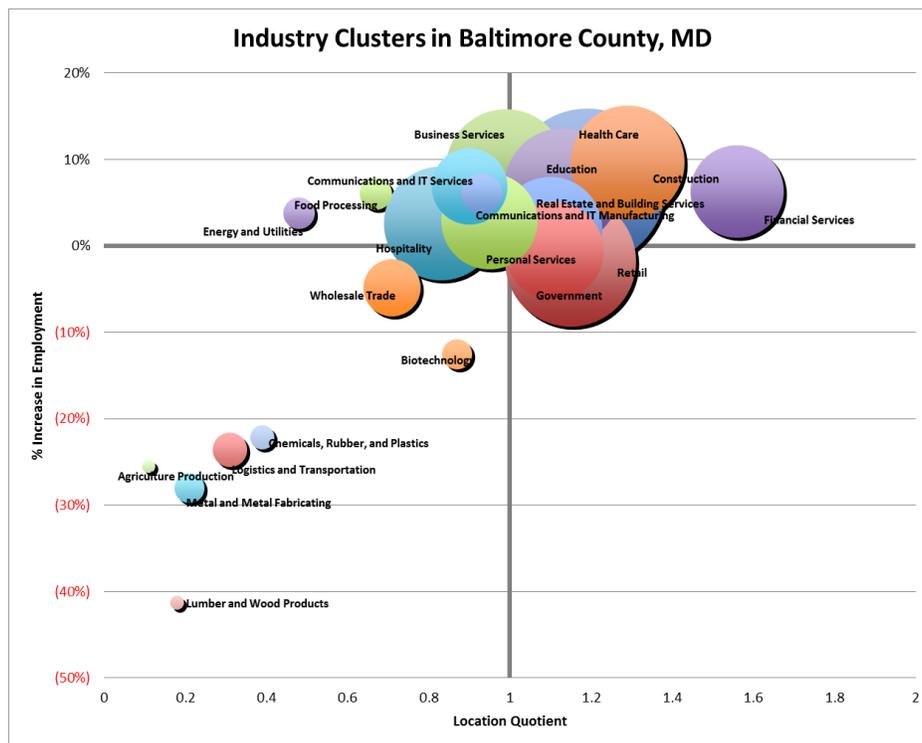


An Introduction to Industry Clusters



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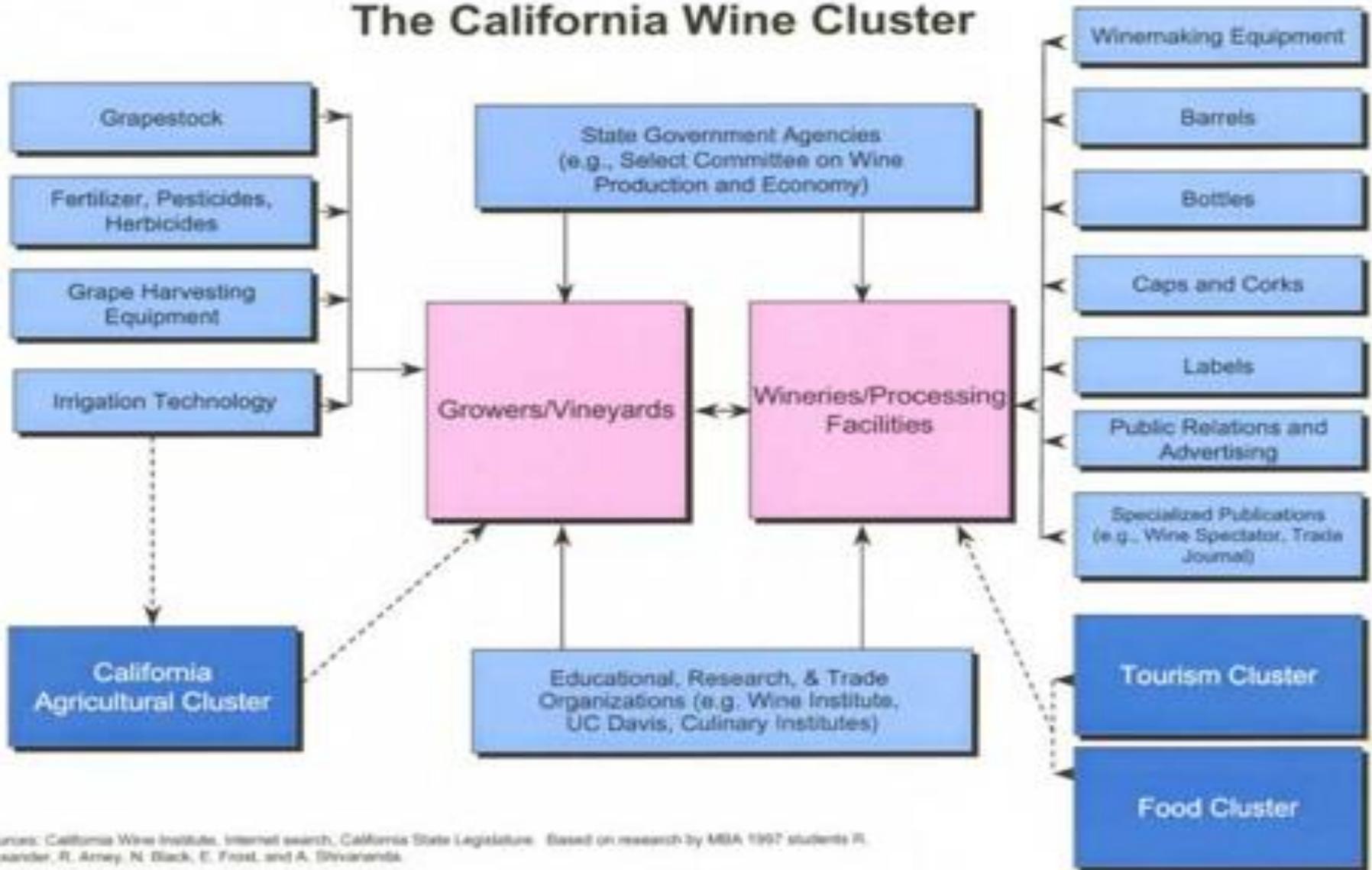
The Norwegian Maritime Cluster



