



# A close look at data on oil and gas employment in Louisiana

by Robert Habans and Alexander S. Kolker

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Independent Analysis for Informed Decisions in Southeast Louisiana

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# Table of Contents

	Introduction	5
<b>1</b>	<b>What is an energy job?</b>	<b>6</b>
<b>2</b>	<b>Oil and gas and the big picture on employment in Louisiana</b>	<b>7</b>
<b>3</b>	<b>What the data says about oil and gas jobs</b>	<b>9</b>
	3.1 Oil and gas jobs are concentrated in Louisiana, but the concentration is shifting from upstream to downstream jobs	9
	3.2 Across Louisiana’s metro economies, growth over the last decade has been slow but uneven, partly due to oil and gas	14
	3.3 Louisiana had a construction employment boom in the 2010s. Much of it was linked to downstream oil and gas and localized to a few parishes.	17
	3.4 Oil and gas pays well	19
<b>4</b>	<b>Counting additional employment (or the multiplier effect)</b>	<b>23</b>
<b>5</b>	<b>Summary and conclusion</b>	<b>27</b>
	<b>Appendix</b>	<b>28</b>
	Data sources	28
	Technical limitations of I-O models	29
	<b>Acknowledgments</b>	<b>34</b>

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# Introduction

*How central is the oil and gas industry to Louisiana’s economy, and how has its role changed over time? This brief rounds up data on the oil and gas industries—often considered part of the broader energy sector—with a focus on jobs.*

The data presented tracks key employment trends, highlighting stability and change with respect to Louisiana’s position as an energy state, while illustrating some of the challenges with interpreting the data. The story that emerges tracks how shifts in the energy economy affect the industries that drive investment and job creation, with uneven effects on regional labor markets. While oil and gas remains an important source of attainable, high-paying jobs, it has dwindled in the quantity of jobs it directly employs. However, these industries are also a source of volatility, underscoring the need for economic diversity.

While jobs numbers are informative, they can become a flash point for questions about how vital oil and gas is to the prosperity of Louisiana’s residents and communities, what costs come with continued investment in these industries,

and who benefits. Behind simple employment numbers lie broader discussions about economic development alternatives, industry diversification, and sustainability and resilience. Employment trends also reflect how transitions in the *national* and *global* energy economy intersect with *local* factors.

With that said, the goal is not to frame oil and gas as good or bad, but to provide a little context—and to argue for a richer accounting of the role of oil and gas in the past and future of the Louisiana economy. The focus is on jobs and key employment trends, and how they affect specific industries and regions. The brief does not directly address environmental issues, fiscal matters like subsidies and tax revenue, or the technology and policy issues that are also critically relevant to the energy sector in Louisiana.



## What is an energy job?

One of the challenging aspects of Louisiana’s economy is that its distinctive industries, including culture and tourism, fishing, ports, and coastal restoration and flood protection, are hard to define. Consequently, pinning down the number of people whose jobs and livelihoods are directly tied to these industries is a matter of interpretation. This also applies to the overlapping industry sectors of “energy” and “oil and gas” and the more specialized activities that fall within them.

In Louisiana, these sectors are usually defined to include the extraction of oil and gas as a natural resource and closely related support activities (“upstream”); pipelines, transportation, and storage (“midstream”); and the industrial processing of oil and gas in refineries, chemical plants and other manufacturing facilities,<sup>1</sup> power plants, and other specialized industrial processes (“downstream”). A significant portion of Louisiana’s water transportation and construction employment also has strong links to oil and gas. However, these jobs are hard to separate from jobs in the same industries without strong links to energy. The same challenge applies to other manufacturing, business, and professional services that link into the oil and gas supply chain. For example, a larger portion of Louisiana’s engineering services are tied to demand from oil and gas than in states that are not major energy producers.

The composition of the energy economy varies across states, as well as across Louisiana’s own regional economies. Much of the material that moves along Louisiana’s waterways is oil, gas, fuels, and chemicals; and along with servicing offshore oil and gas, these activities involve numerous water transportation jobs. As a result, water transportation industries in Louisiana are far more central to oil and gas than they are in North Dakota. While electric utilities could be included, these industries are present in all states, regardless of their status as a major oil and gas producer. It also seems reasonable to include renewable energy with other “energy” industries but not with “oil and gas” industries.

As we get further from the core of the energy economy—extraction, manufacturing, and construction—what is or is not an energy job tends to become less clear. Partly to address this issue, we often see job numbers on the energy economy that are generated by advanced techniques like input-output modeling, which quantify the ripple effect of spending in one industry across related sectors of the economy. However, these models have their own issues, which we return to at the end of this brief. The takeaway is that quantifying the energy and oil and gas industries depends on the definition.

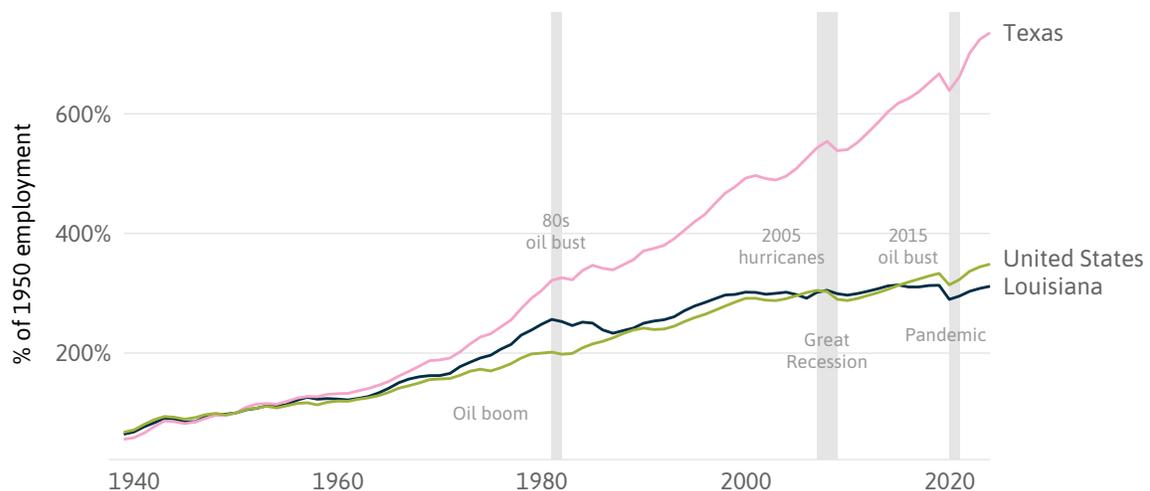
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# Oil and gas and the big picture on employment in Louisiana

Louisiana's economy has long been sensitive to factors outside the state that shape conditions in the energy economy. Figure 1 compares employment in Louisiana relative to the nation over a 75-year period since 1950 (with Texas included for comparison). Jobs in Louisiana grew more quickly than jobs nationally in the oil boom of the 1970s. As the national economy struggled

with high oil prices, oil-producing states like Louisiana and Texas rapidly added jobs. When oil prices fell during the 1980s, Louisiana employment declined. It took a decade for Louisiana employment to return to its level at the start of the 1980s. Not until 1993 did statewide employment recover to its previous high point in 1981.

**Figure 1. Louisiana has lagged behind the U.S. in job growth since 2015**  
Employment growth, 1950–2024



Source: BLS-SAE. National recessions are shown in grey.

During this period, the state's long-term trend essentially reverted back to the U.S. trend (while Texas also took a hit in the 1980s, it has

consistently been among the fastest growing states over the last four decades). After the 1980s oil bust, Louisiana had more-or-less kept pace with

## 2 OIL AND GAS AND THE BIG PICTURE ON EMPLOYMENT IN LOUISIANA

the national economy in terms of job growth. Job growth slowed in the late 1990s, but there was remarkably little separation between the state and national trend over a period of more than six decades through 2015. Since 2015, Louisiana has ranked among the bottom of states with respect to job growth, with essentially no net jobs added over the last decade.

As of December, 2025, U.S. employment had grown 11.5 percent since August, 2015. Over the same period, employment in Louisiana had only grown 0.6 percent. Louisiana had essentially no job growth between 2015 and the 2020 pandemic, while the U.S. grew 7 percent over the same period. Louisiana also only recovered to early-2020 pre-pandemic employment levels in early 2025, a threshold the U.S. reached by mid-2022. In short, job growth in Louisiana has been historically slow over the last decade. The early 1980s oil bust is the only other period since WWII when the state has lagged behind the nation for a prolonged period.

So what happened? One important change is that oil prices fell in late 2014. This inflection point marked a transition in the location of employment in oil and gas extraction, while accelerating a set of other transitions in the energy economy, all of which had uneven consequences on Louisiana's economy.

- The hydraulic fracturing (fracking) and horizontal drilling boom has re-arranged the national map of oil and gas production and pushed the U.S. to the top of global oil and gas production. With shale oil much cheaper to produce than offshore oil and thus more likely to turn a profit at a given price, the industry's focus shifted away from offshore exploration and extraction—and activity in places Port Fourchon, Louisiana's hub for servicing offshore platforms—and toward inland shale regions, most notably the

Permian Basin in Texas.<sup>2</sup>

- As a consequence, natural gas has been abundant and cheap. Gas has a range of uses in electric power generation and industrial processes, and the surplus of gas has essentially made a lucrative new market for liquid natural gas (LNG) that can be shipped to meet demand in foreign countries. Louisiana holds significant gas-related infrastructure and manufacturing capacity, and the gas boom has been a major driver of additional capital investment in chemical manufacturing, LNG, and other industrial uses that run on gas.
- Recent years have seen growing investment in alternative and renewable energy sources, as well as efforts to implement industrial-scale carbon capture to reduce greenhouse gases emissions (GHG). Cleaner energy sources include wind and solar, though Louisiana has been slower than other states to adopt utility-scale renewable energy. Notably, Louisiana and Alaska are the only states where industrial sources account for the majority of GHG emissions.<sup>3</sup>

In essence, as U.S. gas production has increased and shifted away from the Gulf, much of the gas still flows downstream to Louisiana. Staggering levels of industrial capital expenditure since the 2010s, often reported to be in the hundreds of billions of dollars, make for an awkward contrast in a state with stagnant job growth.



