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Oregon Healthcare  
Workforce Institute



# **The Economic Contributions of Oregon's Physicians**

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# The Economic Contributions of Oregon's Physicians

Studies show that physicians are key economic drivers for their communities. In addition to creating jobs, physicians and their employees use business revenue and household income to purchase goods and services locally. Similarly, physician referrals create a cumulative economic effect when patients fill prescriptions at a local pharmacy, obtain diagnostic services at a local medical laboratory, or receive treatment at a hospital. The resulting multiplier effect of these economic transactions generates jobs, increases household incomes and contributes to state and local taxes.

A 2010 report on Oregon's physician practices revealed a significant economic ripple-effect on Oregon's local and state business sectors, residents and government.<sup>1</sup>

This study provides an update to the 2010 report and quantifies the economic contributions of Oregon's physician practices to county and state economies, including employment, Gross Domestic Product, and state and local taxes. The findings by county and state are also presented in table format in Appendix A.

## Methodology

This study used 2011 and 2012 physician, employment and economic data to estimate the economic contributions of physician practices statewide and for each of Oregon's 36 local county economies, including:

1. Direct and total employment contributions of physician practices;
2. Percent of county and state jobs attributed to the economic contribution of physician practices;
3. Total value-added contribution by physicians to state and county Gross Domestic Product (GDP);
4. Annual taxes paid to state and local governments through the total contribution of physicians and physician-related employment.

An economic input/output statistical modeling software program (IMPLAN; 2011) was used to measure the direct and indirect employment, GDP, and state and local tax contributions.<sup>2</sup> This process captured county-level economic leakages in the statewide model, including employment data, which cannot be attributed to a specific county.

Employment figures were abstracted from administrative records provided by employers to the Oregon Employment Department (OED) as part of the state's unemployment insurance program and reflect the annual average of monthly employment in 2011. Direct employment includes all employees in offices of physicians, outpatient care centers, medical and diagnostic laboratories, home health care services, other ambulatory health care services, hospitals, nursing care facilities, pharmacies and drug stores, as categorized under the North American Industrial Classification System (NAICS). The 2011 IMPLAN estimates of employment were used for Wheeler County as OED data was suppressed to protect confidentiality. The low number of corporate officers at

physician offices who opt out of unemployment insurance coverage was added as physician-related employment.

The statewide and county-specific physician and physician-related contributions to employment and value added contribution were estimated with IMPLAN models using 2011 data. State and local tax estimates are derived directly from these models and are calculated based on a ratio to total value added.

Physician data was obtained from the Oregon Medical Board's (OMB) February 2012 licensing database. The database identified 10,509 physicians who had an active license and listed an Oregon practice address. The county of practice was identified by the physicians' self-reported practice address listed in the licensing database. No physician identified a practice address in Sherman County. It is noted here that a number of physicians may have an additional practice location in another Oregon county, and these additional locations are not identified in this report.

Employment data for pharmacists and pharmacy technicians in retail stores are for 2010 and based on unpublished staffing patterns from OED's 2010-2020 Occupational Projections.<sup>3</sup>

***One cautionary note:*** The data presented in this report is not directly comparable to the data presented in the 2010 report, *The Economic Contributions of Oregon's Physician Practices*, due to methodological modifications. This includes improvements in physician and employment data collection, revisions to economic data and economic multipliers, and administrative (non-economic) changes in industry and employment data reporting.

## **Physician Contribution to Employment**

Physicians and physician practices generate jobs by employing staff, referring patients to other local professionals, and prescribing medicine purchased from a local pharmacy. Physicians also contribute to employment at businesses that support their practices, such as accounting firms and janitorial services. People who work at a physician practice or at a business directly supported by that practice buy goods and services from local merchants, producing a multiplier effect that supports another layer of the workforce. Local grocery stores, restaurants, retail stores, and others are also affected by this ripple of economic activity.

