

Oregon’s Advanced Manufacturing Cluster

Advanced Manufacturing sectors are relatively small in Oregon compared to the rest of the U.S., but they are growing faster. Employment and patent activity in Aerospace & Defense and Biomedical sectors are moving closer to the national average. The Aerospace & Defense sector is paying wages comparable to those in the rest of the U.S., but the Biomedical sector is lower. Employment in Metals & Machinery sector grew in Oregon while it diminished in the rest of the U.S. Strong R&D spending in machinery is helping Oregon become more competitive.

Advanced Manufacturing Cluster Performance Metrics

Oregon’s industry cluster performance relative to the United States

Advanced Manufacturing	Oregon		U.S.		Competitiveness Relative to U.S.
	2019	Annual Growth since 2007	2019	Annual Growth since 2007	
Employment	61,491	1.4%	6,425,229	0.2%	Higher
Establishments	3,533	2.3%	290,170	1.9%	Higher
Average Wage	\$71,023	2.8%	\$84,450	2.7%	On Par
R&D (in Millions, annual) ¹	\$598	12.2%	\$99,331	3.6%	Higher
Patents (estimated, annual) ²	397	3.2%	41,210	7.5%	Lower
Location Quotient	0.74				
Projected 10-Year Employment Growth	6.7%				

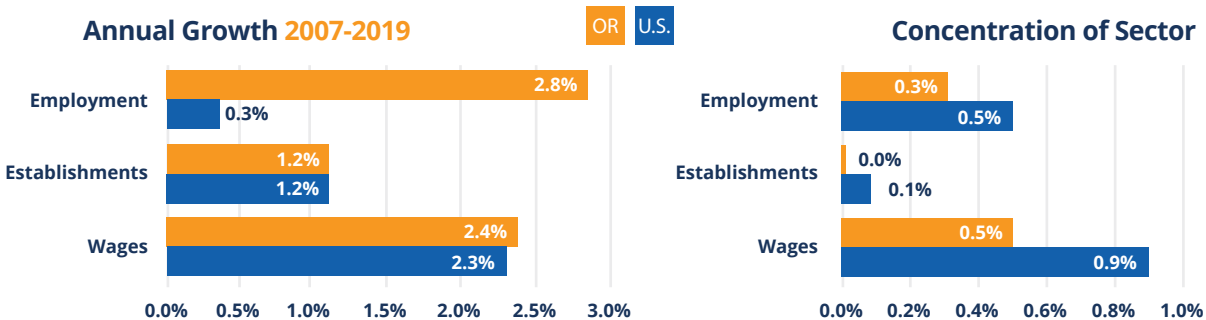
¹ Research and development paid for and performed by companies in 2017 and growth since 2011.

² Estimate of patents granted in 2017 based on 2007 to 2015 data and growth since 2007.

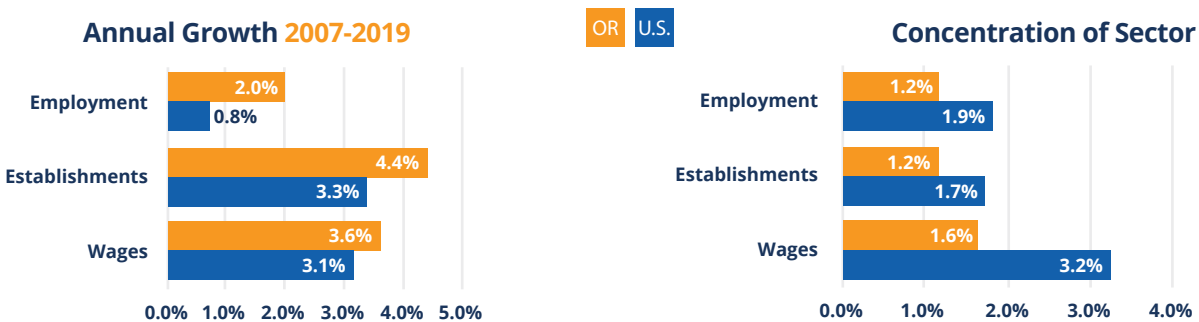
Note: A Location quotient (LQ) measures the concentration or specialization of an industry compared to a larger geography. For these handouts, we compare Oregon’s economic clusters and subclusters to the United States. An LQ is calculated by taking the region’s share of an economic indicator (jobs, wages, establishments, etc.) relative to the share of that indicator in the larger geography.