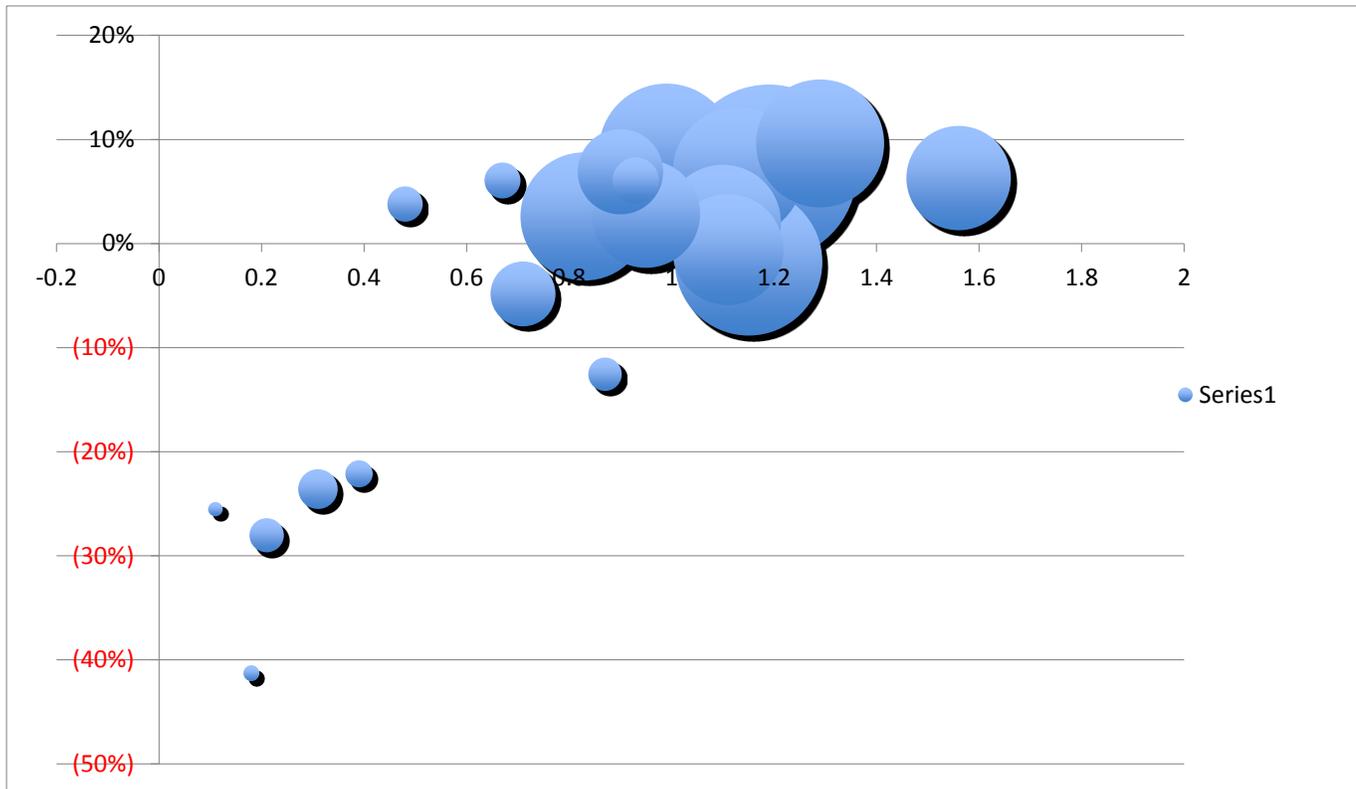
- Norway has 0.1% of the world's population, represents 1.0% of the world's economy, yet accounts for 10% of world seaborne transportation