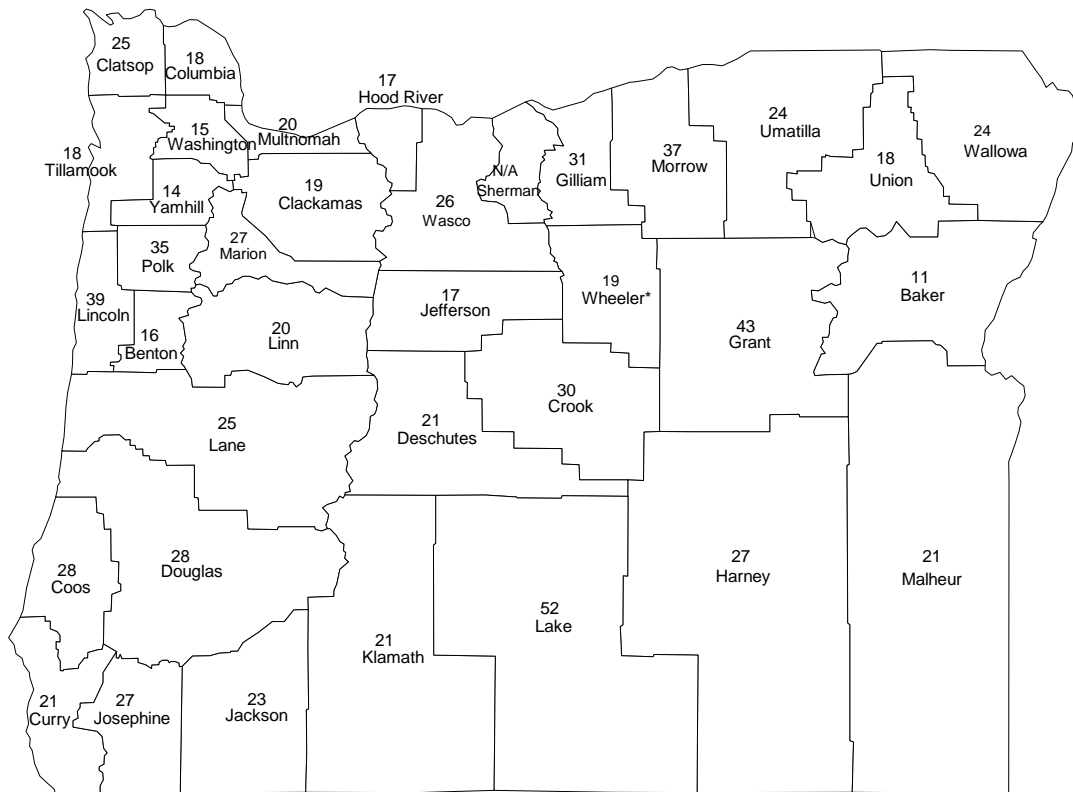
***Direct Employment.*** Statewide in 2011, Oregon's physicians contributed 138,368 jobs through direct employment. Direct employment represents the annual average employment of physicians and those who provide patient care under the supervision or referral of physicians. This includes employment at physicians' offices, outpatient care centers, labs, home health care services, other ambulatory health care services, hospitals, nursing care facilities, pharmacies and drug stores. Employment figures include both full- and part-time workers.

Statewide on average, one physician contributed 12 direct jobs to the state's labor market. Lake County, with six physicians, ranked higher than any other county with an average of 40 direct jobs per physician. Grant County, with seven physicians, averaged 33 jobs per physician. Morrow County, with five physicians, averaged 31 jobs per physician.

**Total Employment Contribution.** The total employment contribution of physician practices is the direct employment estimate plus the economic ripples: the indirect and induced effects. These include employment at businesses providing goods and services to physician practices and physician-related firms, and employment supported by the household spending of physicians and their related and supported firms. Statewide, Oregon’s physician practices contributed 256,432 total jobs.

Looking at the average number of direct, indirect and induced jobs per physician, one physician contributed 23 total jobs on average to the state’s labor market. In Lake County, a single physician supported 52 total jobs in the county (Figure 1). In Grant County, on average a physician contributed 43 jobs and in Lincoln County the average was 39 total jobs per physician.

