

Dynamic change in San Joaquin County's Goods Movement System

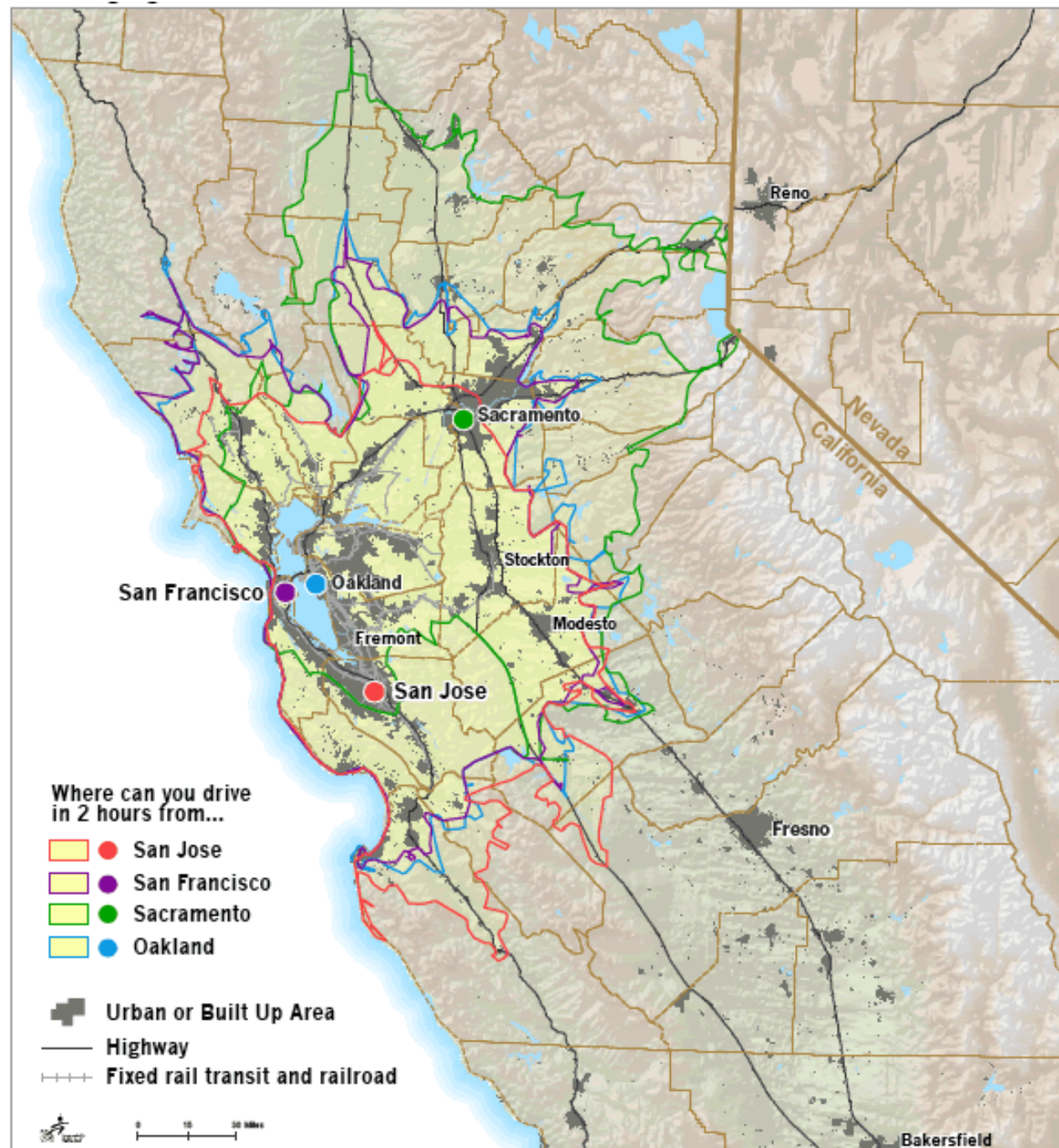
Dr. Jeffrey Michael, Executive Director
and
Dr. Thomas Pogue, Associate Director
CBPR, University of the Pacific