# What the data says about oil and gas jobs

## 3.1 Oil and gas jobs are concentrated in Louisiana, but the concentration is shifting from upstream to downstream jobs

A common measure of concentration is the *location quotient*, which is the percentage of total state or regional employment in the industry divided by the same percentage for the entire U.S. A location quotient substantially greater than one means the industry is very concentrated in the state—specialized, tradable industries have high location quotients. Locally serving industries like health care and retail are large employers everywhere, so these

industries tend to have location quotients around one. As shown in table 1, each of the four major upstream and downstream industries are highly concentrated in Louisiana. Jobs in petroleum and coal products manufacturing (i.e., refineries) and support activities for mining appear in Louisiana at rates several times higher than the national average, indicating the extent to which Louisiana’s economy is specialized around these industries.

**TABLE 1  
LOUISIANA’S KEY OIL AND GAS PRODUCTION INDUSTRIES ARE HIGHLY CONCENTRATED IN THE STATE**

		2024 employment in Louisiana			
	NAICS	Industry	Number	% of total private jobs	Location quotient
Downstream	211	Oil and gas extraction	5,577	0.3	3.9
	213	Support activities for mining	22,817	1.4	6.6

### 3 WHAT THE DATA SAYS ABOUT OIL AND GAS JOBS

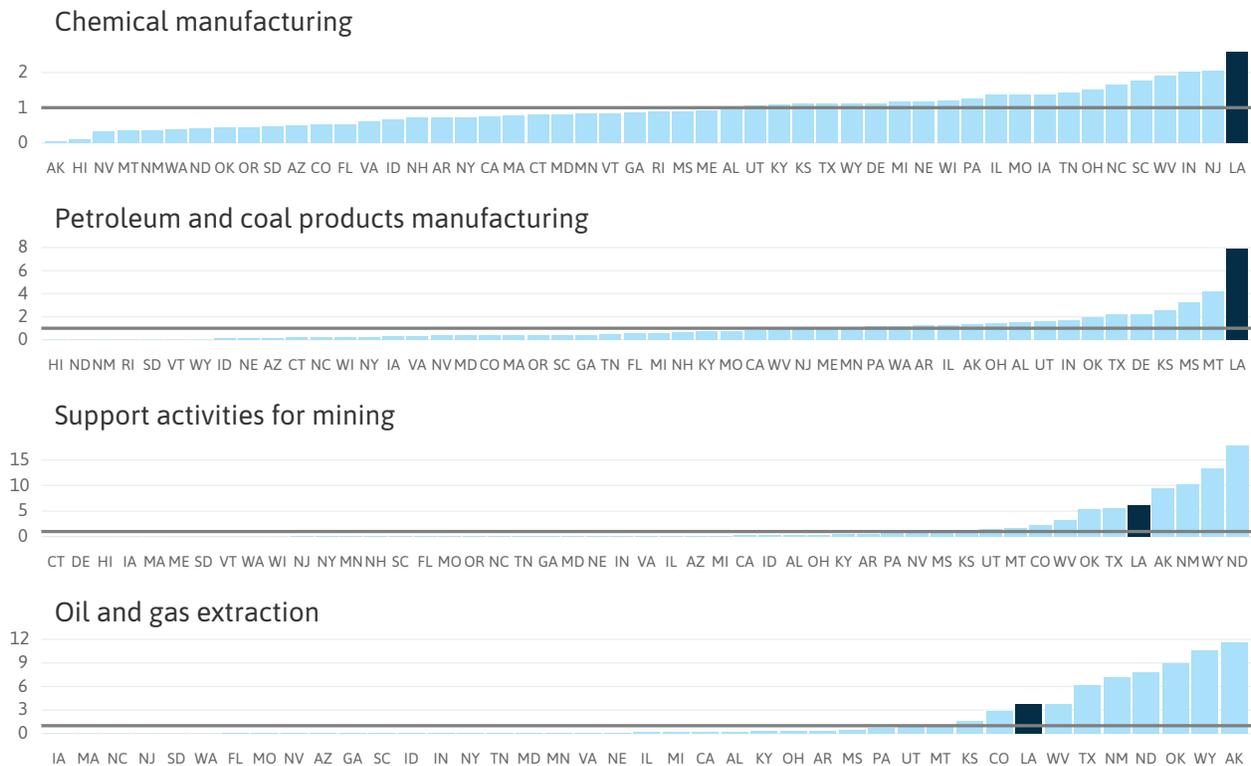
<b>Upstream</b>	324	Petroleum and coal products manufacturing	10,718	0.7	8.1
	325	Chemical manufacturing	28,222	1.7	2.6

Source: QCEW.

To put this in perspective, figure 2 shows the same location quotients in Louisiana alongside other states for comparison. Louisiana has the highest concentration in both downstream manufacturing industries. Along with other oil and gas and mining production states, Louisiana also ranks highly

in upstream industries. While these industries represent a small share of total employment relative to the top industry sectors (e.g., leisure and hospitality, health and education, and professional and business services), their degree of concentration in Louisiana is high.

**Figure 2. Concentration of oil and gas industries by state**  
Employment location quotient, 2024 (LQ > 1 means concentrated)



Source: QCEW.

### 3 WHAT THE DATA SAYS ABOUT OIL AND GAS JOBS

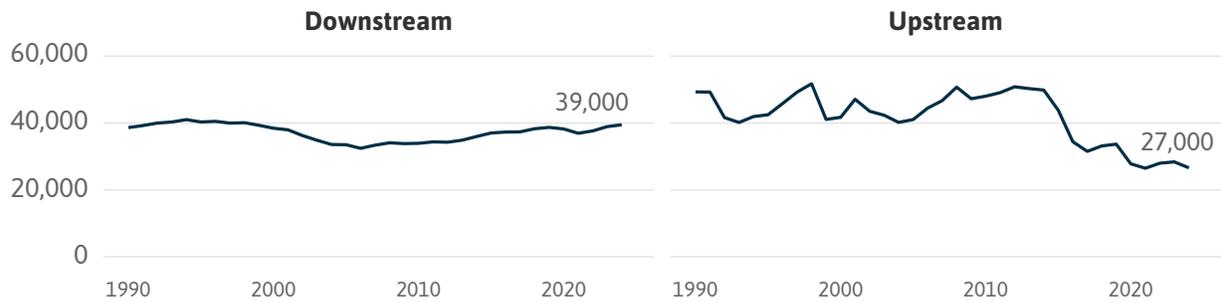
These concentrations illustrate where Louisiana’s oil and gas employment stands after several years of rapid change. Louisiana’s loss of oil and gas extraction jobs after 2014 was swift (figure 3). From 2011 to 2014, Louisiana maintained roughly 50,000 jobs in these industries, about 3 percent of total employment. By 2016, employment fell below

35,000, as the share of total state employment fell below 2 percent for the first time since at least 1990. As of 2024, employment was 27,000 and 1.6 percent of total employment. Though it remains significant, the share of state employment directly involved in extraction is smaller than it has been in decades.

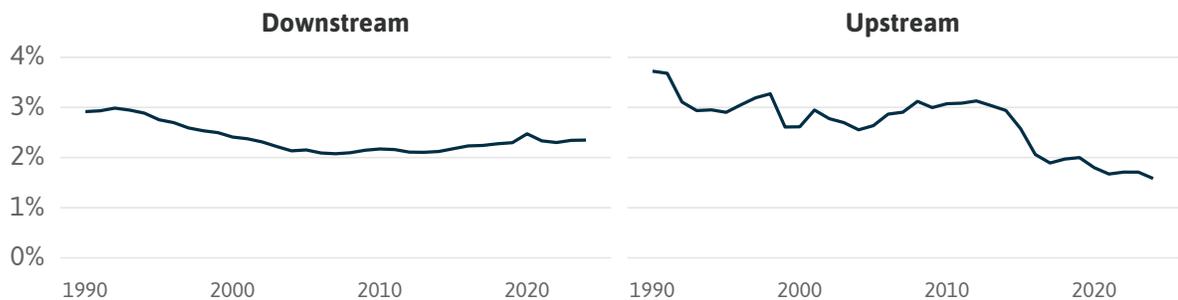
**Figure 3. Upstream and downstream employment have been heading in different directions since the 2010s**