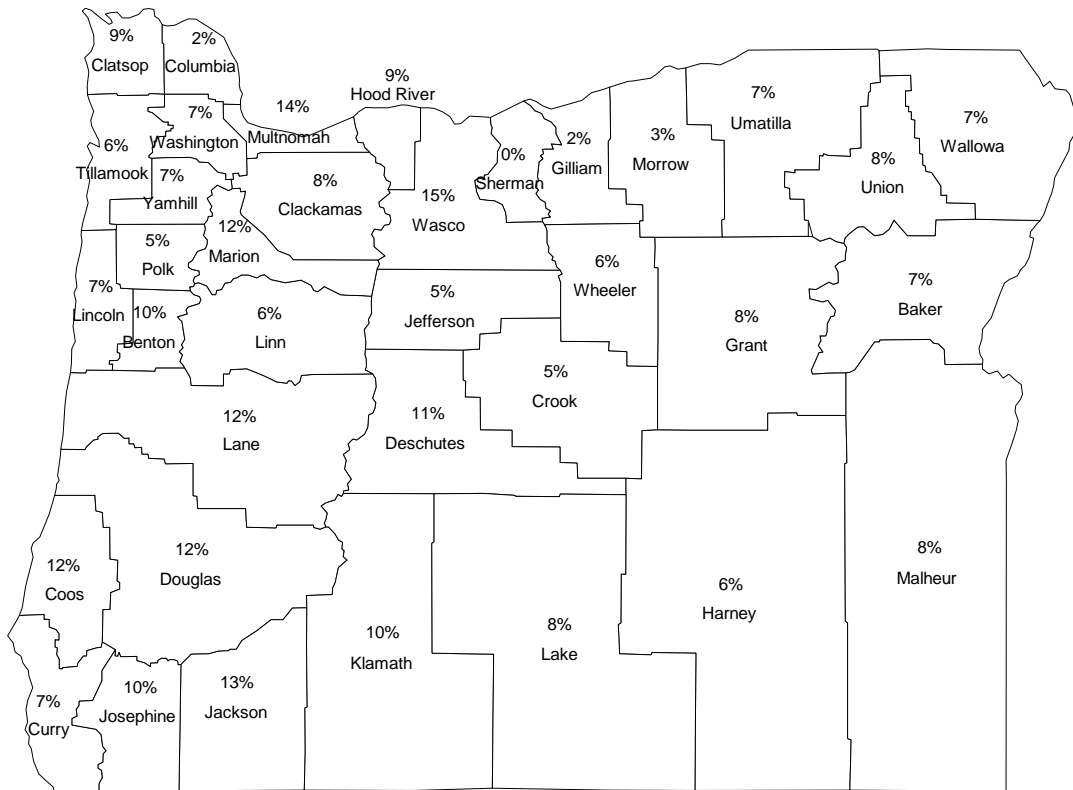
**Figure 1: Total 2011 Employment Contribution per Physician by County**



**Percentage of Physician Contributed Jobs in Labor Market.** The physician-contributed share of jobs is the percentage of jobs in the county that are supported by physicians and physician-related employment. It is calculated by dividing the total employment contribution of physicians by the total number of jobs in the county. Statewide, physician-contributed jobs totaled 12% of the state’s labor market.

Physician-contributed jobs play major roles in the economies of most Oregon counties. In Wasco County, physician-contributed jobs made up 15% of the total county labor market (Figure 2). Physician-contributed jobs made up 14% of the county labor market in Multnomah County and 13% in Jackson County. In Coos, Douglas, Lane and Marion, physician-contributed jobs made up 12% of those counties' labor markets.

