Good Jobs in the Inland Empire:
Data Appendix

Photo Credit: Christina Morillo, Pexels

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CENTER FOR SOCIAL INNOVATION

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Appendix Summary

This data appendix provides additional insights, figures, tables, and data that supplement the Good Jobs in the Inland Empire report. We present tables and figures that take a deeper look at what good jobs mean, and how the share of good jobs differ by region, education level and over time.

We first compare the earning threshold of good jobs between our definition and the definitions from two existing reports by the Brookings Institute and the Federal Reserve Bank of Philadelphia. Using more recent data, we then show how the share of good jobs evolve when they are not only required to be high-paying, but also to be stable (full-time and full-year) and to provide benefits (employer-sponsored health insurance). Next, we present the differences in share of good jobs between workers with and without a BA degree. Following this, we show how the labor market tightness, defined as the number of vacant jobs divided by the number of unemployed persons,evolved over the past few years in the SCAG region.

Diving deeper, we show the change in employment shares for industries and occupations between 2006/07 and 2018/19. We list the top industries and occupations with the highest share of good jobs, as well as the highest concentration of good jobs. Lastly, we demonstrate that the COVID-19 pandemic has impacted industries and occupations differently in the short to medium term.

For additional questions please contact the Center for Social Innovation Research Manager, Gary Rettberg at Gary.Rettberg@ucr.edu.

Data Appendix

For this report we primarily use three sources of data. We use the American Community Survey for its large sample size to study the recovery from the Great Recession. We use the Current Population Survey for the most up-to-date data on the population and employment to study the effects of the pandemic on both and the state of the recovery. For both surveys we restrict the sample to persons aged 16 to 64. When using a national price deflator, we use the Consumer Price Index for All Urban Consumers from the Bureau of Labor Statistics. We use the Regional Price Parities from the Bureau of Economic Analysis to account for local price differences.

We use Labor Insights and Job Postings and Social Profile files from Burning Glass Technologies for historical and up-to-date information on online job postings. This data can be accessed at the following: https://www.burning-glass.com/.

Defining Good Jobs

There is a cottage industry providing tabulations of good jobs in local areas. While the concept of a good job universally centers around a job that provides stable and relatively high compensation to the workers therein, each producer of good job reports has a different definition. We focus on good jobs in Southern California, paying particular attention to each component of these definitions. We consider earnings, benefits, and weeks and hours of work. We further disaggregate by whether or not the job requires a college degree to assess the accessibility of good jobs.

Earnings

The most basic characteristic of a good job is the level of compensation. However, there is not a consensus around what constitutes relatively high earnings. There are two fundamentally different ways to approach this. Researchers at the Brookings Institution choose to define high compensation as earning above the local median income of a worker who has not earned a BA degree or higher.[1] This definition may be useful in showing what industries and occupations provide relatively high earnings in the area. However, since the share of sub-BA individuals with earnings above the threshold is the same in every community, this definition will not be informative regarding differences in job quality across locations.

A second way to define relatively high earnings is by choosing a national standard and directly adjusting for cost of living. With this definition, the share of sub-BA workers earning below or above the threshold will differ by geography and may allow us to compare the share of good jobs across locations. Researchers from the Federal Reserve Bank (FRB) choose this approach. They set their threshold to be the full-time, full-year equivalency of someone earning the national median hourly wage.[2] Since low-wage jobs are disproportionately part-time and part-year, this provides a threshold nationally at $37,690, somewhat higher than the average Brooking's threshold of $35,294.[3] We use the national median ($36,237) in earnings adjusted for costs of living. We can see from the left panel of Figure A1 that there are significant

