



# Total High-Tech

## MSJC

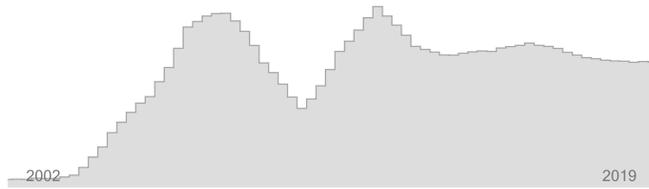


Industry Spotlight

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Total High-Tech  
MSJC – 2019Q1

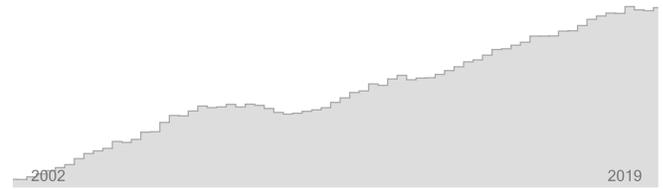
EMPLOYMENT



**4,669**

Regional employment / **16,184,146** in the nation

WAGES



**\$69,116**

Avg Wages per Worker / **\$108,290** in the nation

**0.2%** ↑

Avg Ann % Change Last 10 Years / **+1.1%** in the U.S.



**4.1%**

% of Total Employment / **10.3%** in the U.S.

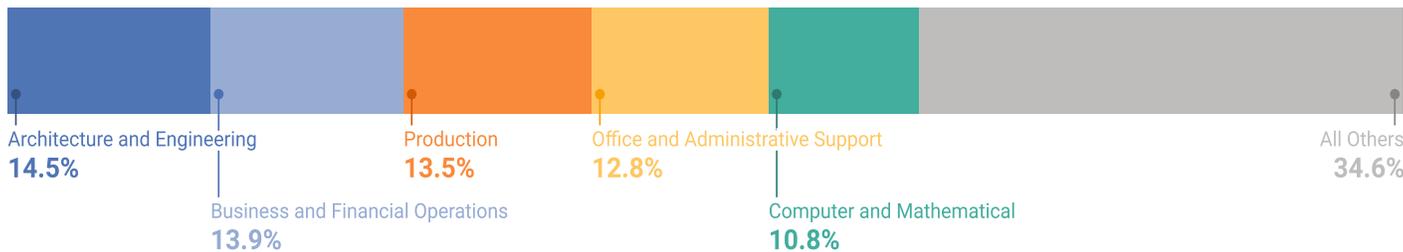


**2.4%** ↑

Avg Ann % Change Last 10 Years / **+3.1%** in the U.S.



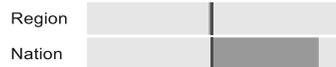
TOP OCCUPATION GROUPS



TOP INDUSTRIES

Avg Ann % Change in Employment, Last 10 Years

**-0.1%** ↓



Management, Scientific, and Technical Consulting Services

**-1.6%** ↓



Semiconductor and Other Electronic Component Manufacturing

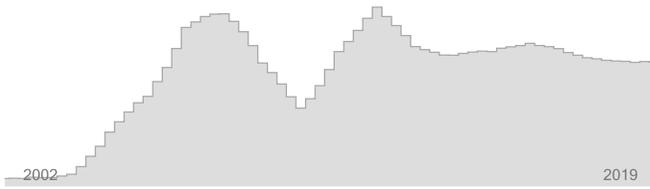
**3.9%** ↑



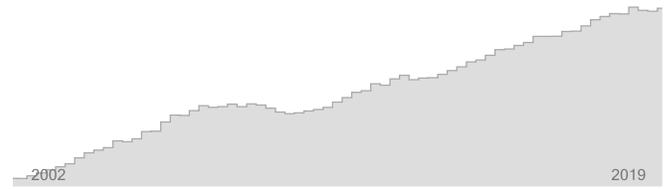
Wired and Wireless Telecommunications Carriers