AUBER 2019 Annual Meeting
Savannah, GA
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<http://pacific.edu/cbpr>

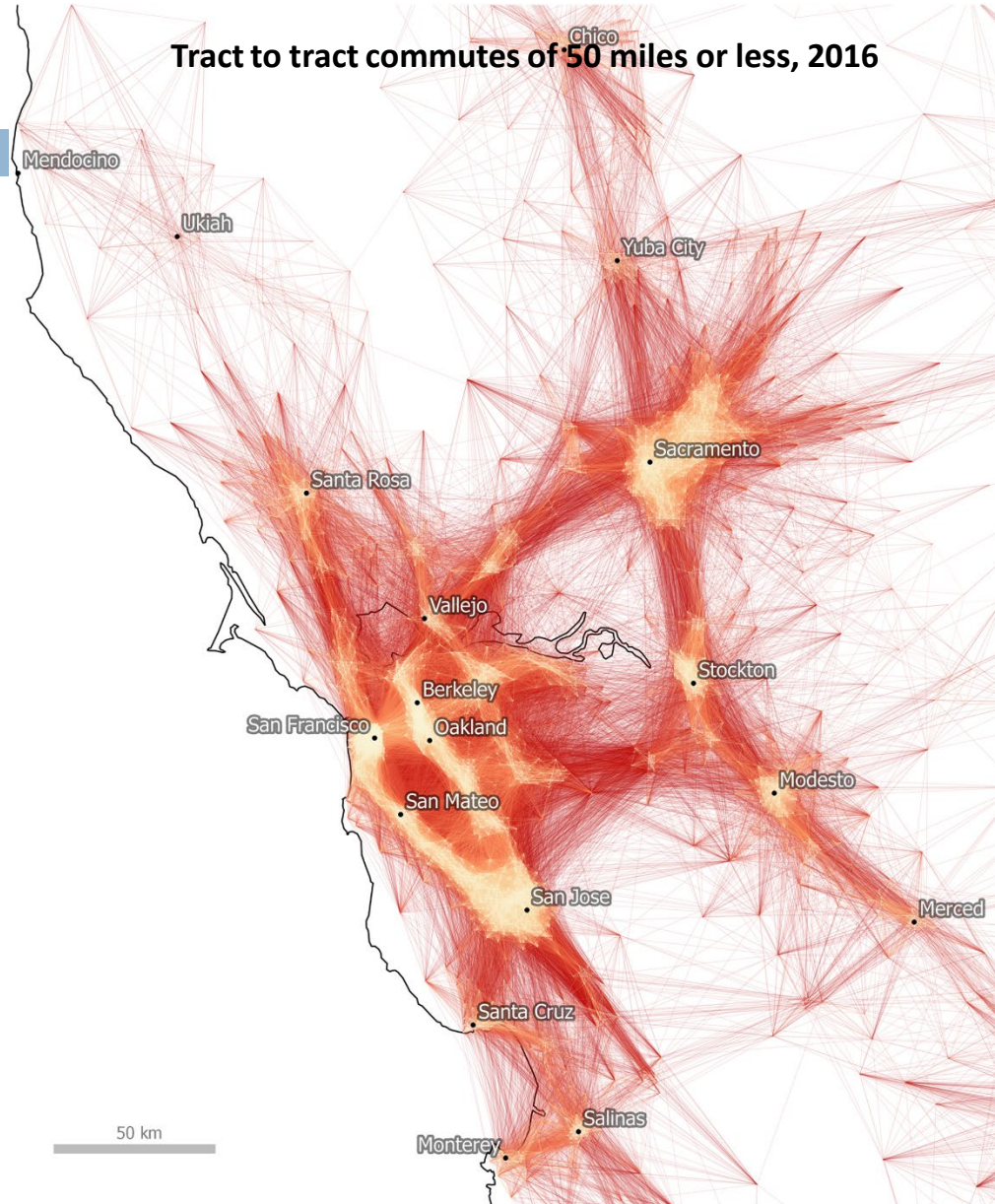
Stockton-Lodi MSA has long been interconnected with the Bay Area and Sacramento.