Sector Snapshot

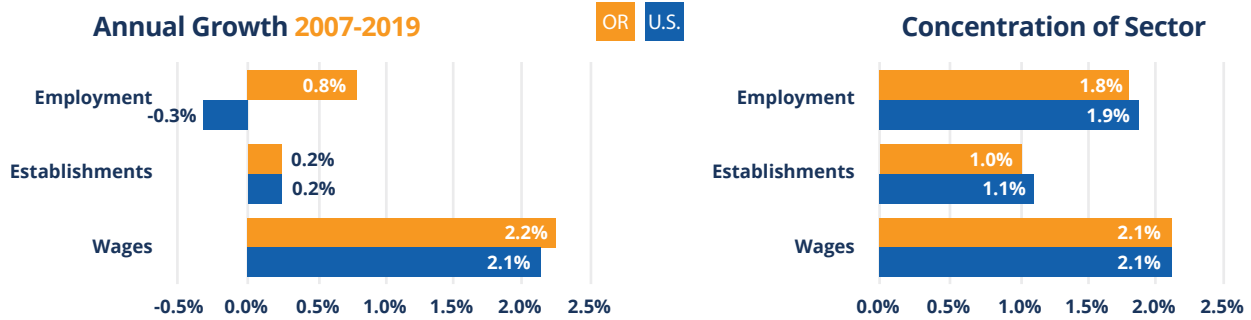
Aerospace & Defense	Oregon		U.S.		Competitiveness Relative to U.S.
	2019	Annual Growth since 2007	2019	Annual Growth since 2007	
Employment	5,174	2.8%	731,475	0.3%	Higher
Establishments	74	1.2%	5,503	1.2%	On Par
Average Wage	\$93,077	2.4%	\$103,665	2.3%	On Par
Location Quotient	0.54				
Projected 10-Year Employment Growth	N/A				



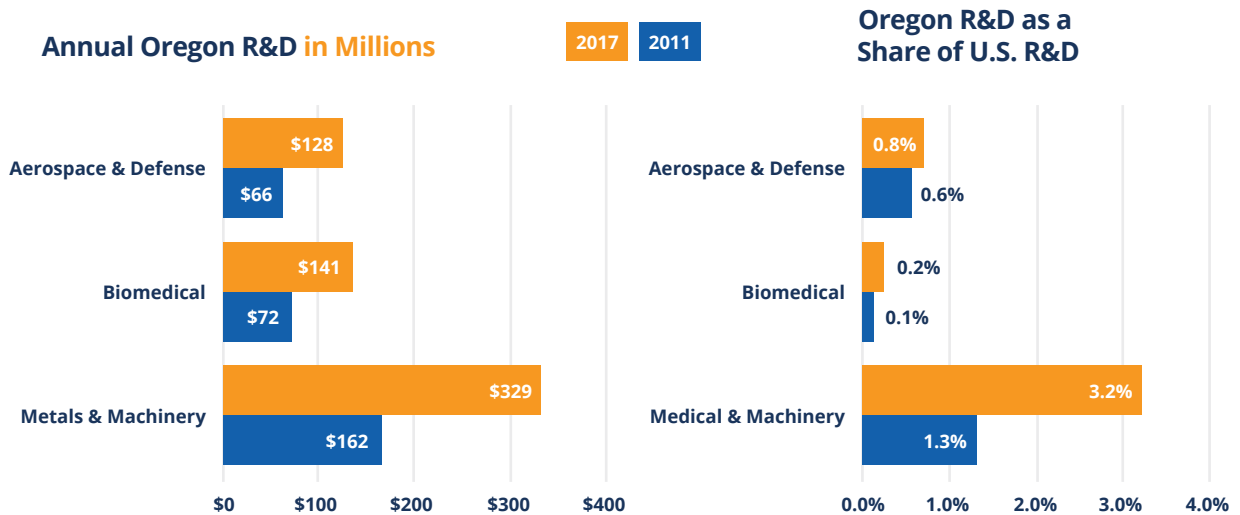
Biomedical	Oregon		U.S.		Competitiveness Relative to U.S.
	2019	Annual Growth since 2007	2019	Annual Growth since 2007	
Employment	22,118	2.0%	2,819,996	0.8%	Higher
Establishments	1,940	4.4%	173,102	3.3%	Higher
Average Wage	\$77,877	3.6%	\$99,610	3.1%	Higher
Location Quotient	0.60				
Projected 10-Year Employment Growth	N/A				



