
Economic Impacts of the Oil and Natural Gas Industry on the US Economy in 2011

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Economic Impacts of the Oil and Natural Gas Industry on the US Economy in 2011

Executive Summary

The American Petroleum Institute engaged PwC to quantify the economic impacts of the US oil and natural gas industry in terms of employment, labor income, and value added.¹ This report provides PwC's economic impacts estimates for 2011, the most recent year for which a consistent set of national and state-level data are available.

The report's findings show that the oil and natural gas industry has a widespread economic impact throughout all sectors of the economy and across all 50 states and the District of Columbia. These impacts result directly from the employment and production within the oil and gas industry, indirectly through the industry's purchases of intermediate and capital goods from a variety of other US industries, and by the personal purchases of employees and business owners both within the oil and natural gas industry and out of the additional income in the supply chain to the industry and from dividends received from oil and natural gas companies.

In describing these economic impacts, this report considers three separate channels -- the direct impact, the indirect impact, and the induced impact -- that in aggregate provide a measure of the total economic impact of the US oil and natural gas industry.

- **Direct impact** is measured as the jobs, labor income, and value added *within* the oil and natural gas industry.
- **Indirect impact** is measured as the jobs, labor income, and value added occurring *throughout the supply chain* of the oil and natural gas industry.
- **Induced impact** is measured as the jobs, labor income, and value added resulting from *household spending* of labor and proprietor's income earned either directly or indirectly from the oil and natural gas industry's spending.

This report quantifies the industry's **operational impact** (due to purchases of intermediate inputs and payments of labor compensation and dividends) and **capital investment impact** (due to its investment in new structures and equipment) at the national level. Separate detail is also provided on the industry's **operational impact** at the state level.² These economic impacts represent all of the *backward linkages* of the US oil and natural gas industry to its suppliers. They do not capture any *forward linkages* (i.e., the economic impact on production in sectors that use oil and natural gas as an input).

¹ Value added refers to the additional value created at a particular stage of production. It is a measure of the overall importance of an industry and represents the industry's portion of US gross domestic product ("GDP"). Value added consists of: employee compensation, proprietors' income, income to capital owners from property, and indirect business taxes (including excise taxes, property taxes, fees, licenses, and sales taxes paid by businesses).

² The industry's *capital investment impact* is not quantified at the state level due to the non-availability of capital expenditure data at the state level.

The US oil and natural gas industry's total employment impact to the national economy in 2011, combining the **operational** and **capital investment** impacts, amounted to 9.8 million full-time and part-time jobs and accounted for 5.6 percent of total US employment (see **Table E-1**). At the national level, each direct job in the oil and natural gas industry supported approximately 2.8 jobs elsewhere in the US economy in 2011. Counting direct, indirect, and induced impacts, the industry's total impact on labor income (including proprietors' income) was \$598 billion, or 6.3 percent of national labor income in 2011. The industry's total impact on US GDP was \$1.2 trillion, accounting for 8.0 percent of the national total in 2011.

Table E-1.– Total Operational and Capital Investment Impacts of the Oil and Natural Gas Industry on the US Economy, 2011

| | Direct Impacts | Indirect and Induced Impacts | | Total Impacts | Percent of U.S. Total |
|------------------------------|----------------|------------------------------|----------------------------|---------------|-----------------------|
| | | Operational Impacts | Capital Investment Impacts | | |
| Employment* | 2,590,700 | 5,854,500 | 1,388,100 | 9,833,200 | 5.6% |
| Labor Income (\$ billions)** | \$203.6 | \$311.8 | \$82.2 | \$597.6 | 6.3% |
| Value Added (\$ billions) | \$551.0 | \$522.5 | \$135.8 | \$1,209.4 | 8.0% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

Note: Details may not add to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The economic impact of the oil and natural gas industry reaches all 50 states and the District of Columbia. The total number of jobs directly or indirectly attributable to the oil and natural gas industry's **operations** (i.e., not counting any **capital investment impacts**) ranged from a low of 13,700 (in District of Columbia) to 1.9 million (in Texas) in 2011. The top 15 states, in terms of the total number of jobs directly or indirectly attributable to the oil and natural gas industry's operations in 2011 were Texas, California, Louisiana, Oklahoma, Pennsylvania, Florida, New York, Illinois, Ohio, Colorado, Michigan, Kansas, North Carolina, New Jersey, and Georgia. Combined these states account for 70 percent of the total jobs attributable to the US oil and natural gas industry's operations (see **Table E-2a**).

Table E-2a.– Total Impacts of the Oil and Natural Gas Industry’s Operations in 2011
Top 15 States, Ranked by Total Employment Impact

| State | Employment* | | Labor Income** | | Value Added | |
|----------------|-------------|------------------------|----------------|------------------------|--------------|------------------------|
| | Amount | Percent of State Total | (\$ Million) | Percent of State Total | (\$ Million) | Percent of State Total |
| Texas | 1,938,700 | 13.6% | \$144,085 | 18.7% | \$308,346 | 23.2% |
| California | 793,200 | 4.1% | \$58,884 | 4.9% | \$131,445 | 6.7% |
| Louisiana | 412,600 | 16.2% | \$24,213 | 19.4% | \$73,925 | 35.5% |
| Oklahoma | 364,300 | 16.8% | \$23,298 | 22.9% | \$39,002 | 23.1% |
| Pennsylvania | 339,000 | 4.7% | \$19,550 | 5.1% | \$34,654 | 5.8% |
| Florida | 286,800 | 2.9% | \$12,919 | 2.8% | \$23,154 | 3.1% |
| New York | 270,600 | 2.4% | \$20,419 | 2.7% | \$35,197 | 3.0% |
| Illinois | 263,700 | 3.6% | \$15,745 | 3.8% | \$33,308 | 5.1% |
| Ohio | 255,100 | 3.9% | \$12,744 | 4.1% | \$28,445 | 5.7% |
| Colorado | 213,100 | 6.7% | \$14,088 | 8.1% | \$25,811 | 9.1% |
| Michigan | 182,000 | 3.6% | \$8,808 | 3.5% | \$15,761 | 4.1% |
| Kansas | 148,300 | 8.1% | \$7,211 | 8.6% | \$12,903 | 9.5% |
| North Carolina | 146,100 | 2.8% | \$6,764 | 2.6% | \$12,479 | 3.0% |
| New Jersey | 143,900 | 2.9% | \$10,124 | 3.3% | \$19,876 | 4.0% |
| Georgia | 141,600 | 2.7% | \$6,765 | 2.5% | \$12,902 | 3.0% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The top 15 states in terms of the percentage of jobs directly or indirectly attributable to the oil and natural gas industry’s operations in 2011 were Wyoming (20.4 percent), Oklahoma (16.8 percent), Louisiana (16.2 percent), Texas (13.6 percent), North Dakota (12.0 percent), Alaska (11.9 percent), New Mexico (9.9 percent), West Virginia (8.9 percent), Kansas (8.1 percent), Montana (6.7 percent), Colorado (6.7 percent), Mississippi (6.6 percent), Arkansas (5.9 percent), Utah (4.9 percent), and Pennsylvania (4.7 percent) (see **Table E-2b**).

Table E-2b.– Total Impacts of the Oil and Natural Gas Industry’s Operations in 2011
Top 15 States, Ranked by Employment Share of State Total

| State | Employment* | | Labor Income** | | Value Added | |
|---------------|-------------|------------------------|----------------|------------------------|--------------|------------------------|
| | Amount | Percent of State Total | (\$ Million) | Percent of State Total | (\$ Million) | Percent of State Total |
| Wyoming | 80,000 | 20.4% | \$5,134.7 | 21.3% | \$13,018.7 | 32.9% |
| Oklahoma | 364,300 | 16.8% | \$23,297.9 | 22.9% | \$39,001.9 | 23.1% |
| Louisiana | 412,600 | 16.2% | \$24,213.4 | 19.4% | \$73,925.4 | 35.5% |
| Texas | 1,938,700 | 13.6% | \$144,085.3 | 18.7% | \$308,346.0 | 23.2% |
| North Dakota | 64,000 | 12.0% | \$3,831.4 | 13.1% | \$6,575.1 | 12.3% |
| Alaska | 56,600 | 11.9% | \$4,501.6 | 12.6% | \$19,277.0 | 34.7% |
| New Mexico | 105,600 | 9.9% | \$5,350.1 | 10.3% | \$11,273.6 | 14.2% |
| West Virginia | 80,400 | 8.9% | \$3,638.6 | 8.8% | \$5,756.1 | 8.7% |
| Kansas | 148,300 | 8.1% | \$7,211.1 | 8.6% | \$12,902.8 | 9.5% |
| Montana | 43,100 | 6.7% | \$2,009.3 | 7.7% | \$4,546.7 | 10.8% |
| Colorado | 213,100 | 6.7% | \$14,087.6 | 8.1% | \$25,811.3 | 9.1% |
| Mississippi | 97,800 | 6.6% | \$4,526.1 | 7.4% | \$9,055.3 | 9.4% |
| Arkansas | 92,500 | 5.9% | \$4,220.3 | 6.3% | \$8,062.7 | 7.8% |
| Utah | 79,600 | 4.9% | \$4,091.5 | 5.3% | \$8,376.7 | 6.9% |
| Pennsylvania | 339,000 | 4.7% | \$19,550.5 | 5.1% | \$34,654.3 | 5.8% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Economic Impacts of the Oil and Natural Gas Industry on the US Economy in 2011

I. Introduction

The American Petroleum Institute engaged PwC to quantify the economic impacts of the US oil and natural gas industry on the national and state economies in terms of employment, labor income, and value added.³ This report presents PwC's economic impact estimates for 2011, the most recent year for which a consistent set of national and state-level data is available.⁴

This study quantifies the industry's **operational impact** (due to purchases of intermediate inputs and payments of labor compensation and dividends) and **capital investment impact** (due to its investment in new structures and equipment) at the national level. Separate detail is also provided on the industry's **operational impact** at the state level.⁵ These economic impacts represent all of the *backward linkages* of the US oil and natural gas industry to its suppliers. They do not capture any *forward linkages* (i.e., the economic impact on production in sectors that use oil and natural gas as an input).

In describing the economic impact of the US oil and natural gas industry through its employment and purchases of goods and services, this report considers three separate channels -- the direct impact, the indirect impact, and the induced impact -- that in aggregate provide a measure of the total economic impact of the US oil and natural gas industry.

- **Direct impact** is measured as the jobs, labor income, and value added *within* the oil and natural gas industry.
- **Indirect impact** is measured as the jobs, labor income, and value added occurring *throughout the supply chain* of the oil and natural gas industry.
- **Induced impact** is measured as the jobs, labor income, and value added resulting from *household spending* of labor and proprietor's income earned either directly or indirectly from the oil and natural gas industry's spending.

Together these effects result in the oil and natural gas industry having a widespread economic impact throughout all sectors of the US economy and in all geographic areas.

³ Value added refers to the additional value created at a particular stage of production. It is a measure of the overall importance of an industry and represents the industry's share of gross domestic product ("GDP"). Value added consists of: employee compensation, proprietors' income, income to capital owners from property, and indirect business taxes (including excise taxes, property taxes, fees, licenses, and sales taxes paid by businesses).

⁴ PwC prepared a prior study for the American Petroleum Institute that quantified the economic impacts of the oil and gas industry in 2009. See PwC, *The Economic Impacts of the Oil and Natural Gas Industry on the US Economy in 2009: Employment, Labor Income, and Value Added* (May 2011).

⁵ The industry's *capital investment impact* is not quantified at the state level due to the non-availability of capital expenditure data at the state level.

Using the IMPLAN input-output modeling system, PwC has built customized multiplier models for the US as a whole, as well as for each of the 50 states and the District of Columbia. The models calculate the oil and natural gas industry's economic impacts at the national and state level in 2011, the most recent historical year for which a consistent set of national and state level data is available from the IMPLAN modeling system.⁶

The rest of this report is organized as follows. **Section II** defines the oil and natural gas industry for this study. **Section III** presents PwC's estimates of the industry's total economic impacts at the national and state level in 2011. **Section IV** provides detail on each of the three separate components -- the direct, indirect, and induced economic impacts -- that in aggregate represent the total economic impacts of the oil and natural gas industry. **Section V** presents a composite measure of the industry's total "spend" based on its direct labor income, capital expenditures, and dividend payments. Detailed state-by-state operational impact results are presented in **Appendix A**. A description of the data sources and methodology used for the study is provided in **Appendix B**.

⁶ The IMPLAN input-output economic modeling system is supported by the IMPLAN Group LLC. Its users include academia, federal, state, and local governments, and the private sector.

II. Industry Definition

The US oil and natural gas industry encompasses a number of activities that span separate industry classifications in government economic data. Oil and natural gas exploration and production is included in the mining sector; oil refining is part of the manufacturing sector; pipeline operations are included in the transportation sector; natural gas distribution is in the utilities sector; and oil marketing is considered part of the wholesale and retail trade sector. For this study, PwC has defined the oil and natural gas industry to include all of these activities.

Table 1, below, shows the composition of the industry as defined by PwC, followed by detailed descriptions based on the *North American Industry Classification System* (“NAICS”).

Table 1.– Composition of the US Oil and Natural Gas Industry

| NAICS | IMPLAN Sector | Description |
|--------|---------------|---|
| 211 | 20 | Oil and gas extraction (including NGL extraction) |
| 213111 | 28 | Drilling oil and gas wells |
| 213112 | 29 | Support activities for oil and gas operations |
| 2212 | 32 | Natural gas distribution (private) |
| 2212 | 432* | Natural gas distribution (public) |
| 23712 | 36* | Oil and gas pipeline and related structures construction |
| 32411 | 115 | Petroleum refineries |
| 32412 | 116, 117 | Asphalt paving, roofing, and saturated materials manufacturing (primarily petroleum-based products) |
| 324191 | 118 | Petroleum lubricating oil and grease manufacturing |
| 4247 | 319* | Petroleum and petroleum products merchant wholesalers |
| 44711 | 326 | Gasoline stations with convenience stores |
| 44719 | 326 | Other gasoline stations |
| 45431 | 331* | Fuel dealers |
| 486 | 337 | Pipeline transportation |

*IMPLAN sectors 432, 36, 319, and 331 include additional NAICS activities outside the US oil and natural gas industry. Modeling of the economic impacts includes only the portion of these sectors that include the oil and natural gas industry NAICS segment.

NAICS 211. Oil and gas extraction. Establishments in this subsector operate and/or develop oil and gas field properties. Such activities may include exploration for crude petroleum and natural gas; drilling, completing, and equipping wells; operating separators, emulsion breakers, desilting equipment, and field gathering lines for crude petroleum and natural gas; and all other activities in the preparation of oil and gas up to the point of shipment from the producing property. This subsector includes the production of crude petroleum, the mining and extraction of oil from oil shale and oil sands, and the production of natural gas, sulfur recovery from natural gas, and recovery of hydrocarbon liquids. Establishments in this subsector include those that operate oil and gas wells on their own account or for others on a contract or fee basis.

NAICS 213111. Drilling oil and gas wells. This subsector comprises establishments primarily engaged in drilling oil and gas wells for others on a contract or fee basis. This industry includes contractors that specialize in spudding in, drilling in, re-drilling, and directional drilling.

NAICS 213112. Support activities for oil and gas operations. This subsector comprises establishments primarily engaged in performing support activities on a contract or fee basis for oil and gas operations (except site preparation and related construction activities). Services included are exploration (except geophysical surveying and mapping); excavating slush pits and cellars, well surveying; running, cutting, and pulling casings, tubes, and rods; cementing wells, shooting wells; perforating well casings; acidizing and chemically treating wells; and cleaning out, bailing, and swabbing wells.

NAICS 2212. Natural gas distribution. This subsector comprises: (1) establishments primarily engaged in operating gas distribution systems (e.g., mains, meters); (2) establishments known as gas marketers that buy gas from the well and sell it to a distribution system; (3) establishments known as gas brokers or agents that arrange the sale of gas over gas distribution systems operated by others; and (4) establishments primarily engaged in transmitting and distributing gas to final consumers. Both privately and publicly owned establishments are included in this study.

NAICS 23712. Oil and gas pipeline and related structures construction. This subsector comprises establishments primarily engaged in the construction of oil and gas lines, mains, refineries, and storage tanks. The work performed may include new work, reconstruction, rehabilitation, and repairs. Specialty trade contractors are included in this group if they are engaged in activities primarily related to oil and gas pipeline and related structures construction. All structures (including buildings) that are integral parts of oil and gas networks (e.g., storage tanks, pumping stations, and refineries) are included in this subsector.

NAICS 32411. Petroleum refineries. This subsector comprises establishments primarily engaged in refining crude petroleum into refined petroleum. Petroleum refining involves one or more of the following activities: (1) fractionation; (2) straight distillation of crude oil; and (3) cracking.

NAICS 32412. Asphalt paving, roofing, and saturated materials manufacturing. This subsector comprises establishments primarily engaged in (1) manufacturing asphalt and tar paving mixtures and blocks and roofing cements and coatings from purchased asphaltic materials and/or (2) saturating purchased mats and felts with asphalt or tar from purchased asphaltic materials. These are primarily petroleum-based products.

NAICS 324191. Petroleum lubricating oil and grease manufacturing. This subsector comprises establishments primarily engaged in blending or compounding

refined petroleum to make lubricating oils and greases and/or re-refining used petroleum lubricating oils.

NAICS 4247. Petroleum and petroleum products merchant wholesalers.

This subsector comprises establishments with bulk liquid storage facilities primarily engaged in the merchant wholesale distribution of crude petroleum and petroleum products, including liquefied petroleum gas.

NAICS 44711. Gasoline stations with convenience stores. This subsector comprises establishments engaged in retailing automotive fuels (e.g., diesel fuel, gasohol, gasoline) in combination with convenience store or food mart items. These establishments can either be in a convenience store (i.e., food mart) setting or a gasoline station setting. These establishments may also provide automotive repair services.

NAICS 44719. Other gasoline stations. This subsector comprises establishments known as gasoline stations (except those with convenience stores) primarily engaged in one of the following: (1) retailing automotive fuels (e.g., diesel fuel, gasohol, gasoline) or (2) retailing these fuels in combination with activities, such as providing repair services; selling automotive oils, replacement parts, and accessories; and/or providing food services

NAICS 45431. Fuel dealers. This subsector comprises establishments primarily engaged in retailing heating oil, liquefied petroleum (LP) gas, and other fuels via direct selling.

NAICS 486. Pipeline transportation. Establishments in this subsector use transmission pipelines to transport products, such as crude oil, natural gas, refined petroleum products, and slurry. It also includes the storage of natural gas because the storage is usually done by the pipeline establishment and because a pipeline is inherently a network in which all the nodes are interdependent.

III. Total Economic Impact

This section presents the estimated total economic impact of the US oil and natural gas industry on the national and state economies. As shown below, the oil and natural gas industry has a widespread economic impact throughout all sectors of the economy and across all 50 states and the District of Columbia. The total economic impact we have measured includes the **direct impact** (the jobs, labor income, and value added *within* the oil and natural gas industry), the **indirect impact** (the jobs, labor income, and value added occurring *throughout the supply chain* of the oil and natural gas industry), and the **induced impact** (the jobs, labor income, and value added resulting from *household spending* of income earned either directly or indirectly from the oil and natural gas industry's spending and from dividends received from oil and natural gas companies).

A. National Impact

As shown in **Table 2**, the total economic impact of the US oil and natural gas industry in terms of jobs, labor income (including wages and salaries and benefits as well as proprietors' income), and value added is significant.

Employment

PwC estimates that, at the national level, the oil and natural gas industry's *operations* directly and indirectly supported 8.4 million full-time and part-time jobs in the national economy in 2011. Further, the industry's *capital investment* supported an additional 1.4 million jobs in the national economy. Combining the operational and capital investment impacts, the oil and natural gas industry's total employment impact on the national economy amounted to 9.8 million full-time and part-time jobs in 2011, accounting for 5.6 percent of total US employment.

Labor Income

The associated labor income (including wages and salaries and benefits, as well as proprietors' income) from jobs directly or indirectly supported by the oil and natural gas industry through its operational spending, dividend payments, and capital investment is estimated to be \$597.6 billion, or 6.3 percent of total US labor income in 2011.

Value Added

Value added refers to the additional value created at a particular stage of production. The sum of value added across all industries in a country or region is, by definition, equivalent to its Gross Domestic Product (GDP). Value added consists of: employee compensation, proprietors' income, income to capital owners from property, and indirect business taxes (i.e., those borne by consumers rather than producers).

PwC estimates that the US oil and natural gas industry's *operations* directly or indirectly generated \$1.1 trillion of value added in the national economy in 2011, and its *capital investment* added an additional \$135.8 billion of value added. Combining both operational and capital investment impacts, the industry's total value added impact at the national level was \$1.2 trillion, accounting for 8.0 percent of US GDP in 2011.

Table 2.– Total Operational and Capital Investment Impact of the Oil and Natural Gas Industry to the US Economy, 2011

| Item | Amount | Percent of US Total |
|---|-------------|---------------------|
| <i>Operational Impact</i> | | |
| Employment* | 8,445,200 | 4.9% |
| Labor Income (\$ millions)** | \$515,368 | 5.4% |
| Value Added (\$ millions) | \$1,073,552 | 7.1% |
| <i>Capital Investment Impact</i> | | |
| Employment* | 1,388,100 | 0.7% |
| Labor Income (\$ millions)** | \$82,247 | 0.9% |
| Value Added (\$ millions) | \$135,837 | 0.9% |
| <i>Total Impacts</i> | | |
| Employment* | 9,833,200 | 5.6% |
| Labor Income (\$ millions)** | \$597,615 | 6.3% |
| Value Added (\$ millions) | \$1,209,389 | 8.0% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

Details may not add to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

B. State Impacts

The US oil and natural gas industry's economic impact reaches all 50 states and the District of Columbia. The impact varies from state to state, depending on factors such as each state's industry mix, wage structure, spending and saving patterns, and connections to other economies.

Table 3a shows the oil and natural gas industry's state-by-state total *operational* impact in terms of jobs, labor income (including wage and salaries and benefits as well as proprietors' income), and value added, where the states are shown alphabetically.

Table 3b is the same as **Table 3a**, except that the states are ranked in order of the industry's total employment impact as a percent of each state's total employment. State-level results, as explained earlier, do not include the economic impact of the industry's capital investment due to the non-availability of state capital expenditure data.

Employment

The total number of jobs directly or indirectly attributable to the oil and natural gas industry's operations as a percent of each state's total employment in 2011 ranged from 1.7 percent (District of Columbia) to 20.4 percent (Wyoming). The oil and natural gas industry directly or indirectly supported 5.0 percent or more of the total employment in 13 states in 2011: Wyoming (20.4 percent), Oklahoma (16.8 percent), Louisiana (16.2 percent), Texas (13.6 percent), North Dakota (12.0 percent), Alaska (11.9 percent), New Mexico (9.9 percent), West Virginia (8.9 percent), Kansas (8.1 percent), Montana (6.7 percent), Colorado (6.7 percent), Mississippi (6.6 percent), and Arkansas (5.9 percent). In these 13 states, the oil and natural gas industry was, on average, directly or indirectly responsible for one out of every nine jobs.

Labor Income

As a percent of each state's total labor income (including wages and salaries and benefits as well as proprietors' income), the labor income from total jobs directly or indirectly supported by the oil and natural gas industry's operations ranged from 1.3 percent (District of Columbia) to 22.9 percent (Oklahoma) in 2011. The oil and natural gas industry's total labor income impact exceeded 5.0 percent of the state total in 15 states: Oklahoma (22.9 percent), Wyoming (21.3 percent), Louisiana (19.4 percent), Texas (18.7 percent), North Dakota (13.1 percent), Alaska (12.6 percent), New Mexico (10.3 percent), West Virginia (8.8 percent), Kansas (8.6 percent), Colorado (8.1 percent), Montana (7.7 percent), Mississippi (7.4 percent), Arkansas (6.3 percent), Utah (5.3 percent), and Pennsylvania (5.1 percent).

Value Added

As a percent of each state's economy, the oil and natural gas industry's total value-added impact from its operations ranged from 1.9 percent (District of Columbia) to 35.5 percent (Louisiana) in 2011. The oil and natural gas industry's total value-added impact accounted for at least 5.0 percent of the state total in 22 states: Louisiana (35.5 percent), Alaska (34.7 percent), Wyoming (32.9 percent), Texas (23.2 percent), Oklahoma (23.1 percent), New Mexico (14.2 percent), North Dakota (12.3 percent), Montana (10.8 percent), Kansas (9.5 percent), Mississippi (9.4 percent), Colorado (9.1 percent), West Virginia (8.7 percent), Arkansas (7.8 percent), Utah (6.9 percent), California (6.7 percent), Alabama (6.4 percent), Indiana (6.3 percent), Pennsylvania (5.8 percent), Ohio (5.7 percent), Nebraska (5.4 percent), Illinois (5.1 percent), and Minnesota (5.0 percent).

**Table 3a. – Total Operational Impact of the Oil and Natural Gas Industry
By State in 2011 (Sorted Alphabetically)**

| State | Employment* | | Labor Income** | | Value Added | |
|----------------------|------------------|------------------------|--------------------|------------------------|----------------------|------------------------|
| | Amount | Percent of State Total | (\$ Million) | Percent of State Total | (\$ Million) | Percent of State Total |
| Alabama | 103,300 | 4.2% | \$4,903.9 | 4.2% | \$11,327.8 | 6.4% |
| Alaska | 56,600 | 11.9% | \$4,501.6 | 12.6% | \$19,277.0 | 34.7% |
| Arizona | 97,100 | 3.0% | \$4,654.4 | 3.0% | \$9,016.6 | 3.4% |
| Arkansas | 92,500 | 5.9% | \$4,220.3 | 6.3% | \$8,062.7 | 7.8% |
| California | 793,200 | 4.1% | \$58,883.6 | 4.9% | \$131,445.1 | 6.7% |
| Colorado | 213,100 | 6.7% | \$14,087.6 | 8.1% | \$25,811.3 | 9.1% |
| Connecticut | 59,400 | 2.7% | \$4,160.4 | 2.8% | \$7,683.0 | 3.3% |
| Delaware | 16,100 | 3.0% | \$957.4 | 3.2% | \$1,965.6 | 4.1% |
| District of Columbia | 13,700 | 1.7% | \$1,426.6 | 1.3% | \$2,702.6 | 1.9% |
| Florida | 286,800 | 2.9% | \$12,918.6 | 2.8% | \$23,154.0 | 3.1% |
| Georgia | 141,600 | 2.7% | \$6,765.0 | 2.5% | \$12,902.3 | 3.0% |
| Hawaii | 20,500 | 2.3% | \$1,036.4 | 2.0% | \$2,167.2 | 2.9% |
| Idaho | 27,000 | 3.1% | \$1,041.0 | 2.9% | \$1,796.9 | 3.1% |
| Illinois | 263,700 | 3.6% | \$15,744.6 | 3.8% | \$33,307.9 | 5.1% |
| Indiana | 136,400 | 3.8% | \$6,699.1 | 4.1% | \$16,595.7 | 6.3% |
| Iowa | 65,100 | 3.3% | \$2,568.0 | 3.0% | \$4,419.0 | 3.1% |
| Kansas | 148,300 | 8.1% | \$7,211.1 | 8.6% | \$12,902.8 | 9.5% |
| Kentucky | 94,700 | 4.0% | \$4,054.0 | 3.8% | \$7,867.8 | 4.6% |
| Louisiana | 412,600 | 16.2% | \$24,213.4 | 19.4% | \$73,925.4 | 35.5% |
| Maine | 28,800 | 3.6% | \$1,150.2 | 3.2% | \$2,370.5 | 4.2% |
| Maryland | 75,400 | 2.2% | \$4,190.0 | 1.9% | \$7,084.8 | 2.2% |
| Massachusetts | 106,300 | 2.5% | \$7,117.9 | 2.6% | \$12,638.9 | 2.9% |
| Michigan | 182,000 | 3.6% | \$8,807.8 | 3.5% | \$15,761.3 | 4.1% |
| Minnesota | 122,100 | 3.5% | \$6,018.2 | 3.4% | \$14,305.7 | 5.0% |
| Mississippi | 97,800 | 6.6% | \$4,526.1 | 7.4% | \$9,055.3 | 9.4% |
| Missouri | 118,800 | 3.4% | \$5,527.1 | 3.3% | \$9,810.9 | 3.8% |
| Montana | 43,100 | 6.7% | \$2,009.3 | 7.7% | \$4,546.7 | 10.8% |
| Nebraska | 47,200 | 3.8% | \$2,687.4 | 4.7% | \$4,722.2 | 5.4% |
| Nevada | 48,600 | 3.2% | \$2,432.7 | 3.2% | \$4,539.9 | 3.8% |
| New Hampshire | 24,900 | 3.0% | \$1,252.7 | 2.8% | \$2,250.3 | 3.3% |
| New Jersey | 143,900 | 2.9% | \$10,123.7 | 3.3% | \$19,875.5 | 4.0% |
| New Mexico | 105,600 | 9.9% | \$5,350.1 | 10.3% | \$11,273.6 | 14.2% |
| New York | 270,600 | 2.4% | \$20,419.4 | 2.7% | \$35,196.8 | 3.0% |
| North Carolina | 146,100 | 2.8% | \$6,763.6 | 2.6% | \$12,479.2 | 3.0% |
| North Dakota | 64,000 | 12.0% | \$3,831.4 | 13.1% | \$6,575.1 | 12.3% |
| Ohio | 255,100 | 3.9% | \$12,744.4 | 4.1% | \$28,444.7 | 5.7% |
| Oklahoma | 364,300 | 16.8% | \$23,297.9 | 22.9% | \$39,001.9 | 23.1% |
| Oregon | 60,400 | 2.8% | \$2,811.2 | 2.8% | \$5,027.0 | 3.0% |
| Pennsylvania | 339,000 | 4.7% | \$19,550.5 | 5.1% | \$34,654.3 | 5.8% |
| Rhode Island | 15,100 | 2.5% | \$934.4 | 2.8% | \$1,650.0 | 3.2% |
| South Carolina | 67,700 | 2.9% | \$2,634.2 | 2.4% | \$4,672.8 | 2.8% |
| South Dakota | 22,500 | 3.9% | \$857.0 | 3.5% | \$1,459.0 | 3.9% |
| Tennessee | 111,500 | 3.2% | \$5,086.1 | 3.0% | \$8,918.5 | 3.4% |
| Texas | 1,938,700 | 13.6% | \$144,085.3 | 18.7% | \$308,346.0 | 23.2% |
| Utah | 79,600 | 4.9% | \$4,091.5 | 5.3% | \$8,376.7 | 6.9% |
| Vermont | 14,600 | 3.6% | \$567.0 | 3.1% | \$1,042.2 | 3.6% |
| Virginia | 141,600 | 3.0% | \$7,215.2 | 2.5% | \$12,460.6 | 2.9% |
| Washington | 104,300 | 2.8% | \$5,908.4 | 2.7% | \$14,004.8 | 4.0% |
| West Virginia | 80,400 | 8.9% | \$3,638.6 | 8.8% | \$5,756.1 | 8.7% |
| Wisconsin | 103,300 | 3.0% | \$4,557.1 | 2.9% | \$7,901.5 | 3.1% |
| Wyoming | 80,000 | 20.4% | \$5,134.7 | 21.3% | \$13,018.7 | 32.9% |
| U.S. Total | 8,445,200 | 4.9% | \$515,368.0 | 5.4% | \$1,073,552.3 | 7.1% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

Details may not add to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table 3b. – Total Operational Impact of the Oil and Natural Gas Industry By State in 2011 (Sorted by Employment Share of State Total)

| State | Employment* | | Labor Income** | | Value Added | |
|----------------------|------------------|------------------------|--------------------|------------------------|----------------------|------------------------|
| | Amount | Percent of State Total | (\$ Million) | Percent of State Total | (\$ Million) | Percent of State Total |
| Wyoming | 80,000 | 20.4% | \$5,134.7 | 21.3% | \$13,018.7 | 32.9% |
| Oklahoma | 364,300 | 16.8% | \$23,297.9 | 22.9% | \$39,001.9 | 23.1% |
| Louisiana | 412,600 | 16.2% | \$24,213.4 | 19.4% | \$73,925.4 | 35.5% |
| Texas | 1,938,700 | 13.6% | \$144,085.3 | 18.7% | \$308,346.0 | 23.2% |
| North Dakota | 64,000 | 12.0% | \$3,831.4 | 13.1% | \$6,575.1 | 12.3% |
| Alaska | 56,600 | 11.9% | \$4,501.6 | 12.6% | \$19,277.0 | 34.7% |
| New Mexico | 105,600 | 9.9% | \$5,350.1 | 10.3% | \$11,273.6 | 14.2% |
| West Virginia | 80,400 | 8.9% | \$3,638.6 | 8.8% | \$5,756.1 | 8.7% |
| Kansas | 148,300 | 8.1% | \$7,211.1 | 8.6% | \$12,902.8 | 9.5% |
| Montana | 43,100 | 6.7% | \$2,009.3 | 7.7% | \$4,546.7 | 10.8% |
| Colorado | 213,100 | 6.7% | \$14,087.6 | 8.1% | \$25,811.3 | 9.1% |
| Mississippi | 97,800 | 6.6% | \$4,526.1 | 7.4% | \$9,055.3 | 9.4% |
| Arkansas | 92,500 | 5.9% | \$4,220.3 | 6.3% | \$8,062.7 | 7.8% |
| Utah | 79,600 | 4.9% | \$4,091.5 | 5.3% | \$8,376.7 | 6.9% |
| Pennsylvania | 339,000 | 4.7% | \$19,550.5 | 5.1% | \$34,654.3 | 5.8% |
| Alabama | 103,300 | 4.2% | \$4,903.9 | 4.2% | \$11,327.8 | 6.4% |
| California | 793,200 | 4.1% | \$58,883.6 | 4.9% | \$131,445.1 | 6.7% |
| Kentucky | 94,700 | 4.0% | \$4,054.0 | 3.8% | \$7,867.8 | 4.6% |
| Ohio | 255,100 | 3.9% | \$12,744.4 | 4.1% | \$28,444.7 | 5.7% |
| South Dakota | 22,500 | 3.9% | \$857.0 | 3.5% | \$1,459.0 | 3.9% |
| Nebraska | 47,200 | 3.8% | \$2,687.4 | 4.7% | \$4,722.2 | 5.4% |
| Indiana | 136,400 | 3.8% | \$6,699.1 | 4.1% | \$16,595.7 | 6.3% |
| Illinois | 263,700 | 3.6% | \$15,744.6 | 3.8% | \$33,307.9 | 5.1% |
| Maine | 28,800 | 3.6% | \$1,150.2 | 3.2% | \$2,370.5 | 4.2% |
| Michigan | 182,000 | 3.6% | \$8,807.8 | 3.5% | \$15,761.3 | 4.1% |
| Vermont | 14,600 | 3.6% | \$567.0 | 3.1% | \$1,042.2 | 3.6% |
| Minnesota | 122,100 | 3.5% | \$6,018.2 | 3.4% | \$14,305.7 | 5.0% |
| Missouri | 118,800 | 3.4% | \$5,527.1 | 3.3% | \$9,810.9 | 3.8% |
| Iowa | 65,100 | 3.3% | \$2,568.0 | 3.0% | \$4,419.0 | 3.1% |
| Nevada | 48,600 | 3.2% | \$2,432.7 | 3.2% | \$4,539.9 | 3.8% |
| Tennessee | 111,500 | 3.2% | \$5,086.1 | 3.0% | \$8,918.5 | 3.4% |
| Idaho | 27,000 | 3.1% | \$1,041.0 | 2.9% | \$1,796.9 | 3.1% |
| Arizona | 97,100 | 3.0% | \$4,654.4 | 3.0% | \$9,016.6 | 3.4% |
| Wisconsin | 103,300 | 3.0% | \$4,557.1 | 2.9% | \$7,901.5 | 3.1% |
| Delaware | 16,100 | 3.0% | \$957.4 | 3.2% | \$1,965.6 | 4.1% |
| Virginia | 141,600 | 3.0% | \$7,215.2 | 2.5% | \$12,460.6 | 2.9% |
| New Hampshire | 24,900 | 3.0% | \$1,252.7 | 2.8% | \$2,250.3 | 3.3% |
| Florida | 286,800 | 2.9% | \$12,918.6 | 2.8% | \$23,154.0 | 3.1% |
| New Jersey | 143,900 | 2.9% | \$10,123.7 | 3.3% | \$19,875.5 | 4.0% |
| South Carolina | 67,700 | 2.9% | \$2,634.2 | 2.4% | \$4,672.8 | 2.8% |
| North Carolina | 146,100 | 2.8% | \$6,763.6 | 2.6% | \$12,479.2 | 3.0% |
| Oregon | 60,400 | 2.8% | \$2,811.2 | 2.8% | \$5,027.0 | 3.0% |
| Washington | 104,300 | 2.8% | \$5,908.4 | 2.7% | \$14,004.8 | 4.0% |
| Georgia | 141,600 | 2.7% | \$6,765.0 | 2.5% | \$12,902.3 | 3.0% |
| Connecticut | 59,400 | 2.7% | \$4,160.4 | 2.8% | \$7,683.0 | 3.3% |
| Rhode Island | 15,100 | 2.5% | \$934.4 | 2.8% | \$1,650.0 | 3.2% |
| Massachusetts | 106,300 | 2.5% | \$7,117.9 | 2.6% | \$12,638.9 | 2.9% |
| New York | 270,600 | 2.4% | \$20,419.4 | 2.7% | \$35,196.8 | 3.0% |
| Hawaii | 20,500 | 2.3% | \$1,036.4 | 2.0% | \$2,167.2 | 2.9% |
| Maryland | 75,400 | 2.2% | \$4,190.0 | 1.9% | \$7,084.8 | 2.2% |
| District of Columbia | 13,700 | 1.7% | \$1,426.6 | 1.3% | \$2,702.6 | 1.9% |
| U.S. Total | 8,445,200 | 4.9% | \$515,368.0 | 5.4% | \$1,073,552.3 | 7.1% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

Details may not add to totals due to rounding.