# Industry Snapshot

## EMPLOYMENT



## WAGES

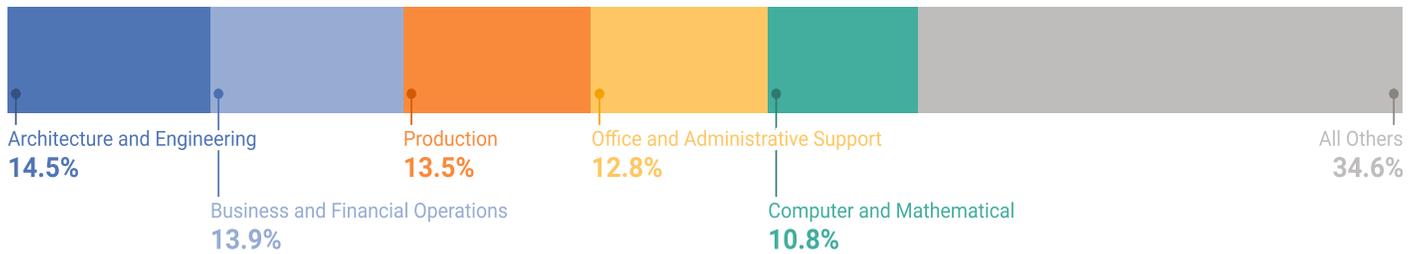


4-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
Management, Scientific, and Technical Consulting Services	984	\$57,443	0.78		113	2.4%
Semiconductor and Other Electronic Component Manufacturing	695	\$62,112	2.55		62	-0.3%
Wired and Wireless Telecommunications Carriers	617	\$68,423	1.28		56	-0.6%
Architectural, Engineering, and Related Services	554	\$71,521	0.47		56	1.7%
Computer Systems Design and Related Services	325	\$90,378	0.20		32	2.3%
Electric Power Generation, Transmission and Distribution	213	\$109,100	0.61		19	0.0%
Commercial and Service Industry Machinery Manufacturing	180	\$78,444	2.66		17	-0.4%
Other Information Services	127	\$32,812	0.37		17	4.0%
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	113	\$71,435	0.37		10	-0.1%
Professional and Commercial Equipment and Supplies Merchant Wholesalers	111	\$47,093	0.22		11	0.3%
Remaining Component Industries	748	\$56,248	0.55		73	0.6%
<b>Total - All Industries</b>	<b>114,447</b>	<b>\$44,841</b>	<b>1.00</b>		<b>14,291</b>	<b>1.5%</b>

Employment is one of the broadest and most timely measures of a region's economy. Fluctuations in the number of jobs shed light on the health of an industry. A growing employment base creates more opportunities for regional residents and helps a region grow its population.

Since wages and salaries generally compose the majority of a household's income, the annual average wages of a region affect its average household income, housing market, quality of life, and other socioeconomic indicators.

# Staffing Pattern



6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Management Analysts	240	\$79,600	26
Telecommunications Equipment Installers and Repairers, Except Line Installers	205	\$50,900	20
Managers, All Other	131	\$115,200	11
Customer Service Representatives	126	\$37,600	16
Sales Representatives, Services, All Other	120	\$52,000	16
Electrical and Electronic Equipment Assemblers	110	\$34,500	10
General and Operations Managers	106	\$117,800	11
Business Operations Specialists, All Other	89	\$66,900	10
Team Assemblers	89	\$29,300	8
Software Developers, Applications	85	\$98,800	9
Remaining Component Occupations	3,321	\$62,500	340
<b>Total</b>	<b>4,669</b>		

 The mix of occupations points to the ability of a region to support an industry and its flexibility to adapt to future demand. Industry wages are a component of the cost of labor for regional employers.

# Employment Distribution by Type

The table below shows the employment mix by ownership type for Total High-Tech for the MSJC. Four of these ownership types — federal, state, and local government and the private sector — together constitute “Covered Employment” (employment covered by the Unemployment Insurance programs of the United States and reported via the Quarterly Census of Employment and Wages).

“Self-Employment” refers to unincorporated self-employment and represents workers whose primary job is self-employment (that is, these data do not include workers whose primary job is a wage-and-salary position that is supplemented with self-employment).