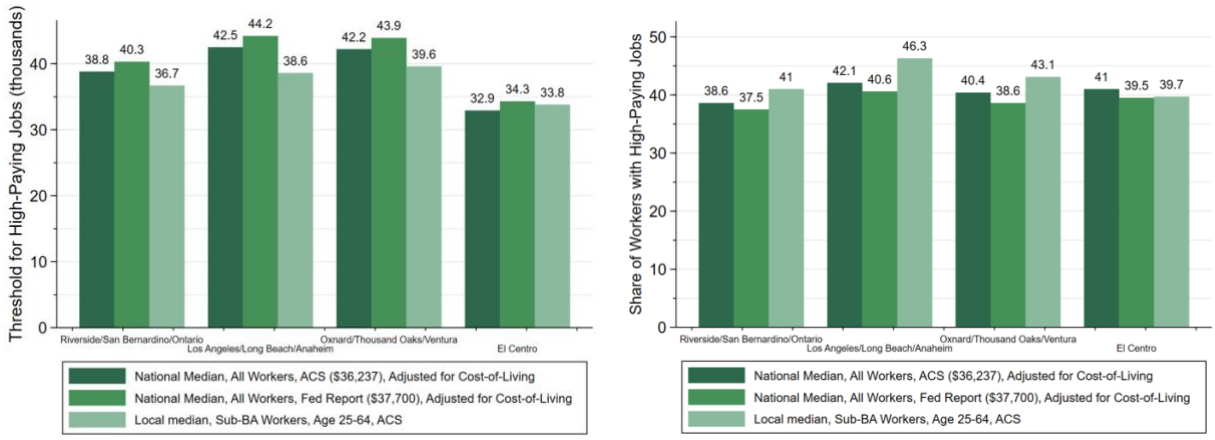
[1] https://www.brookings.edu/research/opportunity-industries/

[2] https://www.philadelphiafed.org/-/media/community-development/publications/special-reports/identifying_opportunity_occupations/opportunity_occupations_revisited.pdf?la=en

[3] All values are in 2017 dollars.

differences in the magnitude of these thresholds both across thresholds in the same location and across places with the same definition. For instance, in Riverside the threshold is $36,700 using the Brookings threshold and $40,300 with the definition from FRB. In LA and Orange County, the thresholds range from $38,600 to $44,200.

Figure A1: Comparison of Definitions for Good Job, Threshold (left) and Share of Good Jobs (right)



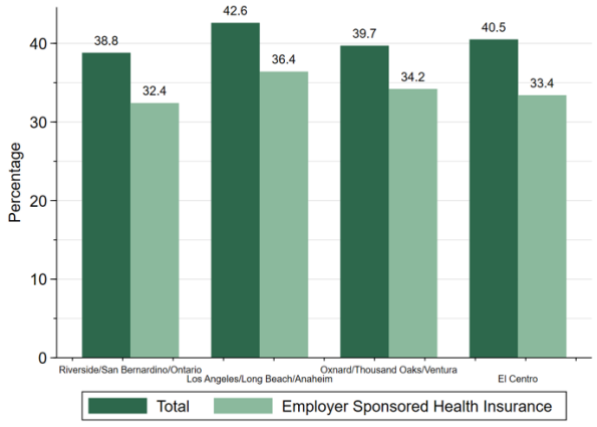
Source: ACS 2012-2016

How do these differences in earnings correspond to differences in shares of high-wage jobs? We show the differences in the shares of high-wage jobs in El Centro, LA, Oxnard, and Inland Empire MSAs using each of the three thresholds in the right panel of Figure 5. We will focus on the definition of relatively high in which the threshold is $36,237, adjusted for local prices. LA MSA has the highest share of their jobs paying relatively well at 42.1% while the Inland Empire has the lowest share of relatively high paying jobs at 38.6%.

Employer-Sponsored Health Insurance and Full Employment

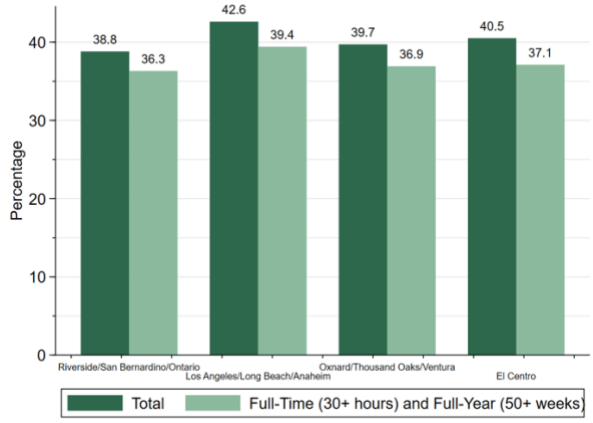
We believe good jobs entail more than simply relatively high pay. In order to provide a pathway to the middle class it is important that jobs provide stability in the form of continuous employment and insurance against adverse health events. Accordingly, we further require jobs to be full-time and full-year and offer health benefits to be classified as a good job. In Figure A2 and Figure A3, we show the shares of jobs that are relatively high paying and how those shares change when we add requirements for full-employment and health benefits. Figure A2 and Figure A3 show that the share of relatively high paying jobs that offer healthcare coverage and full employment is comparable across geographies with 83 to 86% of high-paying jobs also offering health benefits and 90 to 93% of high-paying jobs offering full-employment. The Inland Empire has a smaller share of high-paying jobs offering benefits and El Centro has a smaller share of high-paying jobs that come with full-employment.