* Employment is defined as the number of pay roll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

IV. Detail by Component of Economic Impact: Direct, Indirect, and Induced Impacts

The total economic impact presented in the previous section includes the *direct impact* (the jobs, labor income, and value added within the oil and natural gas industry), the *indirect impact* (the jobs, labor income, and value added occurring throughout the supply chain of the oil and natural gas industry), and the *induced impact* (the jobs, labor income, and value added resulting from household spending earned either directly or indirectly from the oil and natural gas industry's spending or from dividends received from oil and natural gas companies). In this section, the three different economic impacts are separately quantified.

A. Direct Impact

Table 4 shows the direct impact of the US oil and natural gas industry by NAICS subsector for the country as a whole in terms of employment, labor income (including wages and salaries and benefits as well as proprietors' income), and value added. In 2011, the oil and natural gas industry directly provided 2.6 million jobs for American workers, paid \$204 billion in wages, salaries and fringe benefits and proprietors' income, and generated \$551 billion in GDP.

Table 4.– Direct Impact of the Oil and Natural Gas Industry in the US Economy by Subsector, 2011

| NAICS | Sub-sector Description | Employment* | Labor Income** | Value Added |
|--------------|--|------------------|------------------|------------------|
| | | Amount | (\$ Millions) | (\$ Millions) |
| 211 | Oil and gas extraction (including NGL extraction) | 783,800 | 61,454 | 174,178 |
| 213111 | Drilling oil and gas wells | 97,400 | 9,040 | 15,883 |
| 213112 | Support activities for oil and gas operations | 269,300 | 22,271 | 39,130 |
| 2212 | Natural gas distribution (private) | 112,300 | 15,599 | 59,021 |
| 2212 | Natural gas distribution (public) | 6,500 | 356 | 557 |
| 23712 | Oil and gas pipeline and related structures construction | 112,500 | 9,443 | 10,036 |
| 32411 | Petroleum refineries | 72,500 | 20,596 | 125,332 |
| 32412 | Asphalt paving, roofing, and saturated materials manufacturing | 24,200 | 4,225 | 25,712 |
| 324191 | Petroleum lubricating oil and grease manufacturing | 10,200 | 1,899 | 11,554 |
| 4247 | Petroleum and petroleum products merchant wholesalers | 95,900 | 7,558 | 13,297 |
| 44711, 44719 | Gasoline stations | 879,400 | 30,650 | 48,522 |
| 45431 | Fuel dealers | 83,200 | 1,840 | 6,655 |
| 486 | Pipeline transportation | <u>43,500</u> | <u>18,660</u> | <u>21,140</u> |
| | Total Oil and Natural Gas Industry | 2,590,700 | \$203,591 | \$551,018 |

Source: Estimates based on 2011 employment data from the U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, and U.S. Census Bureau and 2011 input-output relationships from the IMPLAN modeling system. Details may not add to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table 5a shows the direct employment, labor income (including wages and salaries and benefits as well as proprietors' income) and value added impacts of the oil and gas industry as a whole by state, where the states are shown alphabetically. **Table 5b** is the same as **Table 5a**, except that the states are ranked by the oil and natural gas industry's direct employment.

In 2011, the ten states with the largest direct employment effect generated by the oil and natural gas industry were, in order: Texas, California, Oklahoma, Louisiana, Pennsylvania, Ohio, Florida, Colorado, Illinois, and New York. These ten states accounted for 59.0 percent of the oil and natural gas industry's national direct employment, 73.3 percent of the oil and natural gas industry's national direct labor income, and 73.3 percent of the oil and natural gas industry's national direct value added in 2011.

**Table 5a.– Direct Impact of the Oil and Natural Gas Industry by State, 2011
(Sorted Alphabetically)**

| State | Direct Employment* | | Direct Labor Income** | | Direct Value Added | |
|----------------------|--------------------|-----------------------|-----------------------|-----------------------|--------------------|-----------------------|
| | Amount | Percent of U.S. Total | (\$ Million) | Percent of U.S. Total | (\$ Million) | Percent of U.S. Total |
| Alabama | 33,900 | 1.3% | \$1,787.6 | 0.9% | \$6,111.6 | 1.1% |
| Alaska | 18,700 | 0.7% | \$2,241.0 | 1.1% | \$15,691.6 | 2.8% |
| Arizona | 27,500 | 1.1% | \$1,240.5 | 0.6% | \$2,543.4 | 0.5% |
| Arkansas | 33,800 | 1.3% | \$1,686.3 | 0.8% | \$3,990.4 | 0.7% |
| California | 182,800 | 7.1% | \$21,725.4 | 10.7% | \$69,466.0 | 12.6% |
| Colorado | 69,700 | 2.7% | \$6,312.5 | 3.1% | \$12,482.1 | 2.3% |
| Connecticut | 15,900 | 0.6% | \$1,048.5 | 0.5% | \$2,409.3 | 0.4% |
| Delaware | 4,500 | 0.2% | \$286.5 | 0.1% | \$848.9 | 0.2% |
| District of Columbia | 2,100 | 0.1% | \$165.5 | 0.1% | \$915.1 | 0.2% |
| Florida | 72,000 | 2.8% | \$2,708.5 | 1.3% | \$5,269.9 | 1.0% |
| Georgia | 42,600 | 1.6% | \$1,650.8 | 0.8% | \$3,718.7 | 0.7% |
| Hawaii | 4,700 | 0.2% | \$254.9 | 0.1% | \$947.5 | 0.2% |
| Idaho | 9,000 | 0.3% | \$299.6 | 0.1% | \$532.6 | 0.1% |
| Illinois | 65,200 | 2.5% | \$3,895.6 | 1.9% | \$13,642.1 | 2.5% |
| Indiana | 39,600 | 1.5% | \$2,168.1 | 1.1% | \$8,910.0 | 1.6% |
| Iowa | 24,500 | 0.9% | \$768.8 | 0.4% | \$1,256.2 | 0.2% |
| Kansas | 56,900 | 2.2% | \$2,937.2 | 1.4% | \$5,856.0 | 1.1% |
| Kentucky | 33,400 | 1.3% | \$1,340.9 | 0.7% | \$3,291.4 | 0.6% |
| Louisiana | 130,300 | 5.0% | \$10,912.4 | 5.4% | \$52,267.4 | 9.5% |
| Maine | 12,400 | 0.5% | \$386.0 | 0.2% | \$1,081.5 | 0.2% |
| Maryland | 17,900 | 0.7% | \$804.0 | 0.4% | \$1,632.2 | 0.3% |
| Massachusetts | 26,700 | 1.0% | \$1,697.0 | 0.8% | \$3,818.0 | 0.7% |
| Michigan | 53,000 | 2.0% | \$2,385.9 | 1.2% | \$4,924.2 | 0.9% |
| Minnesota | 36,300 | 1.4% | \$1,415.6 | 0.7% | \$6,328.7 | 1.1% |
| Mississippi | 37,700 | 1.5% | \$2,110.7 | 1.0% | \$5,123.2 | 0.9% |
| Missouri | 38,200 | 1.5% | \$1,521.8 | 0.7% | \$3,065.1 | 0.6% |
| Montana | 15,500 | 0.6% | \$923.9 | 0.5% | \$2,693.6 | 0.5% |
| Nebraska | 14,300 | 0.6% | \$1,210.9 | 0.6% | \$2,264.1 | 0.4% |
| Nevada | 14,500 | 0.6% | \$705.8 | 0.3% | \$1,538.3 | 0.3% |
| New Hampshire | 8,700 | 0.3% | \$392.1 | 0.2% | \$849.7 | 0.2% |
| New Jersey | 34,500 | 1.3% | \$2,869.1 | 1.4% | \$7,639.3 | 1.4% |
| New Mexico | 39,200 | 1.5% | \$2,322.3 | 1.1% | \$6,554.3 | 1.2% |
| New York | 63,200 | 2.4% | \$4,000.5 | 2.0% | \$8,271.1 | 1.5% |
| North Carolina | 44,700 | 1.7% | \$1,831.1 | 0.9% | \$3,847.8 | 0.7% |
| North Dakota | 27,900 | 1.1% | \$2,155.3 | 1.1% | \$3,944.4 | 0.7% |
| Ohio | 77,000 | 3.0% | \$3,875.9 | 1.9% | \$13,859.4 | 2.5% |
| Oklahoma | 149,300 | 5.8% | \$13,870.3 | 6.8% | \$23,158.0 | 4.2% |
| Oregon | 16,800 | 0.6% | \$783.1 | 0.4% | \$1,538.2 | 0.3% |
| Pennsylvania | 100,700 | 3.9% | \$6,518.2 | 3.2% | \$13,168.9 | 2.4% |
| Rhode Island | 4,100 | 0.2% | \$288.1 | 0.1% | \$612.0 | 0.1% |
| South Carolina | 23,800 | 0.9% | \$710.2 | 0.3% | \$1,406.6 | 0.3% |
| South Dakota | 9,100 | 0.4% | \$304.8 | 0.1% | \$546.4 | 0.1% |
| Tennessee | 34,500 | 1.3% | \$1,263.4 | 0.6% | \$2,600.2 | 0.5% |
| Texas | 619,000 | 23.9% | \$75,459.0 | 37.1% | \$192,087.3 | 34.9% |
| Utah | 23,600 | 0.9% | \$1,501.0 | 0.7% | \$4,126.0 | 0.7% |
| Vermont | 6,100 | 0.2% | \$206.4 | 0.1% | \$426.5 | 0.1% |
| Virginia | 47,000 | 1.8% | \$1,660.5 | 0.8% | \$3,450.5 | 0.6% |
| Washington | 26,700 | 1.0% | \$1,568.5 | 0.8% | \$6,819.6 | 1.2% |
| West Virginia | 35,900 | 1.4% | \$1,609.6 | 0.8% | \$2,331.5 | 0.4% |
| Wisconsin | 32,100 | 1.2% | \$1,151.8 | 0.6% | \$2,132.3 | 0.4% |
| Wyoming | 32,900 | 1.3% | \$2,657.4 | 1.3% | \$9,028.7 | 1.6% |
| U.S. Total | 2,590,700 | 100% | \$203,590.8 | 100% | \$551,017.8 | 100% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

Details may not add to totals due to rounding.

* Employment is defined as the number of pay roll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

**Table 5b.– Direct Impact of the Oil and Natural Gas Industry by State, 2011
(Sorted by Direct Employment)**

| State | Direct Employment* | | Direct Labor Income** | | Direct Value Added | |
|----------------------|--------------------|-----------------------|-----------------------|-----------------------|--------------------|-----------------------|
| | Amount | Percent of U.S. Total | (\$ Million) | Percent of U.S. Total | (\$ Million) | Percent of U.S. Total |
| Texas | 619,000 | 23.9% | \$75,459.0 | 37.1% | \$192,087.3 | 34.9% |
| California | 182,800 | 7.1% | \$21,725.4 | 10.7% | \$69,466.0 | 12.6% |
| Oklahoma | 149,300 | 5.8% | \$13,870.3 | 6.8% | \$23,158.0 | 4.2% |
| Louisiana | 130,300 | 5.0% | \$10,912.4 | 5.4% | \$52,267.4 | 9.5% |
| Pennsylvania | 100,700 | 3.9% | \$6,518.2 | 3.2% | \$13,168.9 | 2.4% |
| Ohio | 77,000 | 3.0% | \$3,875.9 | 1.9% | \$13,859.4 | 2.5% |
| Florida | 72,000 | 2.8% | \$2,708.5 | 1.3% | \$5,269.9 | 1.0% |
| Colorado | 69,700 | 2.7% | \$6,312.5 | 3.1% | \$12,482.1 | 2.3% |
| Illinois | 65,200 | 2.5% | \$3,895.6 | 1.9% | \$13,642.1 | 2.5% |
| New York | 63,200 | 2.4% | \$4,000.5 | 2.0% | \$8,271.1 | 1.5% |
| Kansas | 56,900 | 2.2% | \$2,937.2 | 1.4% | \$5,856.0 | 1.1% |
| Michigan | 53,000 | 2.0% | \$2,385.9 | 1.2% | \$4,924.2 | 0.9% |
| Virginia | 47,000 | 1.8% | \$1,660.5 | 0.8% | \$3,450.5 | 0.6% |
| North Carolina | 44,700 | 1.7% | \$1,831.1 | 0.9% | \$3,847.8 | 0.7% |
| Georgia | 42,600 | 1.6% | \$1,650.8 | 0.8% | \$3,718.7 | 0.7% |
| Indiana | 39,600 | 1.5% | \$2,168.1 | 1.1% | \$8,910.0 | 1.6% |
| New Mexico | 39,200 | 1.5% | \$2,322.3 | 1.1% | \$6,554.3 | 1.2% |
| Missouri | 38,200 | 1.5% | \$1,521.8 | 0.7% | \$3,065.1 | 0.6% |
| Mississippi | 37,700 | 1.5% | \$2,110.7 | 1.0% | \$5,123.2 | 0.9% |
| Minnesota | 36,300 | 1.4% | \$1,415.6 | 0.7% | \$6,328.7 | 1.1% |
| West Virginia | 35,900 | 1.4% | \$1,609.6 | 0.8% | \$2,331.5 | 0.4% |
| New Jersey | 34,500 | 1.3% | \$2,869.1 | 1.4% | \$7,639.3 | 1.4% |
| Tennessee | 34,500 | 1.3% | \$1,263.4 | 0.6% | \$2,600.2 | 0.5% |
| Alabama | 33,900 | 1.3% | \$1,787.6 | 0.9% | \$6,111.6 | 1.1% |
| Arkansas | 33,800 | 1.3% | \$1,686.3 | 0.8% | \$3,990.4 | 0.7% |
| Kentucky | 33,400 | 1.3% | \$1,340.9 | 0.7% | \$3,291.4 | 0.6% |
| Wyoming | 32,900 | 1.3% | \$2,657.4 | 1.3% | \$9,028.7 | 1.6% |
| Wisconsin | 32,100 | 1.2% | \$1,151.8 | 0.6% | \$2,132.3 | 0.4% |
| North Dakota | 27,900 | 1.1% | \$2,155.3 | 1.1% | \$3,944.4 | 0.7% |
| Arizona | 27,500 | 1.1% | \$1,240.5 | 0.6% | \$2,543.4 | 0.5% |
| Massachusetts | 26,700 | 1.0% | \$1,697.0 | 0.8% | \$3,818.0 | 0.7% |
| Washington | 26,700 | 1.0% | \$1,568.5 | 0.8% | \$6,819.6 | 1.2% |
| Iowa | 24,500 | 0.9% | \$768.8 | 0.4% | \$1,256.2 | 0.2% |
| South Carolina | 23,800 | 0.9% | \$710.2 | 0.3% | \$1,406.6 | 0.3% |
| Utah | 23,600 | 0.9% | \$1,501.0 | 0.7% | \$4,126.0 | 0.7% |
| Alaska | 18,700 | 0.7% | \$2,241.0 | 1.1% | \$15,691.6 | 2.8% |
| Maryland | 17,900 | 0.7% | \$804.0 | 0.4% | \$1,632.2 | 0.3% |
| Oregon | 16,800 | 0.6% | \$783.1 | 0.4% | \$1,538.2 | 0.3% |
| Connecticut | 15,900 | 0.6% | \$1,048.5 | 0.5% | \$2,409.3 | 0.4% |
| Montana | 15,500 | 0.6% | \$923.9 | 0.5% | \$2,693.6 | 0.5% |
| Nevada | 14,500 | 0.6% | \$705.8 | 0.3% | \$1,538.3 | 0.3% |
| Nebraska | 14,300 | 0.6% | \$1,210.9 | 0.6% | \$2,264.1 | 0.4% |
| Maine | 12,400 | 0.5% | \$386.0 | 0.2% | \$1,081.5 | 0.2% |
| South Dakota | 9,100 | 0.4% | \$304.8 | 0.1% | \$546.4 | 0.1% |
| Idaho | 9,000 | 0.3% | \$299.6 | 0.1% | \$532.6 | 0.1% |
| New Hampshire | 8,700 | 0.3% | \$392.1 | 0.2% | \$849.7 | 0.2% |
| Vermont | 6,100 | 0.2% | \$206.4 | 0.1% | \$426.5 | 0.1% |
| Hawaii | 4,700 | 0.2% | \$254.9 | 0.1% | \$947.5 | 0.2% |
| Delaware | 4,500 | 0.2% | \$286.5 | 0.1% | \$848.9 | 0.2% |
| Rhode Island | 4,100 | 0.2% | \$288.1 | 0.1% | \$612.0 | 0.1% |
| District of Columbia | 2,100 | 0.1% | \$165.5 | 0.1% | \$915.1 | 0.2% |
| U.S. Total | 2,590,700 | 100% | \$203,590.8 | 100% | \$551,017.8 | 100% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

Details may not add to totals due to rounding.

* Employment is defined as the number of pay roll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

B. Indirect and Induced Impacts

The oil and natural gas industry purchases intermediate inputs from a variety of other US industries, supporting jobs in these industries and spurring additional rounds of input purchases by these industries. Other economic impacts are generated by the personal spending of employees and business owners in the oil and natural gas industry and out of the additional income in the supply chain to the industry. Additional economic impact is generated by shareholder spending out of dividends received from oil and natural gas companies. The jobs, labor income (including wages and salaries and benefits as well as proprietors' income), and value added supported by this cycle of spending, or multiplier process, are referred to as the indirect and induced economic impacts.

The oil and natural gas industry also purchases capital goods from a variety of US suppliers, which has a similar multiplier effect on the rest of the US economy. Based on data from the Census Bureau and US Department of Commerce, PwC estimates that the oil and natural gas industry invested \$177 billion in new equipment and structures in 2011.

PwC quantified the indirect and induced impacts of the oil and natural gas industry's operational and capital spending using the customized impact models PwC has built based on the IMPLAN modeling system.

Table 6 shows the oil and natural gas industry's indirect and induced impacts by sector, separately identifying its **operational** and **capital investment** impacts at the national level. PwC estimates that at the national level, each direct job in the oil and natural gas industry supported nearly three jobs elsewhere in the US economy in 2011. That is, in addition to the 2.6 million direct jobs in the oil and natural gas industry, 7.2 million additional jobs were supported in the US economy through the indirect and induced impacts of the industry. The industry's purchase of intermediate inputs from other US suppliers and payment of dividends to shareholders supported more than 5.8 million indirect and induced jobs in other industries across the country in 2011, and its capital investment supported 1.4 million additional indirect and induced jobs across the US economy. Combined, the oil and natural gas industry directly or indirectly supported 9.8 million jobs in the US economy in 2011. The service sector accounts for the largest number of indirect and induced jobs attributable to the oil and natural gas industry's spending (3.5 million) in 2011, followed by Wholesale and Retail Trade (1.0 million), Finance, Insurance, Real Estate, Rental and Leasing (0.9 million), and Manufacturing (0.6 million).

The industry's estimated national indirect and induced labor income (including wages and salaries and benefits as well as proprietors' income) was \$394 billion and its estimated national indirect and induced value added was \$658 billion in 2011.

Table 6.– The Direct, Indirect, and Induced Impact of the Oil and Natural Gas Industry to the US Economy, 2011

| Sector Description | Employment* | Labor Income (\$ million)** | Value Added (\$ million) |
|--|------------------|-----------------------------|--------------------------|
| Direct Impact of the Oil and Natural Gas Industry | 2,590,700 | \$203,591 | \$551,018 |
| Indirect and Induced Impact on Other Industries | 7,242,600 | \$394,024 | \$658,372 |
| Operational Impact | 5,854,500 | \$311,777 | \$522,535 |
| Agriculture | 84,700 | \$2,591 | \$3,978 |
| Mining | 13,700 | \$1,064 | \$2,749 |
| Utilities | 24,600 | \$3,256 | \$12,950 |
| Construction | 430,000 | \$23,762 | \$25,822 |
| Manufacturing | 380,200 | \$26,826 | \$46,883 |
| Wholesale and retail trade | 777,600 | \$33,179 | \$54,430 |
| Transportation and warehousing | 228,900 | \$11,869 | \$16,159 |
| Information | 101,700 | \$10,432 | \$20,710 |
| Finance, insurance, real estate, rental and leasing | 721,200 | \$37,435 | \$144,867 |
| Services | 2,829,100 | \$142,602 | \$172,764 |
| Other | 262,700 | \$18,761 | \$21,221 |
| Capital Investment Impact | 1,388,100 | \$82,247 | \$135,837 |
| Agriculture | 17,400 | \$592 | \$876 |
| Mining | 3,700 | \$282 | \$699 |
| Utilities | 4,000 | \$525 | \$2,165 |
| Construction | 20,900 | \$1,170 | \$1,390 |
| Manufacturing | 221,800 | \$17,941 | \$28,886 |
| Wholesale and retail trade | 218,000 | \$11,497 | \$19,450 |
| Transportation and warehousing | 57,600 | \$3,073 | \$4,342 |
| Information | 35,200 | \$3,810 | \$7,950 |
| Finance, insurance, real estate, rental and leasing | 155,000 | \$8,091 | \$26,553 |
| Services | 640,500 | \$34,270 | \$42,575 |
| Other | 13,900 | \$997 | \$953 |
| Total Economic Impact | 9,833,200 | \$597,615 | \$1,209,389 |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

Details may not add to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The remainder of this section provides details on the operational economic impacts of the oil and natural gas industry at the state level. As previously discussed, the state-level impacts exclude the economic impacts from capital investment in the oil and natural gas industry because capital expenditure data is not available at the state level.

Table 7a shows the sum of the oil and natural gas industry's indirect and induced effects from its operations (i.e., not including its capital investment impact) in terms of employment, value added, and labor income in the 50 states and the District of Columbia, where the states are shown alphabetically. **Table 7b** is the same as **Table 7a** except that the states are ranked in order of the indirect and induced employment effect. In 2011, the five states with the largest combined indirect and induced employment effect generated by the oil and natural gas industry were, in order: Texas, California, Louisiana, Pennsylvania, and Oklahoma. These five states accounted for 45.5 percent of the oil and natural gas industry's national combined indirect and induced employment, 45.4 percent of the oil and natural gas industry's national combined indirect and

induced labor income, and 45.4 percent of the oil and natural gas industry's national combined indirect and induced value added in 2011.

Table 8a shows the direct, indirect, induced, and total employment impact of the oil and natural gas industry from its operations in the 50 states and the District of Columbia, where the states are shown alphabetically. **Table 8b** is the same as **Table 8a** except that the states are ranked in order of the industry's total employment impact from its operations as a percent of each state's total employment. Using this metric, the top five states in 2011 were, in order: Wyoming (20.4 percent), Oklahoma (16.8 percent), Louisiana (16.2 percent), Texas (13.6 percent), and North Dakota (12.0 percent).

Table 9a shows the direct, indirect, induced, and total labor income impact of the oil and natural gas industry from its operations in the 50 states and the District of Columbia, where the states are shown alphabetically. **Table 9b** is the same as **Table 9a** except the states are ranked in order of the industry's total impact from its operations as a percent of each state's total labor income. The top five states by this metric in 2011 were, in order: Oklahoma (22.9 percent), Wyoming (21.3 percent), Louisiana (19.4 percent), Texas (18.7 percent), and North Dakota (13.1 percent).

Table 10a shows the direct, indirect, induced, and total value-added impact of the oil and natural gas industry from its operations in the 50 states and the District of Columbia, where the states are shown alphabetically. **Table 10b** is the same as **Table 10a** except that the states are ranked in order of the industry's total impact from its operations to each state's GDP. The top five states by this metric in 2011 were, in order: Louisiana (35.5 percent), Alaska (34.7 percent), Wyoming (32.9 percent), Texas (23.3 percent), and Oklahoma (23.1 percent).

More detailed state-by-state operational impact results are included in **Appendix A**.

Table 7a.– Indirect and Induced Impacts of the Oil and Natural Gas Industry's Operations by State, 2011 (Sorted Alphabetically)

| State | Employment* | | Labor Income** | | Value Added | |
|----------------------|------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|
| | Amount | Percent of U.S. Total | (\$ Million) | Percent of U.S. Total | (\$ Million) | Percent of U.S. Total |
| Alabama | 69,400 | 1.2% | \$3,116.3 | 1.0% | \$5,216.2 | 1.0% |
| Alaska | 37,900 | 0.6% | \$2,260.7 | 0.7% | \$3,585.4 | 0.7% |
| Arizona | 69,600 | 1.2% | \$3,413.9 | 1.1% | \$6,473.2 | 1.2% |
| Arkansas | 58,800 | 1.0% | \$2,534.0 | 0.8% | \$4,072.4 | 0.8% |
| California | 610,400 | 10.4% | \$37,158.2 | 11.9% | \$61,979.1 | 11.9% |
| Colorado | 143,400 | 2.4% | \$7,775.0 | 2.5% | \$13,329.3 | 2.6% |
| Connecticut | 43,400 | 0.7% | \$3,111.9 | 1.0% | \$5,273.7 | 1.0% |
| Delaware | 11,600 | 0.2% | \$670.9 | 0.2% | \$1,116.7 | 0.2% |
| District of Columbia | 11,700 | 0.2% | \$1,261.1 | 0.4% | \$1,787.4 | 0.3% |
| Florida | 214,800 | 3.7% | \$10,210.1 | 3.3% | \$17,884.0 | 3.4% |
| Georgia | 99,000 | 1.7% | \$5,114.2 | 1.6% | \$9,183.6 | 1.8% |
| Hawaii | 15,700 | 0.3% | \$781.4 | 0.3% | \$1,219.7 | 0.2% |
| Idaho | 18,000 | 0.3% | \$741.4 | 0.2% | \$1,264.3 | 0.2% |
| Illinois | 198,600 | 3.4% | \$11,849.0 | 3.8% | \$19,665.8 | 3.8% |
| Indiana | 96,700 | 1.7% | \$4,530.9 | 1.5% | \$7,685.6 | 1.5% |
| Iowa | 40,500 | 0.7% | \$1,799.2 | 0.6% | \$3,162.7 | 0.6% |
| Kansas | 91,400 | 1.6% | \$4,273.8 | 1.4% | \$7,046.8 | 1.3% |
| Kentucky | 61,400 | 1.0% | \$2,713.1 | 0.9% | \$4,576.4 | 0.9% |
| Louisiana | 282,300 | 4.8% | \$13,301.0 | 4.3% | \$21,658.0 | 4.1% |
| Maine | 16,400 | 0.3% | \$764.3 | 0.2% | \$1,289.0 | 0.2% |
| Maryland | 57,500 | 1.0% | \$3,386.0 | 1.1% | \$5,452.6 | 1.0% |
| Massachusetts | 79,500 | 1.4% | \$5,420.9 | 1.7% | \$8,820.9 | 1.7% |
| Michigan | 129,000 | 2.2% | \$6,421.9 | 2.1% | \$10,837.0 | 2.1% |
| Minnesota | 85,800 | 1.5% | \$4,602.5 | 1.5% | \$7,976.9 | 1.5% |
| Mississippi | 60,100 | 1.0% | \$2,415.4 | 0.8% | \$3,932.2 | 0.8% |
| Missouri | 80,600 | 1.4% | \$4,005.4 | 1.3% | \$6,745.8 | 1.3% |
| Montana | 27,600 | 0.5% | \$1,085.4 | 0.3% | \$1,853.1 | 0.4% |
| Nebraska | 32,900 | 0.6% | \$1,476.6 | 0.5% | \$2,458.2 | 0.5% |
| Nevada | 34,100 | 0.6% | \$1,726.9 | 0.6% | \$3,001.6 | 0.6% |
| New Hampshire | 16,200 | 0.3% | \$860.6 | 0.3% | \$1,400.7 | 0.3% |
| New Jersey | 109,400 | 1.9% | \$7,254.6 | 2.3% | \$12,236.3 | 2.3% |
| New Mexico | 66,400 | 1.1% | \$3,027.9 | 1.0% | \$4,719.4 | 0.9% |
| New York | 207,400 | 3.5% | \$16,419.0 | 5.3% | \$26,925.8 | 5.2% |
| North Carolina | 101,500 | 1.7% | \$4,932.5 | 1.6% | \$8,631.5 | 1.7% |
| North Dakota | 36,100 | 0.6% | \$1,676.1 | 0.5% | \$2,630.6 | 0.5% |
| Ohio | 178,100 | 3.0% | \$8,868.4 | 2.8% | \$14,585.2 | 2.8% |
| Oklahoma | 215,100 | 3.7% | \$9,427.5 | 3.0% | \$15,844.0 | 3.0% |
| Oregon | 43,700 | 0.7% | \$2,028.0 | 0.7% | \$3,488.8 | 0.7% |
| Pennsylvania | 238,300 | 4.1% | \$13,032.3 | 4.2% | \$21,485.5 | 4.1% |
| Rhode Island | 11,000 | 0.2% | \$646.3 | 0.2% | \$1,038.0 | 0.2% |
| South Carolina | 43,900 | 0.7% | \$1,923.9 | 0.6% | \$3,266.2 | 0.6% |
| South Dakota | 13,300 | 0.2% | \$552.2 | 0.2% | \$912.7 | 0.2% |
| Tennessee | 77,000 | 1.3% | \$3,822.7 | 1.2% | \$6,318.3 | 1.2% |
| Texas | 1,319,700 | 22.5% | \$68,626.3 | 22.0% | \$116,258.7 | 22.2% |
| Utah | 56,000 | 1.0% | \$2,590.6 | 0.8% | \$4,250.7 | 0.8% |
| Vermont | 8,400 | 0.1% | \$360.6 | 0.1% | \$615.7 | 0.1% |
| Virginia | 94,600 | 1.6% | \$5,554.7 | 1.8% | \$9,010.1 | 1.7% |
| Washington | 77,700 | 1.3% | \$4,339.9 | 1.4% | \$7,185.2 | 1.4% |
| West Virginia | 44,500 | 0.8% | \$2,029.0 | 0.7% | \$3,424.5 | 0.7% |
| Wisconsin | 71,200 | 1.2% | \$3,405.4 | 1.1% | \$5,769.2 | 1.1% |
| Wyoming | 47,100 | 0.8% | \$2,477.3 | 0.8% | \$3,990.0 | 0.8% |
| U.S. Total | 5,854,500 | 100.0% | \$311,777.2 | 100.0% | \$522,534.5 | 100.0% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

Details may not add to totals due to rounding.