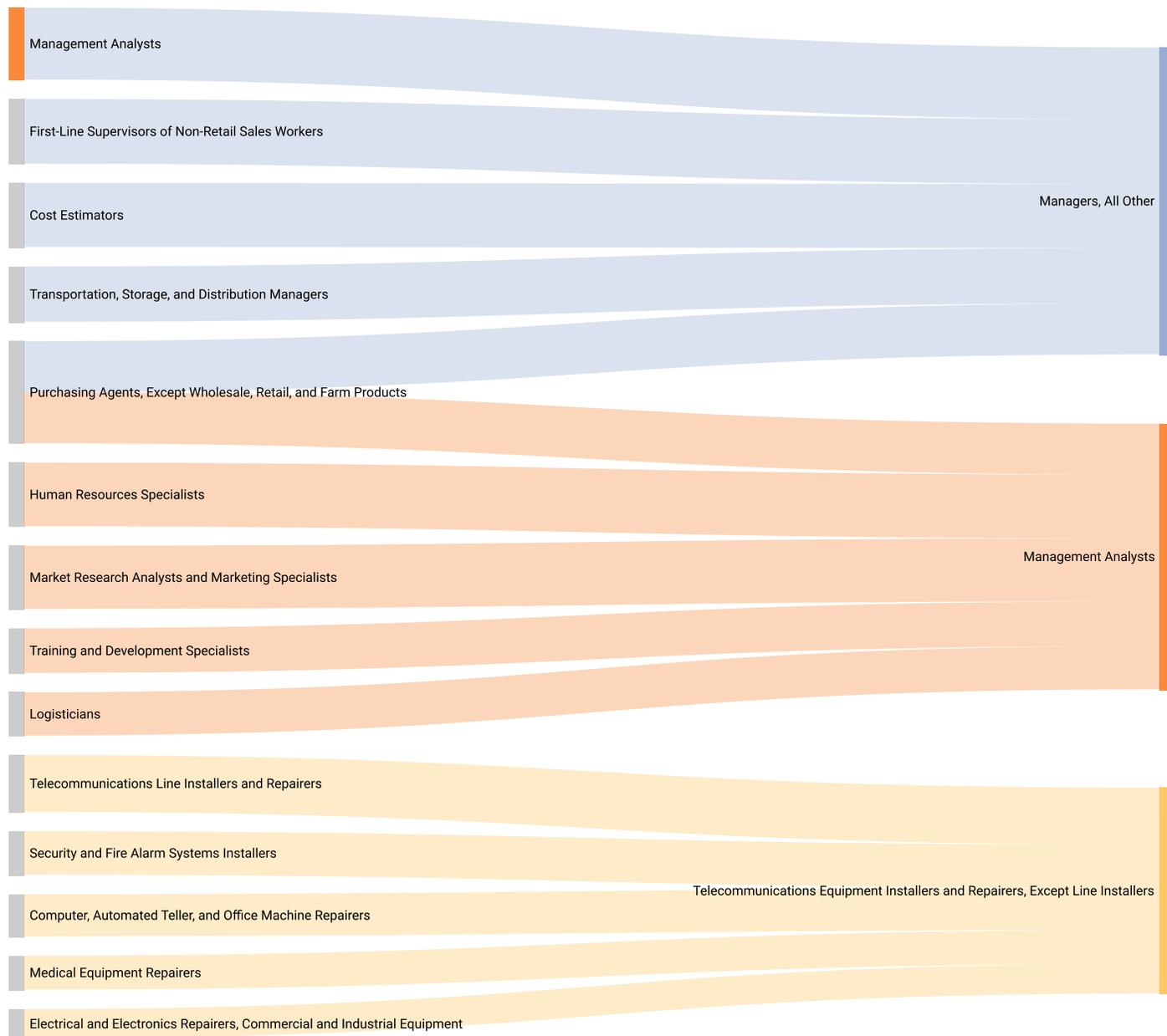


	Empl	%
Private	4,060	87.0%
Self-Employment	543	11.6%
Local Government	21	0.4%
Federal Government	45	1.0%
Other Non-Covered	0	0.0%

Source: JobsEQ®

 Strong entrepreneurial activity is indicative of growing industries. Using self-employment as a proxy for entrepreneurs, a higher share of self-employed individuals within a regional industry points to future growth.

# Sector Strategy Pathways



 The graphics on this page illustrate relationships and potential movement (from left to right) between occupations that share similar skill sets. Developing career pathways as a strategy promotes industry employment growth and workforce engagement.