Louisiana employment in core oil and gas industries, 1990–2024

Louisiana private employment



Percent of Louisiana private employment



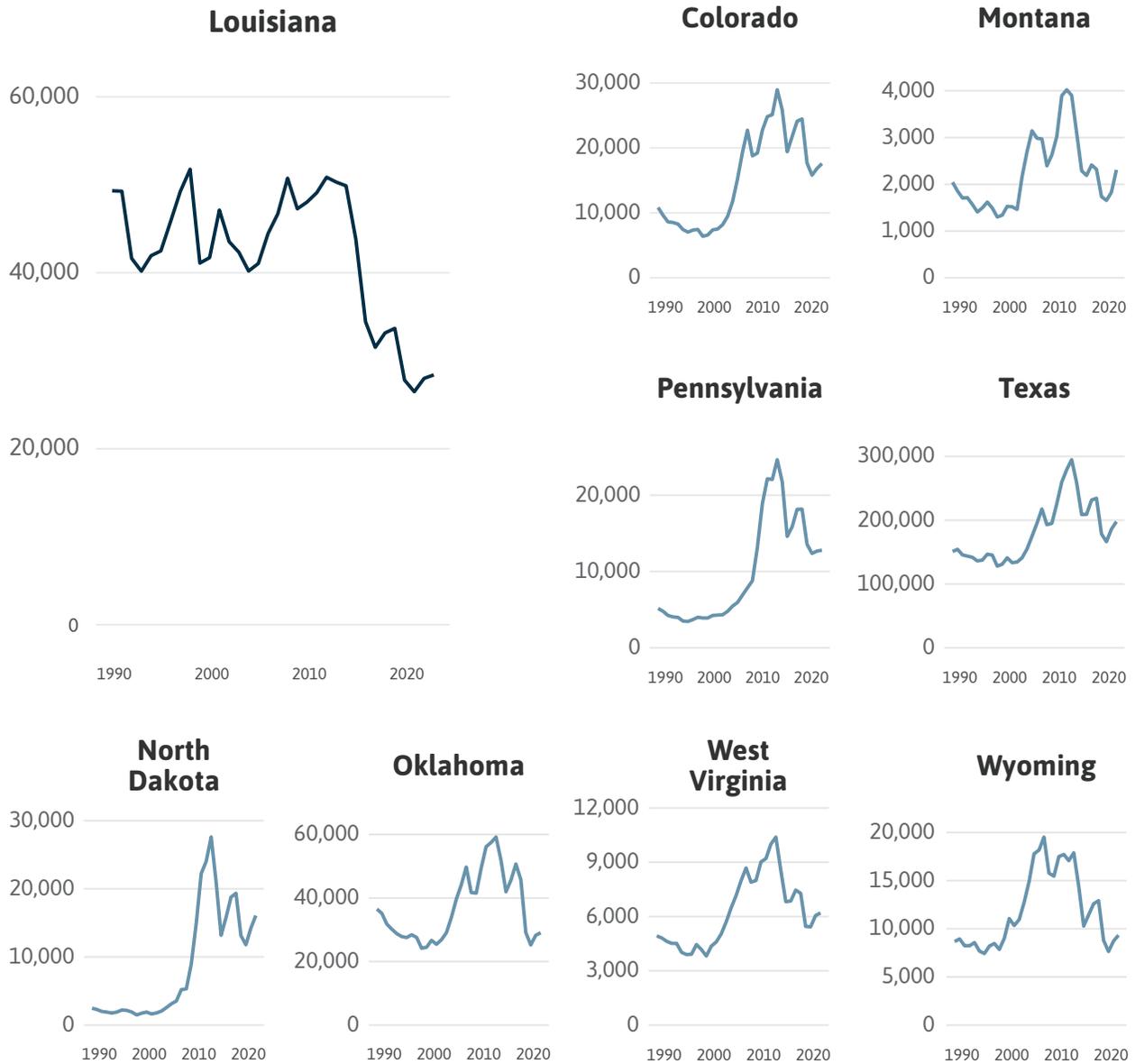
Source: QCEW.

How does the trend in upstream extraction employment compare with other oil-producing states? As shown in figure 4, Louisiana’s job loss has been severe, though not unique. Other states also felt the effects of the oil price collapse in

the late 2010s. However, unlike Louisiana, many of these states previously had experienced an employment boom in the industry—largely driven by fracking—prior to the mid-2010s.

### 3 WHAT THE DATA SAYS ABOUT OIL AND GAS JOBS

**Figure 4. Upstream employment has been volatile in other states as well**  
Upstream oil and gas employment in Louisiana and selected states, 1990–2024



Source: QCEW.

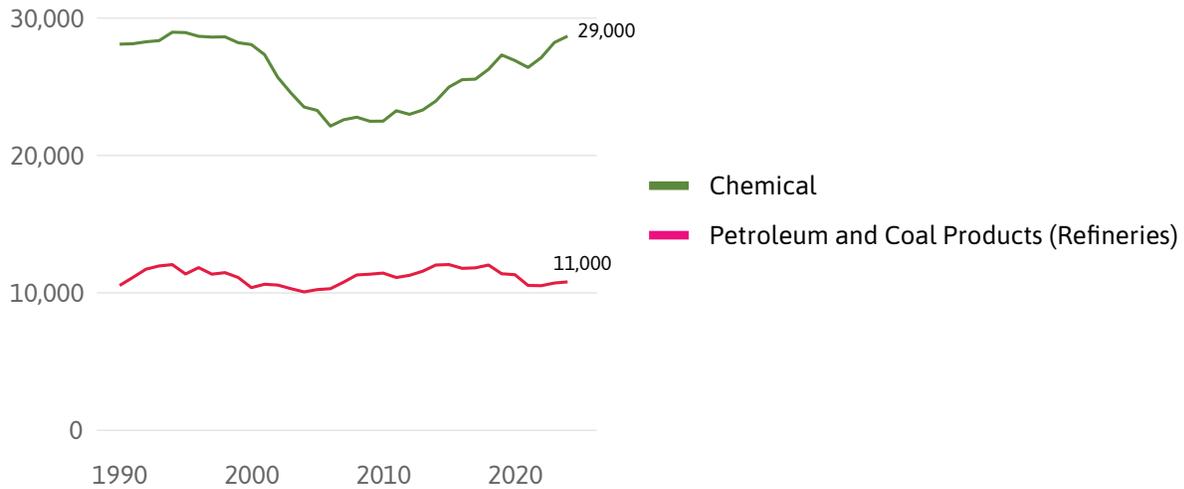
Employment in downstream manufacturing has increased slowly but steadily since around 2010. At 39,000 jobs in 2024, Louisiana’s downstream employment now exceeds its upstream employment. This is mostly owed to chemical manufacturing, which has added jobs nationally but at an even faster rate within Louisiana. To be clear, chemical

manufacturing in Louisiana heavily depends on gas, which provides essential raw materials and feedstocks for its production. Petroleum and coal products manufacturing employment has been declining nationally at a steadier rate than in Louisiana, where totals have remained roughly between 10,000 and 12,000 since 1990.<sup>4</sup>

### 3 WHAT THE DATA SAYS ABOUT OIL AND GAS JOBS

**Figure 5. Chemical manufacturing employment has grown steadily since the late 2000s**

Louisiana private employment in oil and gas, 1990–2024



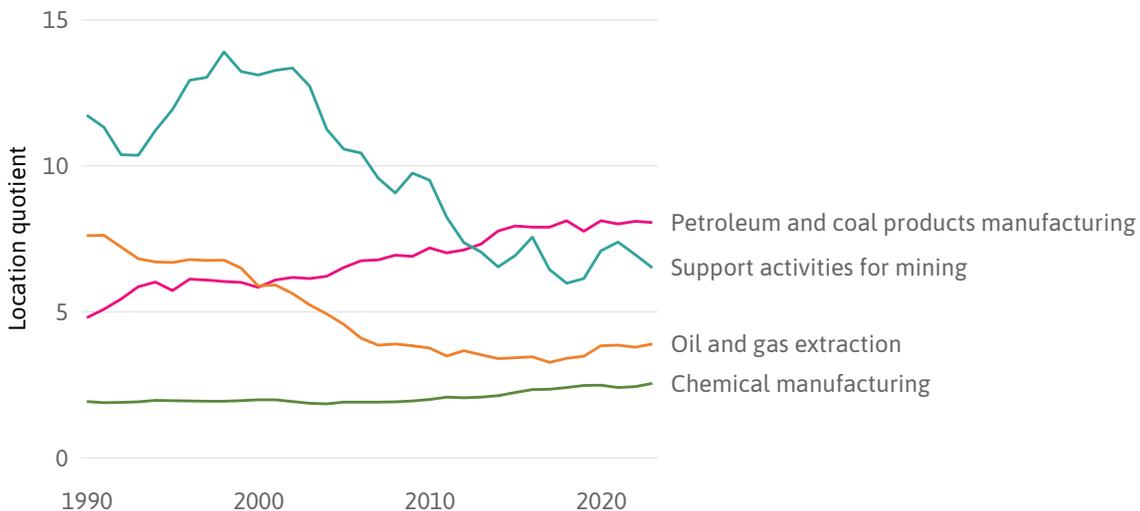
Source: QCEW.

These shifts in core oil and gas industries in Louisiana are also reflected in the changing concentration of employment in the state relative to the nation. Figure 6 shows the change in location quotient over time. Since roughly 2000, the concentration of industry employment in

Louisiana relative to the national economy has fallen for oil and gas extraction and support activities (upstream), but it has increased for petroleum and coal products manufacturing and chemical manufacturing (downstream).

**Figure 6. Changing concentration of oil and gas industries in Louisiana**

Employment location quotient, 1990–2024



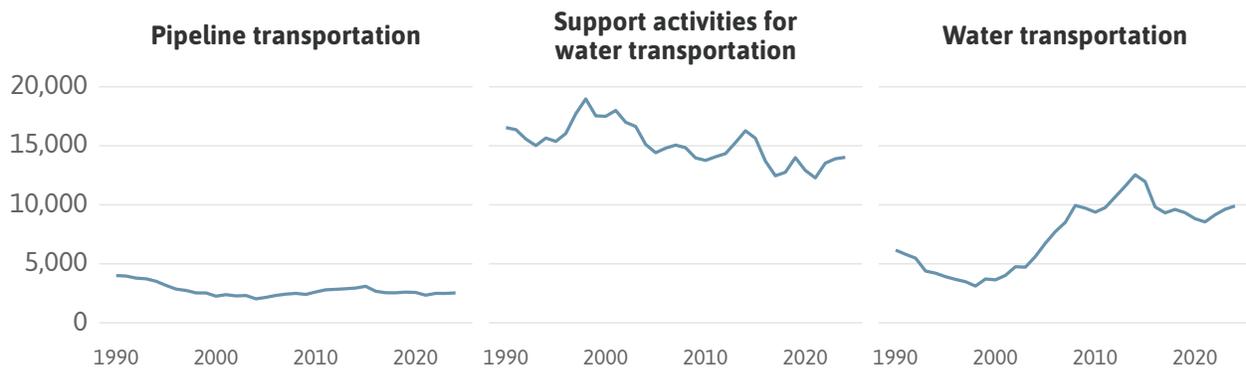
Source: QCEW.