* Employment is defined as the number of pay roll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table 7b.– Indirect and Induced Impacts of the Oil and Natural Gas Industry's Operations by State, 2011 (Sorted by Employment Impact)

| State | Employment* | | Labor Income** | | Value Added | |
|----------------------|------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|
| | Amount | Percent of U.S. Total | (\$ Million) | Percent of U.S. Total | (\$ Million) | Percent of U.S. Total |
| Texas | 1,319,700 | 22.5% | \$68,626.3 | 22.0% | \$116,258.7 | 22.2% |
| California | 610,400 | 10.4% | \$37,158.2 | 11.9% | \$61,979.1 | 11.9% |
| Louisiana | 282,300 | 4.8% | \$13,301.0 | 4.3% | \$21,658.0 | 4.1% |
| Pennsylvania | 238,300 | 4.1% | \$13,032.3 | 4.2% | \$21,485.5 | 4.1% |
| Oklahoma | 215,100 | 3.7% | \$9,427.5 | 3.0% | \$15,844.0 | 3.0% |
| Florida | 214,800 | 3.7% | \$10,210.1 | 3.3% | \$17,884.0 | 3.4% |
| New York | 207,400 | 3.5% | \$16,419.0 | 5.3% | \$26,925.8 | 5.2% |
| Illinois | 198,600 | 3.4% | \$11,849.0 | 3.8% | \$19,665.8 | 3.8% |
| Ohio | 178,100 | 3.0% | \$8,868.4 | 2.8% | \$14,585.2 | 2.8% |
| Colorado | 143,400 | 2.4% | \$7,775.0 | 2.5% | \$13,329.3 | 2.6% |
| Michigan | 129,000 | 2.2% | \$6,421.9 | 2.1% | \$10,837.0 | 2.1% |
| New Jersey | 109,400 | 1.9% | \$7,254.6 | 2.3% | \$12,236.3 | 2.3% |
| North Carolina | 101,500 | 1.7% | \$4,932.5 | 1.6% | \$8,631.5 | 1.7% |
| Georgia | 99,000 | 1.7% | \$5,114.2 | 1.6% | \$9,183.6 | 1.8% |
| Indiana | 96,700 | 1.7% | \$4,530.9 | 1.5% | \$7,685.6 | 1.5% |
| Virginia | 94,600 | 1.6% | \$5,554.7 | 1.8% | \$9,010.1 | 1.7% |
| Kansas | 91,400 | 1.6% | \$4,273.8 | 1.4% | \$7,046.8 | 1.3% |
| Minnesota | 85,800 | 1.5% | \$4,602.5 | 1.5% | \$7,976.9 | 1.5% |
| Missouri | 80,600 | 1.4% | \$4,005.4 | 1.3% | \$6,745.8 | 1.3% |
| Massachusetts | 79,500 | 1.4% | \$5,420.9 | 1.7% | \$8,820.9 | 1.7% |
| Washington | 77,700 | 1.3% | \$4,339.9 | 1.4% | \$7,185.2 | 1.4% |
| Tennessee | 77,000 | 1.3% | \$3,822.7 | 1.2% | \$6,318.3 | 1.2% |
| Wisconsin | 71,200 | 1.2% | \$3,405.4 | 1.1% | \$5,769.2 | 1.1% |
| Arizona | 69,600 | 1.2% | \$3,413.9 | 1.1% | \$6,473.2 | 1.2% |
| Alabama | 69,400 | 1.2% | \$3,116.3 | 1.0% | \$5,216.2 | 1.0% |
| New Mexico | 66,400 | 1.1% | \$3,027.9 | 1.0% | \$4,719.4 | 0.9% |
| Kentucky | 61,400 | 1.0% | \$2,713.1 | 0.9% | \$4,576.4 | 0.9% |
| Mississippi | 60,100 | 1.0% | \$2,415.4 | 0.8% | \$3,932.2 | 0.8% |
| Arkansas | 58,800 | 1.0% | \$2,534.0 | 0.8% | \$4,072.4 | 0.8% |
| Maryland | 57,500 | 1.0% | \$3,386.0 | 1.1% | \$5,452.6 | 1.0% |
| Utah | 56,000 | 1.0% | \$2,590.6 | 0.8% | \$4,250.7 | 0.8% |
| Wyoming | 47,100 | 0.8% | \$2,477.3 | 0.8% | \$3,990.0 | 0.8% |
| West Virginia | 44,500 | 0.8% | \$2,029.0 | 0.7% | \$3,424.5 | 0.7% |
| South Carolina | 43,900 | 0.7% | \$1,923.9 | 0.6% | \$3,266.2 | 0.6% |
| Oregon | 43,700 | 0.7% | \$2,028.0 | 0.7% | \$3,488.8 | 0.7% |
| Connecticut | 43,400 | 0.7% | \$3,111.9 | 1.0% | \$5,273.7 | 1.0% |
| Iowa | 40,500 | 0.7% | \$1,799.2 | 0.6% | \$3,162.7 | 0.6% |
| Alaska | 37,900 | 0.6% | \$2,260.7 | 0.7% | \$3,585.4 | 0.7% |
| North Dakota | 36,100 | 0.6% | \$1,676.1 | 0.5% | \$2,630.6 | 0.5% |
| Nevada | 34,100 | 0.6% | \$1,726.9 | 0.6% | \$3,001.6 | 0.6% |
| Nebraska | 32,900 | 0.6% | \$1,476.6 | 0.5% | \$2,458.2 | 0.5% |
| Montana | 27,600 | 0.5% | \$1,085.4 | 0.3% | \$1,853.1 | 0.4% |
| Idaho | 18,000 | 0.3% | \$741.4 | 0.2% | \$1,264.3 | 0.2% |
| Maine | 16,400 | 0.3% | \$764.3 | 0.2% | \$1,289.0 | 0.2% |
| New Hampshire | 16,200 | 0.3% | \$860.6 | 0.3% | \$1,400.7 | 0.3% |
| Hawaii | 15,700 | 0.3% | \$781.4 | 0.3% | \$1,219.7 | 0.2% |
| South Dakota | 13,300 | 0.2% | \$552.2 | 0.2% | \$912.7 | 0.2% |
| District of Columbia | 11,700 | 0.2% | \$1,261.1 | 0.4% | \$1,787.4 | 0.3% |
| Delaware | 11,600 | 0.2% | \$670.9 | 0.2% | \$1,116.7 | 0.2% |
| Rhode Island | 11,000 | 0.2% | \$646.3 | 0.2% | \$1,038.0 | 0.2% |
| Vermont | 8,400 | 0.1% | \$360.6 | 0.1% | \$615.7 | 0.1% |
| U.S. Total | 5,854,500 | 100.0% | \$311,777.2 | 100.0% | \$522,534.5 | 100.0% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

Details may not add to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table 8a.– Employment Impact of the Oil and Natural Gas Industry’s Operations by State, 2011 (Sorted Alphabetically)

| State | Direct Employment | Indirect Employment | Induced Employment | Total Contribution | Total Contribution as a % of State Total Employment |
|----------------------|-------------------|---------------------|--------------------|--------------------|---|
| Alabama | 33,900 | 30,200 | 39,200 | 103,300 | 4.2% |
| Alaska | 18,700 | 18,300 | 19,600 | 56,600 | 11.9% |
| Arizona | 27,500 | 25,500 | 44,100 | 97,100 | 3.0% |
| Arkansas | 33,800 | 27,100 | 31,600 | 92,500 | 5.9% |
| California | 182,800 | 235,500 | 374,900 | 793,200 | 4.1% |
| Colorado | 69,700 | 61,700 | 81,700 | 213,100 | 6.7% |
| Connecticut | 15,900 | 13,100 | 30,400 | 59,400 | 2.7% |
| Delaware | 4,500 | 4,100 | 7,500 | 16,100 | 3.0% |
| District of Columbia | 2,100 | 4,000 | 7,600 | 13,700 | 1.7% |
| Florida | 72,000 | 77,700 | 137,100 | 286,800 | 2.9% |
| Georgia | 42,600 | 33,500 | 65,500 | 141,600 | 2.7% |
| Hawaii | 4,700 | 5,700 | 10,000 | 20,500 | 2.3% |
| Idaho | 9,000 | 6,700 | 11,300 | 27,000 | 3.1% |
| Illinois | 65,200 | 81,800 | 116,800 | 263,700 | 3.6% |
| Indiana | 39,600 | 40,500 | 56,300 | 136,400 | 3.8% |
| Iowa | 24,500 | 14,700 | 25,900 | 65,100 | 3.3% |
| Kansas | 56,900 | 47,300 | 44,100 | 148,300 | 8.1% |
| Kentucky | 33,400 | 26,900 | 34,500 | 94,700 | 4.0% |
| Louisiana | 130,300 | 151,300 | 131,000 | 412,600 | 16.2% |
| Maine | 12,400 | 5,500 | 10,900 | 28,800 | 3.6% |
| Maryland | 17,900 | 17,900 | 39,500 | 75,400 | 2.2% |
| Massachusetts | 26,700 | 24,100 | 55,500 | 106,300 | 2.5% |
| Michigan | 53,000 | 51,800 | 77,200 | 182,000 | 3.6% |
| Minnesota | 36,300 | 32,900 | 52,900 | 122,100 | 3.5% |
| Mississippi | 37,700 | 29,500 | 30,600 | 97,800 | 6.6% |
| Missouri | 38,200 | 29,200 | 51,500 | 118,800 | 3.4% |
| Montana | 15,500 | 13,900 | 13,700 | 43,100 | 6.7% |
| Nebraska | 14,300 | 10,700 | 22,300 | 47,200 | 3.8% |
| Nevada | 14,500 | 12,600 | 21,500 | 48,600 | 3.2% |
| New Hampshire | 8,700 | 5,200 | 10,900 | 24,900 | 3.0% |
| New Jersey | 34,500 | 38,800 | 70,600 | 143,900 | 2.9% |
| New Mexico | 39,200 | 34,000 | 32,400 | 105,600 | 9.9% |
| New York | 63,200 | 64,800 | 142,600 | 270,600 | 2.4% |
| North Carolina | 44,700 | 36,000 | 65,500 | 146,100 | 2.8% |
| North Dakota | 27,900 | 17,200 | 18,800 | 64,000 | 12.0% |
| Ohio | 77,000 | 75,100 | 103,000 | 255,100 | 3.9% |
| Oklahoma | 149,300 | 102,800 | 112,200 | 364,300 | 16.8% |
| Oregon | 16,800 | 14,600 | 29,100 | 60,400 | 2.8% |
| Pennsylvania | 100,700 | 97,200 | 141,100 | 339,000 | 4.7% |
| Rhode Island | 4,100 | 3,200 | 7,700 | 15,100 | 2.5% |
| South Carolina | 23,800 | 15,300 | 28,600 | 67,700 | 2.9% |
| South Dakota | 9,100 | 5,000 | 8,300 | 22,500 | 3.9% |
| Tennessee | 34,500 | 28,900 | 48,100 | 111,500 | 3.2% |
| Texas | 619,000 | 602,700 | 717,000 | 1,938,700 | 13.6% |
| Utah | 23,600 | 24,700 | 31,300 | 79,600 | 4.9% |
| Vermont | 6,100 | 2,900 | 5,600 | 14,600 | 3.6% |
| Virginia | 47,000 | 35,900 | 58,700 | 141,600 | 3.0% |
| Washington | 26,700 | 26,900 | 50,700 | 104,300 | 2.8% |
| West Virginia | 35,900 | 22,400 | 22,100 | 80,400 | 8.9% |
| Wisconsin | 32,100 | 25,700 | 45,400 | 103,300 | 3.0% |
| Wyoming | 32,900 | 27,200 | 19,900 | 80,000 | 20.4% |
| U.S. Total | 2,590,700 | 2,440,300 | 3,414,200 | 8,445,200 | 4.9% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

Details may not add to totals due to rounding.

Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

Table 8b.– Employment Impact of the Oil and Natural Gas Industry’s Operations by State, 2011 (Sorted by Employment Share)

| State | Direct Employment | Indirect Employment | Induced Employment | Total Contribution | Total Contribution as a % of State Total Employment |
|----------------------|-------------------|---------------------|--------------------|--------------------|---|
| Wyoming | 32,900 | 27,200 | 19,900 | 80,000 | 20.4% |
| Oklahoma | 149,300 | 102,800 | 112,200 | 364,300 | 16.8% |
| Louisiana | 130,300 | 151,300 | 131,000 | 412,600 | 16.2% |
| Texas | 619,000 | 602,700 | 717,000 | 1,938,700 | 13.6% |
| North Dakota | 27,900 | 17,200 | 18,800 | 64,000 | 12.0% |
| Alaska | 18,700 | 18,300 | 19,600 | 56,600 | 11.9% |
| New Mexico | 39,200 | 34,000 | 32,400 | 105,600 | 9.9% |
| West Virginia | 35,900 | 22,400 | 22,100 | 80,400 | 8.9% |
| Kansas | 56,900 | 47,300 | 44,100 | 148,300 | 8.1% |
| Montana | 15,500 | 13,900 | 13,700 | 43,100 | 6.7% |
| Colorado | 69,700 | 61,700 | 81,700 | 213,100 | 6.7% |
| Mississippi | 37,700 | 29,500 | 30,600 | 97,800 | 6.6% |
| Arkansas | 33,800 | 27,100 | 31,600 | 92,500 | 5.9% |
| Utah | 23,600 | 24,700 | 31,300 | 79,600 | 4.9% |
| Pennsylvania | 100,700 | 97,200 | 141,100 | 339,000 | 4.7% |
| Alabama | 33,900 | 30,200 | 39,200 | 103,300 | 4.2% |
| California | 182,800 | 235,500 | 374,900 | 793,200 | 4.1% |
| Kentucky | 33,400 | 26,900 | 34,500 | 94,700 | 4.0% |
| Ohio | 77,000 | 75,100 | 103,000 | 255,100 | 3.9% |
| South Dakota | 9,100 | 5,000 | 8,300 | 22,500 | 3.9% |
| Nebraska | 14,300 | 10,700 | 22,300 | 47,200 | 3.8% |
| Indiana | 39,600 | 40,500 | 56,300 | 136,400 | 3.8% |
| Illinois | 65,200 | 81,800 | 116,800 | 263,700 | 3.6% |
| Maine | 12,400 | 5,500 | 10,900 | 28,800 | 3.6% |
| Michigan | 53,000 | 51,800 | 77,200 | 182,000 | 3.6% |
| Vermont | 6,100 | 2,900 | 5,600 | 14,600 | 3.6% |
| Minnesota | 36,300 | 32,900 | 52,900 | 122,100 | 3.5% |
| Missouri | 38,200 | 29,200 | 51,500 | 118,800 | 3.4% |
| Iowa | 24,500 | 14,700 | 25,900 | 65,100 | 3.3% |
| Nevada | 14,500 | 12,600 | 21,500 | 48,600 | 3.2% |
| Tennessee | 34,500 | 28,900 | 48,100 | 111,500 | 3.2% |
| Idaho | 9,000 | 6,700 | 11,300 | 27,000 | 3.1% |
| Arizona | 27,500 | 25,500 | 44,100 | 97,100 | 3.0% |
| Wisconsin | 32,100 | 25,700 | 45,400 | 103,300 | 3.0% |
| Delaware | 4,500 | 4,100 | 7,500 | 16,100 | 3.0% |
| Virginia | 47,000 | 35,900 | 58,700 | 141,600 | 3.0% |
| New Hampshire | 8,700 | 5,200 | 10,900 | 24,900 | 3.0% |
| Florida | 72,000 | 77,700 | 137,100 | 286,800 | 2.9% |
| New Jersey | 34,500 | 38,800 | 70,600 | 143,900 | 2.9% |
| South Carolina | 23,800 | 15,300 | 28,600 | 67,700 | 2.9% |
| North Carolina | 44,700 | 36,000 | 65,500 | 146,100 | 2.8% |
| Oregon | 16,800 | 14,600 | 29,100 | 60,400 | 2.8% |
| Washington | 26,700 | 26,900 | 50,700 | 104,300 | 2.8% |
| Georgia | 42,600 | 33,500 | 65,500 | 141,600 | 2.7% |
| Connecticut | 15,900 | 13,100 | 30,400 | 59,400 | 2.7% |
| Rhode Island | 4,100 | 3,200 | 7,700 | 15,100 | 2.5% |
| Massachusetts | 26,700 | 24,100 | 55,500 | 106,300 | 2.5% |
| New York | 63,200 | 64,800 | 142,600 | 270,600 | 2.4% |
| Hawaii | 4,700 | 5,700 | 10,000 | 20,500 | 2.3% |
| Maryland | 17,900 | 17,900 | 39,500 | 75,400 | 2.2% |
| District of Columbia | 2,100 | 4,000 | 7,600 | 13,700 | 1.7% |
| U.S. Total | 2,590,700 | 2,440,300 | 3,414,200 | 8,445,200 | 4.9% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

Details may not add to totals due to rounding.

Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

Table 9a. – Impact of the Oil and Natural Gas Industry’s Operations on Labor Income by State, 2011 (in \$ Millions, Sorted Alphabetically)

| State | Direct Labor Income | Indirect Labor Income | Induced Labor Income | Total Contribution | Total Contribution as a % of State Total Labor Income |
|----------------------|---------------------|-----------------------|----------------------|--------------------|---|
| Alabama | \$1,788 | \$1,561 | \$1,556 | \$4,904 | 4.2% |
| Alaska | \$2,241 | \$1,294 | \$967 | \$4,502 | 12.6% |
| Arizona | \$1,241 | \$1,463 | \$1,951 | \$4,654 | 3.0% |
| Arkansas | \$1,686 | \$1,357 | \$1,177 | \$4,220 | 6.3% |
| California | \$21,725 | \$17,162 | \$19,996 | \$58,884 | 4.9% |
| Colorado | \$6,313 | \$4,036 | \$3,739 | \$14,088 | 8.1% |
| Connecticut | \$1,049 | \$1,211 | \$1,901 | \$4,160 | 2.8% |
| Delaware | \$286 | \$297 | \$374 | \$957 | 3.2% |
| District of Columbia | \$166 | \$560 | \$701 | \$1,427 | 1.3% |
| Florida | \$2,709 | \$4,343 | \$5,867 | \$12,919 | 2.8% |
| Georgia | \$1,651 | \$2,076 | \$3,039 | \$6,765 | 2.5% |
| Hawaii | \$255 | \$337 | \$445 | \$1,036 | 2.0% |
| Idaho | \$300 | \$321 | \$420 | \$1,041 | 2.9% |
| Illinois | \$3,896 | \$5,882 | \$5,967 | \$15,745 | 3.8% |
| Indiana | \$2,168 | \$2,233 | \$2,298 | \$6,699 | 4.1% |
| Iowa | \$769 | \$760 | \$1,039 | \$2,568 | 3.0% |
| Kansas | \$2,937 | \$2,529 | \$1,745 | \$7,211 | 8.6% |
| Kentucky | \$1,341 | \$1,383 | \$1,330 | \$4,054 | 3.8% |
| Louisiana | \$10,912 | \$8,109 | \$5,192 | \$24,213 | 19.4% |
| Maine | \$386 | \$306 | \$459 | \$1,150 | 3.2% |
| Maryland | \$804 | \$1,340 | \$2,046 | \$4,190 | 1.9% |
| Massachusetts | \$1,697 | \$2,129 | \$3,292 | \$7,118 | 2.6% |
| Michigan | \$2,386 | \$3,095 | \$3,327 | \$8,808 | 3.5% |
| Minnesota | \$1,416 | \$2,157 | \$2,446 | \$6,018 | 3.4% |
| Mississippi | \$2,111 | \$1,319 | \$1,096 | \$4,526 | 7.4% |
| Missouri | \$1,522 | \$1,784 | \$2,221 | \$5,527 | 3.3% |
| Montana | \$924 | \$616 | \$470 | \$2,009 | 7.7% |
| Nebraska | \$1,211 | \$577 | \$899 | \$2,687 | 4.7% |
| Nevada | \$706 | \$774 | \$953 | \$2,433 | 3.2% |
| New Hampshire | \$392 | \$331 | \$530 | \$1,253 | 2.8% |
| New Jersey | \$2,869 | \$3,237 | \$4,018 | \$10,124 | 3.3% |
| New Mexico | \$2,322 | \$1,780 | \$1,248 | \$5,350 | 10.3% |
| New York | \$4,000 | \$6,805 | \$9,614 | \$20,419 | 2.7% |
| North Carolina | \$1,831 | \$2,120 | \$2,812 | \$6,764 | 2.6% |
| North Dakota | \$2,155 | \$942 | \$735 | \$3,831 | 13.1% |
| Ohio | \$3,876 | \$4,473 | \$4,395 | \$12,744 | 4.1% |
| Oklahoma | \$13,870 | \$5,140 | \$4,287 | \$23,298 | 22.9% |
| Oregon | \$783 | \$829 | \$1,199 | \$2,811 | 2.8% |
| Pennsylvania | \$6,518 | \$6,403 | \$6,630 | \$19,550 | 5.1% |
| Rhode Island | \$288 | \$244 | \$403 | \$934 | 2.8% |
| South Carolina | \$710 | \$799 | \$1,125 | \$2,634 | 2.4% |
| South Dakota | \$305 | \$232 | \$320 | \$857 | 3.5% |
| Tennessee | \$1,263 | \$1,639 | \$2,184 | \$5,086 | 3.0% |
| Texas | \$75,459 | \$36,805 | \$31,821 | \$144,085 | 18.7% |
| Utah | \$1,501 | \$1,339 | \$1,252 | \$4,092 | 5.3% |
| Vermont | \$206 | \$142 | \$218 | \$567 | 3.1% |
| Virginia | \$1,661 | \$2,638 | \$2,917 | \$7,215 | 2.5% |
| Washington | \$1,569 | \$1,829 | \$2,511 | \$5,908 | 2.7% |
| West Virginia | \$1,610 | \$1,211 | \$818 | \$3,639 | 8.8% |
| Wisconsin | \$1,152 | \$1,489 | \$1,917 | \$4,557 | 2.9% |
| Wyoming | \$2,657 | \$1,640 | \$837 | \$5,135 | 21.3% |
| U.S. Total | \$203,591 | \$153,075 | \$158,702 | \$515,368 | 5.4% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

Details may not add to totals due to rounding.

Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table 9b. – Impact of the Oil and Natural Gas Industry’s Operations on Labor Income by State, 2011 (in \$ Millions, Sorted by Labor Income Share)

| State | Direct Labor Income | Indirect Labor Income | Induced Labor Income | Total Contribution | Total Contribution as a % of State Total Labor Income |
|----------------------|---------------------|-----------------------|----------------------|--------------------|---|
| Oklahoma | \$13,870 | \$5,140 | \$4,287 | \$23,298 | 22.9% |
| Wyoming | \$2,657 | \$1,640 | \$837 | \$5,135 | 21.3% |
| Louisiana | \$10,912 | \$8,109 | \$5,192 | \$24,213 | 19.4% |
| Texas | \$75,459 | \$36,805 | \$31,821 | \$144,085 | 18.7% |
| North Dakota | \$2,155 | \$942 | \$735 | \$3,831 | 13.1% |
| Alaska | \$2,241 | \$1,294 | \$967 | \$4,502 | 12.6% |
| New Mexico | \$2,322 | \$1,780 | \$1,248 | \$5,350 | 10.3% |
| West Virginia | \$1,610 | \$1,211 | \$818 | \$3,639 | 8.8% |
| Kansas | \$2,937 | \$2,529 | \$1,745 | \$7,211 | 8.6% |
| Colorado | \$6,313 | \$4,036 | \$3,739 | \$14,088 | 8.1% |
| Montana | \$924 | \$616 | \$470 | \$2,009 | 7.7% |
| Mississippi | \$2,111 | \$1,319 | \$1,096 | \$4,526 | 7.4% |
| Arkansas | \$1,686 | \$1,357 | \$1,177 | \$4,220 | 6.3% |
| Utah | \$1,501 | \$1,339 | \$1,252 | \$4,092 | 5.3% |
| Pennsylvania | \$6,518 | \$6,403 | \$6,630 | \$19,550 | 5.1% |
| California | \$21,725 | \$17,162 | \$19,996 | \$58,884 | 4.9% |
| Nebraska | \$1,211 | \$577 | \$899 | \$2,687 | 4.7% |
| Alabama | \$1,788 | \$1,561 | \$1,556 | \$4,904 | 4.2% |
| Indiana | \$2,168 | \$2,233 | \$2,298 | \$6,699 | 4.1% |
| Ohio | \$3,876 | \$4,473 | \$4,395 | \$12,744 | 4.1% |
| Illinois | \$3,896 | \$5,882 | \$5,967 | \$15,745 | 3.8% |
| Kentucky | \$1,341 | \$1,383 | \$1,330 | \$4,054 | 3.8% |
| Michigan | \$2,386 | \$3,095 | \$3,327 | \$8,808 | 3.5% |
| South Dakota | \$305 | \$232 | \$320 | \$857 | 3.5% |
| Minnesota | \$1,416 | \$2,157 | \$2,446 | \$6,018 | 3.4% |
| Missouri | \$1,522 | \$1,784 | \$2,221 | \$5,527 | 3.3% |
| New Jersey | \$2,869 | \$3,237 | \$4,018 | \$10,124 | 3.3% |
| Nevada | \$706 | \$774 | \$953 | \$2,433 | 3.2% |
| Delaware | \$286 | \$297 | \$374 | \$957 | 3.2% |
| Maine | \$386 | \$306 | \$459 | \$1,150 | 3.2% |
| Vermont | \$206 | \$142 | \$218 | \$567 | 3.1% |
| Tennessee | \$1,263 | \$1,639 | \$2,184 | \$5,086 | 3.0% |
| Iowa | \$769 | \$760 | \$1,039 | \$2,568 | 3.0% |
| Arizona | \$1,241 | \$1,463 | \$1,951 | \$4,654 | 3.0% |
| Wisconsin | \$1,152 | \$1,489 | \$1,917 | \$4,557 | 2.9% |
| Idaho | \$300 | \$321 | \$420 | \$1,041 | 2.9% |
| Connecticut | \$1,049 | \$1,211 | \$1,901 | \$4,160 | 2.8% |
| Florida | \$2,709 | \$4,343 | \$5,867 | \$12,919 | 2.8% |
| New Hampshire | \$392 | \$331 | \$530 | \$1,253 | 2.8% |
| Oregon | \$783 | \$829 | \$1,199 | \$2,811 | 2.8% |
| Rhode Island | \$288 | \$244 | \$403 | \$934 | 2.8% |
| New York | \$4,000 | \$6,805 | \$9,614 | \$20,419 | 2.7% |
| Washington | \$1,569 | \$1,829 | \$2,511 | \$5,908 | 2.7% |
| North Carolina | \$1,831 | \$2,120 | \$2,812 | \$6,764 | 2.6% |
| Massachusetts | \$1,697 | \$2,129 | \$3,292 | \$7,118 | 2.6% |
| Georgia | \$1,651 | \$2,076 | \$3,039 | \$6,765 | 2.5% |
| Virginia | \$1,661 | \$2,638 | \$2,917 | \$7,215 | 2.5% |
| South Carolina | \$710 | \$799 | \$1,125 | \$2,634 | 2.4% |
| Hawaii | \$255 | \$337 | \$445 | \$1,036 | 2.0% |
| Maryland | \$804 | \$1,340 | \$2,046 | \$4,190 | 1.9% |
| District of Columbia | \$166 | \$560 | \$701 | \$1,427 | 1.3% |
| U.S. Total | \$203,591 | \$153,075 | \$158,702 | \$515,368 | 5.4% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

Details may not add to totals due to rounding.

Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table 10a.– Impact of the Oil and Natural Gas Industry’s Operations on Value Added by State, 2011 (in \$ Millions, Sorted Alphabetically)

| State | Direct Value Added | Indirect Value Added | Induced Value Added | Total Contribution | Total Contribution as a % of State GDP |
|----------------------|--------------------|----------------------|---------------------|--------------------|--|
| Alabama | \$6,112 | \$2,525 | \$2,691 | \$11,328 | 6.4% |
| Alaska | \$15,692 | \$1,880 | \$1,705 | \$19,277 | 34.7% |
| Arizona | \$2,543 | \$3,036 | \$3,437 | \$9,017 | 3.4% |
| Arkansas | \$3,990 | \$2,047 | \$2,026 | \$8,063 | 7.8% |
| California | \$69,466 | \$27,787 | \$34,192 | \$131,445 | 6.7% |
| Colorado | \$12,482 | \$6,780 | \$6,549 | \$25,811 | 9.1% |
| Connecticut | \$2,409 | \$2,091 | \$3,183 | \$7,683 | 3.3% |
| Delaware | \$849 | \$495 | \$621 | \$1,966 | 4.1% |
| District of Columbia | \$915 | \$782 | \$1,006 | \$2,703 | 1.9% |
| Florida | \$5,270 | \$7,661 | \$10,223 | \$23,154 | 3.1% |
| Georgia | \$3,719 | \$3,723 | \$5,460 | \$12,902 | 3.0% |
| Hawaii | \$947 | \$487 | \$733 | \$2,167 | 2.9% |
| Idaho | \$533 | \$541 | \$724 | \$1,797 | 3.1% |
| Illinois | \$13,642 | \$9,491 | \$10,174 | \$33,308 | 5.1% |
| Indiana | \$8,910 | \$3,721 | \$3,965 | \$16,596 | 6.3% |
| Iowa | \$1,256 | \$1,299 | \$1,863 | \$4,419 | 3.1% |
| Kansas | \$5,856 | \$4,020 | \$3,026 | \$12,903 | 9.5% |
| Kentucky | \$3,291 | \$2,188 | \$2,388 | \$7,868 | 4.6% |
| Louisiana | \$52,267 | \$12,688 | \$8,970 | \$73,925 | 35.5% |
| Maine | \$1,082 | \$508 | \$781 | \$2,370 | 4.2% |
| Maryland | \$1,632 | \$2,050 | \$3,403 | \$7,085 | 2.2% |
| Massachusetts | \$3,818 | \$3,419 | \$5,402 | \$12,639 | 2.9% |
| Michigan | \$4,924 | \$5,196 | \$5,641 | \$15,761 | 4.1% |
| Minnesota | \$6,329 | \$3,742 | \$4,235 | \$14,306 | 5.0% |
| Mississippi | \$5,123 | \$2,041 | \$1,891 | \$9,055 | 9.4% |
| Missouri | \$3,065 | \$2,918 | \$3,828 | \$9,811 | 3.8% |
| Montana | \$2,694 | \$1,015 | \$838 | \$4,547 | 10.8% |
| Nebraska | \$2,264 | \$953 | \$1,505 | \$4,722 | 5.4% |
| Nevada | \$1,538 | \$1,344 | \$1,657 | \$4,540 | 3.8% |
| New Hampshire | \$850 | \$518 | \$882 | \$2,250 | 3.3% |
| New Jersey | \$7,639 | \$5,361 | \$6,875 | \$19,876 | 4.0% |
| New Mexico | \$6,554 | \$2,554 | \$2,166 | \$11,274 | 14.2% |
| New York | \$8,271 | \$11,148 | \$15,778 | \$35,197 | 3.0% |
| North Carolina | \$3,848 | \$3,483 | \$5,149 | \$12,479 | 3.0% |
| North Dakota | \$3,944 | \$1,397 | \$1,234 | \$6,575 | 12.3% |
| Ohio | \$13,859 | \$7,048 | \$7,537 | \$28,445 | 5.7% |
| Oklahoma | \$23,158 | \$8,283 | \$7,561 | \$39,002 | 23.1% |
| Oregon | \$1,538 | \$1,402 | \$2,087 | \$5,027 | 3.0% |
| Pennsylvania | \$13,169 | \$10,266 | \$11,220 | \$34,654 | 5.8% |
| Rhode Island | \$612 | \$385 | \$653 | \$1,650 | 3.2% |
| South Carolina | \$1,407 | \$1,300 | \$1,966 | \$4,673 | 2.8% |
| South Dakota | \$546 | \$380 | \$533 | \$1,459 | 3.9% |
| Tennessee | \$2,600 | \$2,663 | \$3,656 | \$8,918 | 3.4% |
| Texas | \$192,087 | \$60,235 | \$56,023 | \$308,346 | 23.2% |
| Utah | \$4,126 | \$2,111 | \$2,140 | \$8,377 | 6.9% |
| Vermont | \$427 | \$236 | \$380 | \$1,042 | 3.6% |
| Virginia | \$3,451 | \$4,055 | \$4,955 | \$12,461 | 2.9% |
| Washington | \$6,820 | \$2,834 | \$4,351 | \$14,005 | 4.0% |
| West Virginia | \$2,332 | \$1,976 | \$1,449 | \$5,756 | 8.7% |
| Wisconsin | \$2,132 | \$2,484 | \$3,285 | \$7,901 | 3.1% |
| Wyoming | \$9,029 | \$2,501 | \$1,489 | \$13,019 | 32.9% |
| U.S. Total | \$551,018 | \$249,049 | \$273,485 | \$1,073,552 | 7.1% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

Details may not add to totals due to rounding.

Table 10b.— Impact of the Oil and Natural Gas Industry’s Operations on Value Added by State, 2011 (in \$ Millions, Sorted by Value Added Share)

| State | Direct Value Added | Indirect Value Added | Induced Value Added | Total Contribution | Total Contribution as a % of State GDP |
|----------------------|--------------------|----------------------|---------------------|--------------------|--|
| Louisiana | \$52,267 | \$12,688 | \$8,970 | \$73,925 | 35.5% |
| Alaska | \$15,692 | \$1,880 | \$1,705 | \$19,277 | 34.7% |
| Wyoming | \$9,029 | \$2,501 | \$1,489 | \$13,019 | 32.9% |
| Texas | \$192,087 | \$60,235 | \$56,023 | \$308,346 | 23.2% |
| Oklahoma | \$23,158 | \$8,283 | \$7,561 | \$39,002 | 23.1% |
| New Mexico | \$6,554 | \$2,554 | \$2,166 | \$11,274 | 14.2% |
| North Dakota | \$3,944 | \$1,397 | \$1,234 | \$6,575 | 12.3% |
| Montana | \$2,694 | \$1,015 | \$838 | \$4,547 | 10.8% |
| Kansas | \$5,856 | \$4,020 | \$3,026 | \$12,903 | 9.5% |
| Mississippi | \$5,123 | \$2,041 | \$1,891 | \$9,055 | 9.4% |
| Colorado | \$12,482 | \$6,780 | \$6,549 | \$25,811 | 9.1% |
| West Virginia | \$2,332 | \$1,976 | \$1,449 | \$5,756 | 8.7% |
| Arkansas | \$3,990 | \$2,047 | \$2,026 | \$8,063 | 7.8% |
| Utah | \$4,126 | \$2,111 | \$2,140 | \$8,377 | 6.9% |
| California | \$69,466 | \$27,787 | \$34,192 | \$131,445 | 6.7% |
| Alabama | \$6,112 | \$2,525 | \$2,691 | \$11,328 | 6.4% |
| Indiana | \$8,910 | \$3,721 | \$3,965 | \$16,596 | 6.3% |
| Pennsylvania | \$13,169 | \$10,266 | \$11,220 | \$34,654 | 5.8% |
| Ohio | \$13,859 | \$7,048 | \$7,537 | \$28,445 | 5.7% |
| Nebraska | \$2,264 | \$953 | \$1,505 | \$4,722 | 5.4% |
| Illinois | \$13,642 | \$9,491 | \$10,174 | \$33,308 | 5.1% |
| Minnesota | \$6,329 | \$3,742 | \$4,235 | \$14,306 | 5.0% |
| Kentucky | \$3,291 | \$2,188 | \$2,388 | \$7,868 | 4.6% |
| Maine | \$1,082 | \$508 | \$781 | \$2,370 | 4.2% |
| Delaware | \$849 | \$495 | \$621 | \$1,966 | 4.1% |
| Michigan | \$4,924 | \$5,196 | \$5,641 | \$15,761 | 4.1% |
| Washington | \$6,820 | \$2,834 | \$4,351 | \$14,005 | 4.0% |
| New Jersey | \$7,639 | \$5,361 | \$6,875 | \$19,876 | 4.0% |
| South Dakota | \$546 | \$380 | \$533 | \$1,459 | 3.9% |
| Nevada | \$1,538 | \$1,344 | \$1,657 | \$4,540 | 3.8% |
| Missouri | \$3,065 | \$2,918 | \$3,828 | \$9,811 | 3.8% |
| Vermont | \$427 | \$236 | \$380 | \$1,042 | 3.6% |
| Arizona | \$2,543 | \$3,036 | \$3,437 | \$9,017 | 3.4% |
| Tennessee | \$2,600 | \$2,663 | \$3,656 | \$8,918 | 3.4% |
| Connecticut | \$2,409 | \$2,091 | \$3,183 | \$7,683 | 3.3% |
| New Hampshire | \$850 | \$518 | \$882 | \$2,250 | 3.3% |
| Rhode Island | \$612 | \$385 | \$653 | \$1,650 | 3.2% |
| Florida | \$5,270 | \$7,661 | \$10,223 | \$23,154 | 3.1% |
| Wisconsin | \$2,132 | \$2,484 | \$3,285 | \$7,901 | 3.1% |
| Iowa | \$1,256 | \$1,299 | \$1,863 | \$4,419 | 3.1% |
| Idaho | \$533 | \$541 | \$724 | \$1,797 | 3.1% |
| Oregon | \$1,538 | \$1,402 | \$2,087 | \$5,027 | 3.0% |
| North Carolina | \$3,848 | \$3,483 | \$5,149 | \$12,479 | 3.0% |
| New York | \$8,271 | \$11,148 | \$15,778 | \$35,197 | 3.0% |
| Georgia | \$3,719 | \$3,723 | \$5,460 | \$12,902 | 3.0% |
| Massachusetts | \$3,818 | \$3,419 | \$5,402 | \$12,639 | 2.9% |
| Hawaii | \$947 | \$487 | \$733 | \$2,167 | 2.9% |
| Virginia | \$3,451 | \$4,055 | \$4,955 | \$12,461 | 2.9% |
| South Carolina | \$1,407 | \$1,300 | \$1,966 | \$4,673 | 2.8% |
| Maryland | \$1,632 | \$2,050 | \$3,403 | \$7,085 | 2.2% |
| District of Columbia | \$915 | \$782 | \$1,006 | \$2,703 | 1.9% |
| U.S. Total | \$551,018 | \$249,049 | \$273,485 | \$1,073,552 | 7.1% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

Details may not add to totals due to rounding.