**Figure 2: Percentage of Physician Contributed Jobs in County Labor Markets (2011)**



**Physician Contribution to Gross Domestic Product (GDP)**

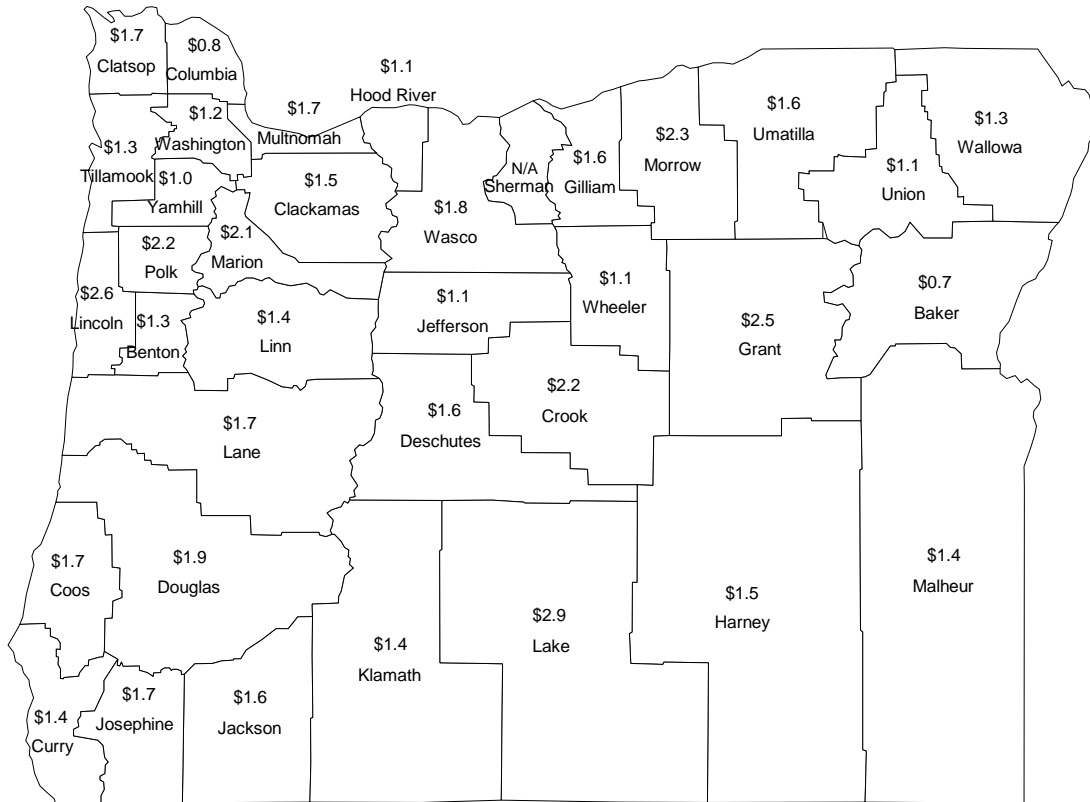
The federal Bureau of Economic Analysis estimated Oregon’s 2011 GDP at \$186.228 billion.<sup>4</sup> Statewide, physician total value added activity contributed an estimated \$18.79 billion, or 10.1% of the state’s GDP in 2011.

Total value added and contributed by physicians is an estimate of the total employee compensation, proprietary income, other property income, and indirect business taxes earned or paid by physicians and physician-related firms, and businesses that support those firms plus businesses that provide goods and services to households with earnings from those firms and businesses. Total value added contribution is not a measure of the cost of health care.

A county's GDP is the sum of all value added within the county; therefore, the physician contributed total value added is the portion of county GDP attributed to physicians. In Multnomah County, the estimated physician contribution to the 2011 GDP was \$6.1 billion. In Washington County, the estimated physician contribution to GDP was \$1.6 billion and in Marion County it was \$1.5 billion. Even Sherman County, where no physician listed a practice address in the OMB database, benefited from physician total value added contribution to that county's GDP (\$200,000).

At the county level per physician, the average estimated total value added contribution to GDP ranged from \$2.9 million in Lake County to \$700,000 in Baker County (Figure 3).

