

Sector Profile

Supply Chain & International Trade

What makes up the Supply Chain & International Trade sector?

A **supply chain** is a system of organizations, activities, technologies, and resources that help move a product or service from supplier to customer. According to the Council of Supply Chain Management Professionals, supply chain involves sourcing, procurement, conversion, and all logistics related activities. It also includes coordination and collaboration among channel partners, such as suppliers, intermediaries, third-party service providers, and customers. Supply chain functions can be performed by third-party providers, such as independent logistics companies, as well as internally within the firms as part of business operations. Hence, supply chain related employment can be found across a variety of sectors, including manufacturing, retail, agriculture, wholesale, and others.

International trade involves exchange of capital, goods, and services across international borders. Supply chain activities create important support systems and linkages for international trade to take place.



Why is it important to California?

International trade is a major economic driver for the state of California. In 2012, California exports amounted to more than \$161 billion, which is about 11% of total U.S. exports. According to the California Chamber of Commerce, state's trade and exports translate into high-paying jobs for more than 1 million of Californians. Many economists contend that export-led growth is the only sustainable way to maintain living standards and secure long term economic success. As supply chain technologies advance, they offer many opportunities to increased efficiency and productivity across the industries that are involved in the international trade in California.

INSIDER PERSPECTIVE

"The importance of international trade to California, both import and export, cannot be overstated. It has become a primary driver of job creation and provides a solid pathway to the middle class. Southern California, with the two largest ports in the country and easy access to the east bound rail services of the BNSF and the UP, make it a natural logistics hub for much of the U.S. With decades of experience, the workforce is uniquely qualified for the Goods Movement Industry. This all made robust international trade possible in the state and its regions."

— B.J. Patterson, CEO
Pacific Mountain Logistics

Quick Facts

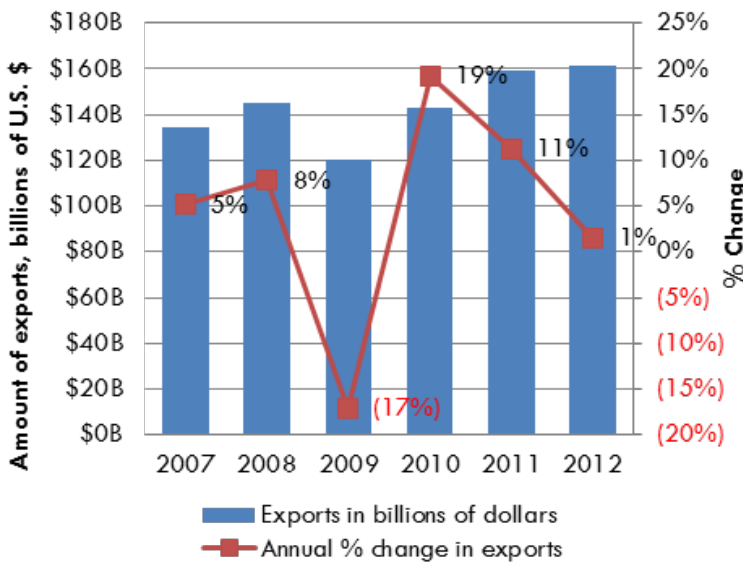
- In 2011, there were over 75,000 identified exporters in California, 96% of which were small and medium enterprises (500 or fewer employees).
- California ranks first in the nation for exporting computers, electronic products, and food and kindred products.
- California exports to approximately 225 foreign markets; the top three trading partners are Mexico, Canada, and China.
- More than 47,000 California firms may be connected to logistics/supply chain activities.
- Over the next three years, employment for supply chain-related occupations is expected to grow by 12,900 jobs.
- Employers across a variety of industries posted over 50,000 online job advertisements for twelve supply chain occupations in 2012.
- Median 2012 hourly wages for supply chain workers range from \$14 and \$38.

International Trade Dynamics in California

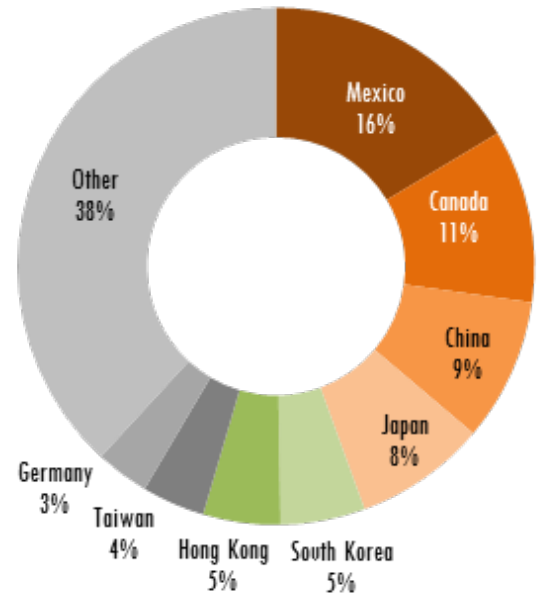
Due to economic downturn in the world, the amount of exports from California experienced a decrease in 2009. However, thanks to a favorable currency exchange rate and steady economic recovery, the exports have rebounded and continued growing since then. Annual sales of goods overseas grew by 19% from 2009 to 2010 and 11% from 2010 to 2011. In 2012, California's exports of goods amounted about \$161 billion.