V. Wages, Capital Spending, and Dividends from the Oil and Natural Gas Industry

As shown in the previous section, the US oil and natural gas industry's direct labor income in 2011 is estimated to be \$203.6 billion and capital expenditures are estimated to be \$176.7 billion in 2011.⁷ One measure of the industry's total "spend" is the sum of the industry labor income, capital expenditures, and dividend payments.

Total dividends paid by the industry were obtained from S&P's Compustat North America® database for US-headquartered companies in the oil and natural gas industry.⁸ Excluding distributions from Master Limited Partnerships and other pass-through entities,⁹ PwC estimates that the industry paid out a total of \$32.0 billion in dividends in 2011, including dividends paid to individuals, retirement plans, foreign shareholders, and other businesses.

Using this measure of total "spend" (consisting of the estimated direct labor income, capital expenditures, and dividend payments), the industry's total "spend" amounted to \$410.3 billion in 2011.

Another source for the industry's annual capital expenditures is a survey published annually by the *Oil & Gas Journal*, which puts the industry's 2011 US capital expenditures at \$292.0 billion.¹⁰ If this estimate of the industry's capital expenditures is used for the purpose of computing the industry's total "spend" as defined above, the industry's total "spend" was \$527.6 billion in 2011.

⁷ The Census Bureau defines capital expenditures to include "all capitalized costs" incurred during the year for structures and equipment "chargeable to asset accounts, and for which depreciation and amortization accounts are ordinarily maintained."

⁸ The measure of dividends used includes cash dividends from all classes of common stock, cash paid in lieu of fractional shares, liquidation payments to shareholders and other cash distributions to shareholders. It also includes dividends paid to US shareholders out of income from US operations by foreign corporations. It does not include the dollar value of stock dividends or dividends paid or accrued on preferred stock.

⁹ Distributions from pass-through entities are included as proprietors' income in PwC's estimate of direct labor income.

¹⁰ *Oil & Gas Journal*, March 5, 2012, available at: www.ogj.com/articles/print/vol-110/issue-3/general-interest/special-report-capital/oil-liquids-rich.html.

***Appendix A: Detailed State-by-State Operational
Impact Results***

The Economic Impact of the Oil and Natural Gas Industry in Alabama, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|-------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 33,926 | | | 33,926 | 1.4% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 8,976 | 18,787 | 27,764 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 6,559 | 5,975 | 12,535 | |
| <i>Wholesale and retail trade</i> | | 1,829 | 7,005 | 8,834 | |
| <i>Manufacturing</i> | | 4,255 | 2,968 | 7,222 | |
| <i>Construction</i> | | 4,618 | 652 | 5,270 | |
| <i>Transportation and warehousing</i> | | 1,771 | 1,015 | 2,787 | |
| <i>Information</i> | | 1,077 | 1,113 | 2,190 | |
| <i>Agriculture</i> | | 319 | 1,094 | 1,413 | |
| <i>Utilities</i> | | 255 | 203 | 458 | |
| <i>Mining</i> | | 274 | 70 | 344 | |
| <i>Other</i> | | 232 | 303 | 536 | |
| Total Operational Impact on Employment | 33,926 | 30,166 | 39,186 | 103,278 | 4.2% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$1,787.6 | | | \$1,787.6 | 1.5% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$385.0 | \$698.7 | \$1,083.7 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$383.2 | \$248.1 | \$631.3 | |
| <i>Manufacturing</i> | | \$261.2 | \$159.9 | \$421.1 | |
| <i>Wholesale and retail trade</i> | | \$89.8 | \$235.8 | \$325.6 | |
| <i>Construction</i> | | \$219.9 | \$31.4 | \$251.3 | |
| <i>Information</i> | | \$66.3 | \$64.9 | \$131.2 | |
| <i>Transportation and warehousing</i> | | \$80.1 | \$45.7 | \$125.8 | |
| <i>Utilities</i> | | \$30.9 | \$24.0 | \$54.9 | |
| <i>Agriculture</i> | | \$9.8 | \$27.4 | \$37.2 | |
| <i>Mining</i> | | \$24.0 | \$6.2 | \$30.2 | |
| <i>Other</i> | | \$10.4 | \$13.6 | \$24.0 | |
| Total Operational Impact on Labor Income | \$1,787.6 | \$1,560.6 | \$1,555.7 | \$4,903.9 | 4.2% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$6,111.6 | | | \$6,111.6 | 3.4% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$691.0 | \$757.9 | \$1,448.9 | |
| <i>Services</i> | | \$447.0 | \$808.6 | \$1,255.6 | |
| <i>Manufacturing</i> | | \$472.7 | \$267.1 | \$739.8 | |
| <i>Wholesale and retail trade</i> | | \$151.3 | \$373.0 | \$524.3 | |
| <i>Information</i> | | \$207.9 | \$214.9 | \$422.8 | |
| <i>Construction</i> | | \$238.0 | \$37.9 | \$275.9 | |
| <i>Utilities</i> | | \$126.4 | \$97.4 | \$223.8 | |
| <i>Transportation and warehousing</i> | | \$111.7 | \$63.5 | \$175.2 | |
| <i>Mining</i> | | \$52.0 | \$13.4 | \$65.4 | |
| <i>Agriculture</i> | | \$10.4 | \$35.7 | \$46.1 | |
| <i>Other</i> | | \$16.6 | \$21.8 | \$38.4 | |
| Total Operational Impact on Value Added | \$6,111.6 | \$2,525.0 | \$2,691.2 | \$11,327.8 | 6.4% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Alaska, 2011

| Employment* | | | | | |
|--|-------------------|------------------|------------------|-------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 18,745 | | | 18,745 | 3.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 5,350 | 10,390 | 15,741 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 4,778 | 2,516 | 7,294 | |
| <i>Wholesale and retail trade</i> | | 970 | 4,075 | 5,045 | |
| <i>Construction</i> | | 4,568 | 210 | 4,779 | |
| <i>Transportation and warehousing</i> | | 1,271 | 844 | 2,115 | |
| <i>Information</i> | | 621 | 445 | 1,066 | |
| <i>Manufacturing</i> | | 217 | 616 | 832 | |
| <i>Utilities</i> | | 161 | 94 | 255 | |
| <i>Mining</i> | | 202 | 47 | 249 | |
| <i>Agriculture</i> | | 27 | 107 | 134 | |
| <i>Other</i> | | 137 | 219 | 356 | |
| Total Operational Impact on Employment | 18,745 | 18,303 | 19,563 | 56,612 | 11.9% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$2,241.0 | | | \$2,241.0 | 6.3% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$311.8 | \$476.0 | \$787.9 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$375.1 | \$160.0 | \$535.1 | |
| <i>Construction</i> | | \$360.9 | \$16.7 | \$377.5 | |
| <i>Wholesale and retail trade</i> | | \$46.1 | \$158.4 | \$204.5 | |
| <i>Transportation and warehousing</i> | | \$89.0 | \$56.1 | \$145.1 | |
| <i>Information</i> | | \$46.9 | \$32.4 | \$79.3 | |
| <i>Manufacturing</i> | | \$14.4 | \$30.5 | \$44.9 | |
| <i>Utilities</i> | | \$17.8 | \$10.2 | \$28.0 | |
| <i>Mining</i> | | \$15.0 | \$3.4 | \$18.4 | |
| <i>Agriculture</i> | | \$5.0 | \$5.3 | \$10.3 | |
| <i>Other</i> | | \$11.5 | \$18.2 | \$29.7 | |
| Total Operational Impact on Labor Income | \$2,241.0 | \$1,293.5 | \$967.1 | \$4,501.6 | 12.6% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$15,691.6 | | | \$15,691.6 | 28.3% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$615.0 | \$563.2 | \$1,178.3 | |
| <i>Services</i> | | \$381.3 | \$571.8 | \$953.1 | |
| <i>Construction</i> | | \$383.6 | \$20.7 | \$404.3 | |
| <i>Wholesale and retail trade</i> | | \$75.4 | \$249.4 | \$324.7 | |
| <i>Information</i> | | \$145.5 | \$108.2 | \$253.7 | |
| <i>Transportation and warehousing</i> | | \$105.2 | \$66.5 | \$171.7 | |
| <i>Utilities</i> | | \$71.9 | \$39.7 | \$111.6 | |
| <i>Mining</i> | | \$60.6 | \$14.3 | \$74.9 | |
| <i>Manufacturing</i> | | \$19.2 | \$38.2 | \$57.4 | |
| <i>Agriculture</i> | | \$4.9 | \$5.6 | \$10.6 | |
| <i>Other</i> | | \$17.4 | \$27.7 | \$45.1 | |
| Total Operational Impact on Value Added | \$15,691.6 | \$1,880.1 | \$1,705.3 | \$19,277.0 | 34.7% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Arizona, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 27,508 | | | 27,508 | 0.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 8,353 | 21,872 | 30,225 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 7,688 | 9,471 | 17,159 | |
| <i>Wholesale and retail trade</i> | | 1,170 | 7,489 | 8,658 | |
| <i>Manufacturing</i> | | 2,104 | 1,327 | 3,431 | |
| <i>Construction</i> | | 2,930 | 404 | 3,334 | |
| <i>Transportation and warehousing</i> | | 1,406 | 1,222 | 2,627 | |
| <i>Information</i> | | 1,057 | 1,268 | 2,324 | |
| <i>Agriculture</i> | | 140 | 609 | 749 | |
| <i>Mining</i> | | 449 | 113 | 562 | |
| <i>Utilities</i> | | 132 | 152 | 285 | |
| <i>Other</i> | | 77 | 185 | 262 | |
| Total Operational Impact on Employment | 27,508 | 25,506 | 44,111 | 97,125 | 3.0% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$1,240.5 | | | \$1,240.5 | 0.8% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$414.1 | \$932.7 | \$1,346.8 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$461.8 | \$387.5 | \$849.3 | |
| <i>Wholesale and retail trade</i> | | \$72.0 | \$320.7 | \$392.7 | |
| <i>Manufacturing</i> | | \$138.6 | \$86.2 | \$224.7 | |
| <i>Construction</i> | | \$164.1 | \$22.5 | \$186.6 | |
| <i>Information</i> | | \$74.5 | \$80.8 | \$155.2 | |
| <i>Transportation and warehousing</i> | | \$67.7 | \$58.0 | \$125.7 | |
| <i>Mining</i> | | \$39.8 | \$10.3 | \$50.1 | |
| <i>Utilities</i> | | \$18.0 | \$19.9 | \$37.9 | |
| <i>Agriculture</i> | | \$7.1 | \$21.0 | \$28.1 | |
| <i>Other</i> | | \$5.1 | \$11.6 | \$16.7 | |
| Total Operational Impact on Labor Income | \$1,240.5 | \$1,462.7 | \$1,951.1 | \$4,654.4 | 3.0% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$2,543.4 | | | \$2,543.4 | 1.0% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$1,419.1 | \$1,090.8 | \$2,509.9 | |
| <i>Services</i> | | \$491.1 | \$1,112.8 | \$1,603.9 | |
| <i>Wholesale and retail trade</i> | | \$123.3 | \$529.6 | \$652.9 | |
| <i>Information</i> | | \$218.6 | \$252.6 | \$471.2 | |
| <i>Manufacturing</i> | | \$231.7 | \$159.8 | \$391.5 | |
| <i>Mining</i> | | \$190.2 | \$50.7 | \$240.9 | |
| <i>Construction</i> | | \$176.3 | \$28.2 | \$204.5 | |
| <i>Transportation and warehousing</i> | | \$93.2 | \$79.3 | \$172.5 | |
| <i>Utilities</i> | | \$73.8 | \$78.5 | \$152.2 | |
| <i>Agriculture</i> | | \$11.0 | \$36.9 | \$47.8 | |
| <i>Other</i> | | \$7.8 | \$18.0 | \$25.8 | |
| Total Operational Impact on Value Added | \$2,543.4 | \$3,036.2 | \$3,437.1 | \$9,016.6 | 3.4% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Arkansas, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|----------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 33,795 | | | 33,795 | 2.2% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 7,989 | 15,799 | 23,789 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 5,571 | 4,024 | 9,595 | |
| <i>Wholesale and retail trade</i> | | 1,562 | 5,799 | 7,360 | |
| <i>Construction</i> | | 5,580 | 461 | 6,041 | |
| <i>Manufacturing</i> | | 3,162 | 2,170 | 5,332 | |
| <i>Transportation and warehousing</i> | | 1,600 | 979 | 2,579 | |
| <i>Information</i> | | 922 | 803 | 1,726 | |
| <i>Agriculture</i> | | 382 | 1,227 | 1,609 | |
| <i>Utilities</i> | | 183 | 136 | 319 | |
| <i>Mining</i> | | 92 | 23 | 115 | |
| <i>Other</i> | | <u>103</u> | <u>186</u> | <u>289</u> | |
| Total Operational Impact on Employment | 33,795 | 27,146 | 31,607 | 92,549 | 5.9% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$1,686.3 | | | \$1,686.3 | 2.5% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$397.8 | \$560.0 | \$957.8 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$303.9 | \$147.2 | \$451.1 | |
| <i>Manufacturing</i> | | \$191.3 | \$111.8 | \$303.1 | |
| <i>Wholesale and retail trade</i> | | \$73.9 | \$197.6 | \$271.6 | |
| <i>Construction</i> | | \$225.5 | \$18.9 | \$244.4 | |
| <i>Transportation and warehousing</i> | | \$73.2 | \$43.7 | \$116.9 | |
| <i>Information</i> | | \$53.0 | \$44.8 | \$97.7 | |
| <i>Agriculture</i> | | \$9.3 | \$30.7 | \$39.9 | |
| <i>Utilities</i> | | \$20.3 | \$14.0 | \$34.4 | |
| <i>Mining</i> | | \$4.9 | \$1.2 | \$6.2 | |
| <i>Other</i> | | <u>\$3.9</u> | <u>\$7.0</u> | <u>\$10.9</u> | |
| Total Operational Impact on Labor Income | \$1,686.3 | \$1,357.0 | \$1,177.0 | \$4,220.3 | 6.3% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$3,990.4 | | | \$3,990.4 | 3.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$461.5 | \$645.7 | \$1,107.2 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$537.0 | \$529.3 | \$1,066.3 | |
| <i>Manufacturing</i> | | \$303.4 | \$187.7 | \$491.1 | |
| <i>Wholesale and retail trade</i> | | \$123.3 | \$310.7 | \$434.1 | |
| <i>Information</i> | | \$165.2 | \$148.0 | \$313.2 | |
| <i>Construction</i> | | \$242.5 | \$23.8 | \$266.2 | |
| <i>Transportation and warehousing</i> | | \$99.8 | \$58.6 | \$158.4 | |
| <i>Utilities</i> | | \$82.7 | \$55.2 | \$137.9 | |
| <i>Agriculture</i> | | \$13.5 | \$52.4 | \$65.9 | |
| <i>Mining</i> | | \$11.5 | \$2.9 | \$14.4 | |
| <i>Other</i> | | <u>\$6.4</u> | <u>\$11.4</u> | <u>\$17.8</u> | |
| Total Operational Impact on Value Added | \$3,990.4 | \$2,046.8 | \$2,025.6 | \$8,062.7 | 7.8% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in California, 2011

| Employment* | | | | | |
|--|-------------------|-------------------|-------------------|--------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 182,777 | | | 182,777 | 0.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 77,290 | 182,153 | 259,444 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 64,002 | 71,723 | 135,725 | |
| <i>Wholesale and retail trade</i> | | 17,890 | 68,667 | 86,556 | |
| <i>Manufacturing</i> | | 20,206 | 16,865 | 37,071 | |
| <i>Construction</i> | | 29,205 | 3,788 | 32,993 | |
| <i>Transportation and warehousing</i> | | 13,354 | 10,457 | 23,811 | |
| <i>Information</i> | | 10,020 | 11,863 | 21,883 | |
| <i>Agriculture</i> | | 1,761 | 7,069 | 8,830 | |
| <i>Utilities</i> | | 759 | 679 | 1,438 | |
| <i>Mining</i> | | 311 | 78 | 389 | |
| <i>Other</i> | | 748 | 1,545 | 2,294 | |
| Total Operational Impact on Employment | 182,777 | 235,546 | 374,887 | 793,210 | 4.1% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$21,725.4 | | | \$21,725.4 | 1.8% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$4,733.7 | \$8,619.6 | \$13,353.3 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$5,344.8 | \$4,190.3 | \$9,535.1 | |
| <i>Wholesale and retail trade</i> | | \$1,146.3 | \$3,076.4 | \$4,222.7 | |
| <i>Manufacturing</i> | | \$1,603.2 | \$1,249.6 | \$2,852.9 | |
| <i>Information</i> | | \$1,324.6 | \$1,383.9 | \$2,708.5 | |
| <i>Construction</i> | | \$1,931.6 | \$253.9 | \$2,185.5 | |
| <i>Transportation and warehousing</i> | | \$775.8 | \$603.5 | \$1,379.3 | |
| <i>Agriculture</i> | | \$96.2 | \$375.2 | \$471.5 | |
| <i>Utilities</i> | | \$116.3 | \$96.9 | \$213.2 | |
| <i>Mining</i> | | \$19.1 | \$4.7 | \$23.8 | |
| <i>Other</i> | | \$70.2 | \$142.2 | \$212.4 | |
| Total Operational Impact on Labor Income | \$21,725.4 | \$17,161.8 | \$19,996.4 | \$58,883.6 | 4.9% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$69,466.0 | | | \$69,466.0 | 3.6% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$10,648.8 | \$10,889.5 | \$21,538.4 | |
| <i>Services</i> | | \$5,601.8 | \$10,407.3 | \$16,009.1 | |
| <i>Wholesale and retail trade</i> | | \$1,949.2 | \$5,016.5 | \$6,965.7 | |
| <i>Information</i> | | \$2,829.5 | \$3,246.0 | \$6,075.5 | |
| <i>Manufacturing</i> | | \$2,844.6 | \$2,293.8 | \$5,138.4 | |
| <i>Construction</i> | | \$2,074.7 | \$317.8 | \$2,392.5 | |
| <i>Transportation and warehousing</i> | | \$1,095.8 | \$888.7 | \$1,984.5 | |
| <i>Utilities</i> | | \$467.6 | \$369.3 | \$836.9 | |
| <i>Agriculture</i> | | \$123.8 | \$536.6 | \$660.5 | |
| <i>Mining</i> | | \$45.7 | \$11.5 | \$57.1 | |
| <i>Other</i> | | \$105.8 | \$214.7 | \$320.5 | |
| Total Operational Impact on Value Added | \$69,466.0 | \$27,787.4 | \$34,191.7 | \$131,445.1 | 6.7% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Colorado, 2011

| Employment* | | | | | |
|--|-------------------|------------------|------------------|-------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 69,673 | | | 69,673 | 2.2% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 17,324 | 39,415 | 56,739 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 18,878 | 16,455 | 35,334 | |
| <i>Wholesale and retail trade</i> | | 3,636 | 15,943 | 19,579 | |
| <i>Construction</i> | | 12,138 | 928 | 13,066 | |
| <i>Manufacturing</i> | | 3,452 | 2,542 | 5,994 | |
| <i>Transportation and warehousing</i> | | 2,698 | 2,046 | 4,744 | |
| <i>Information</i> | | 2,223 | 2,277 | 4,501 | |
| <i>Agriculture</i> | | 281 | 1,255 | 1,536 | |
| <i>Utilities</i> | | 352 | 250 | 602 | |
| <i>Mining</i> | | 415 | 87 | 503 | |
| <i>Other</i> | | 277 | 550 | 827 | |
| Total Operational Impact on Employment | 69,673 | 61,675 | 81,748 | 213,097 | 6.7% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$6,312.5 | | | \$6,312.5 | 3.6% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$1,121.2 | \$1,668.8 | \$2,790.0 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$1,257.6 | \$770.7 | \$2,028.3 | |
| <i>Wholesale and retail trade</i> | | \$215.0 | \$639.4 | \$854.4 | |
| <i>Construction</i> | | \$645.8 | \$50.1 | \$695.9 | |
| <i>Information</i> | | \$298.4 | \$234.5 | \$532.9 | |
| <i>Manufacturing</i> | | \$236.4 | \$162.0 | \$398.3 | |
| <i>Transportation and warehousing</i> | | \$153.2 | \$112.3 | \$265.6 | |
| <i>Utilities</i> | | \$43.4 | \$29.6 | \$73.0 | |
| <i>Mining</i> | | \$39.3 | \$8.2 | \$47.5 | |
| <i>Agriculture</i> | | \$7.6 | \$28.7 | \$36.3 | |
| <i>Other</i> | | \$17.9 | \$34.9 | \$52.8 | |
| Total Operational Impact on Labor Income | \$6,312.5 | \$4,035.7 | \$3,739.3 | \$14,087.6 | 8.1% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$12,482.1 | | | \$12,482.1 | 4.4% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$2,848.9 | \$2,118.2 | \$4,967.1 | |
| <i>Services</i> | | \$1,324.7 | \$2,010.0 | \$3,334.7 | |
| <i>Wholesale and retail trade</i> | | \$363.1 | \$1,035.0 | \$1,398.2 | |
| <i>Information</i> | | \$627.1 | \$611.6 | \$1,238.7 | |
| <i>Construction</i> | | \$688.1 | \$62.1 | \$750.1 | |
| <i>Manufacturing</i> | | \$380.7 | \$290.3 | \$671.0 | |
| <i>Transportation and warehousing</i> | | \$225.7 | \$168.0 | \$393.7 | |
| <i>Utilities</i> | | \$175.5 | \$118.0 | \$293.5 | |
| <i>Mining</i> | | \$106.0 | \$23.2 | \$129.1 | |
| <i>Agriculture</i> | | \$12.5 | \$58.9 | \$71.4 | |
| <i>Other</i> | | \$27.6 | \$54.1 | \$81.7 | |
| Total Operational Impact on Value Added | \$12,482.1 | \$6,779.9 | \$6,549.3 | \$25,811.3 | 9.1% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Connecticut, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 15,932 | | | 15,932 | 0.7% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 4,007 | 15,378 | 19,386 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 3,881 | 6,572 | 10,453 | |
| <i>Wholesale and retail trade</i> | | 508 | 4,728 | 5,236 | |
| <i>Manufacturing</i> | | 2,594 | 1,292 | 3,886 | |
| <i>Transportation and warehousing</i> | | 696 | 771 | 1,467 | |
| <i>Information</i> | | 608 | 840 | 1,448 | |
| <i>Construction</i> | | 627 | 389 | 1,016 | |
| <i>Agriculture</i> | | 35 | 160 | 195 | |
| <i>Utilities</i> | | 44 | 75 | 119 | |
| <i>Mining</i> | | 33 | 8 | 41 | |
| <i>Other</i> | | 49 | 149 | 199 | |
| Total Operational Impact on Employment | 15,932 | 13,082 | 30,363 | 59,378 | 2.7% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$1,048.5 | | | \$1,048.5 | 0.7% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$458.1 | \$620.8 | \$1,078.9 | |
| <i>Services</i> | | \$305.7 | \$758.6 | \$1,064.3 | |
| <i>Manufacturing</i> | | \$240.0 | \$132.0 | \$372.0 | |
| <i>Wholesale and retail trade</i> | | \$39.7 | \$214.7 | \$254.5 | |
| <i>Information</i> | | \$77.1 | \$84.1 | \$161.1 | |
| <i>Transportation and warehousing</i> | | \$33.7 | \$38.3 | \$72.0 | |
| <i>Construction</i> | | \$42.8 | \$25.7 | \$68.4 | |
| <i>Utilities</i> | | \$7.5 | \$12.5 | \$20.0 | |
| <i>Agriculture</i> | | \$0.8 | \$3.3 | \$4.1 | |
| <i>Mining</i> | | \$1.6 | \$0.4 | \$2.0 | |
| <i>Other</i> | | \$3.8 | \$10.8 | \$14.6 | |
| Total Operational Impact on Labor Income | \$1,048.5 | \$1,210.9 | \$1,901.0 | \$4,160.4 | 2.8% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$2,409.3 | | | \$2,409.3 | 1.0% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$980.4 | \$1,328.4 | \$2,308.8 | |
| <i>Services</i> | | \$360.1 | \$879.2 | \$1,239.2 | |
| <i>Manufacturing</i> | | \$375.0 | \$237.6 | \$612.6 | |
| <i>Wholesale and retail trade</i> | | \$69.8 | \$364.0 | \$433.8 | |
| <i>Information</i> | | \$169.2 | \$215.0 | \$384.2 | |
| <i>Transportation and warehousing</i> | | \$49.3 | \$55.5 | \$104.8 | |
| <i>Utilities</i> | | \$30.4 | \$48.7 | \$79.1 | |
| <i>Construction</i> | | \$47.1 | \$31.5 | \$78.5 | |
| <i>Agriculture</i> | | \$1.2 | \$5.8 | \$7.0 | |
| <i>Mining</i> | | \$2.7 | \$0.7 | \$3.4 | |
| <i>Other</i> | | \$5.8 | \$16.5 | \$22.3 | |
| Total Operational Impact on Value Added | \$2,409.3 | \$2,091.0 | \$3,182.7 | \$7,683.0 | 3.3% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Delaware, 2011

| Employment* | | | | | |
|--|----------------|-----------------|----------------|------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 4,528 | | | 4,528 | 0.8% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 1,547 | 3,660 | 5,207 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 1,106 | 1,657 | 2,763 | |
| <i>Wholesale and retail trade</i> | | 272 | 1,234 | 1,507 | |
| <i>Manufacturing</i> | | 315 | 330 | 645 | |
| <i>Transportation and warehousing</i> | | 296 | 179 | 476 | |
| <i>Construction</i> | | 310 | 113 | 423 | |
| <i>Information</i> | | 156 | 210 | 366 | |
| <i>Agriculture</i> | | 14 | 61 | 75 | |
| <i>Utilities</i> | | 38 | 29 | 67 | |
| <i>Mining</i> | | 12 | 2 | 13 | |
| <i>Other</i> | | 23 | 23 | 45 | |
| Total Operational Impact on Employment | 4,528 | 4,089 | 7,498 | 16,115 | 3.0% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$286.5 | | | \$286.5 | 1.0% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$96.4 | \$160.9 | \$257.3 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$104.0 | \$106.1 | \$210.1 | |
| <i>Wholesale and retail trade</i> | | \$16.5 | \$44.1 | \$60.6 | |
| <i>Manufacturing</i> | | \$25.0 | \$22.7 | \$47.7 | |
| <i>Information</i> | | \$14.4 | \$17.3 | \$31.7 | |
| <i>Construction</i> | | \$18.8 | \$6.3 | \$25.1 | |
| <i>Transportation and warehousing</i> | | \$14.8 | \$8.1 | \$22.9 | |
| <i>Utilities</i> | | \$5.1 | \$3.7 | \$8.8 | |
| <i>Agriculture</i> | | \$0.9 | \$3.2 | \$4.1 | |
| <i>Mining</i> | | \$0.3 | \$0.1 | \$0.4 | |
| <i>Other</i> | | \$1.1 | \$1.2 | \$2.3 | |
| Total Operational Impact on Labor Income | \$286.5 | \$297.3 | \$373.6 | \$957.4 | 3.2% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$848.9 | | | \$848.9 | 1.8% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$203.6 | \$221.5 | \$425.2 | |
| <i>Services</i> | | \$113.4 | \$191.7 | \$305.2 | |
| <i>Information</i> | | \$44.1 | \$55.7 | \$99.8 | |
| <i>Wholesale and retail trade</i> | | \$28.0 | \$70.5 | \$98.5 | |
| <i>Manufacturing</i> | | \$40.5 | \$40.1 | \$80.6 | |
| <i>Utilities</i> | | \$20.7 | \$14.1 | \$34.9 | |
| <i>Transportation and warehousing</i> | | \$20.2 | \$11.1 | \$31.3 | |
| <i>Construction</i> | | \$20.6 | \$8.1 | \$28.7 | |
| <i>Agriculture</i> | | \$2.0 | \$6.5 | \$8.5 | |
| <i>Mining</i> | | \$0.5 | \$0.1 | \$0.6 | |
| <i>Other</i> | | \$1.8 | \$1.8 | \$3.6 | |
| Total Operational Impact on Value Added | \$848.9 | \$495.3 | \$621.4 | \$1,965.6 | 4.1% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in the District of Columbia, 2011

| Employment* | | | | | |
|--|----------------|-----------------|------------------|------------------|---------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of District Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 2,055 | | | 2,055 | 0.2% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 1,501 | 4,885 | 6,386 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 1,784 | 1,871 | 3,655 | |
| <i>Information</i> | | 263 | 245 | 508 | |
| <i>Wholesale and retail trade</i> | | 51 | 343 | 394 | |
| <i>Transportation and warehousing</i> | | 175 | 182 | 357 | |
| <i>Construction</i> | | 180 | 50 | 230 | |
| <i>Manufacturing</i> | | 18 | 17 | 36 | |
| <i>Utilities</i> | | 14 | 19 | 33 | |
| <i>Mining</i> | | 16 | 2 | 18 | |
| <i>Agriculture</i> | | 1 | 1 | 2 | |
| <i>Other</i> | | 13 | 26 | 40 | |
| Total Operational Impact on Employment | 2,055 | 4,017 | 7,641 | 13,713 | 1.7% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of District Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$165.5 | | | \$165.5 | 0.1% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$188.5 | \$399.5 | \$588.0 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$300.0 | \$233.1 | \$533.2 | |
| <i>Information</i> | | \$32.7 | \$28.5 | \$61.2 | |
| <i>Transportation and warehousing</i> | | \$14.4 | \$14.7 | \$29.2 | |
| <i>Wholesale and retail trade</i> | | \$4.2 | \$15.6 | \$19.8 | |
| <i>Construction</i> | | \$14.6 | \$3.6 | \$18.2 | |
| <i>Utilities</i> | | \$1.7 | \$2.3 | \$4.0 | |
| <i>Manufacturing</i> | | \$2.3 | \$1.6 | \$3.8 | |
| <i>Mining</i> | | \$0.2 | \$0.0 | \$0.3 | |
| <i>Agriculture</i> | | \$0.0 | \$0.0 | \$0.1 | |
| <i>Other</i> | | \$1.2 | \$2.2 | \$3.4 | |
| Total Operational Impact on Labor Income | \$165.5 | \$559.9 | \$701.2 | \$1,426.6 | 1.3% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of District Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$915.1 | | | \$915.1 | 0.7% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$450.1 | \$434.9 | \$885.0 | |
| <i>Services</i> | | \$205.0 | \$439.0 | \$643.9 | |
| <i>Information</i> | | \$71.1 | \$64.5 | \$135.6 | |
| <i>Transportation and warehousing</i> | | \$19.4 | \$20.2 | \$39.7 | |
| <i>Wholesale and retail trade</i> | | \$7.4 | \$27.1 | \$34.5 | |
| <i>Construction</i> | | \$15.6 | \$4.2 | \$19.8 | |
| <i>Utilities</i> | | \$7.0 | \$9.4 | \$16.5 | |
| <i>Manufacturing</i> | | \$4.0 | \$2.8 | \$6.8 | |
| <i>Mining</i> | | \$0.3 | \$0.1 | \$0.4 | |
| <i>Agriculture</i> | | \$0.1 | \$0.1 | \$0.2 | |
| <i>Other</i> | | \$1.8 | \$3.4 | \$5.2 | |
| Total Operational Impact on Value Added | \$915.1 | \$781.8 | \$1,005.6 | \$2,702.6 | 1.9% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Florida, 2011