Source: Sven Ulring, presented to M.I.T.

The California Wine Cluster

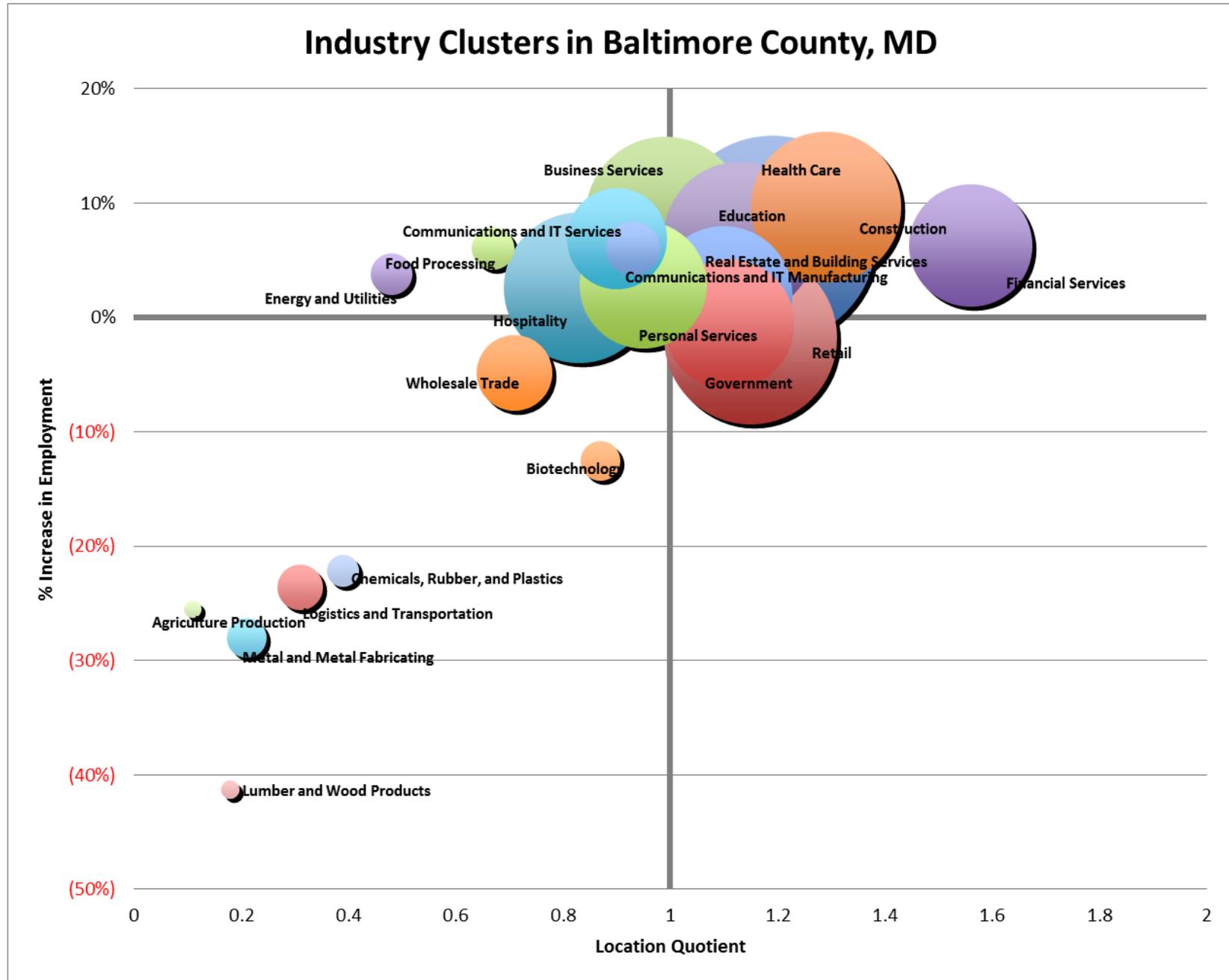


Sources: California Wine Institute, Internet search, California State Legislature. Based on research by MBA 1997 students R. Alexander, R. Arney, N. Black, E. Frost, and A. Shivananda.



Health Care	1.19	7%	70,522
Retail	1.15	(2%)	49,624
Business Services (NEC)	0.99	9%	41,870
Education	1.13	7%	39,156
Hospitality	0.83	3%	37,494
Construction	1.29	10%	37,401
Real Estate and Building Services	1.1	2%	30,740
Government	1.11	(1%)	28,199
Personal Services	0.95	3%	26,676
Financial Services	1.56	6%	24,913
Communications and IT Services	0.9	7%	16,635
Wholesale Trade	0.71	(5%)	9,577
Communications and IT Manufacturing (including Printing)	0.93	6%	4,948
Logistics and Transportation	0.31	(24%)	3,568
Food Processing	0.67	6%	2,950
Energy and Utilities	0.48	4%	2,856
Metal and Metal Fabricating	0.21	(28%)	2,663
Biotechnology and Medical Equipment	0.87	(13%)	2,540
Chemical, Rubber, and Plastics	0.39	(22%)	1,700
Lumber, Paper, and Wood Products	0.18	(41%)	570
Agriculture Production	0.11	(26%)	487

Data Sources and Calculations: This report uses state data from the following agencies: Maryland Department of Labor, Licensing and Regulation, Office of Labor Market Analysis and Information