California's top export markets are Mexico, Canada and China. Exports to Mexico totaled over \$26 billion in 2012 (16% of all exports from the state). California's exports to Mexico are mostly driven by computers and electronic products. Canada is California's second largest export market, purchasing about 11% of all California goods sold overseas. Other important trade markets for California's exporters are China (9%), Japan (8%), and South Korea (5%).

EXPORTS OF GOODS FROM CALIFORNIA (2007-2012)



CALIFORNIA EXPORTS BY COUNTRY (2012)

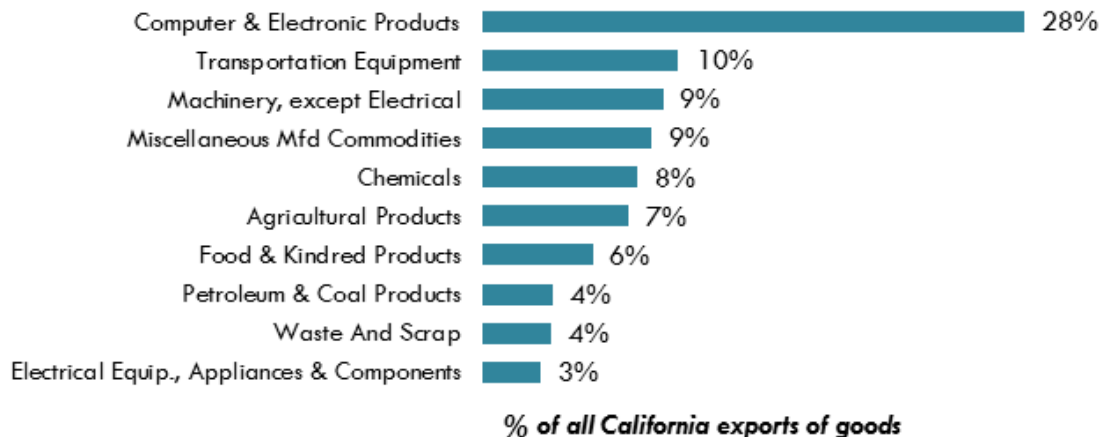


Source: USA Trade Online, US Census Bureau, Foreign Trade Division.

Top Exported Commodities

California is leading the nation in the exports of computer and electronic products, as well as food and kindred products. Computer and electronic products are California's top export, accounting for \$44 billion or 28% of all the state's good that are sold overseas in 2012. Other top categories included transportation equipment (\$16 billion; 10%), non-electrical machinery (\$14 billion; 9%), and chemicals (\$13 billion; 8%).