Figure A2: Share of Workers with High-Paying Jobs, and Employer Sponsored Health Insurance



Source: ACS 2018-2019

Figure A3: Share of Workers with High-Paying Jobs, and Full-Time Full-Year

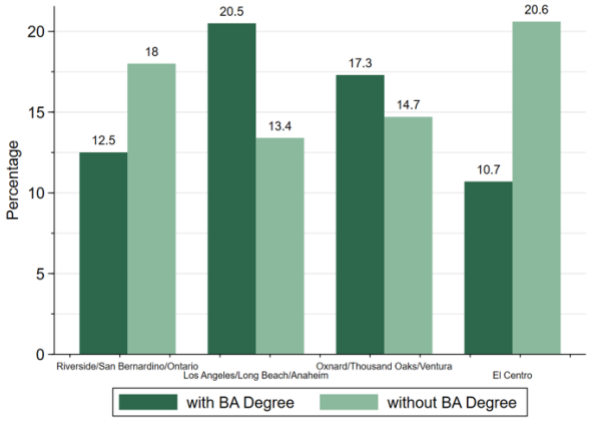


Source: ACS 2018-2019

Education

In Figure A4 we show the share of relatively high-paying jobs that employ workers with and without BA degrees. In coastal areas the majority of the relatively high-paying jobs go to those with a BA or better whereas the majority of relatively high-paying jobs in the Inland Empire and El Centro go to those without a BA. This further indicates large differences in job quality among these relatively high-paying jobs in these different regions.

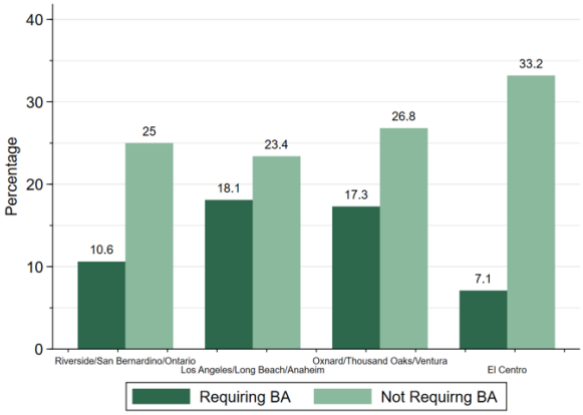
Figure A4: Share of Workers with Good Jobs, with and without BA Degree



Source: ACS 2018-2019

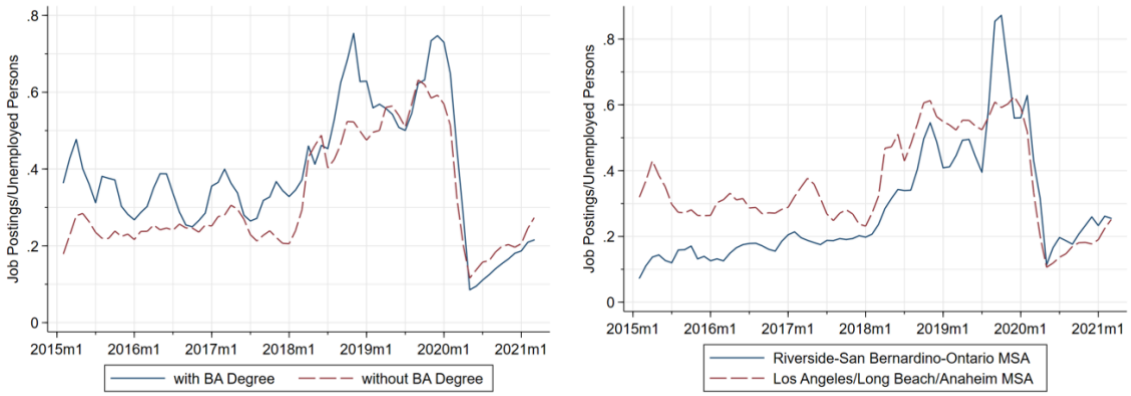
We next consider job postings to inspect the accessibility of the high-paying occupations to those without a college degree. Figure A5 shows that in every geography half or fewer of the postings for high-paying jobs advertise a BA is necessary. This is despite the fact that the previous figures show that most of these positions go to those with higher educational attainment.