**Figure 3: Total Value Added Contribution to County GDP per Physician (2011 \$Millions)**

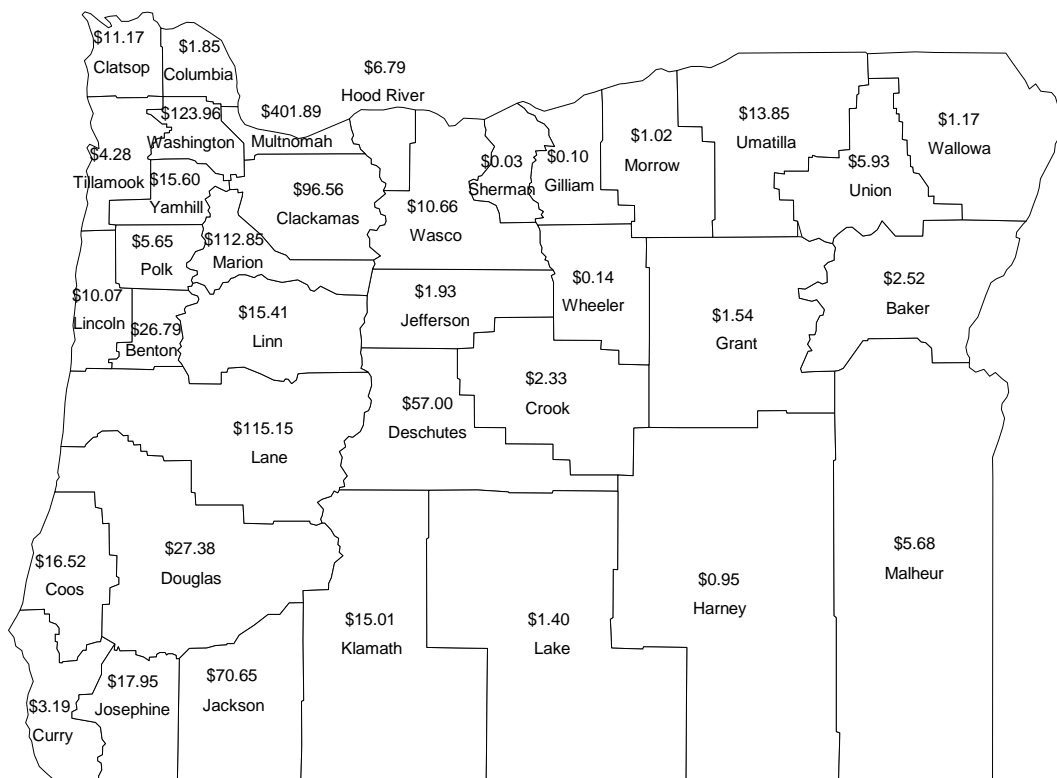


**Physician Contribution to State and Local Taxes**

The study identified the estimated taxes paid to state and local governments through the total direct contribution of physicians and physician-related employment. Statewide, in 2011, the estimated total direct contribution to state and local taxes by Oregon's physicians was \$1.48 billion. This includes taxes paid on employee compensation, indirect business taxes, taxes paid by households, and taxes paid by corporations.

Across Oregon's 36 counties in 2011, Multnomah County had the highest combined total estimated state and local tax contribution attributed to physicians at \$402 million (Figure 4). Washington County had the second highest at \$124 million and Lane County followed at \$115 million. Marion County's physicians contributed an estimated \$113 million to state and local taxes.

**Figure 4: Estimated Total State and Local Tax Contributions related to Physicians (2011 \$Millions)**



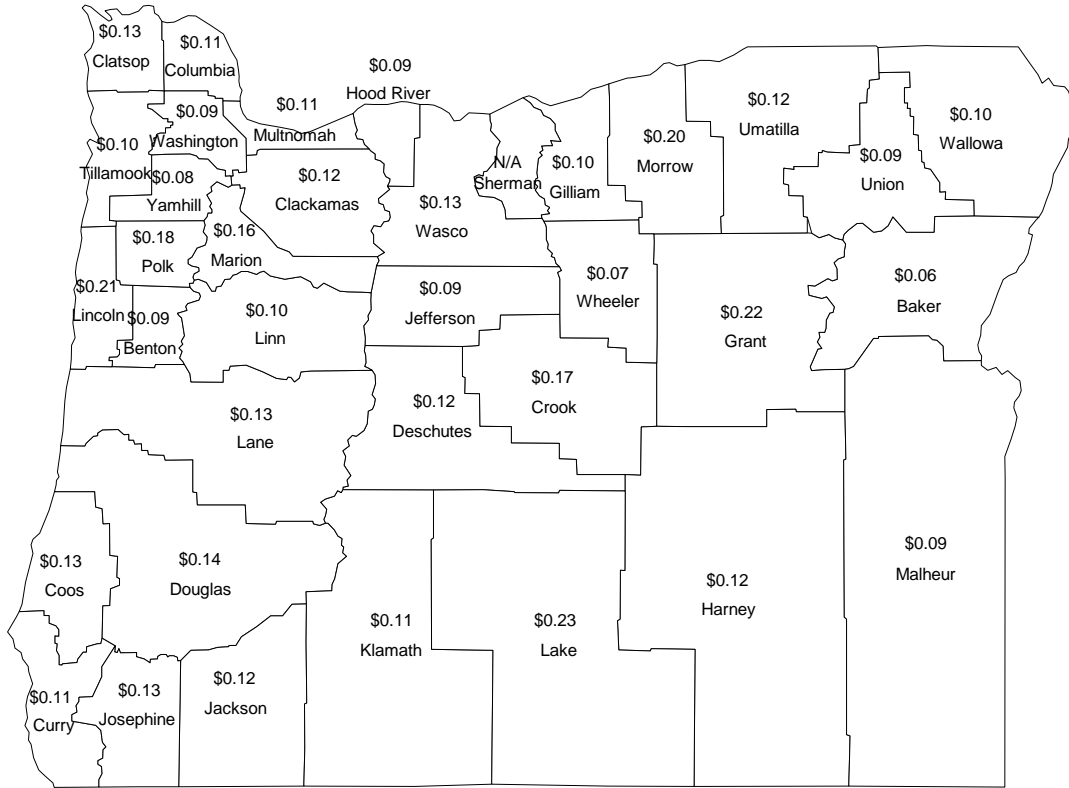
Dividing the estimated state and local tax contribution by the number of physicians provides an average per-physician estimate of the tax contribution from physicians and physician-related employment. Statewide, the average estimated state and local tax contribution of physician-related employment per physician was \$140,000. At the county level, the estimated state and local tax contribution per physician ranged from \$60,000 to \$230,000 (with the exception of Sherman County where no physician practice address was identified in the OMB licensing database) (Figure 5).