CALIFORNIA EXPORTS

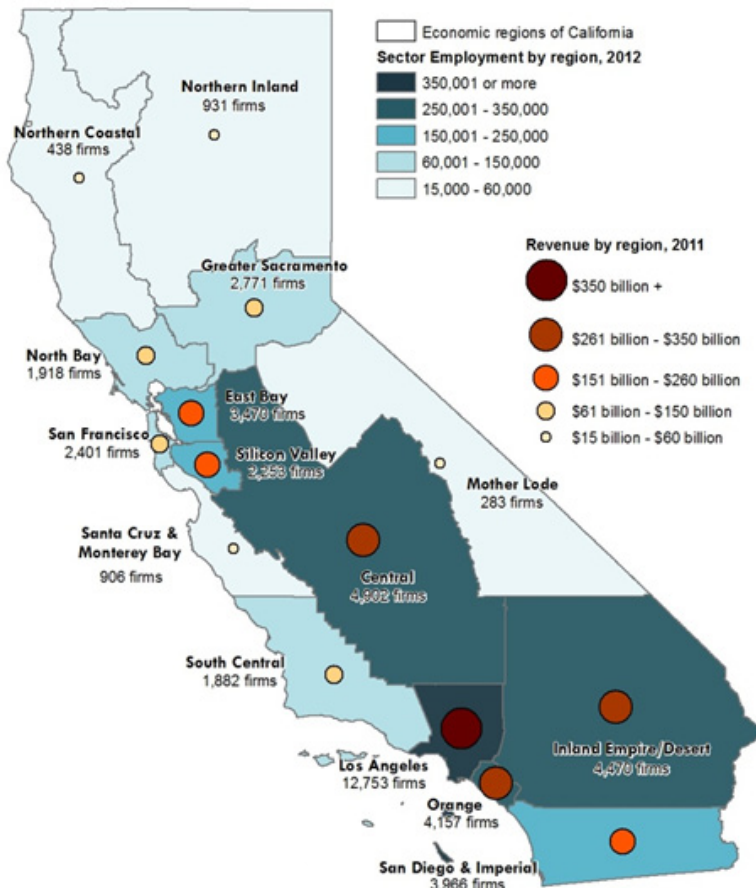
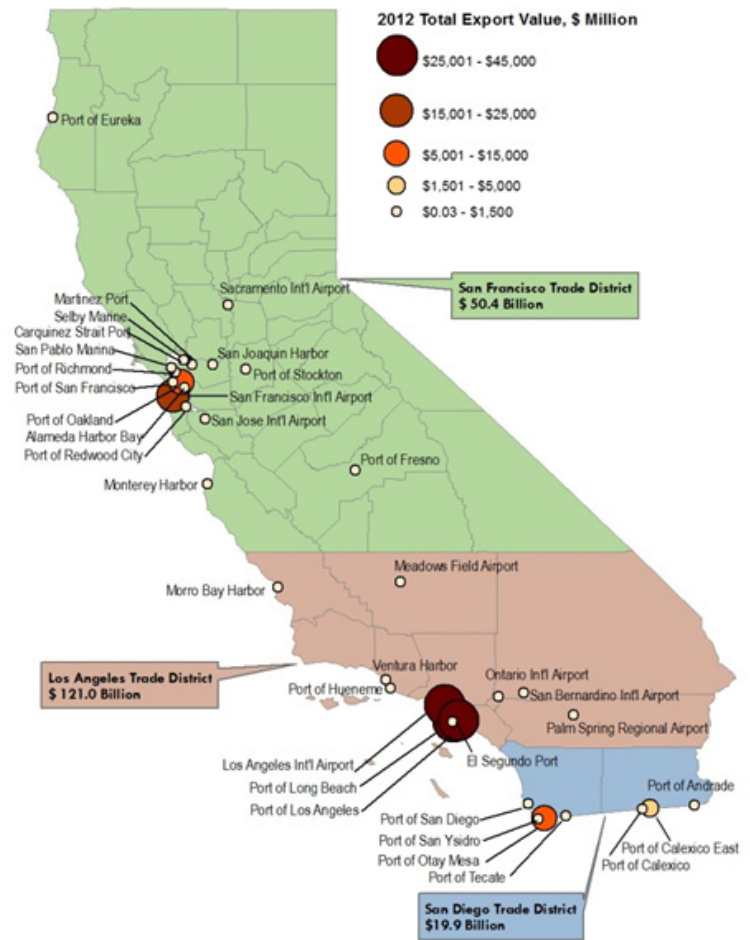


International Trade by Region

California is home to two of the largest ports in all of the United States — Port of Long Beach and Port of Los Angeles. Together, these two ports exported \$78 billion worth of goods in 2012, nearly half of all California's exports. Exports of all ports in Los Angeles customs district (which covers a 7-county area) accounted for about \$121 billion.

The second largest trade area by the volume of exports is San Francisco customs district. Exports of commodities from the ports in this part of the state amounted to over \$50 billion in 2012. The largest ports in this district include San Francisco International Airport and Port of Oakland.

San Diego trade district accounts for nearly \$20 billion in exports value. The ports in this district play an important role in facilitating exchange of goods with Mexico, with 95% of all exported goods sold to this country.



Supply Chain Employers

There are more than 47,300 California establishments in the industries that have a potential for supply chain employment. Together, these firms employ over three million people. Most firms with related supply chain employment are medium and large manufacturers, wholesale trade merchants, and transportation and warehousing service providers. Some supply chain activities and related employment can also be found among large retail trade merchants, such as discount superstores.

The Los Angeles region is home to more than 12,700 supply chain related establishments (27% of those in the state) and employs about 800,000 workers. Other regions with sizable numbers of supply chain firms include Central Valley, Inland Empire/Desert, and Orange County.