### 3 WHAT THE DATA SAYS ABOUT OIL AND GAS JOBS

Finally, the impact of the 2014 oil price drop is also reflected in transportation industries related to oil and gas. Louisiana has the highest private employment concentration of any state in water transportation and support activities for water transportation (port and cargo activities and navigational services), and the state ranks sixth in its concentration in pipeline industry employment. Figure 7 shows employment trends for water transportation, support activities for water transportation, and pipeline transportation. Water transportation employment more than doubled between the late 1990s and early 2010s.

This growth was tied to deepwater offshore activities—indeed, a large proportion of the added jobs in this industry (and in support activities) were in Lafourche Parish and likely tied to Port Fourchon. At the same time, the port-focused support activities industry was flat or declining in most parishes with significant port employment outside of Terrebonne and Lafourche. Employment in each of these three industries fell with oil prices in 2014. As shown below, this decline was acutely reflected in overall employment trends in the Houma-Thibodaux metro (defined as Terrebonne and Lafourche Parishes).

**Figure 7. Employment tied to Louisiana’s ports has also declined since the mid-2010s**  
Louisiana private employment, 1990–2024



Source: QCEW.

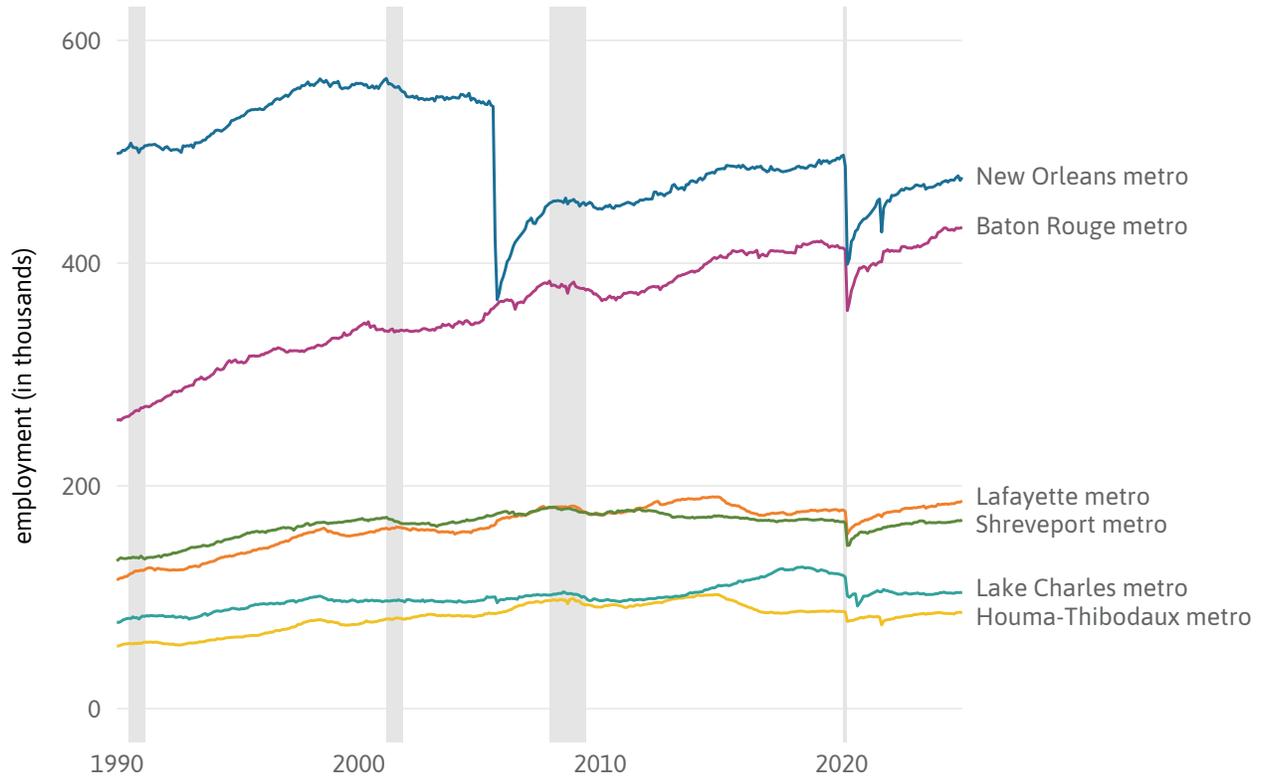
### 3.2 Across Louisiana’s metro economies, growth over the last decade has been slow but uneven, partly due to oil and gas

Despite some variation at the metro level, employment growth has been modest in Louisiana’s metro areas since 2014, as shown for selected metros in figure 8. Except for Lake Charles, each of the six regions shown experienced flattening or declining employment growth in the second half of the 2010s through the 2020 COVID-19 pandemic (note that the New Orleans metro’s recovery from Hurricane Katrina and the Great Recession

had leveled off prior to the mid-2010s). The New Orleans and Baton Rouge metros encompass the Mississippi River industrial corridor. The Lafayette and Shreveport metros also contain significant oil and gas-related employment and both experienced employment decline during the second half of the 2010s. The contrast between Lake Charles and Houma-Thibodaux, two similarly sized economies in 2014, is especially notable (see box).

### 3 WHAT THE DATA SAYS ABOUT OIL AND GAS JOBS

**Figure 8. Growth slowed or declined after 2015 in most metros except for Lake Charles**  
Nonfarm employment for selected metros in Louisiana 1990–2024



Source: BLS-SAE.

New Orleans metro does not include St. Tammany Parish. National Recessions are shown in grey.

#### THE LAKE CHARLES AND HOUMA-THIBODAU METROS: DIVERGING TRAJECTORIES, DIFFERENT TIES TO OIL AND GAS

The Lafayette and Houma-Thibodaux metros experienced the sharpest declines after 2014. Lafayette has a high concentration of oil and gas extraction jobs, and while Houma-Thibodaux shares this concentration, its water transportation and port industries are also closely tied to oil and gas. These trajectories contrast with Lake Charles, where industrial construction drove a sharp employment increase during the late 2010s. Between 2014 and 2019 (just after the oil shock of 2014 and before the COVID shock of 2020), employment increased by 14 percent in the Lake Charles metro and decreased by 14 percent in the Houma-Thibodaux metro. For comparison, U.S. employment increased by 9 percent, and Louisiana statewide employment increased by less than half a percent. The contrasting trajectories of the Houma-Thibodaux and Lake Charles metros, two coastal regional economies anchored by Gulf access and ties to the oil and gas industry, demonstrate how shifts in oil and gas investment can have uneven effects by industry and by geography.

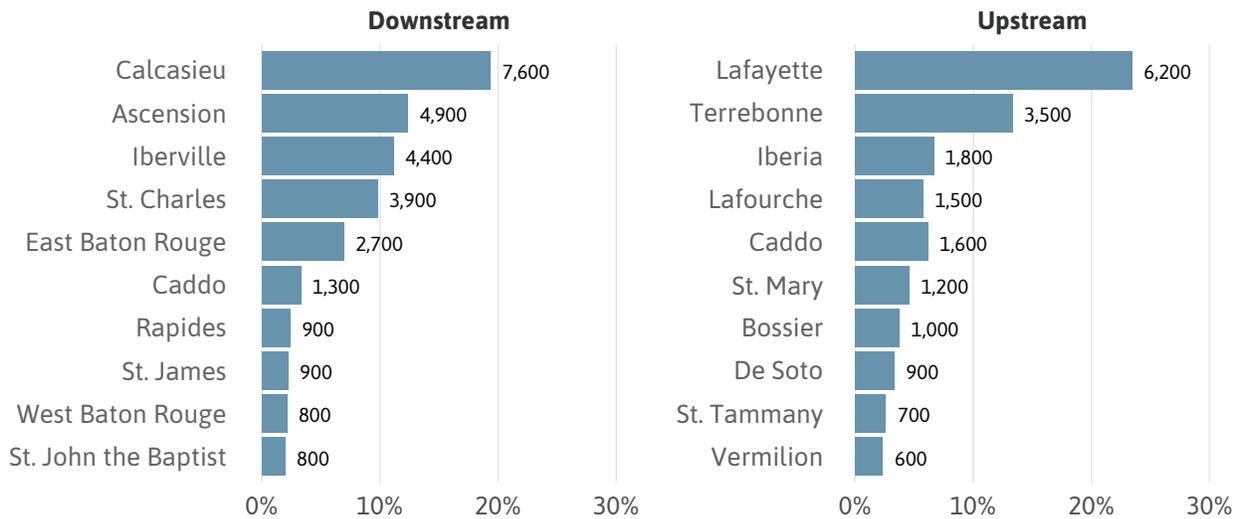
### 3 WHAT THE DATA SAYS ABOUT OIL AND GAS JOBS

In part, these regionally uneven trends reflect the location of oil and gas jobs across the state. Figure 9 shows the location of jobs in the manufacturing and mining sectors by parish—manufacturing includes more jobs than downstream oil and gas manufacturing, but Louisiana has very few mining jobs outside of oil and gas. Manufacturing is concentrated in Calcasieu Parish, along the

Mississippi River industrial corridor between Baton Rouge and New Orleans, in other parts of coastal Louisiana, and in the state’s larger, more urbanized parishes.<sup>5</sup> Mining employment is strongly concentrated in Lafayette Parish, with other concentrations in Terrebonne and other coastal parishes, and in the Shreveport region of Northwest Louisiana.

**Figure 9. Upstream and downstream employment are each concentrated in a different set of parishes**

Upstream and downstream employment by parish, 2024



Source: QCEW.