Figure A5: Share of Good Jobs in Job Postings, by Education Requirement



Source: ACS 2018-2019, Burning Glass Technologies (BGT)

Figure A6: Labor Market Tightness in the SCAG Region, by Education Requirement

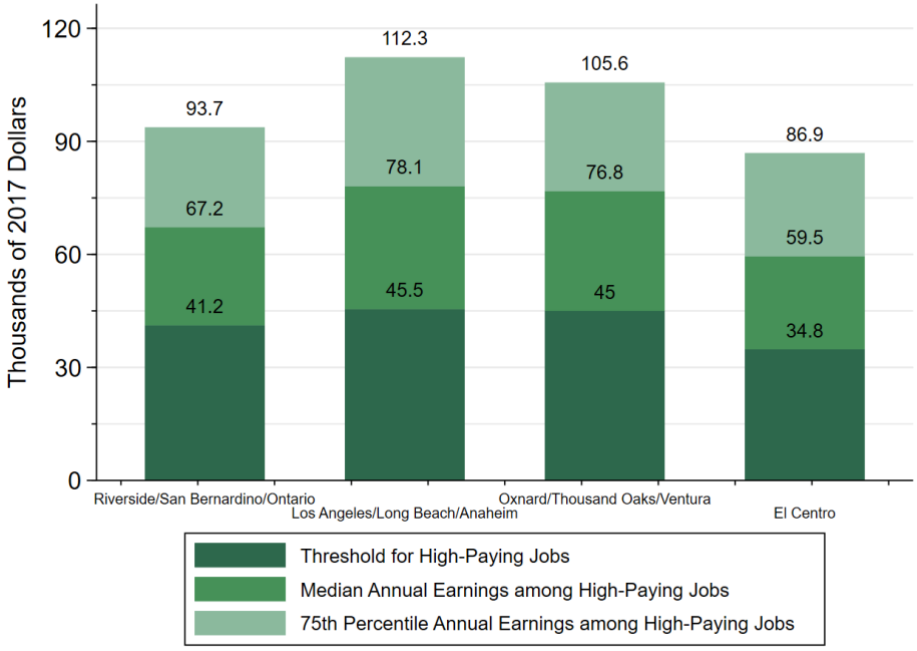


Note: Imperial County is not included in the left figure because it is not identified in the CPS due to its small population.
Source: Current Population Survey (CPS) 2015-2021, Burning Glass Technologies

Putting together job postings data with employment (or unemployment) data allows us to gain insight into what is driving the differences between regional labor markets. Within each region we divide the number of postings with each education requirement from Burning Glass by the number of unemployed persons of each education level from the CPS. In markets with relatively few postings per unemployed person are tight. In Figure A6, we see that in the IE the labor markets for those with and without BAs are persistently tighter than in the surrounding SCAG region, particularly for those with a BA. This suggests that the relative lack of high-education jobs in the region is at least in part due to the lack of employment opportunities rather than the potential workforce.