Supply Chain Jobs

Supply chain job opportunities can be found across a variety of occupational titles with varying levels of education required. The table below shows projected demand for a workforce skilled in several fields of supply chain technology and logistics. Currently, there are more than 600,000 workers employed in the twelve occupations related to supply chain. In the next three years, employers are expected to have nearly 55,000 job openings for these occupations, with most of these openings coming from replacement opportunities, such as retirements and other workforce mobility factors.

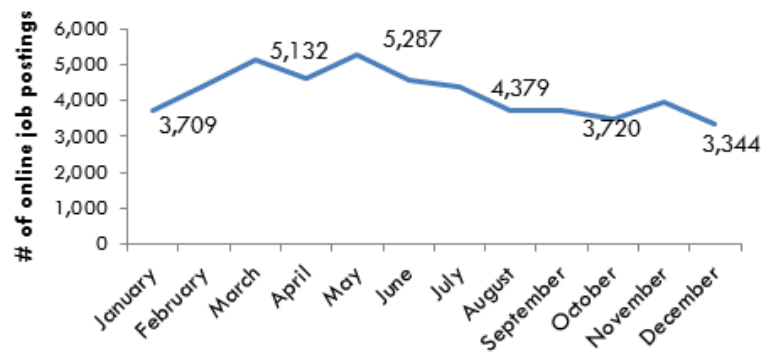
SUPPLY CHAIN CAREER OPPORTUNITIES FOR COMMUNITY COLLEGE GRADUATES

Job Title	2012 Jobs	3-year Change	Openings*	Median Hourly Wage	Minimum Education Level	Online Job Postings*
Business Operations Specialists, All Other	141,622	3,944	12,003	\$32.84	Long-term OJT	4,222
Maintenance & Repair Workers, General	136,493	4,174	11,253	\$18.38	Moderate-term OJT	14,301
Shipping, Receiving & Traffic Clerks	93,031	1,589	8,133	\$14.35	Short-term OJT	3,218
Inspectors, Testers, Sorters, Samplers & Weighers	55,976	362	4,746	\$17.72	Moderate-term OJT	8,441
Production, Planning & Expediting Clerks	41,219	(246)	3,678	\$23.49	Moderate-term OJT	7,088
Installation, Maintenance & Repair Workers, All Other	34,020	1,542	3,498	\$16.27	Moderate-term OJT	6,763
First-line Supervisors of Helpers, Laborers & Material Movers (Hand)	22,277	1,406	2,667	\$21.43	Related work experience	1,571
First-line Supervisors of Transportation & Material-moving Machine & Vehicle Operators	21,872	708	2,001	\$26.79	Related work experience	772
Bus & Truck Mechanics & Diesel Engine Specialists	22,653	340	1,893	\$21.06	Postsecondary non-degree award	1,010
Logisticians	14,325	1,090	1,860	\$37.21	Bachelor's or higher	2,481
Cargo & Freight Agents	12,005	634	1,593	\$19.55	Short-term OJT	286
Transportation, Storage & Distribution Managers	13,285	506	1,485	\$38.14	Related work experience	261
Total, All	608,779	12,871	54,810			50,414

*Openings represents new job growth (3-year change) plus replacement estimates by occupation.

Data sources: Employment and wage data - EMSI, 2013; Online Job postings (Jan-Dec, 2012) - Labor Market Insight, Burning Glass Technologies.

In California, employers posted approximately 50,400 online job advertisements for logistics/supply chain occupations from January 2012 through December 2012. The largest industry employer of logistics/supply chain occupations was Professional, Scientific, and Technical services (3,627 job postings) followed by Administrative and Support services (2,604 job postings), and Educational Services (1,584 job postings).



SUPPLY CHAIN SKILLS

The following represents the skill areas in demand by employers for supply chain technicians:

SKILLS REQUIRED BY EMPLOYERS	# OF JOB POSTINGS (2012)	SKILLS REQUIRED BY EMPLOYERS	# OF JOB POSTINGS (2012)
1 Repair	18,670	6 Hand Tools	2,848
2 Inspection	9,694	7 Blueprints	2,736
3 Scheduling	4,088	8 Forklift	2,654
4 Plumbing	3,766	9 Logistics	2,482
5 HVAC	2,945	10 Welding	2,468

Data notes and sources: Data and information included in the Sector Profile were compiled from the following public and proprietary sources: USA Trade Online, US Census Bureau, Foreign Trade Division; "Strong Trade Opportunities Essential for State International Competitiveness", California Chamber of Commerce, January 2013; Wikipedia.com, Bureau of Labor Statistics; Centers of Excellence; CA Employment Development Department; Economic Modeling Specialists, Inc.; InfoGroup, Inc.; The Conference Board - Help Wanted Online; Burning Glass - Labor Market Insight.