On average in Lake County, a single physician supported 40 direct jobs and contributed \$230,000 in 2011 state and local taxes as a result of this physician-related employment. In Grant County, on average a physician supported 33 direct jobs and generated \$220,000 in state and local taxes through physician-related employment. A Morrow County physician, on average, supported 31 direct jobs and generated \$200,000 in state and local taxes from physician-related employment. In



Polk County, on average a physician supported 28 direct jobs and \$180,000 in state and local taxes through physician-related employment.

**Figure 5: Estimated State and Local Tax Contributions per Physician (2011 \$Millions)**



**Discussion**

This study quantifies the economic contributions of Oregon’s physicians to county and state economies. Oregon’s physicians not only provide health care services to the residents of their respective communities, they are also key economic drivers. The resulting economic multiplier effect of physician practices generates jobs, increases household incomes, and contributes to state and local taxes.

Conversely, the absence or loss of a physician may not only affect health care access but may also affect a county economy, impacting jobs, businesses, county GDP, and tax revenue.<sup>5</sup> In rural areas where fewer physicians practice, residents may find it necessary to travel out of the county to obtain health care services and may also use the opportunity to purchase goods and services that might otherwise be obtained locally.<sup>6,7</sup>

Understanding the multiple economic contributions of a physician’s practice informs recruitment and retention activities, investments in physician workforce development, and community engagement.

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**Appendix A: Table of the Economic Contributions of Physicians to Oregon Counties (2011)**