In 2013, was officially defined as part of the San Francisco-San Jose Combined Statistical Area (CSA)



And these connections are only increasing through an integrated economy (e.g. warehousing), commuting patterns and cultural ties.

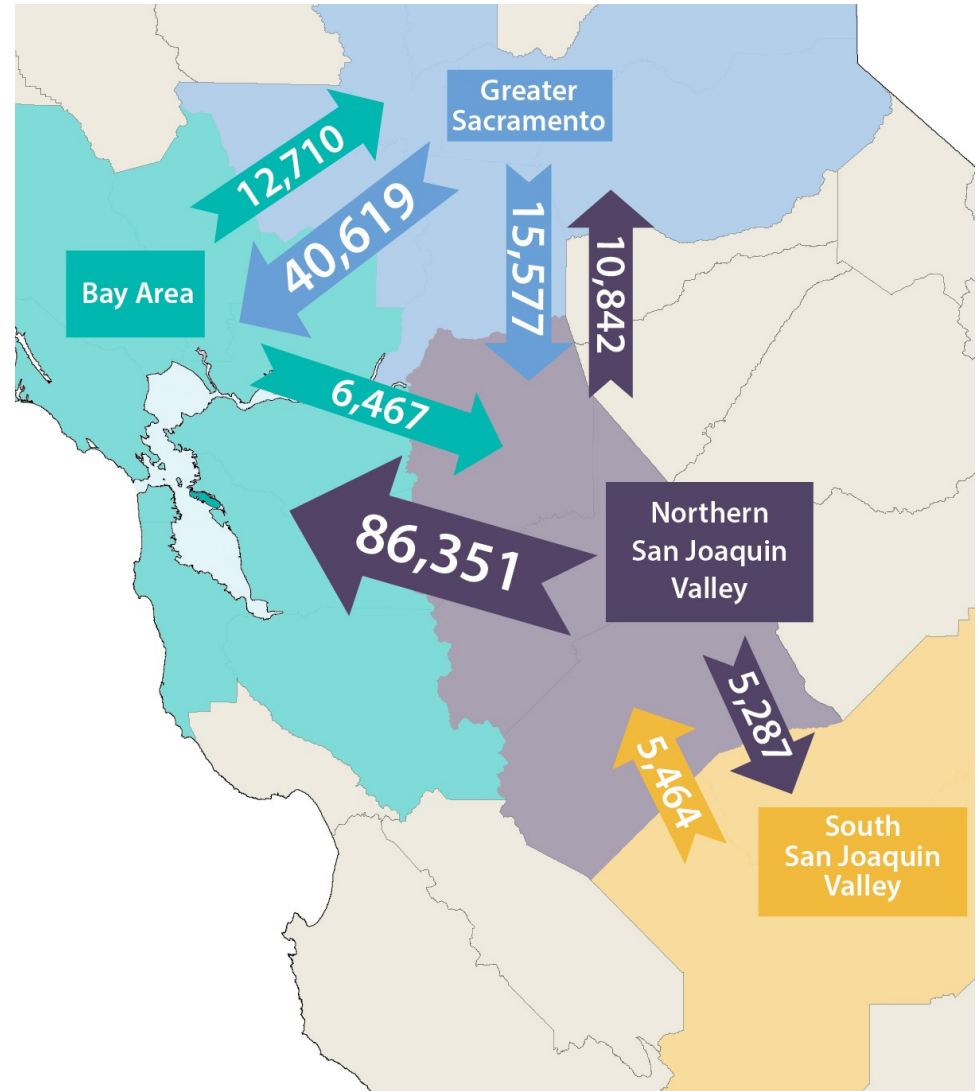
Tract to tract commutes of 50 miles or less, 2016



From "An Economic Geography of the United States: From Commutes to Megaregions" by Garrett Dash Nelson and Alasdair Rae
<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0166083>

Commuting in the mega-region

NSJV to Bay Area Flow
increased
from 60,000 to
over 86,000
since 2014.