# Industry Definition

Total High-Tech is defined as the following NAICS industries:

Code	Description
1131	Timber Tract Operations
1132	Forest Nurseries and Gathering of Forest Products
2111	Oil and Gas Extraction
2211	Electric Power Generation, Transmission and Distribution
3241	Petroleum and Coal Products Manufacturing
3251	Basic Chemical Manufacturing
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing
3253	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing
3254	Pharmaceutical and Medicine Manufacturing
3255	Paint, Coating, and Adhesive Manufacturing
3259	Other Chemical Product and Preparation Manufacturing
3332	Industrial Machinery Manufacturing
3333	Commercial and Service Industry Machinery Manufacturing
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing
3339	Other General Purpose Machinery Manufacturing
3341	Computer and Peripheral Equipment Manufacturing
3342	Communications Equipment Manufacturing
3343	Audio and Video Equipment Manufacturing
3344	Semiconductor and Other Electronic Component Manufacturing
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing
3346	Manufacturing and Reproducing Magnetic and Optical Media
3353	Electrical Equipment Manufacturing
3364	Aerospace Product and Parts Manufacturing
3369	Other Transportation Equipment Manufacturing
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers
4861	Pipeline Transportation of Crude Oil
4862	Pipeline Transportation of Natural Gas
4869	Other Pipeline Transportation
5112	Software Publishers
5173	Wired and Wireless Telecommunications Carriers
5174	Satellite Telecommunications
5179	Other Telecommunications
5182	Data Processing, Hosting, and Related Services
5191	Other Information Services
5211	Monetary Authorities-Central Bank
5232	Securities and Commodity Exchanges
5413	Architectural, Engineering, and Related Services
5415	Computer Systems Design and Related Services
5416	Management, Scientific, and Technical Consulting Services
5417	Scientific Research and Development Services
5511	Management of Companies and Enterprises
5612	Facilities Support Services
8112	Electronic and Precision Equipment Repair and Maintenance
9271	Space Research and Technology
9281	National Security and International Affairs

# Region Definition

**MSJC is defined as the following zip code tabulation areas:**

ZCTA 92532

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ZCTA 92543

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ZCTA 92545

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ZCTA 92548

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ZCTA 92562

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ZCTA 92563

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ZCTA 92567

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ZCTA 92582

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ZCTA 92584

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ZCTA 92585

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ZCTA 92586

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ZCTA 92587

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ZCTA 92591

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ZCTA 92595

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ZCTA 92596

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# Data Notes

- Industry employment and wages (including total regional employment and wages) are as of 2019Q1 and are based upon BLS QCEW data, imputed by Chmura where necessary, and supplemented by additional sources including Census ZBP data. Employment forecasts are modeled by Chmura and are consistent with BLS national-level 10-year forecasts.
- Occupation employment is as of 2019Q1 and is based on industry employment and local staffing patterns calculated by Chmura and utilizing BLS OES data. Occupation wages are per the BLS OES data and are as of 2017.
- GDP is derived from BEA data and imputations by Chmura. Productivity (output per worker) is calculated by Chmura using industry employment and wages as well as GDP and BLS output data. Supply chain modeling including purchases by industry are developed by Chmura.
- Postsecondary awards are per the NCES and are for the 2016-2017 academic year.
- Establishment counts are per the BLS QCEW data.
- Figures may not sum due to rounding.

## FAQ

### What is (LQ) location quotient?

Location quotient is a measurement of concentration in comparison to the nation. An LQ of 1.00 indicates a region has the same concentration of an industry (or occupation) as the nation. An LQ of 2.00 would mean the region has twice the expected employment compared to the nation and an LQ of 0.50 would mean the region has half the expected employment in comparison to the nation.

### What is annual demand?

Annual demand is a of the sum of the annual projected growth demand and separation demand. Separation demand is the number of jobs required due to separations—labor force exits (including retirements) and turnover resulting from workers moving from one occupation into another. Note that separation demand does not include all turnover—it does not include when workers stay in the same occupation but switch employers. Growth demand is the increase or decrease of jobs expected due to expansion or contraction of the overall number of jobs.

### What is the difference between industry wages and occupation wages?

Industry wages and occupation wages are estimated via separate data sets, often the time periods being reported do not align, and wages are defined slightly differently in the two systems (for example, certain bonuses are included in the industry wages but not the occupation wages). It is therefore common that estimates of the average industry wages and average occupation wages in a region do not match exactly.