Putting it all together

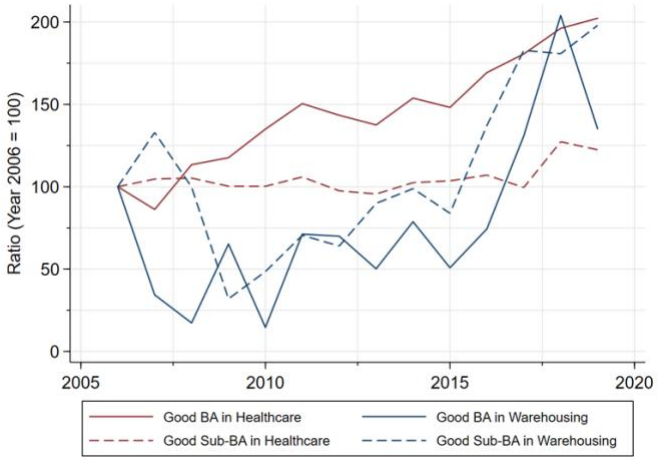
Figure A7: Threshold and Earning Percentiles among High-Paying Jobs by Region



Source: ACS 2018-2019

We further illustrate differences in the quality of jobs across regions by showing that there are large differences across geographies at the median or 75th percentile of earnings among these relatively high-paying jobs. Figure A7 shows that the 75th percentile of good jobs in the MSA containing LA pays 20% higher than the 75th percentile of good jobs in the IE though the earnings threshold in LA is roughly 10% higher than in the IE. While such classifications of job quality provide useful statistics for thinking about the differences in the job composition of local labor markets, it is important to also dig deeper and consider differences within those classifications across regions as well.

Figure A8: Growth of Good Jobs in Warehousing and Healthcare in the Inland Empire



Source: ACS 2006-2019

Supplemental Tables

Table 1: Changing composition of occupations by supply of good jobs for workers with a BA

Occupation Title	Employment Share in 06/07	Employment Share in 18/19	Percentage Change	Share of Good High-skill in 18/19
Health Diagnosing and Treating Practitioners	2.61%	3.77%	44.17%	14.53%
Preschool, Primary, Secondary, and Special Education School Teachers	3.81%	3.38%	-11.08%	13.46%
Other Management Occupations	4.22%	4.64%	9.87%	8.85%
Business Operations Specialists	1.56%	2.23%	43.40%	5.52%
Counselors, Social Workers, and Other Community and Social Service Specialists	1.09%	1.46%	34.27%	4.81%
Computer Occupations	1.03%	1.46%	41.61%	4.62%
Financial Specialists	1.39%	1.37%	-1.41%	4.37%
Engineers	0.77%	0.79%	2.79%	3.83%
Operations Specialties Managers	1.32%	1.43%	8.72%	3.43%
Top Executives	1.28%	1.29%	1.01%	2.99%
Supervisors of Sales Workers	3.25%	2.85%	-12.43%	2.37%
Postsecondary Teachers	0.54%	0.51%	-5.24%	2.18%
Law Enforcement Workers	0.89%	0.89%	-0.52%	2.09%
Lawyers, Judges, and Related Workers	0.27%	0.30%	11.10%	1.84%
Information and Record Clerks	4.09%	3.98%	-2.72%	1.38%
Advertising, Marketing, Promotions, Public Relations, and Sales Managers	0.50%	0.48%	-2.93%	1.35%
Sales Representatives, Wholesale and Manufacturing	1.02%	0.78%	-23.58%	1.20%
Sales Representatives, Services	1.00%	0.77%	-22.93%	1.08%
Health Technologists and Technicians	1.30%	1.94%	49.65%	1.06%
Supervisors of Office and Administrative Support Workers	1.31%	0.84%	-35.82%	1.03%

Table 2: Changing composition of occupations by supply of good jobs for workers without a BA