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Industry Group Jobs and Earnings Comparison

Group	2015 Jobs	2025 Jobs	Earnings Per Worker	Establishments
Health Care	66,001	70,522	\$58,198	2,652
Retail	50,512	49,624	\$34,566	2,723
Business Services (NEC)	38,455	41,870	\$65,140	2,899
Education	36,650	39,156	\$62,662	510
Hospitality	36,542	37,494	\$30,674	2,017
Construction	34,115	37,401	\$71,516	2,420
Real Estate and Building Services	30,136	30,740	\$59,414	2,412
Government	28,361	28,199	\$110,551	74
Personal Services	25,939	26,676	\$33,559	2,468
Financial Services	23,438	24,913	\$99,367	1,458
Communications and IT Services	15,562	16,635	\$83,617	1,128
Wholesale Trade	10,063	9,577	\$76,770	809
Logistics and Transportation	4,670	3,568	\$53,009	388
Communications and IT Manufacturing (including Printing)	4,667	4,948	\$66,256	160
Metal and Metal Fabricating	3,701	2,663	\$82,194	128
Biotechnology and Medical Equipment	2,905	2,540	\$105,395	113
Food Processing	2,781	2,950	\$65,861	59
Energy and Utilities	2,751	2,856	\$108,501	88
Chemical, Rubber, and Plastics	2,183	1,700	\$90,952	85
Lumber, Paper, and Wood Products	971	570	\$64,838	72
Agriculture Production	654	487	\$37,874	40