| Employment* | | | | | |
|--|------------------|------------------|-------------------|-------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 71,983 | | | 71,983 | 0.7% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 25,608 | 70,104 | 95,712 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 22,508 | 27,250 | 49,758 | |
| <i>Wholesale and retail trade</i> | | 4,005 | 23,234 | 27,239 | |
| <i>Construction</i> | | 11,235 | 1,584 | 12,820 | |
| <i>Transportation and warehousing</i> | | 4,619 | 3,949 | 8,568 | |
| <i>Manufacturing</i> | | 4,937 | 3,541 | 8,478 | |
| <i>Information</i> | | 3,379 | 4,302 | 7,681 | |
| <i>Agriculture</i> | | 561 | 2,009 | 2,570 | |
| <i>Utilities</i> | | 347 | 336 | 683 | |
| <i>Mining</i> | | 146 | 39 | 185 | |
| <i>Other</i> | | 341 | 771 | 1,112 | |
| Total Operational Impact on Employment | 71,983 | 77,688 | 137,118 | 286,789 | 2.9% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$2,708.5 | | | \$2,708.5 | 0.6% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$1,305.5 | \$2,832.7 | \$4,138.3 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$1,376.3 | \$1,188.3 | \$2,564.6 | |
| <i>Wholesale and retail trade</i> | | \$226.5 | \$911.8 | \$1,138.2 | |
| <i>Construction</i> | | \$539.2 | \$73.2 | \$612.4 | |
| <i>Information</i> | | \$275.9 | \$301.9 | \$577.7 | |
| <i>Manufacturing</i> | | \$314.0 | \$220.2 | \$534.2 | |
| <i>Transportation and warehousing</i> | | \$212.7 | \$181.1 | \$393.7 | |
| <i>Agriculture</i> | | \$19.0 | \$63.1 | \$82.0 | |
| <i>Utilities</i> | | \$41.2 | \$38.4 | \$79.6 | |
| <i>Mining</i> | | \$8.3 | \$2.2 | \$10.5 | |
| <i>Other</i> | | \$24.8 | \$53.9 | \$78.7 | |
| Total Operational Impact on Labor Income | \$2,708.5 | \$4,343.3 | \$5,866.8 | \$12,918.6 | 2.8% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$5,269.9 | | | \$5,269.9 | 0.7% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$3,382.8 | \$3,307.2 | \$6,690.0 | |
| <i>Services</i> | | \$1,570.7 | \$3,448.2 | \$5,018.9 | |
| <i>Wholesale and retail trade</i> | | \$386.3 | \$1,480.9 | \$1,867.1 | |
| <i>Information</i> | | \$710.9 | \$879.9 | \$1,590.8 | |
| <i>Manufacturing</i> | | \$482.3 | \$422.7 | \$905.0 | |
| <i>Construction</i> | | \$578.8 | \$93.7 | \$672.5 | |
| <i>Transportation and warehousing</i> | | \$297.4 | \$257.1 | \$554.5 | |
| <i>Utilities</i> | | \$168.2 | \$153.2 | \$321.4 | |
| <i>Agriculture</i> | | \$27.0 | \$92.0 | \$119.0 | |
| <i>Mining</i> | | \$19.0 | \$5.1 | \$24.1 | |
| <i>Other</i> | | \$38.0 | \$82.8 | \$120.8 | |
| Total Operational Impact on Value Added | \$5,269.9 | \$7,661.3 | \$10,222.7 | \$23,154.0 | 3.1% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Georgia, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|-------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 42,638 | | | 42,638 | 0.8% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 11,918 | 31,431 | 43,349 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 8,663 | 11,723 | 20,386 | |
| <i>Wholesale and retail trade</i> | | 1,743 | 11,361 | 13,104 | |
| <i>Manufacturing</i> | | 4,720 | 4,286 | 9,006 | |
| <i>Transportation and warehousing</i> | | 2,426 | 2,108 | 4,534 | |
| <i>Information</i> | | 1,715 | 2,238 | 3,953 | |
| <i>Construction</i> | | 1,499 | 740 | 2,239 | |
| <i>Agriculture</i> | | 326 | 941 | 1,267 | |
| <i>Utilities</i> | | 189 | 259 | 448 | |
| <i>Mining</i> | | 167 | 43 | 210 | |
| <i>Other</i> | | 136 | 359 | 495 | |
| Total Operational Impact on Employment | 42,638 | 33,502 | 65,490 | 141,630 | 2.7% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$1,650.8 | | | \$1,650.8 | 0.6% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$595.2 | \$1,232.0 | \$1,827.2 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$618.4 | \$610.9 | \$1,229.3 | |
| <i>Wholesale and retail trade</i> | | \$119.7 | \$477.2 | \$596.9 | |
| <i>Manufacturing</i> | | \$293.9 | \$269.6 | \$563.4 | |
| <i>Information</i> | | \$196.6 | \$215.5 | \$412.1 | |
| <i>Transportation and warehousing</i> | | \$123.6 | \$107.9 | \$231.5 | |
| <i>Construction</i> | | \$75.7 | \$35.0 | \$110.7 | |
| <i>Agriculture</i> | | \$14.5 | \$45.0 | \$59.5 | |
| <i>Utilities</i> | | \$20.6 | \$28.2 | \$48.8 | |
| <i>Mining</i> | | \$11.6 | \$2.9 | \$14.5 | |
| <i>Other</i> | | \$5.8 | \$14.4 | \$20.2 | |
| Total Operational Impact on Labor Income | \$1,650.8 | \$2,075.5 | \$3,038.7 | \$6,765.0 | 2.5% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$3,718.7 | | | \$3,718.7 | 0.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$1,462.0 | \$1,609.6 | \$3,071.6 | |
| <i>Services</i> | | \$697.4 | \$1,441.9 | \$2,139.3 | |
| <i>Information</i> | | \$491.4 | \$612.4 | \$1,103.8 | |
| <i>Manufacturing</i> | | \$464.3 | \$603.7 | \$1,068.0 | |
| <i>Wholesale and retail trade</i> | | \$206.4 | \$785.9 | \$992.3 | |
| <i>Transportation and warehousing</i> | | \$182.9 | \$162.3 | \$345.1 | |
| <i>Utilities</i> | | \$85.2 | \$114.5 | \$199.7 | |
| <i>Construction</i> | | \$83.2 | \$43.4 | \$126.6 | |
| <i>Agriculture</i> | | \$17.2 | \$57.1 | \$74.3 | |
| <i>Mining</i> | | \$24.0 | \$6.2 | \$30.2 | |
| <i>Other</i> | | \$9.3 | \$23.3 | \$32.7 | |
| Total Operational Impact on Value Added | \$3,718.7 | \$3,723.3 | \$5,460.3 | \$12,902.3 | 3.0% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Hawaii, 2011

| Employment* | | | | | |
|--|----------------|-----------------|----------------|------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 4,730 | | | 4,730 | 0.5% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 2,175 | 5,167 | 7,341 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 1,250 | 1,479 | 2,730 | |
| <i>Wholesale and retail trade</i> | | 372 | 1,574 | 1,946 | |
| <i>Transportation and warehousing</i> | | 1,066 | 870 | 1,936 | |
| <i>Information</i> | | 246 | 283 | 529 | |
| <i>Construction</i> | | 376 | 135 | 511 | |
| <i>Manufacturing</i> | | 142 | 210 | 352 | |
| <i>Agriculture</i> | | 47 | 205 | 252 | |
| <i>Utilities</i> | | 44 | 41 | 85 | |
| <i>Mining</i> | | 12 | 3 | 16 | |
| <i>Other</i> | | 19 | 28 | 46 | |
| Total Operational Impact on Employment | 4,730 | 5,749 | 9,995 | 20,473 | 2.3% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$254.9 | | | \$254.9 | 0.5% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$113.0 | \$225.5 | \$338.5 | |
| <i>Transportation and warehousing</i> | | \$77.3 | \$59.0 | \$136.3 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$67.8 | \$57.5 | \$125.3 | |
| <i>Wholesale and retail trade</i> | | \$17.2 | \$55.7 | \$72.9 | |
| <i>Construction</i> | | \$30.1 | \$9.9 | \$40.0 | |
| <i>Information</i> | | \$16.1 | \$17.2 | \$33.3 | |
| <i>Manufacturing</i> | | \$6.6 | \$8.1 | \$14.8 | |
| <i>Utilities</i> | | \$5.0 | \$4.6 | \$9.6 | |
| <i>Agriculture</i> | | \$1.2 | \$5.0 | \$6.2 | |
| <i>Mining</i> | | \$1.0 | \$0.3 | \$1.3 | |
| <i>Other</i> | | \$1.4 | \$2.0 | \$3.4 | |
| Total Operational Impact on Labor Income | \$254.9 | \$336.8 | \$444.7 | \$1,036.4 | 2.0% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$947.5 | | | \$947.5 | 1.3% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$140.8 | \$281.1 | \$421.9 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$117.3 | \$193.8 | \$311.2 | |
| <i>Transportation and warehousing</i> | | \$82.0 | \$63.4 | \$145.4 | |
| <i>Wholesale and retail trade</i> | | \$29.1 | \$87.7 | \$116.8 | |
| <i>Information</i> | | \$48.8 | \$53.7 | \$102.5 | |
| <i>Construction</i> | | \$32.6 | \$11.9 | \$44.6 | |
| <i>Utilities</i> | | \$20.6 | \$18.4 | \$38.9 | |
| <i>Manufacturing</i> | | \$9.9 | \$13.1 | \$23.0 | |
| <i>Agriculture</i> | | \$1.4 | \$5.8 | \$7.2 | |
| <i>Mining</i> | | \$2.5 | \$0.7 | \$3.2 | |
| <i>Other</i> | | \$2.1 | \$3.1 | \$5.1 | |
| Total Operational Impact on Value Added | \$947.5 | \$487.1 | \$732.6 | \$2,167.2 | 2.9% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Idaho, 2011

| Employment* | | | | | |
|--|----------------|-----------------|----------------|------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 8,989 | | | 8,989 | 1.0% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 2,051 | 5,252 | 7,303 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 1,722 | 1,973 | 3,696 | |
| <i>Wholesale and retail trade</i> | | 316 | 1,871 | 2,187 | |
| <i>Manufacturing</i> | | 723 | 619 | 1,343 | |
| <i>Construction</i> | | 739 | 136 | 875 | |
| <i>Transportation and warehousing</i> | | 461 | 367 | 828 | |
| <i>Agriculture</i> | | 172 | 654 | 826 | |
| <i>Information</i> | | 302 | 337 | 638 | |
| <i>Mining</i> | | 125 | 29 | 153 | |
| <i>Utilities</i> | | 22 | 31 | 54 | |
| <i>Other</i> | | 25 | 56 | 81 | |
| Total Operational Impact on Employment | 8,989 | 6,658 | 11,325 | 26,972 | 3.1% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$299.6 | | | \$299.6 | 0.8% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$88.5 | \$182.7 | \$271.3 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$91.0 | \$66.7 | \$157.7 | |
| <i>Wholesale and retail trade</i> | | \$14.8 | \$61.4 | \$76.1 | |
| <i>Manufacturing</i> | | \$39.8 | \$32.7 | \$72.5 | |
| <i>Agriculture</i> | | \$9.2 | \$32.6 | \$41.8 | |
| <i>Construction</i> | | \$32.1 | \$6.0 | \$38.1 | |
| <i>Transportation and warehousing</i> | | \$18.9 | \$14.9 | \$33.8 | |
| <i>Information</i> | | \$15.1 | \$15.6 | \$30.7 | |
| <i>Mining</i> | | \$8.0 | \$1.8 | \$9.8 | |
| <i>Utilities</i> | | \$2.5 | \$3.2 | \$5.7 | |
| <i>Other</i> | | \$1.2 | \$2.7 | \$3.9 | |
| Total Operational Impact on Labor Income | \$299.6 | \$321.1 | \$420.2 | \$1,041.0 | 2.9% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$532.6 | | | \$532.6 | 0.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$192.2 | \$198.7 | \$390.8 | |
| <i>Services</i> | | \$103.7 | \$214.2 | \$317.9 | |
| <i>Wholesale and retail trade</i> | | \$25.4 | \$103.4 | \$128.8 | |
| <i>Manufacturing</i> | | \$66.3 | \$57.5 | \$123.8 | |
| <i>Information</i> | | \$45.0 | \$49.2 | \$94.1 | |
| <i>Agriculture</i> | | \$10.7 | \$50.4 | \$61.0 | |
| <i>Transportation and warehousing</i> | | \$25.3 | \$19.7 | \$45.0 | |
| <i>Construction</i> | | \$34.9 | \$7.7 | \$42.6 | |
| <i>Mining</i> | | \$25.2 | \$6.3 | \$31.4 | |
| <i>Utilities</i> | | \$10.1 | \$12.5 | \$22.6 | |
| <i>Other</i> | | \$1.9 | \$4.2 | \$6.2 | |
| Total Operational Impact on Value Added | \$532.6 | \$540.6 | \$723.7 | \$1,796.9 | 3.1% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Illinois, 2011

| Employment* | | | | | |
|--|-------------------|------------------|-------------------|-------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 65,175 | | | 65,175 | 0.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 26,023 | 58,505 | 84,527 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 19,129 | 20,604 | 39,733 | |
| <i>Wholesale and retail trade</i> | | 5,898 | 20,397 | 26,295 | |
| <i>Manufacturing</i> | | 11,318 | 6,268 | 17,586 | |
| <i>Construction</i> | | 9,883 | 1,263 | 11,146 | |
| <i>Transportation and warehousing</i> | | 5,289 | 3,917 | 9,206 | |
| <i>Information</i> | | 2,895 | 3,431 | 6,326 | |
| <i>Agriculture</i> | | 374 | 1,635 | 2,009 | |
| <i>Utilities</i> | | 419 | 326 | 745 | |
| <i>Mining</i> | | 295 | 71 | 366 | |
| <i>Other</i> | | <u>243</u> | <u>369</u> | 613 | |
| Total Operational Impact on Employment | 65,175 | 81,766 | 116,786 | 263,727 | 3.6% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$3,895.6 | | | \$3,895.6 | 0.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$1,612.7 | \$2,555.1 | \$4,167.8 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$1,746.1 | \$1,399.0 | \$3,145.1 | |
| <i>Manufacturing</i> | | \$862.8 | \$458.5 | \$1,321.3 | |
| <i>Wholesale and retail trade</i> | | \$382.1 | \$865.5 | \$1,247.6 | |
| <i>Construction</i> | | \$626.6 | \$77.0 | \$703.6 | |
| <i>Information</i> | | \$256.7 | \$279.2 | \$535.9 | |
| <i>Transportation and warehousing</i> | | \$280.6 | \$197.9 | \$478.6 | |
| <i>Utilities</i> | | \$61.9 | \$47.0 | \$108.9 | |
| <i>Agriculture</i> | | \$14.2 | \$59.6 | \$73.8 | |
| <i>Mining</i> | | \$23.8 | \$5.8 | \$29.6 | |
| <i>Other</i> | | <u>\$14.7</u> | <u>\$22.2</u> | \$36.8 | |
| Total Operational Impact on Labor Income | \$3,895.6 | \$5,882.3 | \$5,966.7 | \$15,744.6 | 3.8% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$13,642.1 | | | \$13,642.1 | 2.1% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$3,287.3 | \$3,378.1 | \$6,665.4 | |
| <i>Services</i> | | \$1,864.2 | \$2,968.7 | \$4,832.9 | |
| <i>Manufacturing</i> | | \$1,516.0 | \$797.8 | \$2,313.7 | |
| <i>Wholesale and retail trade</i> | | \$651.0 | \$1,418.1 | \$2,069.1 | |
| <i>Information</i> | | \$759.2 | \$879.1 | \$1,638.3 | |
| <i>Construction</i> | | \$673.3 | \$97.3 | \$770.6 | |
| <i>Transportation and warehousing</i> | | \$385.1 | \$272.8 | \$657.9 | |
| <i>Utilities</i> | | \$253.2 | \$189.6 | \$442.7 | |
| <i>Agriculture</i> | | \$29.0 | \$126.0 | \$155.0 | |
| <i>Mining</i> | | \$50.3 | \$12.6 | \$63.0 | |
| <i>Other</i> | | <u>\$22.8</u> | <u>\$34.4</u> | \$57.3 | |
| Total Operational Impact on Value Added | \$13,642.1 | \$9,491.4 | \$10,174.4 | \$33,307.9 | 5.1% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Indiana, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|-------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 39,628 | | | 39,628 | 1.1% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 12,177 | 27,904 | 40,081 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 7,436 | 7,754 | 15,190 | |
| <i>Manufacturing</i> | | 8,561 | 4,982 | 13,542 | |
| <i>Wholesale and retail trade</i> | | 2,804 | 9,835 | 12,639 | |
| <i>Construction</i> | | 4,354 | 729 | 5,083 | |
| <i>Transportation and warehousing</i> | | 2,927 | 1,841 | 4,768 | |
| <i>Information</i> | | 1,210 | 1,312 | 2,522 | |
| <i>Agriculture</i> | | 312 | 1,372 | 1,684 | |
| <i>Utilities</i> | | 279 | 215 | 495 | |
| <i>Mining</i> | | 244 | 62 | 306 | |
| <i>Other</i> | | <u>183</u> | <u>245</u> | 428 | |
| Total Operational Impact on Employment | 39,628 | 40,487 | 56,251 | 136,366 | 3.8% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$2,168.1 | | | \$2,168.1 | 1.3% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$532.7 | \$1,054.5 | \$1,587.2 | |
| <i>Manufacturing</i> | | \$629.4 | \$331.3 | \$960.7 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$410.8 | \$313.7 | \$724.5 | |
| <i>Wholesale and retail trade</i> | | \$139.0 | \$326.4 | \$465.4 | |
| <i>Construction</i> | | \$242.1 | \$38.7 | \$280.8 | |
| <i>Transportation and warehousing</i> | | \$144.3 | \$89.3 | \$233.6 | |
| <i>Information</i> | | \$68.0 | \$69.5 | \$137.4 | |
| <i>Utilities</i> | | \$32.7 | \$24.3 | \$57.0 | |
| <i>Agriculture</i> | | \$8.5 | \$37.2 | \$45.6 | |
| <i>Mining</i> | | \$18.7 | \$4.8 | \$23.6 | |
| <i>Other</i> | | <u>\$6.5</u> | <u>\$8.7</u> | \$15.1 | |
| Total Operational Impact on Labor Income | \$2,168.1 | \$2,232.6 | \$2,298.3 | \$6,699.1 | 4.1% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$8,910.0 | | | \$8,910.0 | 3.4% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$857.9 | \$1,023.3 | \$1,881.2 | |
| <i>Services</i> | | \$630.5 | \$1,245.3 | \$1,875.8 | |
| <i>Manufacturing</i> | | \$1,116.0 | \$563.0 | \$1,679.0 | |
| <i>Wholesale and retail trade</i> | | \$235.3 | \$529.4 | \$764.7 | |
| <i>Information</i> | | \$211.6 | \$228.2 | \$439.8 | |
| <i>Transportation and warehousing</i> | | \$206.4 | \$129.3 | \$335.7 | |
| <i>Construction</i> | | \$262.3 | \$47.9 | \$310.3 | |
| <i>Utilities</i> | | \$132.8 | \$95.9 | \$228.6 | |
| <i>Agriculture</i> | | \$16.4 | \$77.9 | \$94.3 | |
| <i>Mining</i> | | \$40.9 | \$10.6 | \$51.5 | |
| <i>Other</i> | | <u>\$10.6</u> | <u>\$14.2</u> | \$24.8 | |
| Total Operational Impact on Value Added | \$8,910.0 | \$3,720.7 | \$3,964.9 | \$16,595.7 | 6.3% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Iowa, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 24,542 | | | 24,542 | 1.3% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 4,473 | 11,986 | 16,459 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 3,026 | 3,605 | 6,631 | |
| <i>Wholesale and retail trade</i> | | 745 | 4,234 | 4,979 | |
| <i>Manufacturing</i> | | 2,764 | 2,052 | 4,817 | |
| <i>Agriculture</i> | | 340 | 1,756 | 2,096 | |
| <i>Transportation and warehousing</i> | | 1,131 | 870 | 2,002 | |
| <i>Information</i> | | 714 | 881 | 1,594 | |
| <i>Construction</i> | | 1,242 | 258 | 1,500 | |
| <i>Utilities</i> | | 86 | 87 | 172 | |
| <i>Mining</i> | | 76 | 20 | 96 | |
| <i>Other</i> | | 56 | 114 | 169 | |
| Total Operational Impact on Employment | 24,542 | 14,653 | 25,861 | 65,057 | 3.3% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$768.8 | | | \$768.8 | 0.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$181.1 | \$401.0 | \$582.1 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$164.1 | \$169.0 | \$333.0 | |
| <i>Manufacturing</i> | | \$179.3 | \$120.9 | \$300.2 | |
| <i>Wholesale and retail trade</i> | | \$38.4 | \$142.3 | \$180.7 | |
| <i>Information</i> | | \$52.1 | \$58.8 | \$110.9 | |
| <i>Agriculture</i> | | \$16.7 | \$79.0 | \$95.7 | |
| <i>Transportation and warehousing</i> | | \$48.9 | \$38.7 | \$87.6 | |
| <i>Construction</i> | | \$63.2 | \$12.7 | \$76.0 | |
| <i>Utilities</i> | | \$9.5 | \$9.4 | \$18.9 | |
| <i>Mining</i> | | \$4.0 | \$1.1 | \$5.1 | |
| <i>Other</i> | | \$3.0 | \$6.0 | \$9.0 | |
| Total Operational Impact on Labor Income | \$768.8 | \$760.3 | \$1,038.9 | \$2,568.0 | 3.0% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$1,256.2 | | | \$1,256.2 | 0.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$354.5 | \$476.1 | \$830.7 | |
| <i>Services</i> | | \$212.2 | \$469.6 | \$681.9 | |
| <i>Manufacturing</i> | | \$284.5 | \$192.7 | \$477.2 | |
| <i>Information</i> | | \$157.6 | \$189.2 | \$346.8 | |
| <i>Wholesale and retail trade</i> | | \$65.6 | \$233.2 | \$298.8 | |
| <i>Agriculture</i> | | \$32.4 | \$182.6 | \$215.0 | |
| <i>Transportation and warehousing</i> | | \$69.3 | \$53.7 | \$122.9 | |
| <i>Construction</i> | | \$69.3 | \$15.9 | \$85.2 | |
| <i>Utilities</i> | | \$38.9 | \$37.8 | \$76.7 | |
| <i>Mining</i> | | \$10.5 | \$2.8 | \$13.3 | |
| <i>Other</i> | | \$4.7 | \$9.5 | \$14.2 | |
| Total Operational Impact on Value Added | \$1,256.2 | \$1,299.5 | \$1,863.3 | \$4,419.0 | 3.1% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Kansas, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|-------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 56,941 | | | 56,941 | 3.1% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 13,386 | 21,567 | 34,953 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 11,803 | 6,907 | 18,710 | |
| <i>Wholesale and retail trade</i> | | 3,678 | 8,980 | 12,658 | |
| <i>Construction</i> | | 10,150 | 504 | 10,654 | |
| <i>Manufacturing</i> | | 3,609 | 2,011 | 5,619 | |
| <i>Transportation and warehousing</i> | | 2,112 | 1,110 | 3,222 | |
| <i>Information</i> | | 1,575 | 1,224 | 2,799 | |
| <i>Agriculture</i> | | 277 | 1,318 | 1,595 | |
| <i>Utilities</i> | | 369 | 158 | 528 | |
| <i>Mining</i> | | 59 | 15 | 74 | |
| <i>Other</i> | | 234 | 348 | 583 | |
| Total Operational Impact on Employment | 56,941 | 47,252 | 44,143 | 148,336 | 8.1% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$2,937.2 | | | \$2,937.2 | 3.5% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$674.4 | \$819.5 | \$1,493.9 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$637.6 | \$274.2 | \$911.8 | |
| <i>Construction</i> | | \$511.7 | \$25.4 | \$537.1 | |
| <i>Wholesale and retail trade</i> | | \$181.5 | \$309.0 | \$490.5 | |
| <i>Manufacturing</i> | | \$241.8 | \$108.6 | \$350.4 | |
| <i>Information</i> | | \$98.3 | \$77.0 | \$175.2 | |
| <i>Transportation and warehousing</i> | | \$113.2 | \$53.9 | \$167.2 | |
| <i>Utilities</i> | | \$46.6 | \$19.6 | \$66.2 | |
| <i>Agriculture</i> | | \$12.2 | \$44.9 | \$57.1 | |
| <i>Mining</i> | | \$3.0 | \$0.8 | \$3.7 | |
| <i>Other</i> | | \$8.3 | \$12.4 | \$20.7 | |
| Total Operational Impact on Labor Income | \$2,937.2 | \$2,528.6 | \$1,745.3 | \$7,211.1 | 8.6% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$5,856.0 | | | \$5,856.0 | 4.3% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$1,279.0 | \$855.2 | \$2,134.2 | |
| <i>Services</i> | | \$776.0 | \$947.4 | \$1,723.4 | |
| <i>Wholesale and retail trade</i> | | \$304.5 | \$494.9 | \$799.4 | |
| <i>Information</i> | | \$319.1 | \$261.7 | \$580.7 | |
| <i>Construction</i> | | \$548.3 | \$31.8 | \$580.1 | |
| <i>Manufacturing</i> | | \$404.7 | \$170.5 | \$575.2 | |
| <i>Utilities</i> | | \$190.3 | \$79.5 | \$269.8 | |
| <i>Transportation and warehousing</i> | | \$159.3 | \$76.1 | \$235.4 | |
| <i>Agriculture</i> | | \$18.2 | \$87.2 | \$105.4 | |
| <i>Mining</i> | | \$7.3 | \$1.9 | \$9.2 | |
| <i>Other</i> | | \$13.7 | \$20.3 | \$34.0 | |
| Total Operational Impact on Value Added | \$5,856.0 | \$4,020.3 | \$3,026.5 | \$12,902.8 | 9.5% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Kentucky, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 33,374 | | | 33,374 | 1.4% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 7,784 | 16,490 | 24,274 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 5,382 | 4,745 | 10,127 | |
| <i>Wholesale and retail trade</i> | | 1,610 | 5,820 | 7,431 | |
| <i>Manufacturing</i> | | 3,817 | 2,507 | 6,324 | |
| <i>Construction</i> | | 4,219 | 443 | 4,662 | |
| <i>Transportation and warehousing</i> | | 1,643 | 1,185 | 2,828 | |
| <i>Agriculture</i> | | 349 | 1,744 | 2,093 | |
| <i>Information</i> | | 905 | 950 | 1,855 | |
| <i>Mining</i> | | 892 | 203 | 1,095 | |
| <i>Utilities</i> | | 147 | 102 | 249 | |
| <i>Other</i> | | <u>170</u> | <u>266</u> | 435 | |
| Total Operational Impact on Employment | 33,374 | 26,918 | 34,454 | 94,746 | 4.0% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$1,340.9 | | | \$1,340.9 | 1.3% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$353.7 | \$613.7 | \$967.4 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$286.7 | \$193.0 | \$479.7 | |
| <i>Manufacturing</i> | | \$233.5 | \$133.8 | \$367.4 | |
| <i>Wholesale and retail trade</i> | | \$78.6 | \$199.1 | \$277.7 | |
| <i>Construction</i> | | \$187.0 | \$19.5 | \$206.5 | |
| <i>Transportation and warehousing</i> | | \$83.4 | \$59.4 | \$142.7 | |
| <i>Information</i> | | \$51.9 | \$51.0 | \$102.8 | |
| <i>Mining</i> | | \$70.2 | \$16.6 | \$86.8 | |
| <i>Agriculture</i> | | \$16.2 | \$23.7 | \$39.9 | |
| <i>Utilities</i> | | \$14.9 | \$9.9 | \$24.8 | |
| <i>Other</i> | | <u>\$6.8</u> | <u>\$10.6</u> | \$17.4 | |
| Total Operational Impact on Labor Income | \$1,340.9 | \$1,382.8 | \$1,330.3 | \$4,054.0 | 3.8% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$3,291.4 | | | \$3,291.4 | 1.0% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$544.2 | \$614.3 | \$1,158.5 | |
| <i>Services</i> | | \$409.3 | \$711.9 | \$1,121.2 | |
| <i>Manufacturing</i> | | \$387.8 | \$332.6 | \$720.4 | |
| <i>Wholesale and retail trade</i> | | \$131.9 | \$316.6 | \$448.5 | |
| <i>Information</i> | | \$157.1 | \$164.0 | \$321.1 | |
| <i>Construction</i> | | \$202.1 | \$24.1 | \$226.2 | |
| <i>Transportation and warehousing</i> | | \$123.0 | \$88.9 | \$212.0 | |
| <i>Mining</i> | | \$141.9 | \$34.8 | \$176.6 | |
| <i>Utilities</i> | | \$60.6 | \$39.7 | \$100.3 | |
| <i>Agriculture</i> | | \$19.3 | \$44.1 | \$63.3 | |
| <i>Other</i> | | <u>\$11.1</u> | <u>\$17.2</u> | \$28.3 | |
| Total Operational Impact on Value Added | \$3,291.4 | \$2,188.2 | \$2,388.2 | \$7,867.8 | 4.6% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Louisiana, 2011

| Employment* | | | | | |
|--|-------------------|-------------------|------------------|-------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 130,316 | | | 130,316 | 5.1% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 48,518 | 69,383 | 117,901 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 34,602 | 19,943 | 54,544 | |
| <i>Wholesale and retail trade</i> | | 11,962 | 27,552 | 39,514 | |
| <i>Construction</i> | | 35,200 | 1,972 | 37,172 | |
| <i>Transportation and warehousing</i> | | 7,705 | 3,198 | 10,903 | |
| <i>Manufacturing</i> | | 6,321 | 2,742 | 9,063 | |
| <i>Information</i> | | 4,185 | 2,962 | 7,147 | |
| <i>Agriculture</i> | | 773 | 1,784 | 2,557 | |
| <i>Utilities</i> | | 1,100 | 503 | 1,603 | |
| <i>Mining</i> | | 83 | 17 | 100 | |
| <i>Other</i> | | 830 | 980 | 1,828 | |
| Total Operational Impact on Employment | 130,316 | 151,288 | 131,045 | 412,649 | 16.2% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$10,912.4 | | | \$10,912.4 | 8.7% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$2,182.5 | \$2,719.7 | \$4,902.2 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$2,002.5 | \$772.2 | \$2,774.7 | |
| <i>Construction</i> | | \$1,957.0 | \$106.0 | \$2,063.0 | |
| <i>Wholesale and retail trade</i> | | \$571.4 | \$939.5 | \$1,510.9 | |
| <i>Manufacturing</i> | | \$527.1 | \$175.1 | \$702.2 | |
| <i>Transportation and warehousing</i> | | \$420.1 | \$159.0 | \$579.1 | |
| <i>Information</i> | | \$240.8 | \$168.7 | \$409.5 | |
| <i>Utilities</i> | | \$132.4 | \$55.1 | \$187.5 | |
| <i>Agriculture</i> | | \$21.2 | \$38.4 | \$59.5 | |
| <i>Mining</i> | | \$6.4 | \$1.3 | \$7.7 | |
| <i>Other</i> | | \$47.9 | \$56.6 | \$104.5 | |
| Total Operational Impact on Labor Income | \$10,912.4 | \$8,109.3 | \$5,191.7 | \$24,213.4 | 19.4% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$52,267.4 | | | \$52,267.4 | 25.1% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$4,143.7 | \$2,738.0 | \$6,881.7 | |
| <i>Services</i> | | \$2,583.4 | \$3,197.2 | \$5,780.7 | |
| <i>Wholesale and retail trade</i> | | \$946.6 | \$1,462.9 | \$2,409.5 | |
| <i>Construction</i> | | \$2,069.9 | \$129.8 | \$2,199.7 | |
| <i>Manufacturing</i> | | \$1,014.3 | \$326.2 | \$1,340.4 | |
| <i>Information</i> | | \$727.9 | \$535.4 | \$1,263.2 | |
| <i>Transportation and warehousing</i> | | \$553.9 | \$215.8 | \$769.7 | |
| <i>Utilities</i> | | \$533.5 | \$214.8 | \$748.3 | |
| <i>Agriculture</i> | | \$26.6 | \$58.6 | \$85.2 | |
| <i>Mining</i> | | \$13.5 | \$2.9 | \$16.4 | |
| <i>Other</i> | | \$74.8 | \$88.4 | \$163.1 | |
| Total Operational Impact on Value Added | \$52,267.4 | \$12,688.0 | \$8,970.0 | \$73,925.4 | 35.5% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Maine, 2011