Occupation Title	Employment Share in 06/07	Employment Share in 18/19	Percentage Change	Share of Good Sub-BA in 18/19
Motor Vehicle Operators	3.81%	4.18%	9.85%	6.99%
Construction Trades Workers	6.70%	5.00%	-25.45%	6.90%
Other Management Occupations	4.22%	4.64%	9.87%	6.63%
Supervisors of Sales Workers	3.25%	2.85%	-12.43%	4.70%
Material Moving Workers	4.51%	7.69%	70.40%	3.99%
Business Operations Specialists	1.56%	2.23%	43.40%	3.56%
Health Technologists and Technicians	1.30%	1.94%	49.65%	3.45%
Other Installation, Maintenance, and Repair Occupations	1.56%	1.50%	-3.65%	3.19%
Information and Record Clerks	4.09%	3.98%	-2.72%	2.91%
Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	1.67%	1.36%	-18.63%	2.74%
Health Diagnosing and Treating Practitioners	2.61%	3.77%	44.17%	2.74%
Operations Specialties Managers	1.32%	1.43%	8.72%	2.72%
Material Recording, Scheduling, Dispatching, and Distributing Workers	3.53%	2.03%	-42.64%	2.60%
Secretaries and Administrative Assistants	2.21%	1.68%	-23.96%	2.54%
Law Enforcement Workers	0.89%	0.89%	-0.52%	2.45%
Other Production Occupations	2.26%	2.27%	0.30%	2.41%
Top Executives	1.28%	1.29%	1.01%	2.33%
Computer Occupations	1.03%	1.46%	41.61%	2.27%
Other Office and Administrative Support Workers	2.59%	2.11%	-18.53%	1.98%
Metal Workers and Plastic Workers	1.37%	1.05%	-22.77%	1.77%

Table 3: Changing composition of occupations by concentration of good sub-BA jobs

Occupation Title	Employment Share in 06/07	Employment Share in 18/19	Percentage Change	Good Sub-BA Job Concentration
Rail Transportation Workers	0.12%	0.14%	16.67%	91.50%
Plant and System Operators	0.13%	0.12%	-7.69%	81.43%
Fire Fighting and Prevention Workers	0.29%	0.22%	-24.14%	63.47%
Funeral Service Workers	0.00%	0.01%	N/A	50.47%
Supervisors of Personal Care and Service Workers	0.21%	0.08%	-61.90%	48.93%
Law Enforcement Workers	0.89%	0.89%	0.00%	48.85%
Supervisors of Construction and Extraction Workers	0.98%	0.50%	-48.98%	47.81%
Drafters, Engineering Technicians, and Mapping Technicians	0.39%	0.39%	0.00%	47.40%
Supervisors of Transportation and Material Moving Workers	0.30%	0.33%	10.00%	47.11%
Supervisors of Protective Service Workers	0.25%	0.16%	-36.00%	46.15%
Supervisors of Production Workers	0.74%	0.44%	-40.54%	43.34%
Supervisors of Installation, Maintenance, and Repair Workers	0.24%	0.18%	-25.00%	42.25%
Electrical and Electronic Equipment Mechanics, Installers, and Repairers	0.63%	0.42%	-33.33%	41.44%
Forest, Conservation, and Logging Workers	0.02%	0.00%	-100.00%	40.52%
Extraction Workers	0.04%	0.02%	-50.00%	38.71%
Other Installation, Maintenance, and Repair Occupations	1.56%	1.50%	-3.85%	37.75%
Sales Representatives, Wholesale	1.02%	0.78%	-23.53%	36.50%

and Manufacturing				
Occupational Therapy and Physical Therapist Assistants and Aides	0.03%	0.07%	133.33%	36.07%
Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	1.67%	1.36%	-18.56%	35.75%
Legal Support Workers	0.40%	0.33%	-17.50%	34.30%

Table 4: Changing composition of occupations by concentration of good BA jobs

Occupation Title	Employment Share 2006	Employment Share 2018	Percentage change	Good BA Job Concentration
Social Scientists and Related Workers	0.19%	0.15%	-21.05%	74.92%
Lawyers, Judges, and Related Workers	0.27%	0.30%	11.11%	74.12%
Life Scientists	0.04%	0.05%	25.00%	59.60%
Engineers	0.77%	0.79%	2.60%	59.45%
Physical Scientists	0.08%	0.20%	150.00%	56.09%
Postsecondary Teachers	0.54%	0.51%	-5.56%	52.33%
Air Transportation Workers	0.06%	0.10%	66.67%	50.29%
Preschool, Primary, Secondary, and Special Education School Teachers	3.81%	3.38%	-11.29%	48.83%
Health Diagnosing and Treating Practitioners	2.61%	3.77%	44.44%	47.32%
Architects, Surveyors, and Cartographers	0.09%	0.07%	-22.22%	47.23%
Mathematical Science Occupations	0.04%	0.11%	175.00%	42.58%