#### WHERE ARE THE JOBS COUNTED?

Most of the data reported in this brief is from the Bureau of Labor Statistics and ultimately based on data from state unemployment insurance systems. Where the jobs are counted is based on the location of an establishment, the physical place of business where the employee works. For many jobs, this physical place of work is relatively clear. However, situations where the place of work is less clear are also common, and they include oil and gas and offshore workers, construction workers, and perhaps other kinds of workers at an industrial facility. The very strong concentration of total state mining jobs in Lafayette might partially be an artifact of this issue. LNG projects, which have thousands of workers on-site at peak construction, are another example. While LNG construction employment is clearly evident in Cameron Parish data (as shown below), LNG construction in Plaquemines Parish has not produced such a clear signature in employment data, as of the time of writing.

### 3 WHAT THE DATA SAYS ABOUT OIL AND GAS JOBS

#### 3.3 Louisiana had a construction employment boom in the 2010s. Much of it was linked to downstream oil and gas and localized to a few parishes

Construction employment is becoming an increasingly important part of the picture of oil and gas jobs in Louisiana. This reflects a few intersecting trends. Abundant gas has driven investment in numerous industrial projects, and the level of capital expenditures has grown. While large capital investments mean bigger projects with more temporary construction workers, other changes, including automation, often mean fewer new enduring operations jobs than in the past per dollar of capital expenditure or per unit of production capacity. As a result, Louisiana’s energy economy broadly has shifted toward project-based construction jobs relative to manufacturing and operations jobs and especially relative to extraction jobs. Even wind and solar projects have relatively few operations jobs and more up-front, temporary construction jobs.

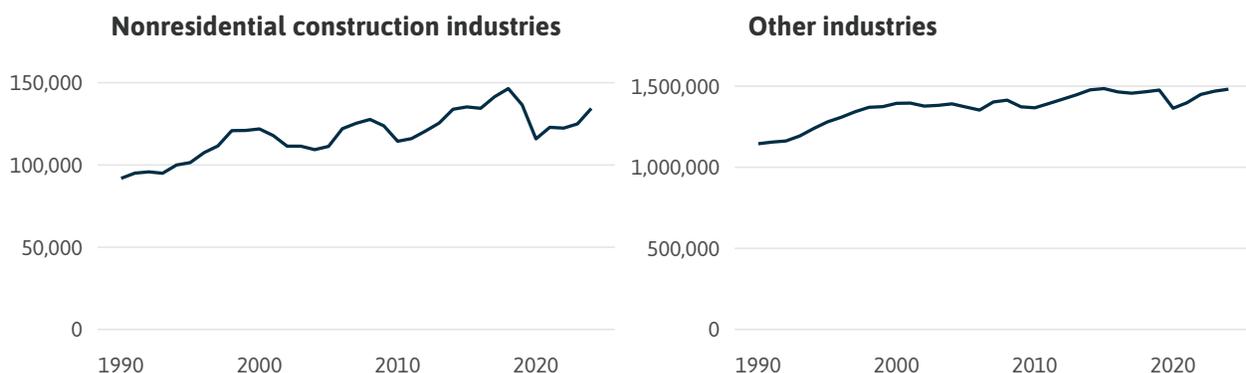
Figure 10 shows total Louisiana employment in a set of construction industries: nonresidential

building construction, heavy and civil engineering construction, and specialty trade contractors—all of the construction sector excluding residential building construction. These trends certainly reflect some demand for commercial and residential projects, public infrastructure, and utility construction, but much of their increase is significantly driven by energy and manufacturing facilities and other industrial infrastructure.<sup>6</sup>

Note the increase in construction during the 2010s. Between 2007 (the peak just before the Great Recession) and 2018, employment in these nonresidential construction industries had grown by 17 percent, with the majority occurring between 2014 and 2018.<sup>7</sup> In contrast, employment in all other industries had grown by 5 percent by 2014 but did not grow—and actually declined slightly—between 2014 and 2018. This was an industrial construction boom, one that occurred in absence of growth in the rest of the state economy.

**Figure 10. Nonresidential construction employment boomed during the 2010s**

Nonresidential construction employment in Louisiana, 1990–2023



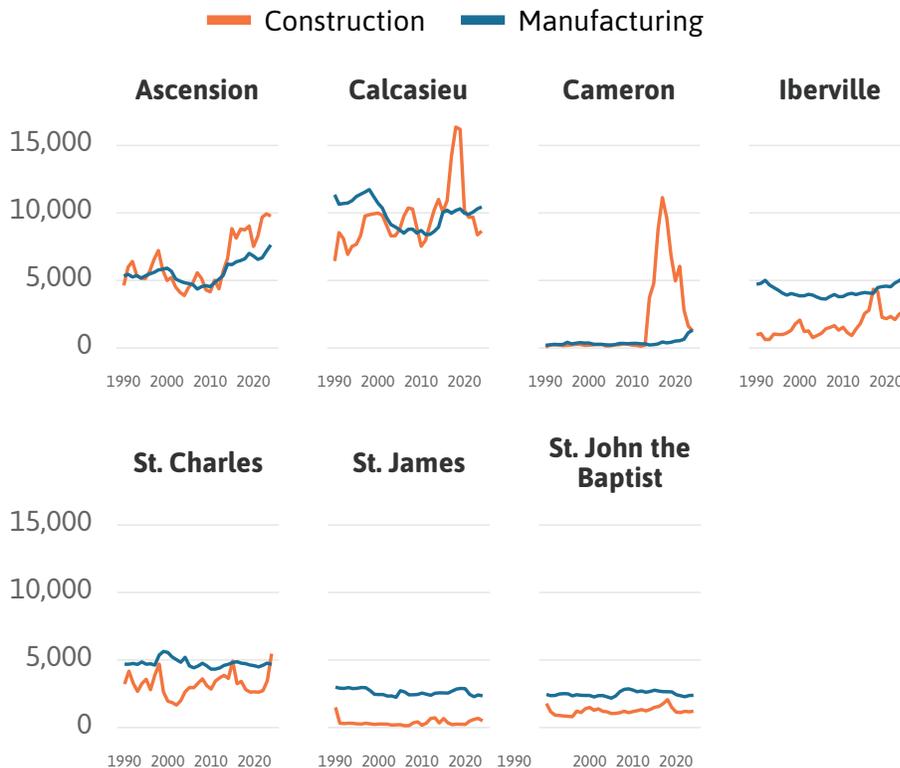
Source: QCEW.

### 3 WHAT THE DATA SAYS ABOUT OIL AND GAS JOBS

The numbers above come from state-level data (with good industry detail), but the boom was not evenly distributed across the state. Figure 11 shows construction and manufacturing employment in southwest Louisiana and the River Parishes, the state’s two main oil and gas manufacturing corridors, where manufacturing is a high percentage of total parish jobs and where much of the state’s chemical manufacturing and refinery capacity are located. For comparison, figure 12 shows the same for the five largest parishes in the state in terms of employment, where manufacturing is a smaller percentage but where much of the state’s total manufacturing employment is located, partly due to higher levels and greater diversity of total employment in these parishes.

The charts suggest that many of the jobs tied to the 2010s construction boom occurred in Ascension, Calcasieu, and Cameron Parishes, with Iberville also seeing a marked increase. Cameron in particular stands out. During a period of massive investment in LNG, construction employment peaked in 2017 at five times the level of total employment in the small coastal parish during the 2000s. Ascension and Calcasieu, parishes with substantially larger and more diverse economies, also show sharp increases in construction employment. After 2020, construction employment tapered off in Calcasieu but remained high in Ascension. Iberville and St. Charles Parishes also show smaller construction increases. While manufacturing employment increased in some of these parishes, most of the big swings occurred in construction.

**Figure 11. Manufacturing and construction employment by parish**  
Southwest and Mississippi River industrial corridor, 1990–2024



Source: QCEW.

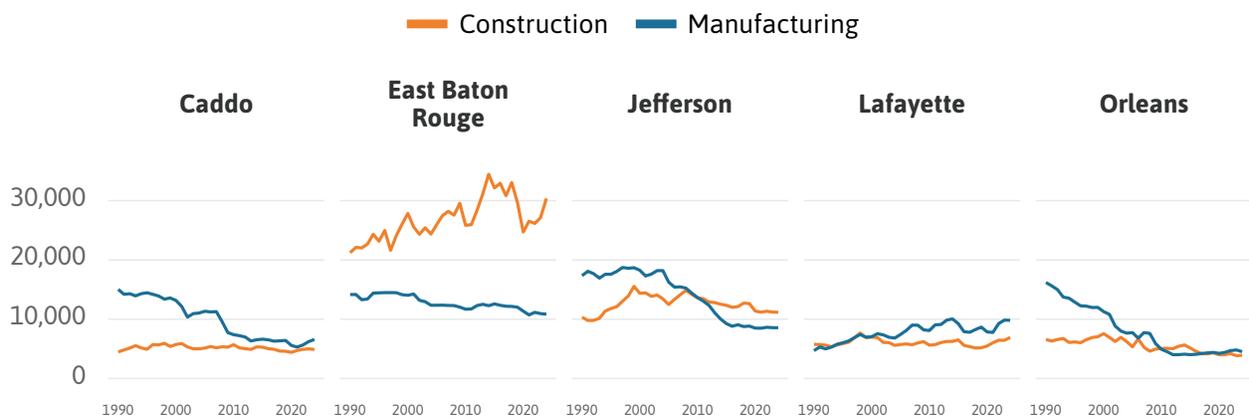
### 3 WHAT THE DATA SAYS ABOUT OIL AND GAS JOBS

Among Louisiana’s larger urban parishes shown in figure 12, construction and manufacturing employment tell a different story. Except for Lafayette Parish, each has experienced long-

term manufacturing decline. Only East Baton Rouge Parish experienced a notable increase in construction employment during the 2010s.