| Employment* | | | | | |
|--|------------------|-----------------|----------------|------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 12,370 | | | 12,370 | 1.6% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 1,722 | 5,709 | 7,432 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 1,305 | 1,525 | 2,830 | |
| <i>Wholesale and retail trade</i> | | 234 | 1,859 | 2,093 | |
| <i>Manufacturing</i> | | 784 | 608 | 1,392 | |
| <i>Transportation and warehousing</i> | | 552 | 363 | 915 | |
| <i>Construction</i> | | 481 | 183 | 664 | |
| <i>Information</i> | | 233 | 286 | 519 | |
| <i>Agriculture</i> | | 134 | 296 | 430 | |
| <i>Utilities</i> | | 26 | 27 | 52 | |
| <i>Mining</i> | | 16 | 4 | 20 | |
| <i>Other</i> | | 16 | 39 | 55 | |
| Total Operational Impact on Employment | 12,370 | 5,503 | 10,900 | 28,772 | 3.6% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$386.0 | | | \$386.0 | 1.1% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$76.8 | \$216.2 | \$292.9 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$95.5 | \$89.9 | \$185.4 | |
| <i>Manufacturing</i> | | \$54.0 | \$39.6 | \$93.6 | |
| <i>Wholesale and retail trade</i> | | \$11.6 | \$61.6 | \$73.2 | |
| <i>Transportation and warehousing</i> | | \$22.5 | \$14.6 | \$37.1 | |
| <i>Information</i> | | \$15.0 | \$16.7 | \$31.7 | |
| <i>Construction</i> | | \$19.5 | \$7.2 | \$26.7 | |
| <i>Agriculture</i> | | \$4.2 | \$7.2 | \$11.4 | |
| <i>Utilities</i> | | \$2.8 | \$2.9 | \$5.7 | |
| <i>Mining</i> | | \$3.0 | \$0.8 | \$3.8 | |
| <i>Other</i> | | \$0.8 | \$1.9 | \$2.8 | |
| Total Operational Impact on Labor Income | \$386.0 | \$305.6 | \$458.6 | \$1,150.2 | 3.2% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$1,081.5 | | | \$1,081.5 | 1.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$188.9 | \$246.5 | \$435.4 | |
| <i>Services</i> | | \$91.2 | \$252.6 | \$343.7 | |
| <i>Manufacturing</i> | | \$90.0 | \$72.7 | \$162.7 | |
| <i>Wholesale and retail trade</i> | | \$20.4 | \$103.2 | \$123.6 | |
| <i>Information</i> | | \$42.6 | \$52.3 | \$94.9 | |
| <i>Transportation and warehousing</i> | | \$29.4 | \$18.9 | \$48.3 | |
| <i>Construction</i> | | \$21.4 | \$9.0 | \$30.4 | |
| <i>Utilities</i> | | \$11.4 | \$11.4 | \$22.8 | |
| <i>Agriculture</i> | | \$4.2 | \$9.4 | \$13.5 | |
| <i>Mining</i> | | \$7.2 | \$2.0 | \$9.2 | |
| <i>Other</i> | | \$1.3 | \$3.1 | \$4.4 | |
| Total Operational Impact on Value Added | \$1,081.5 | \$508.0 | \$781.0 | \$2,370.5 | 4.2% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Maryland, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 17,923 | | | 17,923 | 0.5% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 6,000 | 20,482 | 26,482 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 6,194 | 8,268 | 14,462 | |
| <i>Wholesale and retail trade</i> | | 787 | 5,931 | 6,717 | |
| <i>Manufacturing</i> | | 1,528 | 1,203 | 2,731 | |
| <i>Transportation and warehousing</i> | | 1,216 | 1,185 | 2,401 | |
| <i>Information</i> | | 813 | 1,157 | 1,971 | |
| <i>Construction</i> | | 1,089 | 697 | 1,786 | |
| <i>Agriculture</i> | | 75 | 308 | 383 | |
| <i>Utilities</i> | | 94 | 126 | 220 | |
| <i>Mining</i> | | 76 | 14 | 90 | |
| <i>Other</i> | | 74 | 177 | 251 | |
| Total Operational Impact on Employment | 17,923 | 17,946 | 39,549 | 75,418 | 2.2% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$804.0 | | | \$804.0 | 0.4% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$394.4 | \$979.7 | \$1,374.1 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$523.5 | \$505.3 | \$1,028.8 | |
| <i>Wholesale and retail trade</i> | | \$51.1 | \$237.8 | \$288.9 | |
| <i>Manufacturing</i> | | \$118.6 | \$90.5 | \$209.2 | |
| <i>Information</i> | | \$85.0 | \$95.3 | \$180.3 | |
| <i>Construction</i> | | \$82.7 | \$46.3 | \$129.0 | |
| <i>Transportation and warehousing</i> | | \$58.9 | \$53.4 | \$112.3 | |
| <i>Utilities</i> | | \$14.8 | \$20.0 | \$34.8 | |
| <i>Agriculture</i> | | \$1.3 | \$5.6 | \$6.9 | |
| <i>Mining</i> | | \$5.1 | \$0.9 | \$6.0 | |
| <i>Other</i> | | \$4.8 | \$10.9 | \$15.7 | |
| Total Operational Impact on Labor Income | \$804.0 | \$1,340.3 | \$2,045.6 | \$4,190.0 | 1.9% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$1,632.2 | | | \$1,632.2 | 0.5% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$871.1 | \$1,238.2 | \$2,109.2 | |
| <i>Services</i> | | \$453.1 | \$1,133.0 | \$1,586.2 | |
| <i>Wholesale and retail trade</i> | | \$87.7 | \$378.5 | \$466.1 | |
| <i>Information</i> | | \$199.8 | \$258.9 | \$458.7 | |
| <i>Manufacturing</i> | | \$183.7 | \$146.4 | \$330.1 | |
| <i>Transportation and warehousing</i> | | \$84.1 | \$77.1 | \$161.2 | |
| <i>Construction</i> | | \$91.0 | \$57.0 | \$148.0 | |
| <i>Utilities</i> | | \$60.7 | \$80.7 | \$141.4 | |
| <i>Agriculture</i> | | \$2.9 | \$14.2 | \$17.1 | |
| <i>Mining</i> | | \$8.5 | \$1.6 | \$10.1 | |
| <i>Other</i> | | \$7.5 | \$16.9 | \$24.4 | |
| Total Operational Impact on Value Added | \$1,632.2 | \$2,050.0 | \$3,402.5 | \$7,084.8 | 2.2% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Massachusetts, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|----------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 26,724 | | | 26,724 | 0.6% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 7,929 | 29,441 | 37,369 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 7,677 | 10,663 | 18,340 | |
| <i>Wholesale and retail trade</i> | | 996 | 8,345 | 9,342 | |
| <i>Manufacturing</i> | | 3,497 | 2,381 | 5,878 | |
| <i>Transportation and warehousing</i> | | 1,574 | 1,796 | 3,370 | |
| <i>Information</i> | | 1,278 | 1,706 | 2,984 | |
| <i>Construction</i> | | 885 | 658 | 1,543 | |
| <i>Agriculture</i> | | 58 | 243 | 301 | |
| <i>Utilities</i> | | 66 | 108 | 174 | |
| <i>Mining</i> | | 40 | 10 | 50 | |
| <i>Other</i> | | <u>51</u> | <u>145</u> | <u>196</u> | |
| Total Operational Impact on Employment | 26,724 | 24,051 | 55,497 | 106,272 | 2.5% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$1,697.0 | | | \$1,697.0 | 0.6% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$574.8 | \$1,461.7 | \$2,036.5 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$877.2 | \$926.1 | \$1,803.2 | |
| <i>Manufacturing</i> | | \$289.1 | \$197.2 | \$486.3 | |
| <i>Wholesale and retail trade</i> | | \$77.0 | \$359.0 | \$436.0 | |
| <i>Information</i> | | \$129.0 | \$159.1 | \$288.1 | |
| <i>Transportation and warehousing</i> | | \$101.1 | \$114.7 | \$215.8 | |
| <i>Construction</i> | | \$63.2 | \$41.0 | \$104.2 | |
| <i>Utilities</i> | | \$10.4 | \$16.8 | \$27.2 | |
| <i>Agriculture</i> | | \$1.7 | \$8.0 | \$9.7 | |
| <i>Mining</i> | | \$2.1 | \$0.6 | \$2.7 | |
| <i>Other</i> | | <u>\$3.0</u> | <u>\$8.1</u> | <u>\$11.2</u> | |
| Total Operational Impact on Labor Income | \$1,697.0 | \$2,128.6 | \$3,292.4 | \$7,117.9 | 2.6% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$3,818.0 | | | \$3,818.0 | 0.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$1,510.9 | \$1,971.9 | \$3,482.8 | |
| <i>Services</i> | | \$673.7 | \$1,694.2 | \$2,368.0 | |
| <i>Information</i> | | \$376.2 | \$486.9 | \$863.1 | |
| <i>Manufacturing</i> | | \$446.1 | \$328.0 | \$774.1 | |
| <i>Wholesale and retail trade</i> | | \$133.4 | \$594.2 | \$727.7 | |
| <i>Transportation and warehousing</i> | | \$155.3 | \$185.3 | \$340.6 | |
| <i>Construction</i> | | \$70.0 | \$50.9 | \$120.9 | |
| <i>Utilities</i> | | \$42.4 | \$66.9 | \$109.3 | |
| <i>Agriculture</i> | | \$1.8 | \$9.4 | \$11.2 | |
| <i>Mining</i> | | \$4.5 | \$1.2 | \$5.7 | |
| <i>Other</i> | | <u>\$4.7</u> | <u>\$12.7</u> | <u>\$17.5</u> | |
| Total Operational Impact on Value Added | \$3,818.0 | \$3,419.3 | \$5,401.6 | \$12,638.9 | 2.9% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Michigan, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|-------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 53,044 | | | 53,044 | 1.0% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 15,334 | 39,248 | 54,582 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 12,556 | 12,936 | 25,491 | |
| <i>Wholesale and retail trade</i> | | 2,465 | 12,850 | 15,314 | |
| <i>Manufacturing</i> | | 9,275 | 5,497 | 14,773 | |
| <i>Construction</i> | | 7,239 | 888 | 8,126 | |
| <i>Transportation and warehousing</i> | | 2,286 | 1,804 | 4,090 | |
| <i>Information</i> | | 1,646 | 1,960 | 3,606 | |
| <i>Agriculture</i> | | 356 | 1,326 | 1,682 | |
| <i>Utilities</i> | | 299 | 271 | 570 | |
| <i>Mining</i> | | 143 | 39 | 182 | |
| <i>Other</i> | | 186 | 394 | 579 | |
| Total Operational Impact on Employment | 53,044 | 51,785 | 77,211 | 182,040 | 3.6% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$2,385.9 | | | \$2,385.9 | 1.0% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$838.5 | \$1,506.5 | \$2,345.0 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$804.1 | \$564.9 | \$1,369.0 | |
| <i>Manufacturing</i> | | \$661.5 | \$435.1 | \$1,096.5 | |
| <i>Wholesale and retail trade</i> | | \$131.8 | \$466.6 | \$598.4 | |
| <i>Construction</i> | | \$357.0 | \$42.9 | \$399.9 | |
| <i>Information</i> | | \$113.3 | \$124.8 | \$238.1 | |
| <i>Transportation and warehousing</i> | | \$114.1 | \$88.5 | \$202.6 | |
| <i>Utilities</i> | | \$42.0 | \$37.7 | \$79.7 | |
| <i>Agriculture</i> | | \$10.1 | \$35.0 | \$45.1 | |
| <i>Mining</i> | | \$11.9 | \$3.2 | \$15.1 | |
| <i>Other</i> | | \$10.6 | \$21.9 | \$32.5 | |
| Total Operational Impact on Labor Income | \$2,385.9 | \$3,094.9 | \$3,327.1 | \$8,807.8 | 3.5% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$4,924.2 | | | \$4,924.2 | 1.3% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$1,845.8 | \$1,602.1 | \$3,448.0 | |
| <i>Services</i> | | \$978.9 | \$1,764.5 | \$2,743.3 | |
| <i>Manufacturing</i> | | \$1,009.0 | \$685.2 | \$1,694.2 | |
| <i>Wholesale and retail trade</i> | | \$221.5 | \$746.7 | \$968.2 | |
| <i>Information</i> | | \$347.5 | \$400.3 | \$747.9 | |
| <i>Construction</i> | | \$387.7 | \$54.6 | \$442.3 | |
| <i>Utilities</i> | | \$171.5 | \$153.0 | \$324.5 | |
| <i>Transportation and warehousing</i> | | \$161.4 | \$126.4 | \$287.8 | |
| <i>Agriculture</i> | | \$14.0 | \$63.1 | \$77.1 | |
| <i>Mining</i> | | \$41.6 | \$11.3 | \$52.9 | |
| <i>Other</i> | | \$16.6 | \$34.2 | \$50.8 | |
| Total Operational Impact on Value Added | \$4,924.2 | \$5,195.6 | \$5,641.4 | \$15,761.3 | 4.1% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Minnesota, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|-------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 36,341 | | | 36,341 | 1.1% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 11,708 | 26,360 | 38,068 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 7,267 | 8,750 | 16,017 | |
| <i>Wholesale and retail trade</i> | | 2,335 | 8,703 | 11,039 | |
| <i>Manufacturing</i> | | 4,875 | 3,209 | 8,084 | |
| <i>Transportation and warehousing</i> | | 2,058 | 1,508 | 3,566 | |
| <i>Construction</i> | | 2,482 | 650 | 3,132 | |
| <i>Information</i> | | 1,247 | 1,527 | 2,774 | |
| <i>Agriculture</i> | | 382 | 1,716 | 2,098 | |
| <i>Utilities</i> | | 200 | 170 | 370 | |
| <i>Mining</i> | | 210 | 55 | 266 | |
| <i>Other</i> | | 164 | 225 | 389 | |
| Total Operational Impact on Employment | 36,341 | 32,929 | 52,875 | 122,146 | 3.5% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$1,415.6 | | | \$1,415.6 | 0.8% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$710.0 | \$1,062.0 | \$1,772.0 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$530.2 | \$491.8 | \$1,022.0 | |
| <i>Manufacturing</i> | | \$357.3 | \$223.2 | \$580.6 | |
| <i>Wholesale and retail trade</i> | | \$155.3 | \$342.5 | \$497.8 | |
| <i>Information</i> | | \$93.6 | \$105.9 | \$199.4 | |
| <i>Construction</i> | | \$140.8 | \$34.8 | \$175.6 | |
| <i>Transportation and warehousing</i> | | \$98.3 | \$70.6 | \$168.9 | |
| <i>Agriculture</i> | | \$17.6 | \$76.1 | \$93.8 | |
| <i>Utilities</i> | | \$24.9 | \$21.0 | \$45.9 | |
| <i>Mining</i> | | \$19.2 | \$5.1 | \$24.3 | |
| <i>Other</i> | | \$9.4 | \$12.9 | \$22.2 | |
| Total Operational Impact on Labor Income | \$1,415.6 | \$2,156.6 | \$2,445.9 | \$6,018.2 | 3.4% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$6,328.7 | | | \$6,328.7 | 2.2% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$1,303.1 | \$1,346.4 | \$2,649.4 | |
| <i>Services</i> | | \$831.0 | \$1,230.4 | \$2,061.4 | |
| <i>Manufacturing</i> | | \$547.4 | \$354.8 | \$902.2 | |
| <i>Wholesale and retail trade</i> | | \$266.4 | \$571.0 | \$837.4 | |
| <i>Information</i> | | \$279.4 | \$334.3 | \$613.7 | |
| <i>Transportation and warehousing</i> | | \$146.0 | \$108.4 | \$254.4 | |
| <i>Construction</i> | | \$152.3 | \$41.1 | \$193.4 | |
| <i>Utilities</i> | | \$102.0 | \$85.3 | \$187.2 | |
| <i>Agriculture</i> | | \$24.0 | \$122.5 | \$146.6 | |
| <i>Mining</i> | | \$76.3 | \$20.4 | \$96.7 | |
| <i>Other</i> | | \$14.6 | \$20.1 | \$34.7 | |
| Total Operational Impact on Value Added | \$6,328.7 | \$3,742.4 | \$4,234.5 | \$14,305.7 | 5.0% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Mississippi, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 37,681 | | | 37,681 | 2.5% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 9,156 | 15,298 | 24,454 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 5,880 | 4,076 | 9,956 | |
| <i>Wholesale and retail trade</i> | | 2,264 | 5,806 | 8,070 | |
| <i>Construction</i> | | 5,925 | 448 | 6,372 | |
| <i>Manufacturing</i> | | 2,411 | 1,787 | 4,198 | |
| <i>Transportation and warehousing</i> | | 2,044 | 892 | 2,937 | |
| <i>Information</i> | | 908 | 751 | 1,659 | |
| <i>Agriculture</i> | | 373 | 1,144 | 1,518 | |
| <i>Utilities</i> | | 283 | 162 | 445 | |
| <i>Mining</i> | | 47 | 11 | 58 | |
| <i>Other</i> | | <u>208</u> | <u>213</u> | 420 | |
| Total Operational Impact on Employment | 37,681 | 29,499 | 30,589 | 97,768 | 6.6% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$2,110.7 | | | \$2,110.7 | 3.4% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$377.1 | \$538.7 | \$915.8 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$266.3 | \$129.5 | \$395.8 | |
| <i>Wholesale and retail trade</i> | | \$98.0 | \$184.6 | \$282.6 | |
| <i>Construction</i> | | \$258.6 | \$20.1 | \$278.7 | |
| <i>Manufacturing</i> | | \$131.5 | \$89.2 | \$220.8 | |
| <i>Transportation and warehousing</i> | | \$88.3 | \$37.4 | \$125.7 | |
| <i>Information</i> | | \$51.7 | \$40.4 | \$92.1 | |
| <i>Agriculture</i> | | \$10.8 | \$34.2 | \$45.0 | |
| <i>Utilities</i> | | \$28.2 | \$14.5 | \$42.7 | |
| <i>Mining</i> | | \$2.3 | \$0.5 | \$2.8 | |
| <i>Other</i> | | <u>\$6.6</u> | <u>\$6.8</u> | \$13.4 | |
| Total Operational Impact on Labor Income | \$2,110.7 | \$1,319.3 | \$1,096.1 | \$4,526.1 | 7.4% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$5,123.2 | | | \$5,123.2 | 5.3% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$453.4 | \$638.2 | \$1,091.6 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$513.4 | \$505.5 | \$1,018.9 | |
| <i>Wholesale and retail trade</i> | | \$163.2 | \$289.2 | \$452.4 | |
| <i>Manufacturing</i> | | \$212.6 | \$138.2 | \$350.8 | |
| <i>Construction</i> | | \$276.7 | \$24.1 | \$300.8 | |
| <i>Information</i> | | \$159.3 | \$134.5 | \$293.8 | |
| <i>Transportation and warehousing</i> | | \$121.5 | \$51.3 | \$172.7 | |
| <i>Utilities</i> | | \$114.1 | \$56.8 | \$170.9 | |
| <i>Agriculture</i> | | \$11.7 | \$41.2 | \$52.9 | |
| <i>Mining</i> | | \$4.1 | \$0.9 | \$5.0 | |
| <i>Other</i> | | <u>\$11.0</u> | <u>\$11.4</u> | \$22.4 | |
| Total Operational Impact on Value Added | \$5,123.2 | \$2,040.9 | \$1,891.3 | \$9,055.3 | 9.4% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Missouri, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 38,179 | | | 38,179 | 1.1% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 9,655 | 25,326 | 34,981 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 6,992 | 8,422 | 15,414 | |
| <i>Wholesale and retail trade</i> | | 1,389 | 8,517 | 9,907 | |
| <i>Manufacturing</i> | | 4,080 | 2,762 | 6,842 | |
| <i>Transportation and warehousing</i> | | 1,969 | 1,619 | 3,588 | |
| <i>Construction</i> | | 2,860 | 603 | 3,463 | |
| <i>Information</i> | | 1,400 | 1,677 | 3,077 | |
| <i>Agriculture</i> | | 417 | 2,038 | 2,455 | |
| <i>Utilities</i> | | 134 | 157 | 291 | |
| <i>Mining</i> | | 176 | 44 | 220 | |
| <i>Other</i> | | <u>122</u> | <u>291</u> | 413 | |
| Total Operational Impact on Employment | 38,179 | 29,195 | 51,455 | 118,828 | 3.4% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$1,521.8 | | | \$1,521.8 | 0.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$551.3 | \$1,017.5 | \$1,568.8 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$458.1 | \$399.6 | \$857.7 | |
| <i>Manufacturing</i> | | \$257.2 | \$167.9 | \$425.1 | |
| <i>Wholesale and retail trade</i> | | \$77.6 | \$313.6 | \$391.2 | |
| <i>Information</i> | | \$143.7 | \$143.2 | \$286.9 | |
| <i>Construction</i> | | \$152.8 | \$31.6 | \$184.4 | |
| <i>Transportation and warehousing</i> | | \$99.3 | \$80.2 | \$179.6 | |
| <i>Agriculture</i> | | \$7.1 | \$31.5 | \$38.6 | |
| <i>Utilities</i> | | \$15.9 | \$18.1 | \$34.0 | |
| <i>Mining</i> | | \$15.2 | \$4.0 | \$19.2 | |
| <i>Other</i> | | <u>\$6.1</u> | <u>\$13.9</u> | \$20.0 | |
| Total Operational Impact on Labor Income | \$1,521.8 | \$1,784.3 | \$2,221.1 | \$5,527.1 | 3.3% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$3,065.1 | | | \$3,065.1 | 1.2% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$942.3 | \$1,087.6 | \$2,029.9 | |
| <i>Services</i> | | \$642.2 | \$1,189.7 | \$1,832.0 | |
| <i>Manufacturing</i> | | \$424.5 | \$322.4 | \$746.9 | |
| <i>Information</i> | | \$332.4 | \$387.6 | \$720.0 | |
| <i>Wholesale and retail trade</i> | | \$133.5 | \$519.4 | \$652.9 | |
| <i>Transportation and warehousing</i> | | \$140.7 | \$113.3 | \$254.0 | |
| <i>Construction</i> | | \$164.9 | \$38.5 | \$203.3 | |
| <i>Utilities</i> | | \$65.1 | \$71.9 | \$137.0 | |
| <i>Agriculture</i> | | \$12.2 | \$62.3 | \$74.5 | |
| <i>Mining</i> | | \$50.1 | \$13.5 | \$63.6 | |
| <i>Other</i> | | <u>\$9.6</u> | <u>\$22.1</u> | \$31.7 | |
| Total Operational Impact on Value Added | \$3,065.1 | \$2,917.6 | \$3,828.3 | \$9,810.9 | 3.8% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Montana, 2011

| Employment* | | | | | |
|--|------------------|------------------|----------------|------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 15,505 | | | 15,505 | 2.4% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 4,220 | 6,910 | 11,130 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 3,735 | 2,312 | 6,047 | |
| <i>Wholesale and retail trade</i> | | 996 | 2,424 | 3,421 | |
| <i>Construction</i> | | 2,524 | 189 | 2,713 | |
| <i>Transportation and warehousing</i> | | 763 | 334 | 1,097 | |
| <i>Information</i> | | 492 | 375 | 867 | |
| <i>Manufacturing</i> | | 535 | 300 | 834 | |
| <i>Agriculture</i> | | 193 | 605 | 798 | |
| <i>Mining</i> | | 242 | 53 | 295 | |
| <i>Utilities</i> | | 141 | 66 | 207 | |
| <i>Other</i> | | 96 | 83 | 179 | |
| Total Operational Impact on Employment | 15,505 | 13,937 | 13,651 | 43,093 | 6.7% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$923.9 | | | \$923.9 | 3.6% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$168.5 | \$243.4 | \$411.9 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$153.2 | \$65.3 | \$218.5 | |
| <i>Construction</i> | | \$111.3 | \$8.5 | \$119.8 | |
| <i>Wholesale and retail trade</i> | | \$42.2 | \$76.0 | \$118.2 | |
| <i>Transportation and warehousing</i> | | \$42.9 | \$16.7 | \$59.5 | |
| <i>Information</i> | | \$26.4 | \$19.5 | \$45.9 | |
| <i>Manufacturing</i> | | \$26.9 | \$12.9 | \$39.8 | |
| <i>Mining</i> | | \$20.3 | \$4.5 | \$24.8 | |
| <i>Utilities</i> | | \$17.2 | \$7.4 | \$24.6 | |
| <i>Agriculture</i> | | \$4.6 | \$13.2 | \$17.8 | |
| <i>Other</i> | | \$2.4 | \$2.1 | \$4.5 | |
| Total Operational Impact on Labor Income | \$923.9 | \$615.9 | \$469.5 | \$2,009.3 | 7.7% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$2,693.6 | | | \$2,693.6 | 6.4% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$297.7 | \$239.2 | \$536.8 | |
| <i>Services</i> | | \$200.0 | \$291.3 | \$491.3 | |
| <i>Wholesale and retail trade</i> | | \$70.6 | \$120.0 | \$190.6 | |
| <i>Information</i> | | \$81.9 | \$64.5 | \$146.4 | |
| <i>Construction</i> | | \$117.7 | \$10.2 | \$127.9 | |
| <i>Utilities</i> | | \$69.1 | \$29.3 | \$98.4 | |
| <i>Mining</i> | | \$68.3 | \$15.7 | \$84.1 | |
| <i>Transportation and warehousing</i> | | \$57.0 | \$22.4 | \$79.3 | |
| <i>Manufacturing</i> | | \$41.9 | \$19.8 | \$61.7 | |
| <i>Agriculture</i> | | \$6.6 | \$22.1 | \$28.6 | |
| <i>Other</i> | | \$4.2 | \$3.7 | \$7.8 | |
| Total Operational Impact on Value Added | \$2,693.6 | \$1,015.0 | \$838.1 | \$4,546.7 | 10.8% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Nebraska, 2011

| Employment* | | | | | |
|--|------------------|-----------------|------------------|------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 14,280 | | | 14,280 | 1.2% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 3,383 | 10,586 | 13,969 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 2,614 | 3,494 | 6,108 | |
| <i>Wholesale and retail trade</i> | | 515 | 4,047 | 4,562 | |
| <i>Manufacturing</i> | | 1,161 | 1,283 | 2,444 | |
| <i>Transportation and warehousing</i> | | 869 | 787 | 1,656 | |
| <i>Construction</i> | | 1,287 | 269 | 1,556 | |
| <i>Agriculture</i> | | 202 | 1,012 | 1,214 | |
| <i>Information</i> | | 538 | 629 | 1,167 | |
| <i>Mining</i> | | 33 | 9 | 42 | |
| <i>Utilities</i> | | 6 | 9 | 15 | |
| <i>Other</i> | | 43 | 127 | 169 | |
| Total Operational Impact on Employment | 14,280 | 10,651 | 22,252 | 47,184 | 3.8% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$1,210.9 | | | \$1,210.9 | 2.1% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$163.5 | \$383.9 | \$547.4 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$148.4 | \$151.9 | \$300.3 | |
| <i>Wholesale and retail trade</i> | | \$25.0 | \$131.6 | \$156.6 | |
| <i>Manufacturing</i> | | \$65.8 | \$69.5 | \$135.4 | |
| <i>Construction</i> | | \$72.1 | \$14.9 | \$87.0 | |
| <i>Transportation and warehousing</i> | | \$46.5 | \$40.4 | \$86.9 | |
| <i>Information</i> | | \$37.0 | \$40.4 | \$77.3 | |
| <i>Agriculture</i> | | \$13.4 | \$57.7 | \$71.1 | |
| <i>Utilities</i> | | \$1.4 | \$1.8 | \$3.2 | |
| <i>Mining</i> | | \$2.1 | \$0.6 | \$2.7 | |
| <i>Other</i> | | \$2.3 | \$6.4 | \$8.6 | |
| Total Operational Impact on Labor Income | \$1,210.9 | \$577.4 | \$899.2 | \$2,687.4 | 4.7% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$2,264.1 | | | \$2,264.1 | 2.6% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$334.7 | \$425.7 | \$760.4 | |
| <i>Services</i> | | \$189.5 | \$443.6 | \$633.1 | |
| <i>Wholesale and retail trade</i> | | \$42.7 | \$214.9 | \$257.6 | |
| <i>Information</i> | | \$103.0 | \$120.4 | \$223.4 | |
| <i>Manufacturing</i> | | \$100.7 | \$97.8 | \$198.5 | |
| <i>Agriculture</i> | | \$21.5 | \$108.4 | \$129.9 | |
| <i>Transportation and warehousing</i> | | \$69.5 | \$58.2 | \$127.8 | |
| <i>Construction</i> | | \$77.2 | \$18.1 | \$95.3 | |
| <i>Utilities</i> | | \$5.2 | \$6.6 | \$11.9 | |
| <i>Mining</i> | | \$5.2 | \$1.4 | \$6.6 | |
| <i>Other</i> | | \$3.5 | \$10.1 | \$13.6 | |
| Total Operational Impact on Value Added | \$2,264.1 | \$952.8 | \$1,505.4 | \$4,722.2 | 5.4% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Nevada, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 14,534 | | | 14,534 | 1.0% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 4,414 | 11,300 | 15,714 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 3,412 | 4,370 | 7,782 | |
| <i>Wholesale and retail trade</i> | | 540 | 3,475 | 4,015 | |
| <i>Transportation and warehousing</i> | | 954 | 861 | 1,814 | |
| <i>Construction</i> | | 1,431 | 189 | 1,620 | |
| <i>Manufacturing</i> | | 743 | 469 | 1,213 | |
| <i>Information</i> | | 422 | 496 | 918 | |
| <i>Mining</i> | | 616 | 132 | 747 | |
| <i>Agriculture</i> | | 18 | 90 | 108 | |
| <i>Utilities</i> | | 50 | 49 | 98 | |
| <i>Other</i> | | 16 | 41 | 57 | |
| Total Operational Impact on Employment | 14,534 | 12,614 | 21,471 | 48,620 | 3.2% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$705.8 | | | \$705.8 | 0.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$253.9 | \$513.1 | \$767.1 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$184.9 | \$141.8 | \$326.7 | |
| <i>Wholesale and retail trade</i> | | \$29.2 | \$138.2 | \$167.5 | |
| <i>Transportation and warehousing</i> | | \$61.2 | \$55.0 | \$116.2 | |
| <i>Construction</i> | | \$95.7 | \$12.2 | \$107.8 | |
| <i>Information</i> | | \$38.2 | \$39.1 | \$77.3 | |
| <i>Manufacturing</i> | | \$45.9 | \$28.8 | \$74.8 | |
| <i>Mining</i> | | \$56.2 | \$12.6 | \$68.8 | |
| <i>Utilities</i> | | \$6.3 | \$6.1 | \$12.3 | |
| <i>Agriculture</i> | | \$1.1 | \$3.9 | \$4.9 | |
| <i>Other</i> | | \$1.0 | \$2.4 | \$3.3 | |
| Total Operational Impact on Labor Income | \$705.8 | \$773.6 | \$953.3 | \$2,432.7 | 3.2% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$1,538.3 | | | \$1,538.3 | 1.3% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$324.2 | \$666.8 | \$991.0 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$390.5 | \$430.5 | \$821.0 | |
| <i>Wholesale and retail trade</i> | | \$49.8 | \$230.5 | \$280.4 | |
| <i>Mining</i> | | \$194.7 | \$49.0 | \$243.7 | |
| <i>Information</i> | | \$109.6 | \$119.6 | \$229.2 | |
| <i>Transportation and warehousing</i> | | \$73.5 | \$66.6 | \$140.1 | |
| <i>Construction</i> | | \$102.3 | \$14.9 | \$117.2 | |
| <i>Manufacturing</i> | | \$70.5 | \$44.0 | \$114.5 | |
| <i>Utilities</i> | | \$25.8 | \$24.6 | \$50.4 | |
| <i>Agriculture</i> | | \$1.6 | \$7.3 | \$8.9 | |
| <i>Other</i> | | \$1.5 | \$3.7 | \$5.2 | |
| Total Operational Impact on Value Added | \$1,538.3 | \$1,344.2 | \$1,657.4 | \$4,539.9 | 3.8% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in New Hampshire, 2011

| Employment* | | | | | |
|--|----------------|-----------------|----------------|------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 8,711 | | | 8,711 | 1.0% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 1,573 | 5,479 | 7,052 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 1,316 | 1,880 | 3,196 | |
| <i>Wholesale and retail trade</i> | | 226 | 2,046 | 2,272 | |
| <i>Manufacturing</i> | | 1,142 | 587 | 1,729 | |
| <i>Transportation and warehousing</i> | | 350 | 317 | 668 | |
| <i>Construction</i> | | 323 | 160 | 483 | |
| <i>Information</i> | | 184 | 258 | 442 | |
| <i>Agriculture</i> | | 47 | 109 | 156 | |
| <i>Utilities</i> | | 25 | 34 | 59 | |
| <i>Mining</i> | | 18 | 4 | 22 | |
| <i>Other</i> | | 20 | 57 | 77 | |
| Total Operational Impact on Employment | 8,711 | 5,224 | 10,931 | 24,866 | 3.0% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$392.1 | | | \$392.1 | 0.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$86.3 | \$236.4 | \$322.7 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$93.6 | \$104.3 | \$197.9 | |
| <i>Manufacturing</i> | | \$74.2 | \$40.0 | \$114.2 | |
| <i>Wholesale and retail trade</i> | | \$15.1 | \$83.1 | \$98.3 | |
| <i>Transportation and warehousing</i> | | \$18.6 | \$16.8 | \$35.4 | |
| <i>Information</i> | | \$15.0 | \$17.8 | \$32.9 | |
| <i>Construction</i> | | \$16.7 | \$8.2 | \$24.9 | |
| <i>Agriculture</i> | | \$3.9 | \$14.3 | \$18.2 | |
| <i>Utilities</i> | | \$3.5 | \$4.7 | \$8.2 | |
| <i>Mining</i> | | \$2.8 | \$0.7 | \$3.5 | |
| <i>Other</i> | | \$1.2 | \$3.3 | \$4.5 | |
| Total Operational Impact on Labor Income | \$392.1 | \$330.9 | \$529.7 | \$1,252.7 | 2.8% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$849.7 | | | \$849.7 | 1.2% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$171.0 | \$276.6 | \$447.6 | |
| <i>Services</i> | | \$99.4 | \$272.6 | \$372.0 | |
| <i>Manufacturing</i> | | \$112.5 | \$64.7 | \$177.2 | |
| <i>Wholesale and retail trade</i> | | \$26.7 | \$140.7 | \$167.4 | |
| <i>Information</i> | | \$39.0 | \$52.0 | \$91.0 | |
| <i>Transportation and warehousing</i> | | \$26.2 | \$24.7 | \$51.0 | |
| <i>Utilities</i> | | \$14.1 | \$18.9 | \$33.0 | |
| <i>Construction</i> | | \$18.4 | \$10.1 | \$28.5 | |
| <i>Agriculture</i> | | \$3.9 | \$15.6 | \$19.5 | |
| <i>Mining</i> | | \$5.1 | \$1.4 | \$6.5 | |
| <i>Other</i> | | \$1.9 | \$5.1 | \$7.0 | |
| Total Operational Impact on Value Added | \$849.7 | \$518.2 | \$882.4 | \$2,250.3 | 3.3% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in New Jersey, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|-------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 34,479 | | | 34,479 | 0.7% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 13,229 | 34,520 | 47,749 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 11,073 | 14,829 | 25,902 | |
| <i>Wholesale and retail trade</i> | | 2,634 | 12,047 | 14,681 | |
| <i>Manufacturing</i> | | 4,507 | 3,037 | 7,545 | |
| <i>Transportation and warehousing</i> | | 2,811 | 2,488 | 5,299 | |
| <i>Information</i> | | 1,568 | 2,074 | 3,643 | |
| <i>Construction</i> | | 2,564 | 801 | 3,365 | |
| <i>Agriculture</i> | | 73 | 309 | 382 | |
| <i>Utilities</i> | | 136 | 146 | 282 | |
| <i>Mining</i> | | 49 | 12 | 61 | |
| <i>Other</i> | | 184 | 352 | 536 | |
| Total Operational Impact on Employment | 34,479 | 38,830 | 70,615 | 143,924 | 2.9% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$2,869.1 | | | \$2,869.1 | 0.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$997.8 | \$1,690.1 | \$2,688.0 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$1,021.7 | \$966.7 | \$1,988.4 | |
| <i>Wholesale and retail trade</i> | | \$205.4 | \$618.0 | \$823.4 | |
| <i>Manufacturing</i> | | \$449.2 | \$289.5 | \$738.7 | |
| <i>Information</i> | | \$182.5 | \$206.0 | \$388.5 | |
| <i>Transportation and warehousing</i> | | \$151.5 | \$130.1 | \$281.5 | |
| <i>Construction</i> | | \$185.1 | \$56.5 | \$241.6 | |
| <i>Utilities</i> | | \$24.1 | \$25.0 | \$49.1 | |
| <i>Agriculture</i> | | \$2.0 | \$8.1 | \$10.2 | |
| <i>Mining</i> | | \$3.5 | \$0.9 | \$4.4 | |
| <i>Other</i> | | \$14.3 | \$26.6 | \$40.9 | |
| Total Operational Impact on Labor Income | \$2,869.1 | \$3,237.1 | \$4,017.5 | \$10,123.7 | 3.3% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$7,639.3 | | | \$7,639.3 | 1.5% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$1,984.3 | \$2,293.3 | \$4,277.6 | |
| <i>Services</i> | | \$1,174.1 | \$1,986.0 | \$3,160.1 | |
| <i>Manufacturing</i> | | \$825.2 | \$562.5 | \$1,387.7 | |
| <i>Wholesale and retail trade</i> | | \$354.0 | \$1,029.1 | \$1,383.1 | |
| <i>Information</i> | | \$482.1 | \$599.3 | \$1,081.4 | |
| <i>Transportation and warehousing</i> | | \$210.5 | \$183.9 | \$394.4 | |
| <i>Construction</i> | | \$201.4 | \$71.2 | \$272.7 | |
| <i>Utilities</i> | | \$96.2 | \$94.4 | \$190.6 | |
| <i>Agriculture</i> | | \$3.2 | \$13.1 | \$16.3 | |
| <i>Mining</i> | | \$8.0 | \$2.0 | \$10.0 | |
| <i>Other</i> | | \$21.8 | \$40.7 | \$62.4 | |
| Total Operational Impact on Value Added | \$7,639.3 | \$5,360.9 | \$6,875.4 | \$19,875.5 | 4.0% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in New Mexico, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|-------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 39,208 | | | 39,208 | 3.7% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 10,320 | 17,297 | 27,617 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 10,252 | 5,222 | 15,474 | |
| <i>Wholesale and retail trade</i> | | 1,882 | 6,280 | 8,163 | |
| <i>Construction</i> | | 7,254 | 432 | 7,687 | |
| <i>Transportation and warehousing</i> | | 1,406 | 735 | 2,141 | |
| <i>Information</i> | | 1,130 | 853 | 1,983 | |
| <i>Manufacturing</i> | | 984 | 665 | 1,649 | |
| <i>Agriculture</i> | | 112 | 515 | 627 | |
| <i>Utilities</i> | | 233 | 137 | 370 | |
| <i>Mining</i> | | 272 | 57 | 329 | |
| <i>Other</i> | | 125 | 207 | 332 | |
| Total Operational Impact on Employment | 39,208 | 33,970 | 32,400 | 105,579 | 9.9% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$2,322.3 | | | \$2,322.3 | 4.5% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$491.3 | \$638.2 | \$1,129.5 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$592.3 | \$206.2 | \$798.5 | |
| <i>Construction</i> | | \$351.1 | \$20.5 | \$371.6 | |
| <i>Wholesale and retail trade</i> | | \$75.5 | \$204.1 | \$279.6 | |
| <i>Transportation and warehousing</i> | | \$84.2 | \$39.8 | \$123.9 | |
| <i>Information</i> | | \$58.9 | \$43.5 | \$102.4 | |
| <i>Manufacturing</i> | | \$59.3 | \$35.8 | \$95.1 | |
| <i>Agriculture</i> | | \$13.4 | \$33.2 | \$46.7 | |
| <i>Utilities</i> | | \$25.1 | \$13.4 | \$38.6 | |
| <i>Mining</i> | | \$23.2 | \$4.9 | \$28.1 | |
| <i>Other</i> | | \$5.3 | \$8.7 | \$14.0 | |
| Total Operational Impact on Labor Income | \$2,322.3 | \$1,779.7 | \$1,248.2 | \$5,350.1 | 10.3% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$6,554.3 | | | \$6,554.3 | 8.2% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$872.6 | \$666.2 | \$1,538.8 | |
| <i>Services</i> | | \$583.0 | \$765.7 | \$1,348.8 | |
| <i>Wholesale and retail trade</i> | | \$125.8 | \$327.2 | \$453.0 | |
| <i>Construction</i> | | \$373.4 | \$25.6 | \$399.1 | |
| <i>Information</i> | | \$186.7 | \$138.5 | \$325.3 | |
| <i>Manufacturing</i> | | \$110.2 | \$71.7 | \$181.9 | |
| <i>Transportation and warehousing</i> | | \$109.8 | \$51.1 | \$160.9 | |
| <i>Utilities</i> | | \$101.9 | \$52.4 | \$154.3 | |
| <i>Mining</i> | | \$72.0 | \$15.5 | \$87.5 | |
| <i>Agriculture</i> | | \$9.8 | \$37.5 | \$47.3 | |
| <i>Other</i> | | \$8.5 | \$14.0 | \$22.6 | |
| Total Operational Impact on Value Added | \$6,554.3 | \$2,553.8 | \$2,165.5 | \$11,273.6 | 14.2% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in New York, 2011