Area	Number of Physicians	Direct Employment (jobs)	Jobs per Physician	Total Employment Contribution (jobs)	Total Employment Contribution (jobs) per Physician	Total Number of Jobs in Area	Physician Contributed Jobs Share of Total Jobs	Total Value Added Contribution to Area GDP (2011 \$millions)	Total Value Added Contribution per Physician (2011 \$millions)	Estimated State and Local Tax Contribution Related to Physicians (2011 \$millions)	Estimated Tax Contribution Related to Physicians per Physician (2011 \$millions)
Baker	44	398	8	533	11	7,454	7%	\$31.4	\$0.7	\$2.52	\$0.06
Benton	296	3,242	10	5,064	16	53,149	10%	\$370.9	\$1.3	\$26.79	\$0.09
Clackamas	838	9,946	11	16,817	19	214,535	8%	\$1,288.8	\$1.5	\$96.56	\$0.12
Clatsop	83	1,361	15	2,119	25	24,258	9%	\$140.4	\$1.7	\$11.17	\$0.13
Columbia	17	257	14	320	18	15,512	2%	\$14.4	\$0.8	\$1.85	\$0.11
Coos	125	2,446	19	3,631	28	30,249	12%	\$211.4	\$1.7	\$16.52	\$0.13
Crook	14	298	20	440	30	8,872	5%	\$30.1	\$2.2	\$2.33	\$0.17
Curry	29	466	15	638	21	9,763	7%	\$40.2	\$1.4	\$3.19	\$0.11
Deschutes	480	5,729	11	10,334	21	92,087	11%	\$747.2	\$1.6	\$57.00	\$0.12
Douglas	194	3,598	18	5,632	28	48,382	12%	\$363.0	\$1.9	\$27.38	\$0.14
Gilliam	1	24	23	32	31	1,776	2%	\$1.6	\$1.6	\$0.10	\$0.10
Grant	7	237	33	311	43	3,741	8%	\$17.4	\$2.5	\$1.54	\$0.22
Harney	8	174	21	223	27	3,564	6%	\$12.3	\$1.5	\$0.95	\$0.12
Hood River	77	957	11	1,384	17	15,369	9%	\$88.4	\$1.1	\$6.79	\$0.09
Jackson	566	7,987	13	13,709	23	108,306	13%	\$907.6	\$1.6	\$70.65	\$0.12
Jefferson	22	300	13	396	17	8,246	5%	\$23.7	\$1.1	\$1.93	\$0.09
Josephine	135	2,557	18	3,821	27	36,714	10%	\$231.1	\$1.7	\$17.95	\$0.13
Klamath	137	1,972	13	3,023	21	31,573	10%	\$190.4	\$1.4	\$15.01	\$0.11
Lake	6	248	40	317	52	3,942	8%	\$17.3	\$2.9	\$1.40	\$0.23
Lane	871	12,909	14	22,241	25	189,138	12%	\$1,497.3	\$1.7	\$115.15	\$0.13
Lincoln	48	1,166	23	1,909	39	27,513	7%	\$125.8	\$2.6	\$10.07	\$0.21
Linn	147	2,206	14	3,107	20	51,497	6%	\$199.9	\$1.4	\$15.41	\$0.10
Malheur	61	1,074	17	1,363	21	16,786	8%	\$82.5	\$1.4	\$5.68	\$0.09
Marion	721	12,069	16	19,983	27	171,220	12%	\$1,504.0	\$2.1	\$112.85	\$0.16
Morrow	5	159	31	190	37	6,651	3%	\$11.3	\$2.3	\$1.02	\$0.20
Multnomah	3,661	43,987	11	77,295	20	559,815	14%	\$6,136.6	\$1.7	\$401.89	\$0.11
Polk	32	924	28	1,156	35	25,547	5%	\$68.9	\$2.2	\$5.65	\$0.18
Sherman	0	5	N/A	6	N/A	1,689	0%	\$0.2	N/A	\$0.03	N/A
Tillamook	42	509	11	813	18	12,858	6%	\$53.1	\$1.3	\$4.28	\$0.10
Umatilla	113	1,961	16	2,824	24	41,302	7%	\$177.9	\$1.6	\$13.85	\$0.12
Union	64	819	12	1,196	18	14,506	8%	\$71.8	\$1.1	\$5.93	\$0.09
Wallowa	12	225	18	302	24	4,573	7%	\$15.1	\$1.3	\$1.17	\$0.10
Wasco	79	1,461	17	2,118	26	13,855	15%	\$141.9	\$1.8	\$10.66	\$0.13
Washington	1,367	14,191	9	21,986	15	297,224	7%	\$1,631.1	\$1.2	\$123.96	\$0.09
Wheeler*	2	32	15	39	19	656	6%	\$2.1	\$1.1	\$0.14	\$0.07
Yamhill	199	2,289	11	3,083	14	44,250	7%	\$191.6	\$1.0	\$15.60	\$0.08
<b>Oregon</b>	<b>10,509</b>	<b>138,368</b>	<b>12</b>	<b>256,432</b>	<b>23</b>	<b>2,196,570</b>	<b>12%</b>	<b>\$18,788.0</b>	<b>\$1.8</b>	<b>\$1,481.14</b>	<b>\$0.14</b>

\*Oregon Employment Department data suppressed to protect confidentiality. Using 2011 IMPLAN estimates of employment.