**Figure 12. Except for Lafayette Parish, manufacturing employment has continued to decline in the state’s largest urban parishes**

Manufacturing and construction employment, largest urban parishes by employment, 1990–2024



Source: QCEW.

### 3.4 Oil and gas pays well

In addition to trends in the number of jobs, another important aspect of oil and gas jobs is where they are situated in the broader labor market. Over several decades and like in other states, Louisiana’s labor market has grown significantly more polarized in the sense that the labor market provides many low-paying jobs and many high-paying jobs but relatively few jobs in the middle.<sup>8</sup> On average, oil and gas jobs tend to pay relatively well, as shown in table 2. These jobs have traditionally bolstered opportunities in the “middle-skill” segment of the labor market (jobs that require some training beyond high school but less than a four-year degree), often at rates of pay well beyond a living wage threshold.

High- and low-paying jobs tend to look the same in most places, since every state and regional economy has college-educated professionals, business owners and managers, food prep and service workers, retail workers, and a wide range of health care jobs. Middle-skill jobs tend to vary more from place to place. This is because they often reflect unique industry concentrations that exist in a state or regional economy. Just as oil and gas industries are concentrated in Louisiana, oil and gas-related jobs are well-represented among the occupations most heavily concentrated in Louisiana.

### 3 WHAT THE DATA SAYS ABOUT OIL AND GAS JOBS

**TABLE 2**  
**ON AVERAGE, JOBS IN OIL AND GAS HAVE SIGNIFICANTLY HIGHER EARNINGS THAN IN OTHER INDUSTRIES**  
AVERAGE ANNUAL EARNINGS AND EMPLOYMENT, 2024

Industry	Employment	Earnings
Oil and gas extraction	5,577	169,538
Support activities for mining	22,817	99,936
Petroleum and coal products manufacturing	10,718	148,109
Chemical manufacturing	28,222	133,097
All industries	1,594,324	59,447

Source: QCEW.

#### KEY TERMS: INDUSTRIES VERSUS OCCUPATIONS

In employment data, *industries* are types of businesses defined by their organizational structure and by the specific goods and services they provide. Child care centers, pharmacies, grocery stores, and manufacturing facilities are businesses in different industries. *Occupations* refer to types of jobs, distinguished by the skills and tasks they require of the worker. Childcare workers, pharmacists, cashiers, and production and assembly workers are different occupations. Industries (NAICS) and occupations (SOC) are organized into separate standardized hierarchical classification systems, which are used throughout this brief.

Figure 13 illustrates this pattern. The chart shows median hourly wages for the occupations that are most heavily concentrated in Louisiana (the percentage of total state employment in the occupation is at least three times the percentage of national employment in the same occupation). The occupations are shown in order of the number of statewide employees, from highest (food preparation workers — 35,130) to

lowest (designers, all other — 650), though only occupations with at least 500 Louisiana employees are shown. To be clear, food preparation jobs are a large share of jobs everywhere and just barely concentrated in Louisiana enough to be included on the chart, though they are by far the largest occupation shown.

The main takeaways are, first, that many of these

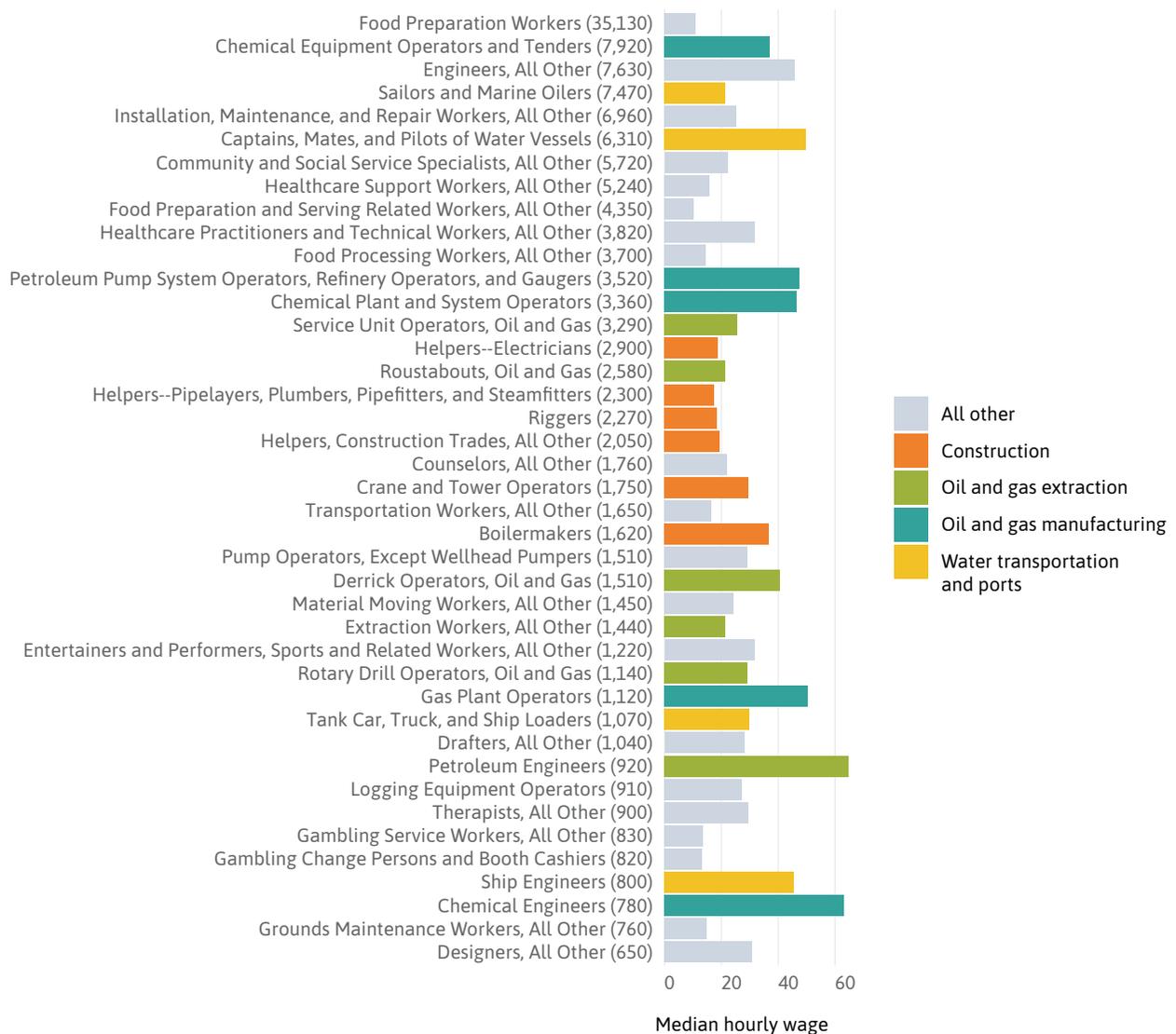
### 3 WHAT THE DATA SAYS ABOUT OIL AND GAS JOBS

occupations are involved in oil and gas-related activities, while others are involved in ports and construction where demand is also partly driven by oil and gas. Second, many of these jobs pay relatively well, often without requiring a four-year

degree. While some high-paying jobs like chemical and petroleum engineers require a four-year degree, others like operators in oil and gas-related manufacturing do not.

**Figure 13. Oil and gas jobs pay well and are among the more accessible job opportunities concentrated in Louisiana**

Occupations highly concentrated in Louisiana by hourly wage, 2024



Source: OEWS Only occupations where LA employment is more than 500 jobs and 3x the national proportion are shown.

### 3 WHAT THE DATA SAYS ABOUT OIL AND GAS JOBS

The data is consistent with the notion that oil and gas-related activities have traditionally contributed to the mix of opportunities for good-paying jobs that are particularly concentrated in Louisiana. However, these opportunities are not distributed equally. As shown above, they are geographically concentrated to varying degrees across the state's regional labor markets and industry corridors. Demographics are also relevant here. Among the major upstream and downstream industries, men are the vast majority of the workforce.<sup>9</sup>

Diversifying Louisiana's driver industries will help to shore-up stable demand for middle-skill jobs. While especially critical for a slow-growth, high-poverty state like Louisiana, a broader set of pathways into better-paying jobs can also mitigate downside risk of volatility in the energy sector, as seen over the last decade.<sup>10</sup>



# 4

## Counting additional employment (or the multiplier effect)

Oil and gas-related industries are often considered “tradable” or “driver” industries for state and regional economies, as they produce goods for external markets. This trade draws dollars into the regional economy, where it circulates and supports jobs in other sectors. The cascading effect can be large for specialized, tradable industries like oil and gas. From a certain perspective, industries oriented toward external trade and their local supply chains are the lifeblood of a regional economy. They shape the region’s position within broader national or global markets and fuel local-serving industries.

The same logic is used to quantify the full scope of jobs supported by specific industries, often using terms like “total employment impacts,” “total economic contribution,” “additional jobs supported,” or “indirect jobs.” To do so, analysts use input-output (I-O) modeling to quantify how a demand stimulus—such as the construction and operation of a new manufacturing facility—reverberates through a regional economy. Based on a balance sheet of trade among sectors within a region, I-O models can estimate a *multiplier* effect, which is the total increase in economic activity that results from an initial change in demand. For example, a new facility supports *direct jobs* as it hires workers. The new demand also supports *indirect jobs* at regional businesses that supply the facility with goods and services, and at those business’ suppliers. Employment multipliers

may also include *induced jobs*—the spinoff jobs created from the portion of increased household earnings that result from new jobs that are then spent within the region.<sup>11</sup> Versions of these terms are frequently used in media, government, and corporate communications, particularly for major industrial projects in Louisiana.