Counselors, Social Workers, and Other Community and Social Service Specialists	1.09%	1.46%	33.94%	40.43%
Financial Specialists	1.39%	1.37%	-1.44%	39.12%
Computer Occupations	1.03%	1.46%	41.75%	38.83%
Supervisors of Protective Service Workers	0.25%	0.16%	-36.00%	37.60%
Advertising, Marketing, Promotions, Public Relations, and Sales Managers	0.50%	0.48%	-4.00%	34.08%
Business Operations Specialists	1.56%	2.23%	42.95%	30.32%
Operations Specialties Managers	1.32%	1.43%	8.33%	29.41%
Law Enforcement Workers	0.89%	0.89%	0.00%	28.86%
Top Executives	1.28%	1.29%	0.78%	28.49%

Table 5: Comparative impacts from COVID-19, by industry

		COVID-19						Great Recession
		Immediate Impact		Short-Term Impact		Recovery from Immediate Impact		Short-Term Impact
Industry Title	Region	Jobs	Job Postings	Jobs	Job Postings	Jobs	Job Postings	Jobs
Retail Trade (14%)	US	-10%	6%	-1%	9%	11%	3%	-1%
	CA	-18%	13%	-7%	9%	14%	-4%	-3%
	IE	**-14%**	**13%**	**-10%**	**15%**	**4%**	**2%**	**15%**
Health Care and Social Assistance (12%)	US	-8%	-7%	-4%	9%	4%	17%	2%
	CA	-12%	-7%	-9%	6%	3%	14%	3%

	IE	**-12%**	**-8%**	**4%**	**3%**	**17%**	**12%**	**-7%**
Construction (9%)	US	-9%	2%	-3%	10%	7%	8%	-10%
	CA	-5%	-3%	-1%	-4%	4%	-1%	-15%
	IE	**12%**	**0%**	**16%**	**12%**	**4%**	**13%**	**-19%**
Educational Services (9%)	US	-11%	-16%	-5%	-17%	6%	-1%	4%
	CA	-11%	-25%	-11%	-29%	0%	-5%	5%
	IE	**1%**	**-33%**	**-1%**	**-33%**	**-2%**	**0%**	**6%**
Accommodation and Food Services (8%)	US	-27%	-29%	-18%	-13%	13%	22%	1%
	CA	-29%	-39%	-16%	-29%	19%	16%	4%
	IE	**-36%**	**-27%**	**-13%**	**-11%**	**36%**	**21%**	**5%**
Transportation and Warehousing (8%)	US	-10%	15%	-3%	57%	8%	37%	-3%
	CA	-13%	17%	-5%	48%	9%	27%	3%
	IE	**3%**	**43%**	**11%**	**89%**	**8%**	**32%**	**-10%**
Manufacturing (6%)	US	-9%	-17%	-6%	0%	3%	20%	-5%
	CA	-16%	-18%	-8%	-9%	9%	12%	2%
	IE	**-25%**	**-3%**	**-22%**	**15%**	**4%**	**19%**	**-13%**
Administrative and Support and Waste Management and Remediation Services (5%)	US	-9%	-25%	-6%	-19%	2%	8%	-6%
	CA	-5%	-50%	-6%	-47%	-1%	6%	-11%
	IE	**9%**	**-22%**	**-7%**	**-12%**	**-14%**	**14%**	**-3%**
Other Services (except Public Administration) (5%)	US	-15%	-13%	-10%	2%	5%	18%	-1%
	CA	-26%	-23%	-24%	-5%	4%	24%	6%
	IE	**-31%**	**-14%**	**-9%**	**14%**	**33%**	**33%**	**5%**
Professional, Scientific, and Technical Services (5%)	US	-1%	-24%	-4%	-18%	-2%	8%	-1%
	CA	-7%	-23%	-9%	-24%	-3%	-2%	-3%

	IE	**-14%**	**-18%**	**-17%**	**-21%**	**-3%**	**-4%**	**27%**

"Before the Shock" refers to 6 months prior to the shock. "Immediate after the Shock" refers to 6 months after the shock. "Short-term after the Shock" refers to the 7th month to the 14th month after the shock.