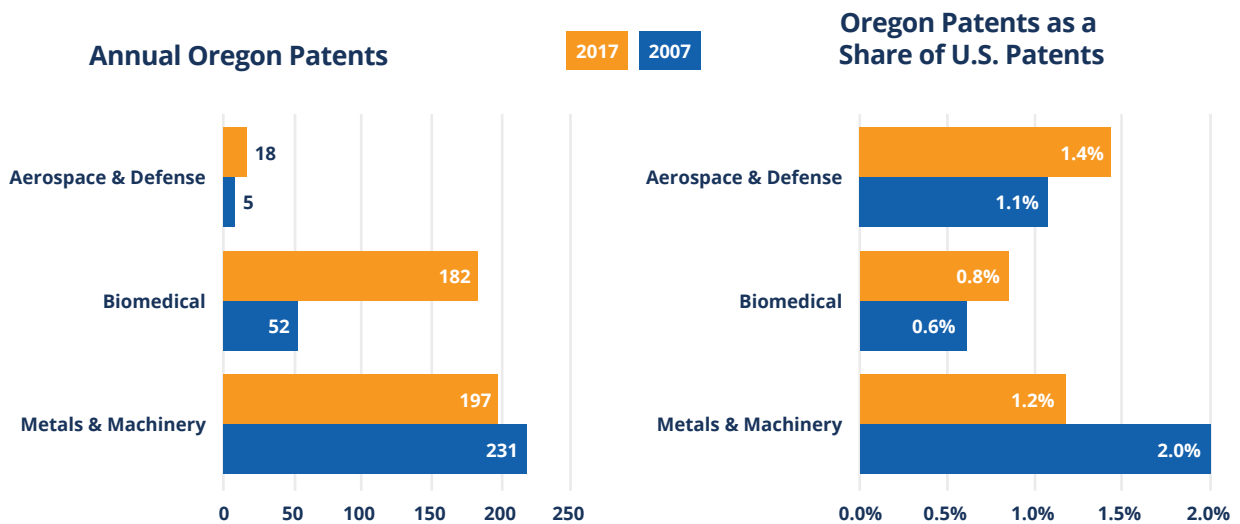
Metals & Machinery	Oregon		U.S.		Competitiveness Relative to U.S.
	2019	Annual Growth since 2007	2019	Annual Growth since 2007	
Employment	34,199	0.8%	2,873,758	-0.3%	Higher
Establishments	1,519	0.2%	111,565	0.2%	On Par
Average Wage	\$63,254	2.2%	\$64,682	2.1%	On Par
Location Quotient	0.92				
Projected 10-Year Employment Growth	6.7%				



R&D by Sector



Patents by Sector



Sources:

U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW), 2007 and 2019.

Oregon Employment Department, Oregon Industry Employment Forecast, 2017-2027.

National Science Foundation (NSF), Business Enterprise Research and Development Survey (BERD), 2011 and 2017.

U.S. Patent and Trademark Office, Patent Technology Monitoring Team (PTMT), Patenting by Geographic Region (State and Country), 2007 to 2015.