I-O models are powerful tools for understanding the interlinked nature of regional economies, and they can provide valuable insights for planning purposes. For instance, in response to a stimulus (or a downturn) in demand, I-O models can point decisionmakers to new industries and occupations to target for job-seekers and training needs, demands on public services, and consequences for revenue and spending in government and the private sector. Arguably, no readily available alternative source exists for this information.<sup>12</sup> However, in practice, I-O multipliers are often used to make job numbers sound more impressive.

Table 3 reports a selection of employment multipliers for the state of Louisiana, drawn from a popular private vendor of data and I-O models.<sup>13</sup> A multiplier of two would mean that for every direct job, an additional job would be created through the sum of the indirect and induced effects.<sup>14</sup> The multipliers for some oil and gas-related industries in Louisiana are impressive, though there is significant variation:

#### 4 COUNTING ADDITIONAL EMPLOYMENT (OR THE MULTIPLIER EFFECT)

**TABLE 3  
EMPLOYMENT MULTIPLIERS FOR SELECTED INDUSTRIES IN LOUISIANA  
(INDUSTRIES MOST CLOSELY LINKED TO THE OIL AND GAS INDUSTRY  
TRENDS ARE IN BOLD)**

Industry	Multiplier
<b>Petroleum refineries</b>	10.0
<b>Coastal and great lakes freight transportation</b>	5.5
Iron and steel mills and ferroalloy manufacturing	5.5
<b>Deep sea freight transportation</b>	5.4
<b>Plastics material and resin manufacturing</b>	5.0
<b>Petrochemical manufacturing</b>	4.7
Solar electric power generation	4.5
<b>Inland water freight transportation</b>	4.3
Geothermal electric power generation	3.8
Wind electric power generation	3.7
Fossil fuel electric power generation	3.5
<b>Industrial gas manufacturing</b>	3.2
Research and development in biotechnology (except nanobiotechnology)	3.0
<b>Crude petroleum extraction</b>	2.8
Software publishers	2.5
<b>Natural gas distribution</b>	2.5
Computing infrastructure providers, data processing, web hosting, and related services	2.4

## 4 COUNTING ADDITIONAL EMPLOYMENT (OR THE MULTIPLIER EFFECT)

Engineering services	2.4
General medical and surgical hospitals	2.3
<b>Oil and gas pipeline and related structures construction</b>	2.2
<b>Natural gas extraction</b>	2.1
<b>Support activities for oil and gas operations</b>	2.1
<b>Drilling oil and gas wells</b>	2.1
Power and communication line and related structures construction	2.0
<b>Industrial building construction</b>	2.0
<b>Other heavy and civil engineering construction</b>	1.9
Commercial and institutional building construction	1.8
Full-service restaurants	1.4
Shellfish fishing	1.2

Source: Lightcast input-output. Multipliers include direct, indirect, and induced jobs (Type II). Note that these are detailed 6-digit industries that do not align with the 3-digit industries described above.

- Petroleum refineries, which are highly concentrated in Louisiana, have a multiplier of 10, suggesting that a whopping nine additional jobs across the state are supported for every one direct job in the industry. Other oil and gas-related manufacturing industries also have high, though less extreme, multipliers.
- “Computing infrastructure” and “iron and steel mills” roughly align with the Meta project in Richland Parish and the Hyundai project in Ascension Parish, respectively, both announced earlier this year and have high multipliers.

- Water transportation industries also have high multipliers. Many of these industries are highly concentrated in Louisiana and tied to Mississippi River and Gulf Coast port activity.
- Upstream oil and gas jobs, as well as high-tech, STEM (software, biotech, and engineering), and construction jobs have

more modest multipliers between 2 and 3. The takeaway is that Louisiana’s trade-oriented industries naturally produce large multipliers, especially for oil and gas-related manufacturing industries with large industrial capital expenditures. How much stock should we put in these multipliers?<sup>15</sup> To be clear, there are technical limitations with I-O models (see appendix)

## 4 COUNTING ADDITIONAL EMPLOYMENT (OR THE MULTIPLIER EFFECT)

that complicate the way they are commonly interpreted. Whether their strong assumptions and other technical limitations are acceptable is highly dependent on how the information is used. The limitations also mean that even careful, skilled analysts can produce estimates that are imprecise and likely larger than the “true” multiplier.<sup>16</sup>

Typically, I-O multipliers are used to describe the *contributions* of a given demand stimulus—an event, policy, or industry—to *gross* economic activity by simply totaling up the direct, indirect, and induced jobs.<sup>17</sup> These contributions are often mislabeled or misinterpreted as *net* impact and used for political reasons to justify a decision, like a favorable subsidy or regulatory approval, or for public relations purposes.<sup>18</sup> In most cases, they do not account for negative feedback, directly assess costs, or compare alternatives. The main story they tell is of a positive return, and big jobs numbers can be very convincing for public officials and community members, especially in struggling communities where job opportunities are in short supply. From this perspective, the size of the multiplier matters. If I-O multipliers only count positive contributions and do not allow for negative impacts, the multipliers will be bigger—and more likely to inflate the ratio of benefits to costs.<sup>19</sup>

Consequently, some critics have dismissed the use of multipliers to inflate jobs numbers as “magic pixie dust” or “manna from heaven” that grants large and potentially misleading payoffs to proposed projects.<sup>20</sup> Again, there is nothing inherently wrong with I-O modeling; indeed, Louisiana needs more rigorous analysis of economic alternatives, and we should leverage all of our tools to better understand how the economy is interlinked. Still, it is reasonable to read big jobs numbers skeptically when presented in isolation. What is needed is analysis that incorporates both positive and negative effects of

development, that considers alternative scenarios more systematically, that emphasizes net impacts on communities, and that identifies which workers benefit from job creation.<sup>21</sup> Careful use of I-O models and close analysis of past data both have a role to play. The issue is that this level of nuance is rare, while multiplier-inflated job totals of proposed projects are very common.



## Summary and conclusion

A close look at Louisiana’s employment data reveals an evolving relationship with the oil and gas industry. The boom of the 1970s and the prolonged bust of the 1980s had a lasting influence on the trajectory of regional economies across the state. The past decade has seen another shift, with Louisiana’s job growth lagging significantly behind the nation’s. The recent stagnation coincides with a set of transitions in the energy landscape: a shift in employment from the highly volatile upstream sectors to more capital-intensive downstream and construction-related industries.

While direct employment in oil and gas remains a relatively small share of total statewide jobs, the industry’s influence extends far deeper. Leaders in economic development, education and workforce development, infrastructure, and environmental management recognize the need for diversity within and beyond the energy sector and the dislocative effects of energy transitions—whether the transition is from oil to gas or from fossil fuels to renewables. In addition to major initiatives within the energy sector, the past year has also brought high-profile announcements for the Meta facility in Richland Parish and the Hyundai steel plant slated for a site in Ascension Parish, showing how the drivers of major capital investment projects are changing. The Data Center has also published examinations of how to create new opportunities for good-paying jobs while enhancing regional resiliency: in investment in

infrastructure, sustainable energy, and water and green jobs.

Understandably, public discussion tends to focus on new investments and the immediate job opportunities they create. However, many open questions remain about how to leverage existing skills while broadening pathways into careers, about the extent to which new investments sustain large numbers of high-paying jobs, and about leveling the playing field for people and places left behind by previous economic transitions. What is clear is that any discussion about the future of the energy economy in Louisiana should be rooted in a clear view of its past.

# Appendix

## Data sources

Most of the data used in this report comes from the U.S. Bureau of Labor Statistics. The main source of industry employment is QCEW (Quarterly Census of Employment and Wages), a program that publishes a quarterly count of employment and wages for over 95 percent of U.S. wage-and-salary jobs. The data is derived from a federal-state data sharing partnership, and is largely based on wages reported by employers for state unemployment insurance (UI) programs. QCEW provides detailed information on industries and other firm characteristics. Its smallest geographic unit is the parish, but employment by detailed industry is often suppressed to protect the confidentiality of individual businesses. Industry employment is reported for privately owned businesses.

OEWS (Occupational Employment and Wage Statistics) reports employment and wage estimates by occupation. It is based on a semiannual survey of business establishments. OEWS also implements suppression rules. OEWS is used to compare median wages for occupations concentrated in Louisiana. Concentration was determined by

calculating the location quotient. Occupations are included on the chart when the location quotient is greater than 3. Calculating the location quotient required comparing Louisiana employment to national employment, but OEWS reporting uses some national- and state-specific industry codes that deviate from standard SOC 2018 codes. Thus, to calculate the location quotient, we first crosswalked the national OEWS codes to align with Louisiana codes and compared total employment.

Long-term employment totals by state and metro area are based on the Current Employment Statistics—State and Area Employment data sets.

We also reference employee demographic information, which is based on Quarterly Workforce Indicators, a data product produced by the Longitudinal Employer-Household Dynamics program at the Census Bureau. This data is based on QCEW, but it uses linked records to enhance UI-based administrative records with demographics and other additional characteristics. The information referenced is shown in this table.

### GENDER, RACE, AND HISPANIC ETHNICITY BY PERCENT OF TOTAL EMPLOYEES FOR NAICS 211, 213, 324, AND 325 LOUISIANA, Q4 2024

	Upstream and downstream	All industries
Male	85.6	51.0
Female	14.4	49.0
White alone	78.3	64.3

Black alone	18.3	31.1
Asian alone	1.5	2.2
Non-Hispanic	95.7	93.5
Hispanic	4.6	6.5

Source: *Quarterly Workforce Indicators* (U.S. Census Bureau).