"Immediate Impact" compares the "Immediate after the Shock" to the "Before the Shock". "Short-term Impact" compares the "Short-term after the Shock" to the "Before the Shock". "Recovery from Immediate Impact" compares "Short-term after the Shock" to the "Immediate after the Shock".

*Defined by share of employment in 2019, as shown in parenthesis.

Table 6: Comparative impacts from COVID-19, by occupation

Percentage Change of Average Monthly Jobs and Job Postings, by Top 10 Occupations* in the Inland Empire in 2019

		COVID-19						Great Recession
		Immediate Impact		Short-Term Impact		Recovery from Immediate Impact		Short-Term Impact
Occupation Title	Region	Jobs	Job Postings	Jobs	Job Postings	Jobs	Job Postings	Jobs
Office and Administrative Support (13%)	US	-12%	-15%	-8%	-2%	4%	15%	-3%
	CA	-12%	-22%	-12%	-16%	0%	7%	-4%
	IE	**-20%**	**-10%**	**-17%**	**3%**	**4%**	**15%**	**7%**
Sales and Related (12%)	US	-13%	-17%	-7%	-13%	7%	5%	-3%
	CA	-19%	-23%	-8%	-18%	13%	7%	-8%
	IE	**-12%**	**-20%**	**-6%**	**-14%**	**8%**	**7%**	**-2%**
Transportation and Material Moving (10%)	US	-5%	38%	2%	67%	7%	22%	-3%
	CA	-8%	45%	-2%	60%	7%	11%	-5%
	IE	**-3%**	**58%**	**1%**	**100%**	**3%**	**27%**	**14%**
Construction and Extraction (8%)	US	-10%	11%	-4%	32%	6%	20%	-12%
	CA	-5%	1%	-8%	27%	-4%	26%	-21%
	IE	**20%**	**1%**	**1%**	**48%**	**-16%**	**46%**	**-39%**
Management (8%)	US	-4%	-21%	-3%	-9%	1%	14%	2%
	CA	-11%	-20%	-9%	-15%	2%	6%	1%
	IE	**-16%**	**-15%**	**-11%**	**-9%**	**6%**	**7%**	**27%**

Education, Training, and Library (6%)	US	-11%	-1%	-4%	-8%	8%	-7%	3%
	CA	-10%	-17%	-5%	-25%	6%	-9%	7%
	IE	**7%**	**-34%**	**-12%**	**-34%**	**-18%**	**1%**	**7%**
Food Preparation and Serving Related (6%)	US	-31%	-22%	-20%	-8%	17%	18%	2%
	CA	-36%	-32%	-25%	-19%	17%	18%	1%
	IE	**-38%**	**-18%**	**-17%**	**-4%**	**34%**	**17%**	**0%**
Healthcare Practitioners and Technical (5%)	US	-4%	-6%	-3%	10%	1%	17%	2%
	CA	-6%	-5%	-7%	8%	-2%	14%	5%
	IE	**1%**	**-7%**	**7%**	**7%**	**6%**	**15%**	**6%**
Personal Care and Service (5%)	US	-40%	-5%	-36%	3%	5%	9%	2%
	CA	-58%	-15%	-54%	-10%	10%	6%	7%
	IE	**-47%**	**-23%**	**-40%**	**-16%**	**12%**	**9%**	**-10%**
Installation, Maintenance, and Repair (4%)	US	-10%	-7%	-7%	6%	3%	14%	-4%
	CA	-8%	-12%	12%	1%	22%	15%	3%
	IE	**-8%**	**-1%**	**16%**	**13%**	**27%**	**14%**	**-8%**

"Before the Shock" refers to 6 months prior to the shock. "Immediate after the Shock" refers to 6 months after the shock. "Short-term after the Shock" refers to the 7th month to the 14th month after the shock.

"Immediate Impact" compares the "Immediate after the Shock" to the "Before the Shock". "Short-term Impact" compares the "Short-term after the Shock" to the "Before the Shock". "Recovery from Immediate Impact" compares "Short-term after the Shock" to the "Immediate after the Shock".

*Defined by share of employment in 2019, as shown in parenthesis.