

California

Advanced industries employ

1,722,753

full-time workers. (2015)

These direct jobs supports an additional

1,378,200

indirect jobs in other industries in
the region.

Advanced industries produce

\$420.3

billion dollars in output in the region.
(2015, 2009 Chained)

Advanced industries pay, on average

\$131,905

dollars per year (2015).

Advanced industries directly
account for

10.3%

of all jobs in the region.

This employment share is

#7

among all states.

This accounts for

19.2%

of all output in the region (2015).

This compares to average pay of

\$63,257

for all industries (2015).

Advanced industry annual average growth, 2013-2015

OUTPUT

JOB

3.95%

RANK:
#9

2.70%

3.33%

RANK:
#12

2.46%

California

U.S.

California

U.S.

What are Advanced Industries?

The Metropolitan Policy Program at Brookings defines advanced industries as those that: 1) Spend at least \$450 per worker per year on R&D and 2) employ at least 20 percent of their workforce in STEM-intensive occupations. The definition identifies 50 4-digit NAICS industries across the manufacturing, energy, and services sectors that together constitute the advanced industries super-sector.

Why do Advanced Industries Matter?

Advanced industries encompass the nation's "tech" sector at its broadest and most consequential. They represent a sizable economic anchor for the U.S. economy and have led the post-recession employment recovery. Their competitiveness and growth are prerequisites for any future broadly shared prosperity. As such, the sector encompasses the country's best shot at supporting innovative, inclusive, and sustainable growth. Advanced industries are present in nearly every U.S. region, but the sector's geography is uneven.

For More Information

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DATA NOTES

All figures reflect Brookings analysis of data from Moody's Analytics.

California

Twenty-Five Largest Advanced Industries (2015)

There are 13 advanced industries in California with LQs over 1.5. LQs over 1.5 indicate specialization †

Industry 4-Digit NAICS Code	Industry Title	Industry Employment (2015)	Industry Location Quotient (LQ) † 2015	Industry Share of Total Advanced Industries Employment (2015)	Industry Employment Annual Growth		Industry Share of Total Advanced Industries Output (2015)	Industry Output Annual Growth	
					2010- 2013	2013- 2015		2010- 2013	2013- 2015
5415	Computer Systems Design	286,190	1.32	16.6%	6.9%	8.4%	12.1%	8.5%	11.6%
5416	Management Consulting	200,340	1.38	11.6%	7.3%	0.6%	7.7%	4.0%	6.1%
5413	Engineering	169,600	1.06	9.8%	1.8%	1.1%	6.1%	0.3%	4.9%
5417	R&D Services	135,770	1.80	7.9%	2.5%	3.2%	6.8%	3.3%	8.1%
3344	Semiconductors	85,540	2.04	5.0%	-0.5%	-0.5%	5.5%	7.6%	3.7%
3345	Precision Instruments	82,160	1.81	4.8%	-2.8%	2.6%	4.8%	3.5%	1.7%
5191	Web Search Portals and Internet Publishing	81,660	2.95	4.7%	15.5%	16.4%	7.0%	29.0%	6.2%
3364	Aircraft Products & Parts	76,530	1.37	4.4%	-0.4%	3.0%	2.9%	-1.9%	0.0%
3341	Computer Equipment	68,120	3.69	4.0%	3.5%	4.2%	7.2%	10.8%	8.9%
5112	Software Products	61,730	1.63	3.6%	6.1%	7.2%	7.0%	8.3%	8.9%
3391	Medical Equipment & Supplies	52,820	1.51	3.1%	2.7%	-1.3%	2.4%	-1.1%	2.3%
3254	Pharmaceuticals	48,090	1.51	2.8%	1.7%	2.7%	6.9%	4.9%	1.3%
6215	Medical and Diagnostic Laboratories	33,610	1.14	2.0%	1.6%	2.3%	0.7%	1.1%	2.0%
5182	Data Processing & Hosting	32,940	0.97	1.9%	9.0%	17.0%	1.2%	-4.0%	11.0%
3399	Misc. Manufacturing	31,430	0.98	1.8%	0.6%	1.0%	1.0%	-2.6%	2.1%
3342	Communications Equipment	19,520	1.94	1.1%	-4.8%	-9.7%	1.4%	3.4%	-5.4%
2211	Power Generation & Supply	18,860	0.42	1.1%	-2.7%	-3.9%	1.9%	-3.9%	-11.6%
5172	Wireless Telecom Carriers	18,380	1.20	1.1%	-5.8%	-2.3%	2.2%	0.4%	9.0%
3339	General Purpose Machinery	16,090	0.53	0.9%	0.6%	0.0%	0.5%	1.7%	-3.1%
3332	Industrial Machinery	15,620	1.22	0.9%	1.9%	5.8%	0.5%	2.6%	3.9%
3359	Misc. Electrical Equipment	13,500	0.91	0.8%	3.5%	4.0%	0.3%	-2.1%	1.8%
3363	Motor Vehicle Parts	13,320	0.21	0.8%	2.4%	1.5%	0.3%	-1.1%	-0.2%
3241	Petroleum & Coal Products	12,480	1.00	0.7%	-4.6%	-3.9%	2.9%	-16.2%	-1.1%
5152	Cable and Other Subscription Programming	12,440	1.76	0.7%	-5.8%	-4.9%	1.9%	3.6%	-4.0%
3333	Commercial & Service Machinery	12,230	1.21	0.7%	2.6%	2.1%	0.4%	2.5%	0.0%
IFG	Advanced industries manufacturing	650,080	1.02	37.7%	-0.1%	1.3%	41.1%	1.6%	2.2%
	Advanced industries energy	30,260	0.42	1.8%	-0.7%	-1.3%	5.0%	0.4%	-11.2%
	Advanced industries services	1,042,420	1.37	60.5%	4.7%	4.8%	54.0%	6.1%	7.3%
	ADVANCED INDUSTRIES TOTAL	1,722,750	1.18	100.0%	2.6%	3.3%	100.0%	3.7%	4.0%

† Location quotients are a measure of specialization for an industry using employment. A LQ of over 1 indicates that an industry employs more workers, as a share of total employment, than the nation as a whole.