Throughout, several NAICS codes are used to report employment totals by industry. These codes are listed below. The core upstream and downstream oil and gas industries are marked with an asterisk\* and double asterisk\*\*, respectively, but the other oil and gas-related industries are also used in charts and narrative based on QCEW data (note that we relied on relatively general 2- and 3-digit industries rather than more specific levels as QCEW applies suppression inconsistently when comparing trends over time or across geography):

- 21 Mining, quarrying, and oil and gas extraction
  - 211 Oil and gas extraction\*
  - 213 Support activities for mining\*
- 22 Utilities
- 23 Construction
  - 2362 Nonresidential building construction
  - 237 Heavy and civil engineering construction
- 31-33 Manufacturing
  - 324 Petroleum and coal products manufacturing\*\*
  - 325 Chemical manufacturing\*\*
- 48-49 Transportation and warehousing
  - 483 Water transportation
  - 486 Pipeline transportation
  - 4883 Support activities for water transportation
- 238 Specialty trade contractors

Multipliers are extracted from Lightcast and reported purely for illustrative purposes. Lightcast does not provide industry multipliers directly, so we generated them by entering an arbitrary employment number for each industry into the input-output scenario tool and recording the reported multiplier. The multipliers reflect the Q3 2025 Lightcast Data Set with the geography set to Louisiana.

## Technical limitations of I-O models

The following is a non-exhaustive list of potential technical limitations with I-O models. In practice, the severity of these limitations can vary depending on the investigator, the product used to conduct the analysis, or the subject of the analysis.

- Input-output models hinge on regional

data on trade flows between industries, but this data is not collected directly. Rather, national data is adjusted to reflect proportions of these purchases that come from local suppliers and retailers. This “regionalization” process uses assumptions based on limited information available from

other local data, including measures of industry concentration akin to the location quotients—when more of the supply chain is concentrated in the region, more of the supply will be sourced locally. However, this assumption might not be true.

- Input-output multipliers generally assume fixed prices and capacity to expand. They do not incorporate the effects of increased demand on prices. A large, new source of demand in one industry could drive up housing, labor, and materials costs, and this feedback could limit its positive impact on jobs and crowd out other industries. This can occur strictly through market forces, which are typically not incorporated in the model.
- Because I-O models are static and based on the assumption that the future balance sheet of the economy will look like the past, they have limited validity for forward-looking estimates of ripple effects, especially when substantial changes are occurring (arguably, when these kinds of analyses are most useful).
- Multipliers are sensitive to the size of the region being analyzed. Statewide multipliers are larger than multipliers for a region within the state because the “local” supply chain is bigger by definition.
- There is no standard method or benchmark for I-O studies.<sup>22</sup> Substantial judgment is involved, and the level of effort and rigor varies from study to study. Additionally, they “count everything” (e.g., new jobs or new incomes), often without discounting for negative price feedbacks or differentiating among jobs that go to the already employed, to the un- or under-employed, or to commuters or in-migrants.
- Natural gas extraction and chemical manufacturing using gas as a feedstock are both concentrated in Louisiana. Is it reasonable to assume that in-state gas production will expand to accommodate

demand from a new chemical plant?

Because I-O models are based on national data, unique relationships among local industries may not be well captured. As described earlier, Louisiana’s energy economy is defined by multi-faceted and somewhat unique concentrations of upstream and downstream production, transportation, natural resources, and infrastructure, and in a specialized industry, their traded relationships are likely to be specific to the state and its regions.

- Studies using alternative, counterfactual-based methods that account for congestion effects have found that empirical multipliers tend to be smaller on average than multipliers generated by I-O models.<sup>23</sup>

# Endnotes

- 1 Many large industrial facilities in Louisiana also use oil and gas as both a fuel and as a primary feedstock for products like plastics, fertilizers, and specialized chemicals.
- 2 The Haynesville shale in Northwest Louisiana has yet to see the level of production in other shale regions.
- 3 Based on an analysis by the author of EPA Inventory of Greenhouse Gas Emissions and Sinks by State: 1990–2022.
- 4 As a result of these changes, the location quotients of upstream and downstream industries are on different trajectories. When compared with the late 1990s and early 2000s, location quotients for the two upstream industries have been falling, indicating that these industries are becoming less concentrated in Louisiana compared with the national average. In contrast, the location quotients in the two upstream industries have been growing.
- 5 For example, Orleans, Jefferson, East Baton Rouge, Caddo, Ouachita, Lafayette, and Calcasieu Parishes.
- 6 The source of demand in these industries is difficult to tease out. However, very few parts of Louisiana have experienced residential or commercial construction booms during the period examined.
- 7 Standard NAICS codes in many cases do not clearly assign jobs to industrial demand as opposed to residential, commercial, or civil infrastructure, since nearly half of construction-sector jobs in Louisiana are in the specialty trade contractors' industry. The industries described here are broad and include nonresidential building construction (2362), specialty trade contractors (238), and heavy and civil engineering construction (237). However, using an alternative and more restrictive set of industries to more carefully exclude nonresidential contractors, infrastructure, and commercial buildings shows even sharper employment growth: 29 percent between 2007 and 2018.
- 8 David Autor, "The Polarization of Job Opportunities in the U.S. Labor Market: Implications for Employment and Earnings" (Washington, D.C.: The Hamilton Project, Brookings Institution, 2010): <https://www.hamiltonproject.org/publication/policy-proposal/the-polarization-of-job-opportunities-in-the-u-s-labor-market-implications-for-employment-and-earnings/>; David Deming, Christopher Ong, and Lawrence Summers, "Technological Disruption in the U.S. Labor Market." (Aspen Institute Economic Strategy Group, 2024).
- 9 David Autor analysis of Quarterly Workforce Indicators, summarizing demographics of employees for Q4 2024 in NAICS 211, 213, 324, and 325.
- 10 Enhancing these opportunities would essentially mean that more occupations show up on the chart. Notably, middle-skill jobs associated with renewable energy—wind turbine service technicians and solar photovoltaic installers—do not appear on the chart. In fact, they don't appear in the data set due to low numbers.
- 11 Note that, while the concept is the same, the exact jargon and terminology can vary. Lightcast for example uses "initial" for what is usually termed "direct," and the term "indirect" would be synonymous with the sum of their "direct" and "indirect" effects.
- 12 Joshua Drucker, "Problems With Economic Impact Analysis: Examples From Base Communities," *Planetizen* (February 17, 2016).
- 13 These employment multipliers include the sum of direct, indirect, and induced effects, also known as "type II" multipliers. Note that these multipliers may differ from those used in other studies or supplied by other vendors of I-O models.
- 14 These are frequently referred to as "Type II" multipliers, as they include the induced effect.
- 15 Inputs to upstream oil and gas are essentially natural resources pulled out of the ground, so it seems reasonable that the multipliers are not especially high. On the other hand, as the number of these jobs declined dramatically in the late 2010s, state-wide employment growth slowed to a crawl. Some studies that have estimated multipliers retrospectively through alternative methods of analysis accounting for negative effects have found significantly smaller multipliers. Timothy J. Bartik and Nathan Sotherland, "Local Job Multipliers in the United States: Variation with Local Characteristics and with High-Tech Shocks." (W.E. Upjohn Institute for Employment Research: Upjohn Institute Working Paper 19-301, 2019): <https://doi.org/10.17848/wp19-301>.
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- 21 Wim Wiewel, Joseph Fitzsimons, and David Mollenkopf. Does 'Trickle Down' Work?: Economic Development Strategies and Job Chains in Local Labor Markets. (Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 2004), Chapter 3; Joshua Drucker, "Counterfactual Impact Analysis of Economic Development Programs," *Journal of Planning Literature* 29, no. 4 (2014); Timothy J. Bartik, "Making Sense of Incentives: Taming Business Incentives to Promote Prosperity," (Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 2019).
- 22 Clark Merrefield, "Economic Impact Studies: What Are They and How Are They Used in Journalism and Policy?" (Journalist's Resource, Shorenstein Center on Media, Politics and Public Policy, Harvard Kennedy School, April 17, 2018): <https://journalists-resource.org/economics/economic-impact-studies-research-reliable/>; Wim Wiewel, Joseph Fitzsimons, and David Mollenkopf, "Does 'Trickle Down' Work?: Economic Development Strategies and Job Chains in Local Labor Markets," (Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 2004), Chapter 3.
- 23 Timothy J. Bartik and Nathan Sotherland, "Realistic Local Job Multipliers." Policy Brief. (Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 2019): <https://doi.org/10.17848/pb2019-8>.

## ABOUT THE AUTHORS

Dr. Robert Habans is an applied economist and social scientist. Dr. Habans was previously the chief economist at The Data Center. Currently, he is an independent consultant and a researcher at the University of Louisiana at Lafayette. Dr. Habans' work focuses on jobs and the labor market, place and regional economies, and the interface between data, evidence, and policy. A native of southeast Louisiana, he holds degrees from UC Berkeley, UNO, and the University of Illinois at Chicago.

Dr. Alexander S. Kolker is a climate scientist with global experience. He runs the Coastal Climates Institute, a consultancy focused on addressing the planet's climate challenges in the coastal zone. His research career includes experience in the earth, atmosphere, and ocean sciences at multiple Louisiana academic institutions. In addition, he served as a Fulbright Scholar in Morocco, and as a fellow with the North Atlantic Treaty Organization's (NATO) Climate Change and Security Centre of Excellence and with NATO's Energy Security Centre of Excellence. He holds degrees from the University of California, Santa Cruz and Stony Brook University.

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## FOR MORE INFORMATION

Robert Habans  
uru research LLC  
robby@rhabans.com

Alexander S. Kolker, PhD  
Coastal Climates Institute and Coastal Climates, LLC  
alex@coastalclimates.org

## **ABOUT THE DATA CENTER**

The Data Center, a project of Nonprofit Knowledge Works, is the most trusted resource for data about Southeast Louisiana. Founded in 1997, we provide fully independent research and analysis to offer a comprehensive look at issues that matter most to our region. With a mission of democratizing data, The Data Center has, and continues to be, an objective partner in bringing reliable, thoroughly researched data to conversations about building a more prosperous, inclusive, and sustainable region.

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