Industry Group Growth Comparison

Group	2015 Jobs	2025 Jobs	Change	% Change	
Construction	34,115	37,401	3,286	10%	1.29
Business Services (NEC)	38,455	41,870	3,415	9%	0.99
Communications and IT Services	15,562	16,635	1,073	7%	0.9
Health Care	66,001	70,522	4,521	7%	1.19
Education	36,650	39,156	2,506	7%	1.13
Financial Services	23,438	24,913	1,474	6%	1.56
Food Processing	2,781	2,950	168	6%	0.67
Communications and IT Manufacturing (including Printing)	4,667	4,948	281	6%	0.93
Energy and Utilities	2,751	2,856	105	4%	0.48
Personal Services	25,939	26,676	737	3%	0.95
Hospitality	36,542	37,494	953	3%	0.83
Real Estate and Building Services	30,136	30,740	604	2%	1.1
Government	28,361	28,199	(163)	(1%)	1.11
Retail	50,512	49,624	(888)	(2%)	1.15
Wholesale Trade	10,063	9,577	(486)	(5%)	0.71
Biotechnology and Medical Equipment	2,905	2,540	(365)	(13%)	0.87
Chemical, Rubber, and Plastics	2,183	1,700	(483)	(22%)	0.39
Logistics and Transportation	4,670	3,568	(1,102)	(24%)	0.31
Agriculture Production	654	487	(167)	(26%)	0.11
Metal and Metal Fabricating	3,701	2,663	(1,037)	(28%)	0.21
Lumber, Paper, and Wood Products	971	570	(401)	(41%)	0.18

Industry Group Shift Share Comparison					
Group	Job Change	Ind Mix Effect	Nat Growth Effect	Expected Change	Competitive Effect
Communications and IT Manufacturing (including Printing)	281	(697)	513	(184)	466
Food Processing	168	(194)	306	112	57
Agriculture Production	(167)	(75)	72	(3)	(164)
Energy and Utilities	105	105	302	407	(302)
Lumber, Paper, and Wood Products	(401)	(160)	107	(54)	(347)
Chemical, Rubber, and Plastics	(483)	(253)	240	(13)	(470)
Financial Services	1,474	(581)	2,576	1,994	(520)
Construction	3,286	66	3,749	3,815	(529)
Biotechnology and Medical Equipment	(365)	35	319	354	(719)
Government	(163)	(2,181)	3,117	935	(1,098)
Metal and Metal Fabricating	(1,037)	(282)	407	125	(1,162)
Wholesale Trade	(486)	(427)	1,106	679	(1,165)
Communications and IT Services	1,073	554	1,710	2,264	(1,191)
Education	2,506	(48)	4,027	3,979	(1,474)
Logistics and Transportation	(1,102)	56	513	569	(1,671)
Real Estate and Building Services	604	(430)	3,312	2,882	(2,278)
Hospitality	953	181	4,016	4,197	(3,244)
Business Services (NEC)	3,415	2,454	4,226	6,680	(3,265)
Personal Services	737	1,248	2,850	4,098	(3,361)
Retail	(888)	(1,670)	5,551	3,881	(4,768)
Health Care	4,521	6,489	7,253	13,741	(9,220)

Industry Group Location Quotient Comparison				
Group	2015 Jobs	2015 LQ	2025 LQ	Percent Change LQ
Financial Services	23,438	1.49	1.56	5%
Health Care	66,001	1.25	1.19	(5%)
Construction	34,115	1.22	1.29	6%
Retail	50,512	1.18	1.15	(2%)
Real Estate and Building Services	30,136	1.11	1.10	0%
Education	36,650	1.10	1.13	3%
Government	28,361	1.08	1.11	3%
Biotechnology and Medical Equipment	2,905	1.04	0.87	(17%)
Personal Services	25,939	1.00	0.95	(5%)
Business Services (NEC)	38,455	0.99	0.99	(1%)
Communications and IT Services	15,562	0.90	0.90	0%
Hospitality	36,542	0.85	0.83	(1%)
Communications and IT Manufacturing (including Printing)	4,667	0.78	0.93	18%
Wholesale Trade	10,063	0.75	0.71	(5%)
Food Processing	2,781	0.62	0.67	9%
Energy and Utilities	2,751	0.49	0.48	(3%)
Chemical, Rubber, and Plastics	2,183	0.46	0.39	(16%)
Logistics and Transportation	4,670	0.42	0.31	(27%)
Metal and Metal Fabricating	3,701	0.29	0.21	(25%)
Lumber, Paper, and Wood Products	971	0.27	0.18	(33%)
Agriculture Production	654	0.14	0.11	(20%)

Data Sources and Calculations: This report uses state data from the following agencies: Maryland Department of Labor, Licensing and Regulation, Office of Labor Market Analysis and Information