling the activity as a single entity, but the process can produce more appropriate impact estimates when the activities being modeled do not fit precisely within a single RIMS II industry sector.

¹⁸ We do not attempt to formulate a comprehensive net cost-benefit analysis of the state's oil and gas cluster. There are many relevant components to a net analysis that extend well beyond the direct economic role of the cluster. These include social costs and benefits, alternative uses of state and local funding, alternative options for providing energy in the state, and the deadweight economic loss that can occur in the private sector because of taxpayer funding of services.

¹⁹ Caution must be exercised when using input-output analysis to estimate the total economic activity 'supported' by an existing industry or firm. Input-output multipliers are designed to predict the gross changes in a regional economy resulting from a small, incremental change in its current structure. For an accessible discussion of how multiplier-based estimates of spillover effects are frequently misused and often overstate resulting spillover effects, see Hughes (2018) <https://extension.tennessee.edu/publications/Documents/W644.pdf> and Olfert and Stabler (1994) <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1468-2257.1994.tb00155.x>.

²⁰ We do not construct a counterfactual scenario that represents an alternative comparative view of the state economy that removes the oil and gas cluster and its various interrelationships from the structure of the model. Devising a sound counterfactual analysis that represents a reasonable alternative use to oil and gas presents a considerable modeling challenge. It is not at all clear what the proper counterfactual should be in assessing the economic role of oil and gas production.

²¹ Production quantities for both crude oil and natural gas are based on Energy Information Administration (EIA) estimates. The price of crude oil is based on the state level series of first purchaser prices produced by EIA. The price of natural gas is based on the average spot price reported at major natural gas trading hubs across Oklahoma as provided by NGI. Natural gas pricing data is available as a service from Natural Gas Intelligence (www.naturalgasintel.com). The use of NGI spot prices reflects the general lack of standardized gas pricing data at the state level and widely different pricing methods followed by the producing states. All effective rate calculations are based on the state's fiscal year beginning July 1 of each year. The value of production is similarly tabulated on a matching fiscal year basis in calculating the effective rate.

²² The state's Constitutional Reserve Fund (CRF) is more commonly known as the Rainy Day Fund.

²³ An exception is Wyoming, which has a local ad valorem tax based on the value of production.

²⁴ For detailed revenue and expenditure reports, see: https://sdweb01.sde.ok.gov/OCAS_Reporting/StateReports.aspx. For a summary of current and historical apportionment, see: https://www.ok.gov/tax/Forms_&_Publications/Reports_&_Statistics/Appportionment_Charts_&_Formulas/index.html

²⁵ For the full apportionment rules for gross production tax in Oklahoma, see: <http://www.oscn.net/applications/oscn/deliverdocument.asp?cite=68+O.S.+1004>

²⁶ For a description of the Common Education Technology Revolving Fund, see: <http://www.oscn.net/applications/oscn/DeliverDocument.asp?citeid=456863>

²⁷ For access to the BEA data, see: <https://www.bea.gov/data/gdp/gdp-state>

²⁸ For details on the BEA methodology, see: https://www.bea.gov/sites/default/files/methodologies/0417_GDP_by_State_Methodology.pdf. For detailed coverage of taxes, see: <https://apps.bea.gov/scb/2018/04-april/0418-preview-2018-comprehensive-nipa-update.htm>

²⁹ BEA tracks employer contributions as a component of employee compensation.

³⁰ Taxes paid by wage and salary workers and self-employed proprietors working in the industry are significant as well. See for example: Snead, Mark C. and Amy A. Jones. 2019. "Oklahoma Oil and Gas Activity and Tax Contribution." Oklahoma State Chamber Research Foundation. <https://okresearchfoundation.org/uploads/regiontrack-ok-oil-gas-report-2019-final.pdf>

³¹ Most of the underlying tax estimates are built 'bottom-up' using either special tabulations at the state level, government finance data from the Census Bureau, or IRS tax receipts. The series also nets out any subsidies received by the industry. Totals are controlled to Census Bureau estimates for state and local tax payments received within each state to adjust for payments made within each state.

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