| Employment* | | | | | |
|--|------------------|-------------------|-------------------|-----------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 63,184 | | | 63,184 | 0.6% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 20,967 | 73,862 | 94,829 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 20,344 | 29,230 | 49,574 | |
| <i>Wholesale and retail trade</i> | | 3,041 | 20,824 | 23,866 | |
| <i>Manufacturing</i> | | 6,994 | 4,967 | 11,962 | |
| <i>Transportation and warehousing</i> | | 3,878 | 4,771 | 8,648 | |
| <i>Information</i> | | 3,707 | 4,911 | 8,618 | |
| <i>Construction</i> | | 4,896 | 1,731 | 6,627 | |
| <i>Agriculture</i> | | 217 | 943 | 1,160 | |
| <i>Utilities</i> | | 314 | 421 | 735 | |
| <i>Mining</i> | | 174 | 48 | 222 | |
| <i>Other</i> | | <u>317</u> | <u>847</u> | <u>1,164</u> | |
| Total Operational Impact on Employment | 63,184 | 64,848 | 142,555 | 270,587 | 2.4% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$4,000.5 | | | \$4,000.5 | 0.5% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$3,097.7 | \$3,439.0 | \$6,536.7 | |
| <i>Services</i> | | \$1,633.3 | \$3,611.5 | \$5,244.8 | |
| <i>Information</i> | | \$705.6 | \$720.6 | \$1,426.1 | |
| <i>Wholesale and retail trade</i> | | \$215.3 | \$972.4 | \$1,187.6 | |
| <i>Manufacturing</i> | | \$507.3 | \$360.0 | \$867.3 | |
| <i>Construction</i> | | \$352.1 | \$113.8 | \$465.9 | |
| <i>Transportation and warehousing</i> | | \$208.6 | \$241.2 | \$449.7 | |
| <i>Utilities</i> | | \$44.4 | \$60.0 | \$104.5 | |
| <i>Agriculture</i> | | \$7.3 | \$29.5 | \$36.8 | |
| <i>Mining</i> | | \$8.6 | \$2.3 | \$10.9 | |
| <i>Other</i> | | <u>\$25.2</u> | <u>\$63.3</u> | <u>\$88.5</u> | |
| Total Operational Impact on Labor Income | \$4,000.5 | \$6,805.3 | \$9,613.7 | \$20,419.4 | 2.7% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$8,271.1 | | | \$8,271.1 | 0.7% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$5,783.7 | \$6,634.5 | \$12,418.2 | |
| <i>Services</i> | | \$1,904.3 | \$4,268.4 | \$6,172.7 | |
| <i>Information</i> | | \$1,334.9 | \$1,600.7 | \$2,935.7 | |
| <i>Wholesale and retail trade</i> | | \$372.3 | \$1,614.4 | \$1,986.8 | |
| <i>Manufacturing</i> | | \$828.8 | \$786.7 | \$1,615.6 | |
| <i>Transportation and warehousing</i> | | \$293.9 | \$341.4 | \$635.3 | |
| <i>Construction</i> | | \$380.7 | \$140.9 | \$521.6 | |
| <i>Utilities</i> | | \$183.0 | \$243.4 | \$426.4 | |
| <i>Agriculture</i> | | \$7.6 | \$44.5 | \$52.1 | |
| <i>Mining</i> | | \$20.6 | \$5.7 | \$26.3 | |
| <i>Other</i> | | <u>\$38.3</u> | <u>\$96.7</u> | <u>\$135.1</u> | |
| Total Operational Impact on Value Added | \$8,271.1 | \$11,148.2 | \$15,777.5 | \$35,196.8 | 3.0% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in North Carolina, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|-------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 44,671 | | | 44,671 | 0.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 12,210 | 32,571 | 44,781 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 7,980 | 10,428 | 18,408 | |
| <i>Wholesale and retail trade</i> | | 1,802 | 10,795 | 12,597 | |
| <i>Manufacturing</i> | | 6,140 | 5,099 | 11,239 | |
| <i>Construction</i> | | 3,376 | 848 | 4,224 | |
| <i>Transportation and warehousing</i> | | 2,187 | 1,729 | 3,917 | |
| <i>Information</i> | | 1,587 | 2,128 | 3,715 | |
| <i>Agriculture</i> | | 306 | 1,274 | 1,580 | |
| <i>Utilities</i> | | 135 | 154 | 289 | |
| <i>Mining</i> | | 127 | 33 | 160 | |
| <i>Other</i> | | 170 | 394 | 564 | |
| Total Operational Impact on Employment | 44,671 | 36,021 | 65,454 | 146,146 | 2.8% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$1,831.1 | | | \$1,831.1 | 0.7% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$654.0 | \$1,236.7 | \$1,890.7 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$500.0 | \$462.2 | \$962.2 | |
| <i>Manufacturing</i> | | \$420.3 | \$321.8 | \$742.1 | |
| <i>Wholesale and retail trade</i> | | \$99.8 | \$393.5 | \$493.4 | |
| <i>Information</i> | | \$149.8 | \$185.6 | \$335.4 | |
| <i>Construction</i> | | \$154.0 | \$37.7 | \$191.7 | |
| <i>Transportation and warehousing</i> | | \$98.4 | \$80.8 | \$179.2 | |
| <i>Agriculture</i> | | \$14.1 | \$57.4 | \$71.5 | |
| <i>Utilities</i> | | \$16.1 | \$17.9 | \$34.0 | |
| <i>Mining</i> | | \$6.5 | \$1.7 | \$8.2 | |
| <i>Other</i> | | \$7.5 | \$16.7 | \$24.2 | |
| Total Operational Impact on Labor Income | \$1,831.1 | \$2,120.4 | \$2,812.1 | \$6,763.6 | 2.6% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$3,847.8 | | | \$3,847.8 | 0.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$938.1 | \$1,326.7 | \$2,264.9 | |
| <i>Services</i> | | \$764.6 | \$1,445.5 | \$2,210.1 | |
| <i>Manufacturing</i> | | \$710.0 | \$785.3 | \$1,495.3 | |
| <i>Information</i> | | \$479.6 | \$612.0 | \$1,091.6 | |
| <i>Wholesale and retail trade</i> | | \$170.2 | \$634.2 | \$804.4 | |
| <i>Transportation and warehousing</i> | | \$140.9 | \$117.5 | \$258.4 | |
| <i>Construction</i> | | \$167.7 | \$47.3 | \$215.0 | |
| <i>Utilities</i> | | \$66.0 | \$71.7 | \$137.7 | |
| <i>Agriculture</i> | | \$14.3 | \$76.2 | \$90.5 | |
| <i>Mining</i> | | \$19.4 | \$5.1 | \$24.5 | |
| <i>Other</i> | | \$12.0 | \$26.9 | \$39.0 | |
| Total Operational Impact on Value Added | \$3,847.8 | \$3,483.0 | \$5,148.5 | \$12,479.2 | 3.0% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in North Dakota, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 27,937 | | | 27,937 | 5.2% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 6,130 | 9,995 | 16,126 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 4,398 | 2,487 | 6,885 | |
| <i>Wholesale and retail trade</i> | | 1,000 | 4,012 | 5,012 | |
| <i>Construction</i> | | 2,445 | 230 | 2,675 | |
| <i>Transportation and warehousing</i> | | 994 | 410 | 1,404 | |
| <i>Manufacturing</i> | | 968 | 358 | 1,326 | |
| <i>Information</i> | | 807 | 496 | 1,304 | |
| <i>Agriculture</i> | | 205 | 658 | 863 | |
| <i>Mining</i> | | 172 | 26 | 199 | |
| <i>Utilities</i> | | 102 | 86 | 188 | |
| <i>Other</i> | | 24 | 64 | 88 | |
| Total Operational Impact on Employment | 27,937 | 17,246 | 18,822 | 64,006 | 12.0% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$2,155.3 | | | \$2,155.3 | 7.4% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$282.8 | \$367.5 | \$650.4 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$223.5 | \$81.9 | \$305.3 | |
| <i>Wholesale and retail trade</i> | | \$48.8 | \$128.3 | \$177.2 | |
| <i>Construction</i> | | \$144.8 | \$12.9 | \$157.7 | |
| <i>Transportation and warehousing</i> | | \$78.4 | \$32.5 | \$110.9 | |
| <i>Manufacturing</i> | | \$72.5 | \$26.7 | \$99.2 | |
| <i>Information</i> | | \$47.8 | \$27.3 | \$75.0 | |
| <i>Agriculture</i> | | \$14.4 | \$43.2 | \$57.6 | |
| <i>Utilities</i> | | \$11.5 | \$9.6 | \$21.2 | |
| <i>Mining</i> | | \$16.1 | \$2.4 | \$18.5 | |
| <i>Other</i> | | \$0.9 | \$2.2 | \$3.1 | |
| Total Operational Impact on Labor Income | \$2,155.3 | \$941.5 | \$734.6 | \$3,831.4 | 13.1% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$3,944.4 | | | \$3,944.4 | 7.4% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$329.4 | \$426.9 | \$756.4 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$377.5 | \$320.3 | \$697.7 | |
| <i>Wholesale and retail trade</i> | | \$82.6 | \$207.3 | \$289.9 | |
| <i>Information</i> | | \$135.5 | \$87.0 | \$222.5 | |
| <i>Construction</i> | | \$156.2 | \$16.6 | \$172.8 | |
| <i>Manufacturing</i> | | \$121.0 | \$40.8 | \$161.8 | |
| <i>Transportation and warehousing</i> | | \$105.1 | \$42.7 | \$147.9 | |
| <i>Utilities</i> | | \$46.9 | \$38.9 | \$85.7 | |
| <i>Agriculture</i> | | \$14.7 | \$45.2 | \$59.9 | |
| <i>Mining</i> | | \$26.7 | \$4.3 | \$31.0 | |
| <i>Other</i> | | \$1.4 | \$3.7 | \$5.1 | |
| Total Operational Impact on Value Added | \$3,944.4 | \$1,397.0 | \$1,233.6 | \$6,575.1 | 12.3% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Ohio, 2011

| Employment* | | | | | |
|--|-------------------|------------------|------------------|-------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 77,025 | | | 77,025 | 1.2% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 23,328 | 53,792 | 77,120 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 16,592 | 15,897 | 32,489 | |
| <i>Manufacturing</i> | | 13,612 | 6,785 | 20,397 | |
| <i>Wholesale and retail trade</i> | | 3,048 | 16,983 | 20,031 | |
| <i>Construction</i> | | 10,152 | 1,227 | 11,379 | |
| <i>Transportation and warehousing</i> | | 4,448 | 2,974 | 7,422 | |
| <i>Information</i> | | 2,370 | 2,526 | 4,896 | |
| <i>Agriculture</i> | | 401 | 1,682 | 2,083 | |
| <i>Utilities</i> | | 354 | 273 | 627 | |
| <i>Mining</i> | | 308 | 66 | 374 | |
| <i>Other</i> | | 457 | 799 | 1,256 | |
| Total Operational Impact on Employment | 77,025 | 75,070 | 103,004 | 255,098 | 3.9% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$3,875.9 | | | \$3,875.9 | 1.2% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$1,306.4 | \$2,089.8 | \$3,396.2 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$1,028.3 | \$764.1 | \$1,792.3 | |
| <i>Manufacturing</i> | | \$1,010.7 | \$486.8 | \$1,497.5 | |
| <i>Wholesale and retail trade</i> | | \$139.1 | \$583.1 | \$722.1 | |
| <i>Construction</i> | | \$516.5 | \$61.9 | \$578.3 | |
| <i>Transportation and warehousing</i> | | \$222.6 | \$145.6 | \$368.3 | |
| <i>Information</i> | | \$154.5 | \$154.8 | \$309.3 | |
| <i>Utilities</i> | | \$44.4 | \$33.5 | \$77.9 | |
| <i>Agriculture</i> | | \$8.8 | \$35.7 | \$44.5 | |
| <i>Mining</i> | | \$21.7 | \$4.6 | \$26.3 | |
| <i>Other</i> | | \$20.5 | \$35.2 | \$55.7 | |
| Total Operational Impact on Labor Income | \$3,875.9 | \$4,473.4 | \$4,395.1 | \$12,744.4 | 4.1% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$13,859.4 | | | \$13,859.4 | 2.8% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$2,067.6 | \$2,301.2 | \$4,368.9 | |
| <i>Services</i> | | \$1,517.6 | \$2,425.0 | \$3,942.6 | |
| <i>Manufacturing</i> | | \$1,615.3 | \$800.7 | \$2,416.0 | |
| <i>Wholesale and retail trade</i> | | \$233.0 | \$956.6 | \$1,189.7 | |
| <i>Information</i> | | \$472.4 | \$498.7 | \$971.1 | |
| <i>Construction</i> | | \$559.6 | \$78.4 | \$638.0 | |
| <i>Transportation and warehousing</i> | | \$311.0 | \$205.3 | \$516.3 | |
| <i>Utilities</i> | | \$180.7 | \$134.7 | \$315.4 | |
| <i>Agriculture</i> | | \$15.0 | \$70.4 | \$85.5 | |
| <i>Mining</i> | | \$43.0 | \$9.8 | \$52.8 | |
| <i>Other</i> | | \$32.7 | \$56.4 | \$89.2 | |
| Total Operational Impact on Value Added | \$13,859.4 | \$7,047.9 | \$7,537.3 | \$28,444.7 | 5.7% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Oklahoma, 2011

| Employment* | | | | | |
|--|-------------------|------------------|------------------|-------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 149,258 | | | 149,258 | 6.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 30,824 | 57,507 | 88,331 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 28,729 | 16,723 | 45,452 | |
| <i>Wholesale and retail trade</i> | | 6,566 | 23,382 | 29,948 | |
| <i>Construction</i> | | 22,242 | 1,283 | 23,525 | |
| <i>Manufacturing</i> | | 4,994 | 3,392 | 8,387 | |
| <i>Information</i> | | 3,689 | 2,758 | 6,446 | |
| <i>Transportation and warehousing</i> | | 3,894 | 2,187 | 6,081 | |
| <i>Agriculture</i> | | 628 | 3,513 | 4,141 | |
| <i>Utilities</i> | | 790 | 439 | 1,229 | |
| <i>Mining</i> | | 125 | 28 | 154 | |
| <i>Other</i> | | 347 | 1,008 | 1,355 | |
| Total Operational Impact on Employment | 149,258 | 102,830 | 112,221 | 364,308 | 16.8% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$13,870.3 | | | \$13,870.3 | 13.6% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$1,606.4 | \$2,203.8 | \$3,810.2 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$1,361.9 | \$578.8 | \$1,940.8 | |
| <i>Wholesale and retail trade</i> | | \$304.9 | \$839.8 | \$1,144.8 | |
| <i>Construction</i> | | \$928.3 | \$54.6 | \$983.0 | |
| <i>Manufacturing</i> | | \$329.4 | \$178.3 | \$507.7 | |
| <i>Information</i> | | \$258.7 | \$169.4 | \$428.2 | |
| <i>Transportation and warehousing</i> | | \$215.1 | \$114.1 | \$329.1 | |
| <i>Utilities</i> | | \$90.3 | \$48.6 | \$138.9 | |
| <i>Agriculture</i> | | \$23.5 | \$54.6 | \$78.1 | |
| <i>Mining</i> | | \$6.1 | \$1.4 | \$7.4 | |
| <i>Other</i> | | \$15.4 | \$44.0 | \$59.4 | |
| Total Operational Impact on Labor Income | \$13,870.3 | \$5,140.1 | \$4,287.4 | \$23,297.9 | 22.9% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$23,158.0 | | | \$23,158.0 | 13.7% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$2,949.3 | \$2,254.8 | \$5,204.2 | |
| <i>Services</i> | | \$1,868.0 | \$2,577.3 | \$4,445.3 | |
| <i>Wholesale and retail trade</i> | | \$507.8 | \$1,348.1 | \$1,855.9 | |
| <i>Information</i> | | \$711.4 | \$529.6 | \$1,241.0 | |
| <i>Construction</i> | | \$987.4 | \$70.6 | \$1,058.0 | |
| <i>Manufacturing</i> | | \$549.7 | \$274.6 | \$824.3 | |
| <i>Utilities</i> | | \$363.1 | \$192.2 | \$555.3 | |
| <i>Transportation and warehousing</i> | | \$280.0 | \$147.5 | \$427.5 | |
| <i>Agriculture</i> | | \$27.8 | \$92.1 | \$119.9 | |
| <i>Mining</i> | | \$14.1 | \$3.3 | \$17.5 | |
| <i>Other</i> | | \$24.6 | \$70.4 | \$95.1 | |
| Total Operational Impact on Value Added | \$23,158.0 | \$8,283.3 | \$7,560.6 | \$39,001.9 | 23.1% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Oregon, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 16,791 | | | 16,791 | 0.8% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 4,811 | 14,347 | 19,157 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 3,738 | 4,842 | 8,579 | |
| <i>Wholesale and retail trade</i> | | 693 | 4,714 | 5,407 | |
| <i>Manufacturing</i> | | 2,457 | 1,729 | 4,186 | |
| <i>Transportation and warehousing</i> | | 961 | 895 | 1,855 | |
| <i>Agriculture</i> | | 436 | 1,307 | 1,743 | |
| <i>Information</i> | | 613 | 773 | 1,386 | |
| <i>Construction</i> | | 688 | 262 | 950 | |
| <i>Mining</i> | | 88 | 23 | 111 | |
| <i>Utilities</i> | | 37 | 50 | 86 | |
| <i>Other</i> | | 53 | 137 | 190 | |
| Total Operational Impact on Employment | 16,791 | 14,574 | 29,077 | 60,442 | 2.8% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$783.1 | | | \$783.1 | 0.8% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$249.6 | \$552.6 | \$802.3 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$211.7 | \$196.2 | \$407.9 | |
| <i>Manufacturing</i> | | \$161.9 | \$106.0 | \$267.9 | |
| <i>Wholesale and retail trade</i> | | \$44.5 | \$184.7 | \$229.2 | |
| <i>Information</i> | | \$44.2 | \$50.5 | \$94.6 | |
| <i>Transportation and warehousing</i> | | \$48.2 | \$45.7 | \$93.9 | |
| <i>Construction</i> | | \$40.8 | \$14.6 | \$55.4 | |
| <i>Agriculture</i> | | \$14.7 | \$29.9 | \$44.7 | |
| <i>Utilities</i> | | \$5.1 | \$6.8 | \$11.9 | |
| <i>Mining</i> | | \$3.7 | \$0.9 | \$4.7 | |
| <i>Other</i> | | \$4.5 | \$11.0 | \$15.5 | |
| Total Operational Impact on Labor Income | \$783.1 | \$829.0 | \$1,199.0 | \$2,811.2 | 2.8% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$1,538.2 | | | \$1,538.2 | 0.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$473.6 | \$584.5 | \$1,058.1 | |
| <i>Services</i> | | \$297.2 | \$669.7 | \$966.9 | |
| <i>Manufacturing</i> | | \$261.7 | \$197.8 | \$459.5 | |
| <i>Wholesale and retail trade</i> | | \$76.8 | \$304.5 | \$381.3 | |
| <i>Information</i> | | \$120.9 | \$147.3 | \$268.1 | |
| <i>Transportation and warehousing</i> | | \$72.1 | \$70.2 | \$142.3 | |
| <i>Agriculture</i> | | \$18.8 | \$48.1 | \$67.0 | |
| <i>Construction</i> | | \$45.0 | \$18.8 | \$63.8 | |
| <i>Utilities</i> | | \$20.8 | \$27.1 | \$47.9 | |
| <i>Mining</i> | | \$8.2 | \$2.2 | \$10.4 | |
| <i>Other</i> | | \$6.8 | \$16.7 | \$23.5 | |
| Total Operational Impact on Value Added | \$1,538.2 | \$1,401.9 | \$2,086.9 | \$5,027.0 | 3.0% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Pennsylvania, 2011

| Employment* | | | | | |
|--|-------------------|-------------------|-------------------|-------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 100,716 | | | 100,716 | 1.4% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 30,833 | 73,247 | 104,080 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 24,170 | 22,131 | 46,300 | |
| <i>Wholesale and retail trade</i> | | 5,768 | 25,498 | 31,266 | |
| <i>Manufacturing</i> | | 13,858 | 7,311 | 21,169 | |
| <i>Construction</i> | | 11,158 | 1,805 | 12,963 | |
| <i>Transportation and warehousing</i> | | 6,374 | 4,629 | 11,003 | |
| <i>Information</i> | | 3,076 | 3,434 | 6,510 | |
| <i>Agriculture</i> | | 455 | 1,798 | 2,253 | |
| <i>Mining</i> | | 752 | 181 | 934 | |
| <i>Utilities</i> | | 445 | 407 | 852 | |
| <i>Other</i> | | 330 | 610 | 940 | |
| Total Operational Impact on Employment | 100,716 | 97,219 | 141,051 | 338,986 | 4.7% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$6,518.2 | | | \$6,518.2 | 1.7% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$1,853.5 | \$3,191.6 | \$5,045.0 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$1,792.9 | \$1,241.3 | \$3,034.2 | |
| <i>Manufacturing</i> | | \$951.3 | \$485.4 | \$1,436.7 | |
| <i>Wholesale and retail trade</i> | | \$338.4 | \$956.3 | \$1,294.7 | |
| <i>Construction</i> | | \$667.2 | \$106.9 | \$774.0 | |
| <i>Information</i> | | \$333.0 | \$294.3 | \$627.2 | |
| <i>Transportation and warehousing</i> | | \$324.9 | \$218.7 | \$543.5 | |
| <i>Utilities</i> | | \$66.2 | \$58.4 | \$124.6 | |
| <i>Mining</i> | | \$49.0 | \$11.8 | \$60.8 | |
| <i>Agriculture</i> | | \$10.2 | \$35.3 | \$45.4 | |
| <i>Other</i> | | \$16.3 | \$29.7 | \$46.0 | |
| Total Operational Impact on Labor Income | \$6,518.2 | \$6,402.7 | \$6,629.6 | \$19,550.5 | 5.1% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$13,168.9 | | | \$13,168.9 | 2.2% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$3,511.1 | \$3,428.7 | \$6,939.7 | |
| <i>Services</i> | | \$2,147.8 | \$3,723.6 | \$5,871.4 | |
| <i>Manufacturing</i> | | \$1,681.6 | \$882.1 | \$2,563.6 | |
| <i>Wholesale and retail trade</i> | | \$577.6 | \$1,577.5 | \$2,155.1 | |
| <i>Information</i> | | \$773.0 | \$813.3 | \$1,586.3 | |
| <i>Construction</i> | | \$719.9 | \$132.9 | \$852.7 | |
| <i>Transportation and warehousing</i> | | \$443.0 | \$300.0 | \$743.0 | |
| <i>Utilities</i> | | \$268.1 | \$229.6 | \$497.7 | |
| <i>Mining</i> | | \$105.7 | \$26.3 | \$132.0 | |
| <i>Agriculture</i> | | \$12.3 | \$59.0 | \$71.2 | |
| <i>Other</i> | | \$25.7 | \$47.0 | \$72.8 | |
| Total Operational Impact on Value Added | \$13,168.9 | \$10,265.6 | \$11,219.9 | \$34,654.3 | 5.8% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Rhode Island, 2011

| Employment* | | | | | |
|--|----------------|-----------------|----------------|------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 4,120 | | | 4,120 | 0.7% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 1,094 | 4,302 | 5,396 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 851 | 1,324 | 2,175 | |
| <i>Wholesale and retail trade</i> | | 121 | 1,056 | 1,177 | |
| <i>Manufacturing</i> | | 612 | 416 | 1,028 | |
| <i>Information</i> | | 202 | 282 | 484 | |
| <i>Transportation and warehousing</i> | | 191 | 204 | 395 | |
| <i>Construction</i> | | 135 | 81 | 217 | |
| <i>Agriculture</i> | | 8 | 33 | 41 | |
| <i>Utilities</i> | | 6 | 10 | 17 | |
| <i>Mining</i> | | 7 | 2 | 9 | |
| <i>Other</i> | | 5 | 15 | 21 | |
| Total Operational Impact on Employment | 4,120 | 3,232 | 7,726 | 15,077 | 2.5% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$288.1 | | | \$288.1 | 0.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$90.9 | \$222.4 | \$313.3 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$66.4 | \$72.5 | \$138.9 | |
| <i>Manufacturing</i> | | \$38.6 | \$24.7 | \$63.3 | |
| <i>Wholesale and retail trade</i> | | \$7.5 | \$40.8 | \$48.3 | |
| <i>Information</i> | | \$19.9 | \$24.3 | \$44.3 | |
| <i>Transportation and warehousing</i> | | \$10.0 | \$9.9 | \$19.9 | |
| <i>Construction</i> | | \$8.2 | \$4.6 | \$12.8 | |
| <i>Utilities</i> | | \$0.9 | \$1.4 | \$2.3 | |
| <i>Agriculture</i> | | \$0.3 | \$0.9 | \$1.2 | |
| <i>Mining</i> | | \$0.4 | \$0.1 | \$0.5 | |
| <i>Other</i> | | \$0.4 | \$1.1 | \$1.5 | |
| Total Operational Impact on Labor Income | \$288.1 | \$243.6 | \$402.7 | \$934.4 | 2.8% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$612.0 | | | \$612.0 | 1.2% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$107.8 | \$262.8 | \$370.6 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$118.8 | \$184.5 | \$303.3 | |
| <i>Information</i> | | \$55.8 | \$72.3 | \$128.1 | |
| <i>Manufacturing</i> | | \$61.2 | \$38.9 | \$100.1 | |
| <i>Wholesale and retail trade</i> | | \$13.0 | \$66.0 | \$79.0 | |
| <i>Transportation and warehousing</i> | | \$13.6 | \$13.9 | \$27.5 | |
| <i>Construction</i> | | \$9.1 | \$6.0 | \$15.2 | |
| <i>Utilities</i> | | \$3.7 | \$5.6 | \$9.3 | |
| <i>Agriculture</i> | | \$0.4 | \$1.3 | \$1.7 | |
| <i>Mining</i> | | \$0.7 | \$0.2 | \$0.9 | |
| <i>Other</i> | | \$0.6 | \$1.7 | \$2.3 | |
| Total Operational Impact on Value Added | \$612.0 | \$384.7 | \$653.3 | \$1,650.0 | 3.2% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in South Carolina, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 23,849 | | | 23,849 | 1.0% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 4,800 | 13,861 | 18,662 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 3,400 | 4,763 | 8,163 | |
| <i>Manufacturing</i> | | 3,465 | 2,325 | 5,791 | |
| <i>Wholesale and retail trade</i> | | 613 | 4,831 | 5,445 | |
| <i>Transportation and warehousing</i> | | 1,154 | 812 | 1,967 | |
| <i>Information</i> | | 553 | 741 | 1,293 | |
| <i>Construction</i> | | 875 | 376 | 1,251 | |
| <i>Agriculture</i> | | 189 | 546 | 735 | |
| <i>Utilities</i> | | 114 | 150 | 264 | |
| <i>Mining</i> | | 41 | 11 | 52 | |
| <i>Other</i> | | 87 | 188 | 275 | |
| Total Operational Impact on Employment | 23,849 | 15,293 | 28,604 | 67,746 | 2.9% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$710.2 | | | \$710.2 | 0.7% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$203.4 | \$498.7 | \$702.2 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$183.2 | \$184.0 | \$367.2 | |
| <i>Manufacturing</i> | | \$224.3 | \$140.9 | \$365.1 | |
| <i>Wholesale and retail trade</i> | | \$31.4 | \$163.9 | \$195.3 | |
| <i>Information</i> | | \$41.0 | \$49.0 | \$90.0 | |
| <i>Transportation and warehousing</i> | | \$49.7 | \$35.8 | \$85.6 | |
| <i>Construction</i> | | \$41.9 | \$16.6 | \$58.5 | |
| <i>Utilities</i> | | \$12.3 | \$16.0 | \$28.2 | |
| <i>Agriculture</i> | | \$5.5 | \$12.2 | \$17.7 | |
| <i>Mining</i> | | \$2.4 | \$0.6 | \$3.0 | |
| <i>Other</i> | | \$3.6 | \$7.6 | \$11.2 | |
| Total Operational Impact on Labor Income | \$710.2 | \$798.7 | \$1,125.3 | \$2,634.2 | 2.4% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$1,406.6 | | | \$1,406.6 | 0.8% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$345.1 | \$569.9 | \$914.9 | |
| <i>Services</i> | | \$246.3 | \$595.9 | \$842.2 | |
| <i>Manufacturing</i> | | \$353.2 | \$222.2 | \$575.4 | |
| <i>Wholesale and retail trade</i> | | \$53.1 | \$257.7 | \$310.8 | |
| <i>Information</i> | | \$119.8 | \$153.5 | \$273.3 | |
| <i>Transportation and warehousing</i> | | \$67.2 | \$48.4 | \$115.7 | |
| <i>Utilities</i> | | \$50.7 | \$64.9 | \$115.6 | |
| <i>Construction</i> | | \$46.3 | \$20.7 | \$67.0 | |
| <i>Agriculture</i> | | \$6.5 | \$18.9 | \$25.4 | |
| <i>Mining</i> | | \$6.1 | \$1.7 | \$7.8 | |
| <i>Other</i> | | \$5.9 | \$12.3 | \$18.1 | |
| Total Operational Impact on Value Added | \$1,406.6 | \$1,300.2 | \$1,966.0 | \$4,672.8 | 2.8% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in South Dakota, 2011

| Employment* | | | | | |
|--|----------------|-----------------|----------------|------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 9,148 | | | 9,148 | 1.6% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 1,446 | 3,932 | 5,377 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 1,150 | 1,238 | 2,388 | |
| <i>Wholesale and retail trade</i> | | 275 | 1,405 | 1,680 | |
| <i>Manufacturing</i> | | 554 | 436 | 990 | |
| <i>Construction</i> | | 849 | 111 | 960 | |
| <i>Agriculture</i> | | 128 | 604 | 733 | |
| <i>Transportation and warehousing</i> | | 310 | 223 | 533 | |
| <i>Information</i> | | 235 | 253 | 488 | |
| <i>Utilities</i> | | 36 | 31 | 67 | |
| <i>Mining</i> | | 41 | 10 | 51 | |
| <i>Other</i> | | 18 | 38 | 56 | |
| Total Operational Impact on Employment | 9,148 | 5,041 | 8,281 | 22,471 | 3.9% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$304.8 | | | \$304.8 | 1.2% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$60.7 | \$140.0 | \$200.7 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$48.0 | \$41.2 | \$89.2 | |
| <i>Wholesale and retail trade</i> | | \$13.0 | \$45.8 | \$58.8 | |
| <i>Manufacturing</i> | | \$31.2 | \$22.2 | \$53.4 | |
| <i>Agriculture</i> | | \$8.9 | \$38.0 | \$46.9 | |
| <i>Construction</i> | | \$37.2 | \$4.8 | \$42.1 | |
| <i>Information</i> | | \$13.8 | \$13.9 | \$27.7 | |
| <i>Transportation and warehousing</i> | | \$13.4 | \$9.6 | \$23.0 | |
| <i>Utilities</i> | | \$3.4 | \$2.9 | \$6.2 | |
| <i>Mining</i> | | \$2.2 | \$0.6 | \$2.8 | |
| <i>Other</i> | | \$0.5 | \$1.0 | \$1.4 | |
| Total Operational Impact on Labor Income | \$304.8 | \$232.2 | \$319.9 | \$857.0 | 3.5% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$546.4 | | | \$546.4 | 1.5% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$109.0 | \$132.1 | \$241.0 | |
| <i>Services</i> | | \$71.1 | \$163.3 | \$234.4 | |
| <i>Wholesale and retail trade</i> | | \$22.2 | \$75.3 | \$97.4 | |
| <i>Information</i> | | \$42.4 | \$46.3 | \$88.8 | |
| <i>Manufacturing</i> | | \$45.9 | \$30.0 | \$75.9 | |
| <i>Agriculture</i> | | \$10.7 | \$52.3 | \$62.9 | |
| <i>Construction</i> | | \$40.0 | \$6.0 | \$46.0 | |
| <i>Transportation and warehousing</i> | | \$18.4 | \$12.8 | \$31.2 | |
| <i>Utilities</i> | | \$13.6 | \$11.4 | \$25.0 | |
| <i>Mining</i> | | \$6.0 | \$1.5 | \$7.5 | |
| <i>Other</i> | | \$0.8 | \$1.7 | \$2.5 | |
| Total Operational Impact on Value Added | \$546.4 | \$380.1 | \$532.6 | \$1,459.0 | 3.9% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Tennessee, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 34,461 | | | 34,461 | 1.0% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 8,970 | 23,579 | 32,549 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 6,231 | 7,291 | 13,521 | |
| <i>Wholesale and retail trade</i> | | 1,513 | 8,126 | 9,639 | |
| <i>Manufacturing</i> | | 5,107 | 3,488 | 8,595 | |
| <i>Transportation and warehousing</i> | | 2,287 | 1,898 | 4,185 | |
| <i>Construction</i> | | 3,013 | 564 | 3,576 | |
| <i>Information</i> | | 1,101 | 1,370 | 2,471 | |
| <i>Agriculture</i> | | 347 | 1,402 | 1,749 | |
| <i>Mining</i> | | 190 | 42 | 231 | |
| <i>Utilities</i> | | 46 | 47 | 93 | |
| <i>Other</i> | | <u>143</u> | <u>261</u> | 404 | |
| Total Operational Impact on Employment | 34,461 | 28,947 | 48,068 | 111,475 | 3.2% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$1,263.4 | | | \$1,263.4 | 0.7% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$443.8 | \$1,035.8 | \$1,479.6 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$399.9 | \$358.6 | \$758.5 | |
| <i>Manufacturing</i> | | \$323.9 | \$221.0 | \$544.9 | |
| <i>Wholesale and retail trade</i> | | \$85.2 | \$316.8 | \$402.0 | |
| <i>Transportation and warehousing</i> | | \$148.6 | \$118.7 | \$267.2 | |
| <i>Construction</i> | | \$144.4 | \$27.5 | \$171.9 | |
| <i>Information</i> | | \$70.1 | \$82.3 | \$152.4 | |
| <i>Mining</i> | | \$10.8 | \$2.4 | \$13.2 | |
| <i>Agriculture</i> | | \$2.7 | \$6.6 | \$9.3 | |
| <i>Utilities</i> | | \$4.1 | \$4.0 | \$8.1 | |
| <i>Other</i> | | <u>\$5.6</u> | <u>\$10.0</u> | \$15.6 | |
| Total Operational Impact on Labor Income | \$1,263.4 | \$1,638.9 | \$2,183.8 | \$5,086.1 | 3.0% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$2,600.2 | | | \$2,600.2 | 1.0% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$839.5 | \$1,010.4 | \$1,849.9 | |
| <i>Services</i> | | \$521.8 | \$1,207.4 | \$1,729.2 | |
| <i>Manufacturing</i> | | \$519.5 | \$407.4 | \$926.9 | |
| <i>Wholesale and retail trade</i> | | \$145.2 | \$510.3 | \$655.5 | |
| <i>Information</i> | | \$205.5 | \$253.5 | \$459.1 | |
| <i>Transportation and warehousing</i> | | \$210.2 | \$168.8 | \$379.0 | |
| <i>Construction</i> | | \$157.4 | \$33.9 | \$191.3 | |
| <i>Mining</i> | | \$31.8 | \$7.6 | \$39.4 | |
| <i>Utilities</i> | | \$16.2 | \$15.5 | \$31.8 | |
| <i>Agriculture</i> | | \$6.4 | \$24.7 | \$31.1 | |
| <i>Other</i> | | <u>\$9.1</u> | <u>\$16.3</u> | \$25.4 | |
| Total Operational Impact on Value Added | \$2,600.2 | \$2,662.6 | \$3,655.8 | \$8,918.5 | 3.4% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Texas, 2011

| Employment* | | | | | |
|--|--------------------|-------------------|-------------------|--------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 618,974 | | | 618,974 | 4.4% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 171,299 | 348,509 | 519,808 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 165,857 | 124,645 | 290,502 | |
| <i>Wholesale and retail trade</i> | | 46,235 | 156,665 | 202,900 | |
| <i>Construction</i> | | 131,494 | 8,885 | 140,379 | |
| <i>Manufacturing</i> | | 31,458 | 22,256 | 53,714 | |
| <i>Transportation and warehousing</i> | | 30,032 | 18,322 | 48,354 | |
| <i>Information</i> | | 16,626 | 16,307 | 32,933 | |
| <i>Agriculture</i> | | 2,381 | 13,986 | 16,367 | |
| <i>Utilities</i> | | 4,100 | 2,745 | 6,845 | |
| <i>Mining</i> | | 811 | 166 | 977 | |
| <i>Other</i> | | 2,411 | 4,535 | 6,945 | |
| Total Operational Impact on Employment | 618,974 | 602,704 | 717,021 | 1,938,700 | 13.6% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$75,459.0 | | | \$75,459.0 | 9.8% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$8,605.6 | \$14,311.9 | \$22,917.5 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$11,495.1 | \$6,045.7 | \$17,540.8 | |
| <i>Wholesale and retail trade</i> | | \$2,869.8 | \$6,464.5 | \$9,334.3 | |
| <i>Construction</i> | | \$7,386.6 | \$517.6 | \$7,904.2 | |
| <i>Manufacturing</i> | | \$2,670.2 | \$1,497.9 | \$4,168.1 | |
| <i>Information</i> | | \$1,385.9 | \$1,244.3 | \$2,630.2 | |
| <i>Transportation and warehousing</i> | | \$1,520.8 | \$872.5 | \$2,393.3 | |
| <i>Utilities</i> | | \$633.3 | \$389.7 | \$1,022.9 | |
| <i>Agriculture</i> | | \$75.7 | \$258.5 | \$334.2 | |
| <i>Mining</i> | | \$51.0 | \$10.3 | \$61.3 | |
| <i>Other</i> | | \$111.2 | \$208.3 | \$319.5 | |
| Total Operational Impact on Labor Income | \$75,459.0 | \$36,805.0 | \$31,821.2 | \$144,085.3 | 18.7% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$192,087.3 | | | \$192,087.3 | 14.4% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$23,600.9 | \$18,188.0 | \$41,788.9 | |
| <i>Services</i> | | \$9,995.5 | \$16,650.2 | \$26,645.7 | |
| <i>Wholesale and retail trade</i> | | \$4,833.1 | \$10,363.4 | \$15,196.5 | |
| <i>Construction</i> | | \$7,871.2 | \$632.7 | \$8,503.9 | |
| <i>Information</i> | | \$4,001.2 | \$3,928.1 | \$7,929.4 | |
| <i>Manufacturing</i> | | \$4,950.9 | \$2,818.7 | \$7,769.6 | |
| <i>Utilities</i> | | \$2,495.9 | \$1,477.1 | \$3,973.0 | |
| <i>Transportation and warehousing</i> | | \$2,127.9 | \$1,229.6 | \$3,357.5 | |
| <i>Agriculture</i> | | \$73.9 | \$381.8 | \$455.8 | |
| <i>Mining</i> | | \$107.4 | \$22.1 | \$129.5 | |
| <i>Other</i> | | \$177.1 | \$331.8 | \$508.9 | |
| Total Operational Impact on Value Added | \$192,087.3 | \$60,235.2 | \$56,023.5 | \$308,346.0 | 23.2% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Utah, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 23,560 | | | 23,560 | 1.4% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 7,981 | 14,646 | 22,627 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 6,810 | 6,661 | 13,470 | |
| <i>Wholesale and retail trade</i> | | 1,754 | 5,604 | 7,358 | |
| <i>Manufacturing</i> | | 2,368 | 1,501 | 3,868 | |
| <i>Construction</i> | | 2,865 | 364 | 3,229 | |
| <i>Transportation and warehousing</i> | | 1,374 | 823 | 2,197 | |
| <i>Information</i> | | 980 | 1,029 | 2,009 | |
| <i>Agriculture</i> | | 83 | 428 | 510 | |
| <i>Mining</i> | | 324 | 67 | 391 | |
| <i>Utilities</i> | | 100 | 72 | 172 | |
| <i>Other</i> | | <u>87</u> | <u>125</u> | 213 | |
| Total Operational Impact on Employment | 23,560 | 24,725 | 31,320 | 79,605 | 4.9% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$1,501.0 | | | \$1,501.0 | 1.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$373.4 | \$554.2 | \$927.6 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$336.6 | \$220.2 | \$556.8 | |
| <i>Wholesale and retail trade</i> | | \$92.1 | \$211.5 | \$303.6 | |
| <i>Manufacturing</i> | | \$153.7 | \$87.3 | \$241.0 | |
| <i>Transportation and warehousing</i> | | \$128.9 | \$80.0 | \$208.9 | |
| <i>Construction</i> | | \$153.8 | \$19.5 | \$173.3 | |
| <i>Information</i> | | \$56.6 | \$54.6 | \$111.2 | |
| <i>Mining</i> | | \$26.1 | \$5.1 | \$31.2 | |
| <i>Utilities</i> | | \$12.6 | \$8.5 | \$21.1 | |
| <i>Agriculture</i> | | \$1.3 | \$5.4 | \$6.7 | |
| <i>Other</i> | | <u>\$3.8</u> | <u>\$5.5</u> | \$9.3 | |
| Total Operational Impact on Labor Income | \$1,501.0 | \$1,338.8 | \$1,251.7 | \$4,091.5 | 5.3% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$4,126.0 | | | \$4,126.0 | 3.4% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$629.9 | \$626.1 | \$1,256.1 | |
| <i>Services</i> | | \$437.1 | \$647.1 | \$1,084.2 | |
| <i>Wholesale and retail trade</i> | | \$156.9 | \$356.8 | \$513.7 | |
| <i>Manufacturing</i> | | \$270.7 | \$148.0 | \$418.7 | |
| <i>Information</i> | | \$157.9 | \$160.1 | \$317.9 | |
| <i>Transportation and warehousing</i> | | \$160.7 | \$101.1 | \$261.8 | |
| <i>Construction</i> | | \$166.2 | \$24.5 | \$190.7 | |
| <i>Mining</i> | | \$70.5 | \$15.3 | \$85.8 | |
| <i>Utilities</i> | | \$51.1 | \$34.0 | \$85.1 | |
| <i>Agriculture</i> | | \$3.7 | \$18.1 | \$21.8 | |
| <i>Other</i> | | <u>\$6.1</u> | <u>\$8.8</u> | \$14.9 | |
| Total Operational Impact on Value Added | \$4,126.0 | \$2,110.8 | \$2,139.9 | \$8,376.7 | 6.9% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Vermont, 2011

| Employment* | | | | | |
|--|----------------|-----------------|----------------|---------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 6,124 | | | 6,124 | 1.5% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 890 | 2,995 | 3,885 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 781 | 793 | 1,574 | |
| <i>Wholesale and retail trade</i> | | 107 | 881 | 988 | |
| <i>Manufacturing</i> | | 416 | 317 | 733 | |
| <i>Transportation and warehousing</i> | | 222 | 162 | 385 | |
| <i>Construction</i> | | 242 | 71 | 314 | |
| <i>Information</i> | | 120 | 145 | 265 | |
| <i>Agriculture</i> | | 27 | 148 | 175 | |
| <i>Utilities</i> | | 21 | 24 | 45 | |
| <i>Mining</i> | | 21 | 6 | 27 | |
| <i>Other</i> | | <u>11</u> | <u>27</u> | 38 | |
| Total Operational Impact on Employment | 6,124 | 2,860 | 5,570 | 14,554 | 3.6% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$206.4 | | | \$206.4 | 1.1% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$33.7 | \$107.4 | \$141.1 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$39.3 | \$32.5 | \$71.8 | |
| <i>Manufacturing</i> | | \$24.7 | \$17.3 | \$41.9 | |
| <i>Wholesale and retail trade</i> | | \$5.2 | \$30.0 | \$35.2 | |
| <i>Transportation and warehousing</i> | | \$9.5 | \$7.1 | \$16.6 | |
| <i>Information</i> | | \$7.4 | \$8.3 | \$15.8 | |
| <i>Agriculture</i> | | \$6.3 | \$7.0 | \$13.3 | |
| <i>Construction</i> | | \$10.1 | \$3.0 | \$13.2 | |
| <i>Utilities</i> | | \$2.7 | \$3.1 | \$5.8 | |
| <i>Mining</i> | | \$2.6 | \$0.7 | \$3.2 | |
| <i>Other</i> | | <u>\$0.8</u> | <u>\$2.0</u> | <u>\$2.8</u> | |
| Total Operational Impact on Labor Income | \$206.4 | \$142.3 | \$218.3 | \$567.0 | 3.1% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$426.5 | | | \$426.5 | 1.5% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$74.7 | \$103.4 | \$178.1 | |
| <i>Services</i> | | \$40.2 | \$126.2 | \$166.5 | |
| <i>Manufacturing</i> | | \$40.8 | \$33.0 | \$73.8 | |
| <i>Wholesale and retail trade</i> | | \$9.2 | \$50.7 | \$59.9 | |
| <i>Information</i> | | \$22.5 | \$26.7 | \$49.2 | |
| <i>Utilities</i> | | \$11.1 | \$12.8 | \$23.9 | |
| <i>Transportation and warehousing</i> | | \$13.0 | \$9.6 | \$22.6 | |
| <i>Construction</i> | | \$11.2 | \$4.0 | \$15.2 | |
| <i>Agriculture</i> | | \$6.0 | \$8.9 | \$14.9 | |
| <i>Mining</i> | | \$5.8 | \$1.6 | \$7.4 | |
| <i>Other</i> | | <u>\$1.2</u> | <u>\$3.0</u> | <u>\$4.2</u> | |
| Total Operational Impact on Value Added | \$426.5 | \$235.6 | \$380.0 | \$1,042.2 | 3.6% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Virginia, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|-------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 46,979 | | | 46,979 | 1.0% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 11,323 | 28,968 | 40,290 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 11,134 | 11,832 | 22,966 | |
| <i>Wholesale and retail trade</i> | | 1,397 | 9,389 | 10,786 | |
| <i>Manufacturing</i> | | 3,368 | 2,502 | 5,870 | |
| <i>Construction</i> | | 4,178 | 922 | 5,100 | |
| <i>Transportation and warehousing</i> | | 2,122 | 1,651 | 3,773 | |
| <i>Information</i> | | 1,431 | 1,751 | 3,182 | |
| <i>Agriculture</i> | | 264 | 1,042 | 1,307 | |
| <i>Mining</i> | | 337 | 79 | 415 | |
| <i>Utilities</i> | | 139 | 142 | 282 | |
| <i>Other</i> | | 203 | 448 | 651 | |
| Total Operational Impact on Employment | 46,979 | 35,895 | 58,725 | 141,599 | 3.0% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$1,660.5 | | | \$1,660.5 | 0.6% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$795.3 | \$1,303.8 | \$2,099.1 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$1,019.4 | \$780.4 | \$1,799.8 | |
| <i>Wholesale and retail trade</i> | | \$80.3 | \$346.0 | \$426.3 | |
| <i>Manufacturing</i> | | \$218.7 | \$151.8 | \$370.4 | |
| <i>Information</i> | | \$130.0 | \$147.1 | \$277.1 | |
| <i>Construction</i> | | \$227.3 | \$47.4 | \$274.7 | |
| <i>Transportation and warehousing</i> | | \$100.4 | \$78.8 | \$179.2 | |
| <i>Mining</i> | | \$32.0 | \$7.8 | \$39.8 | |
| <i>Utilities</i> | | \$19.2 | \$19.3 | \$38.5 | |
| <i>Agriculture</i> | | \$4.1 | \$10.2 | \$14.3 | |
| <i>Other</i> | | \$11.4 | \$24.1 | \$35.5 | |
| Total Operational Impact on Labor Income | \$1,660.5 | \$2,638.0 | \$2,916.7 | \$7,215.2 | 2.5% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$3,450.5 | | | \$3,450.5 | 0.8% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$1,739.7 | \$1,734.8 | \$3,474.4 | |
| <i>Services</i> | | \$932.3 | \$1,525.4 | \$2,457.7 | |
| <i>Information</i> | | \$365.6 | \$442.4 | \$807.9 | |
| <i>Wholesale and retail trade</i> | | \$137.3 | \$560.8 | \$698.0 | |
| <i>Manufacturing</i> | | \$320.2 | \$359.2 | \$679.4 | |
| <i>Construction</i> | | \$244.7 | \$57.3 | \$302.0 | |
| <i>Transportation and warehousing</i> | | \$145.2 | \$116.0 | \$261.2 | |
| <i>Utilities</i> | | \$78.8 | \$78.4 | \$157.2 | |
| <i>Mining</i> | | \$66.9 | \$16.9 | \$83.8 | |
| <i>Agriculture</i> | | \$6.7 | \$26.1 | \$32.8 | |
| <i>Other</i> | | \$17.8 | \$37.9 | \$55.7 | |
| Total Operational Impact on Value Added | \$3,450.5 | \$4,055.1 | \$4,955.0 | \$12,460.6 | 2.9% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Washington, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|----------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 26,666 | | | 26,666 | 0.7% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 9,155 | 24,795 | 33,949 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 6,706 | 8,862 | 15,568 | |
| <i>Wholesale and retail trade</i> | | 2,219 | 8,731 | 10,950 | |
| <i>Manufacturing</i> | | 2,980 | 2,273 | 5,253 | |
| <i>Transportation and warehousing</i> | | 2,213 | 1,832 | 4,045 | |
| <i>Information</i> | | 1,146 | 1,497 | 2,643 | |
| <i>Agriculture</i> | | 489 | 1,756 | 2,245 | |
| <i>Construction</i> | | 1,537 | 530 | 2,067 | |
| <i>Mining</i> | | 144 | 31 | 175 | |
| <i>Utilities</i> | | 68 | 60 | 128 | |
| <i>Other</i> | | <u>278</u> | <u>370</u> | <u>648</u> | |
| Total Operational Impact on Employment | 26,666 | 26,935 | 50,736 | 104,338 | 2.8% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$1,568.5 | | | \$1,568.5 | 0.7% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$541.7 | \$1,088.5 | \$1,630.2 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$480.9 | \$442.0 | \$922.9 | |
| <i>Wholesale and retail trade</i> | | \$146.5 | \$391.2 | \$537.7 | |
| <i>Transportation and warehousing</i> | | \$170.6 | \$165.6 | \$336.2 | |
| <i>Manufacturing</i> | | \$195.0 | \$137.2 | \$332.2 | |
| <i>Information</i> | | \$132.6 | \$148.1 | \$280.7 | |
| <i>Construction</i> | | \$104.5 | \$34.1 | \$138.6 | |
| <i>Agriculture</i> | | \$22.2 | \$70.3 | \$92.5 | |
| <i>Utilities</i> | | \$7.9 | \$6.7 | \$14.6 | |
| <i>Mining</i> | | \$8.0 | \$1.7 | \$9.7 | |
| <i>Other</i> | | <u>\$19.0</u> | <u>\$25.4</u> | <u>\$44.4</u> | |
| Total Operational Impact on Labor Income | \$1,568.5 | \$1,829.0 | \$2,510.8 | \$5,908.4 | 2.7% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$6,819.6 | | | \$6,819.6 | 1.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$794.4 | \$1,234.5 | \$2,028.9 | |
| <i>Services</i> | | \$643.5 | \$1,294.3 | \$1,937.8 | |
| <i>Wholesale and retail trade</i> | | \$254.4 | \$678.3 | \$932.7 | |
| <i>Information</i> | | \$337.6 | \$418.9 | \$756.4 | |
| <i>Transportation and warehousing</i> | | \$288.2 | \$305.6 | \$593.8 | |
| <i>Manufacturing</i> | | \$294.6 | \$218.6 | \$513.2 | |
| <i>Construction</i> | | \$113.9 | \$43.9 | \$157.8 | |
| <i>Agriculture</i> | | \$25.7 | \$87.1 | \$112.7 | |
| <i>Utilities</i> | | \$32.1 | \$25.8 | \$57.9 | |
| <i>Mining</i> | | \$20.9 | \$4.6 | \$25.5 | |
| <i>Other</i> | | <u>\$29.3</u> | <u>\$39.1</u> | <u>\$68.3</u> | |
| Total Operational Impact on Value Added | \$6,819.6 | \$2,834.5 | \$4,350.7 | \$14,004.8 | 4.0% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in West Virginia, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 35,925 | | | 35,925 | 4.0% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 5,809 | 11,840 | 17,649 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 4,663 | 2,493 | 7,156 | |
| <i>Wholesale and retail trade</i> | | 1,364 | 4,478 | 5,842 | |
| <i>Construction</i> | | 5,455 | 298 | 5,753 | |
| <i>Manufacturing</i> | | 1,850 | 753 | 2,603 | |
| <i>Transportation and warehousing</i> | | 971 | 482 | 1,453 | |
| <i>Mining</i> | | 1,058 | 249 | 1,307 | |
| <i>Information</i> | | 697 | 516 | 1,213 | |
| <i>Agriculture</i> | | 216 | 680 | 896 | |
| <i>Utilities</i> | | 181 | 112 | 293 | |
| <i>Other</i> | | 110 | 190 | 309 | |
| Total Operational Impact on Employment | 35,925 | 22,374 | 22,102 | 80,401 | 8.9% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$1,609.6 | | | \$1,609.6 | 3.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$278.8 | \$431.5 | \$710.3 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$249.6 | \$92.0 | \$341.6 | |
| <i>Construction</i> | | \$287.6 | \$15.2 | \$302.8 | |
| <i>Wholesale and retail trade</i> | | \$53.8 | \$135.9 | \$189.7 | |
| <i>Manufacturing</i> | | \$123.0 | \$43.1 | \$166.2 | |
| <i>Mining</i> | | \$96.9 | \$23.3 | \$120.2 | |
| <i>Information</i> | | \$46.9 | \$30.5 | \$77.4 | |
| <i>Transportation and warehousing</i> | | \$46.7 | \$22.5 | \$69.2 | |
| <i>Utilities</i> | | \$21.0 | \$12.4 | \$33.3 | |
| <i>Agriculture</i> | | \$2.6 | \$5.0 | \$7.6 | |
| <i>Other</i> | | \$3.8 | \$6.9 | \$10.7 | |
| Total Operational Impact on Labor Income | \$1,609.6 | \$1,210.6 | \$818.4 | \$3,638.6 | 8.8% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$2,331.5 | | | \$2,331.5 | 3.5% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$559.2 | \$384.3 | \$943.4 | |
| <i>Services</i> | | \$322.4 | \$504.2 | \$826.6 | |
| <i>Construction</i> | | \$304.4 | \$18.2 | \$322.6 | |
| <i>Manufacturing</i> | | \$222.2 | \$84.4 | \$306.6 | |
| <i>Wholesale and retail trade</i> | | \$89.0 | \$214.3 | \$303.3 | |
| <i>Mining</i> | | \$196.1 | \$48.4 | \$244.4 | |
| <i>Information</i> | | \$122.4 | \$93.8 | \$216.1 | |
| <i>Utilities</i> | | \$85.4 | \$48.7 | \$134.1 | |
| <i>Transportation and warehousing</i> | | \$64.6 | \$31.5 | \$96.0 | |
| <i>Agriculture</i> | | \$3.9 | \$9.8 | \$13.7 | |
| <i>Other</i> | | \$6.3 | \$11.4 | \$17.7 | |
| Total Operational Impact on Value Added | \$2,331.5 | \$1,975.8 | \$1,448.7 | \$5,756.1 | 8.7% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

The Economic Impact of the Oil and Natural Gas Industry in Wisconsin, 2011

| Employment* | | | | | |
|--|------------------|------------------|------------------|----------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 32,116 | | | 32,116 | 0.9% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 7,668 | 21,706 | 29,374 | |
| <i>Manufacturing</i> | | 7,566 | 4,446 | 12,012 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 4,886 | 6,755 | 11,642 | |
| <i>Wholesale and retail trade</i> | | 1,082 | 7,208 | 8,291 | |
| <i>Transportation and warehousing</i> | | 1,706 | 1,524 | 3,230 | |
| <i>Information</i> | | 960 | 1,300 | 2,259 | |
| <i>Agriculture</i> | | 354 | 1,634 | 1,988 | |
| <i>Construction</i> | | 1,198 | 441 | 1,638 | |
| <i>Utilities</i> | | 110 | 139 | 250 | |
| <i>Mining</i> | | 88 | 24 | 112 | |
| <i>Other</i> | | <u>109</u> | <u>255</u> | <u>364</u> | |
| Total Operational Impact on Employment | 32,116 | 25,727 | 45,432 | 103,275 | 3.0% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$1,151.8 | | | \$1,151.8 | 0.7% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$393.9 | \$830.0 | \$1,223.9 | |
| <i>Manufacturing</i> | | \$501.4 | \$286.1 | \$787.5 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$284.0 | \$302.8 | \$586.9 | |
| <i>Wholesale and retail trade</i> | | \$60.2 | \$249.5 | \$309.6 | |
| <i>Transportation and warehousing</i> | | \$82.6 | \$73.0 | \$155.7 | |
| <i>Information</i> | | \$62.9 | \$79.7 | \$142.6 | |
| <i>Construction</i> | | \$69.1 | \$23.8 | \$92.9 | |
| <i>Agriculture</i> | | \$8.6 | \$38.1 | \$46.7 | |
| <i>Utilities</i> | | \$14.1 | \$17.8 | \$31.9 | |
| <i>Mining</i> | | \$5.7 | \$1.5 | \$7.3 | |
| <i>Other</i> | | <u>\$6.3</u> | <u>\$14.1</u> | <u>\$20.4</u> | |
| Total Operational Impact on Labor Income | \$1,151.8 | \$1,488.8 | \$1,916.5 | \$4,557.1 | 2.9% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$2,132.3 | | | \$2,132.3 | 0.8% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$668.8 | \$867.0 | \$1,535.8 | |
| <i>Services</i> | | \$461.0 | \$961.4 | \$1,422.4 | |
| <i>Manufacturing</i> | | \$769.9 | \$466.7 | \$1,236.6 | |
| <i>Wholesale and retail trade</i> | | \$103.8 | \$423.8 | \$527.6 | |
| <i>Information</i> | | \$193.6 | \$255.5 | \$449.1 | |
| <i>Transportation and warehousing</i> | | \$117.8 | \$104.3 | \$222.1 | |
| <i>Utilities</i> | | \$58.1 | \$72.3 | \$130.4 | |
| <i>Construction</i> | | \$76.2 | \$29.5 | \$105.6 | |
| <i>Agriculture</i> | | \$12.5 | \$79.4 | \$91.9 | |
| <i>Mining</i> | | \$12.4 | \$3.3 | \$15.7 | |
| <i>Other</i> | | <u>\$0.8</u> | <u>\$22.1</u> | <u>\$22.9</u> | |
| Total Operational Impact on Value Added | \$2,132.3 | \$2,483.9 | \$3,285.3 | \$7,901.5 | 3.1% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

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| Employment* | | | | | |
|--|------------------|------------------|------------------|-------------------|------------------------------|
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | 32,933 | | | 32,933 | 8.4% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | 7,497 | 9,870 | 17,366 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | 6,931 | 3,327 | 10,258 | |
| <i>Construction</i> | | 6,563 | 281 | 6,844 | |
| <i>Wholesale and retail trade</i> | | 1,803 | 4,425 | 6,228 | |
| <i>Transportation and warehousing</i> | | 1,484 | 525 | 2,009 | |
| <i>Information</i> | | 840 | 472 | 1,313 | |
| <i>Manufacturing</i> | | 928 | 295 | 1,223 | |
| <i>Mining</i> | | 469 | 105 | 574 | |
| <i>Agriculture</i> | | 184 | 318 | 503 | |
| <i>Utilities</i> | | 259 | 103 | 362 | |
| <i>Other</i> | | 206 | 221 | 427 | |
| Total Operational Impact on Employment | 32,933 | 27,164 | 19,943 | 80,040 | 20.4% |
| Labor Income** (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$2,657.4 | | | \$2,657.4 | 11.0% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Services</i> | | \$384.7 | \$445.1 | \$829.8 | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$475.3 | \$98.4 | \$573.7 | |
| <i>Construction</i> | | \$383.1 | \$16.1 | \$399.2 | |
| <i>Wholesale and retail trade</i> | | \$83.3 | \$150.8 | \$234.1 | |
| <i>Transportation and warehousing</i> | | \$100.1 | \$33.0 | \$133.2 | |
| <i>Manufacturing</i> | | \$77.0 | \$31.2 | \$108.2 | |
| <i>Information</i> | | \$45.0 | \$24.4 | \$69.5 | |
| <i>Mining</i> | | \$46.1 | \$10.6 | \$56.7 | |
| <i>Utilities</i> | | \$31.0 | \$11.9 | \$42.8 | |
| <i>Agriculture</i> | | \$4.4 | \$5.4 | \$9.9 | |
| <i>Other</i> | | \$9.8 | \$10.5 | \$20.3 | |
| Total Operational Impact on Labor Income | \$2,657.4 | \$1,639.9 | \$837.4 | \$5,134.7 | 21.3% |
| Value Added (\$ Millions) | | | | | |
| Sector Description | Direct | Indirect | Induced | Total | As a % of State Total |
| Direct Operational Impact of the Oil and Natural Gas Industry | \$9,028.7 | | | \$9,028.7 | 22.8% |
| Indirect and Induced Operational Impacts on Other Industries | | | | | |
| <i>Finance, insurance, real estate, rental and leasing</i> | | \$860.7 | \$414.6 | \$1,275.4 | |
| <i>Services</i> | | \$457.9 | \$535.2 | \$993.1 | |
| <i>Construction</i> | | \$404.1 | \$19.3 | \$423.4 | |
| <i>Wholesale and retail trade</i> | | \$138.6 | \$241.1 | \$379.7 | |
| <i>Information</i> | | \$141.5 | \$81.3 | \$222.8 | |
| <i>Utilities</i> | | \$126.0 | \$47.8 | \$173.8 | |
| <i>Manufacturing</i> | | \$122.7 | \$50.8 | \$173.5 | |
| <i>Transportation and warehousing</i> | | \$127.4 | \$42.2 | \$169.6 | |
| <i>Mining</i> | | \$97.5 | \$22.7 | \$120.1 | |
| <i>Agriculture</i> | | \$9.4 | \$17.0 | \$26.4 | |
| <i>Other</i> | | \$15.5 | \$16.7 | \$32.2 | |
| Total Operational Impact on Value Added | \$9,028.7 | \$2,501.2 | \$1,488.8 | \$13,018.7 | 32.9% |

Source: PwC calculations using the IMPLAN modeling system (2011 database).

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Appendix B: Data Sources and Methodology

This Appendix describes the methodology used to derive the results for the study. It first discusses the data sources PwC utilized to develop estimates of the US oil and natural gas industry's direct employment, labor income, and value added impacts and its dividend and capital investment impacts. It then describes the development of the indirect and induced impact estimates.

Estimating the Direct Jobs, Labor Income and Value Added

This study uses data on employment, employee compensation, proprietors' income, and GDP by industry from the Bureau of Economic Analysis' *Regional Economic Accounts* and data on employment and wages and salaries from the Bureau of Labor Statistics *Quarterly Census of Employment and Wages* to develop our estimates of the direct economic impact of the oil and natural gas industry.

PwC's employment estimates include both full-time and part-time workers as well as self-employed business owners. The *State Annual Personal Income and Employment* data set published by the US Bureau of Economic Analysis ("BEA") is the only source on total employment including self-employed individuals by industry. In cases where there is a one-to-one correspondence between the subsectors of the oil and natural gas industry as defined by PwC and the BEA sectors, we use the BEA data without any further adjustment. This is the case for three NAICS codes: NAICS 211 (Oil and gas extraction), NAICS 447 (Gasoline stations), and NAICS 486 (Pipeline transportation).

For the remaining subsectors for the oil and natural gas industry, which are more disaggregated compared to the BEA data, PwC obtained each subsector's paid employment from the US Bureau of Labor Statistics ("BLS"). PwC then estimated total self employment for the more aggregated industry using the BEA data and allocated across the subsectors according to each industry's share of paid employment. For example, self employment was estimated for NAICS sector 213 (Support Activities for Mining) and was then allocated across five sub-industries including 213111 (Drilling Oil and Gas Wells) and 213112 (Support Activities for Oil and Gas Operations). In a limited number of cases, data from the Census Bureau's *Nonemployer Statistics* was used to allocate self employment across subsectors.¹¹ Direct employment was separately estimated for the US as a whole and for each of the 50 states and the District of Columbia. The state-level estimates were then scaled to match the national level estimates.

A similar methodology was used to estimate labor income for industries where there wasn't a one-to-one correspondence between the subsectors of the oil and natural gas industry as defined by PwC and the BEA sectors. Labor income was estimated as the

¹¹ A nonemployer is a business without paid employees. Most nonemployers are self-employed individuals operating small unincorporated businesses, which may or may not be the owner's principal source of income.

sum of employee compensation (i.e., wages and salaries and fringe benefits) and proprietors' income.

GDP by subsector was estimated by allocating GDP for the aggregated industry to each subsector based on each subsector's share of direct labor income and data from the IMPLAN model.

Estimating Capital Investment Impact

To quantify the industry's capital investment impact, PwC estimated their capital expenditures for 2011 based on data from the Census Bureau and the Bureau of Economic Analysis. For the impact analysis, capital spending was then translated into purchases of capital assets by type through the use of the so-called "capital flow matrix" from the US Department of Commerce.

Estimating Dividend Impact

PwC obtained data on common stock dividend payments by companies in the US oil and natural gas industry. Dividend payments were allocated between households, foreign shareholders, retirement plans, governments, and other businesses using data from the Federal Reserve Board's *Flow of Funds Accounts*. Dividends paid to households by the oil and natural gas industry were allocated by income group and across the 50 states and the District of Columbia using tax return data published by the IRS's Statistics of Income Division.

Dividends paid to pension plans and other retirement accounts were allocated across income group based on data on retirement assets by income quintile obtained from the 2007 *Survey of Consumer Finances*, conducted by the Federal Reserve. The data were then allocated across the 50 states and the District of Columbia using data on the distribution of assets in 401(k) and thrift savings accounts from the *Survey of Income and Program Participation* conducted by the US Census Bureau. These data were combined with the data on dividends paid directly to households by the oil and natural gas industry to derive our estimates of total dividends paid by the industry to residents in each state.

To quantify the economic impact resulting from the dividend payments of the US oil and natural gas industry, PwC first converted dividend payments into additional household consumption expenditures. For dividends paid directly to households, after-tax dividend income was estimated by income class based on average tax rates on dividend income. The additional consumption from dividends received from the oil and natural gas industry was estimated using published estimates of the marginal propensity to consume by income quintile.¹² Similarly, the additional consumption resulting from

¹² The marginal propensity to consume ("MPC") is a measure of the additional consumption resulting from the last dollar of income earned. The MPCs used for this study were estimated as one minus the marginal propensity to save reported in Table 9 of Karen E. Dynan, Jonathan Skinner, and Stephen P. Zeldes, "Do the Rich Save More?" *Journal of Political Economy*, 2004, Vol. 112, No. 2, pgs. 397-443. The estimated MPCs ranged from a high of 0.93 in the lower income levels to 0.75 in the top income quintile.

dividend payments by the oil and natural gas industry to retirement accounts was estimated based on published estimates of the marginal propensity to consume out of wealth.¹³

Estimating the Indirect and Induced Economic Impacts

Estimates of the indirect and induced economic impacts of the oil and natural gas industry were derived based on the IMPLAN models for the US as a whole and for each of the 50 states and the District of Columbia.

The IMPLAN model is built around an “input-output” table that relates the purchases that each industry has made from other industries to the value of the output of each industry. To meet the demand for goods and services from an industry, purchases are made in other industries according to the patterns recorded in the input-output table. These purchases in turn spark still more purchases by the industry’s suppliers, and so on. Additionally, employees and business owners make personal purchases out of the additional income that is generated by this process, sending more new demands rippling through the economy. Multipliers describe these iterations. The Type I multiplier measures the direct and indirect effects of a change in economic activity. It captures the inter-industry effects only, i.e., industries buying from local industries. The Type II (Social Accounting Matrix or SAM) multiplier captures the direct and indirect effects and, in addition, it also reflects induced effects (i.e., changes in spending from households as income increases or decreases due to the changes in production). The indirect and induced impacts by the oil and natural gas industry on other sectors of the economy in terms of employment, labor income (including wages and salaries and benefits as well as proprietors’ income), and value added were calculated through the multiplier process built into the model.¹⁴

For a given direct impact in a state, IMPLAN state models capture only the indirect and induced effects within that state, excluding the indirect and induced effects crossing state borders (“cross-state spillover effects”). PwC estimated and allocated the cross-state indirect and induced employment, labor income, and value added effects by industry across the 50 states and the District of Columbia in proportion to each state’s share of the total national employment, labor income, and value added in each industry. The state indirect and induced effects reported throughout this study include such allocation of the cross-state spillover effects.

¹³ A review of the literature suggests that each additional dollar of financial wealth increases consumption between two and five cents (see, for example, the literature review in Sherif Khalifa, Ousmane Seck, and Elwin Tobing, “Financial Wealth Effect: Evidence from Threshold Estimation,” September 26, 2010). To be conservative we have assumed an MPC out of wealth of 0.02 for all income groups.

¹⁴ Because the IMPLAN models are used for total impact analysis (as opposed to marginal impact analysis) in this study, necessary adjustments are made to the initial indirect and induced impact estimates to prevent double-counting. For instance, any indirect or induced effects from the estimates that are mapped to the oil and natural gas industry are removed.