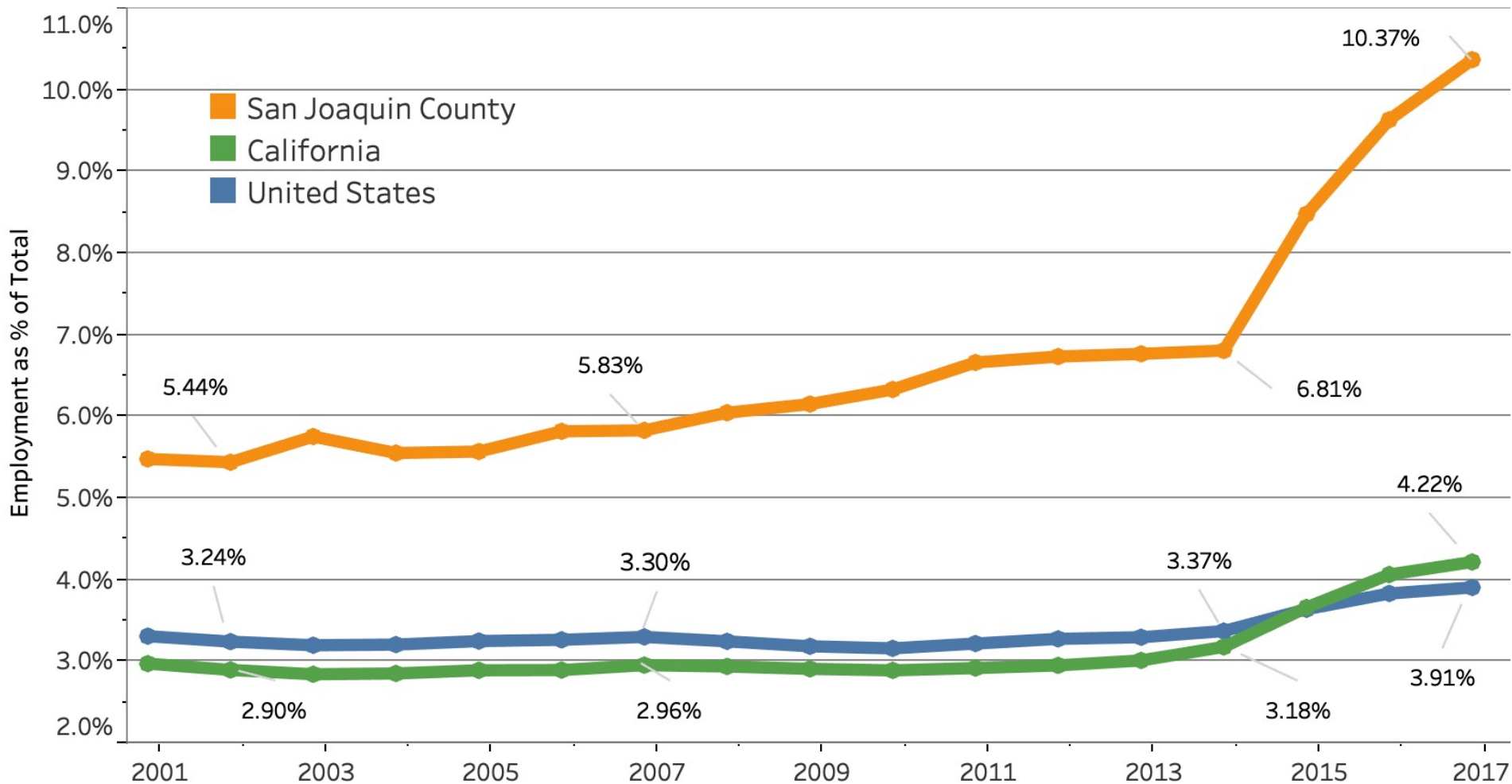


Dynamics of the T&W Growth: Four Factors



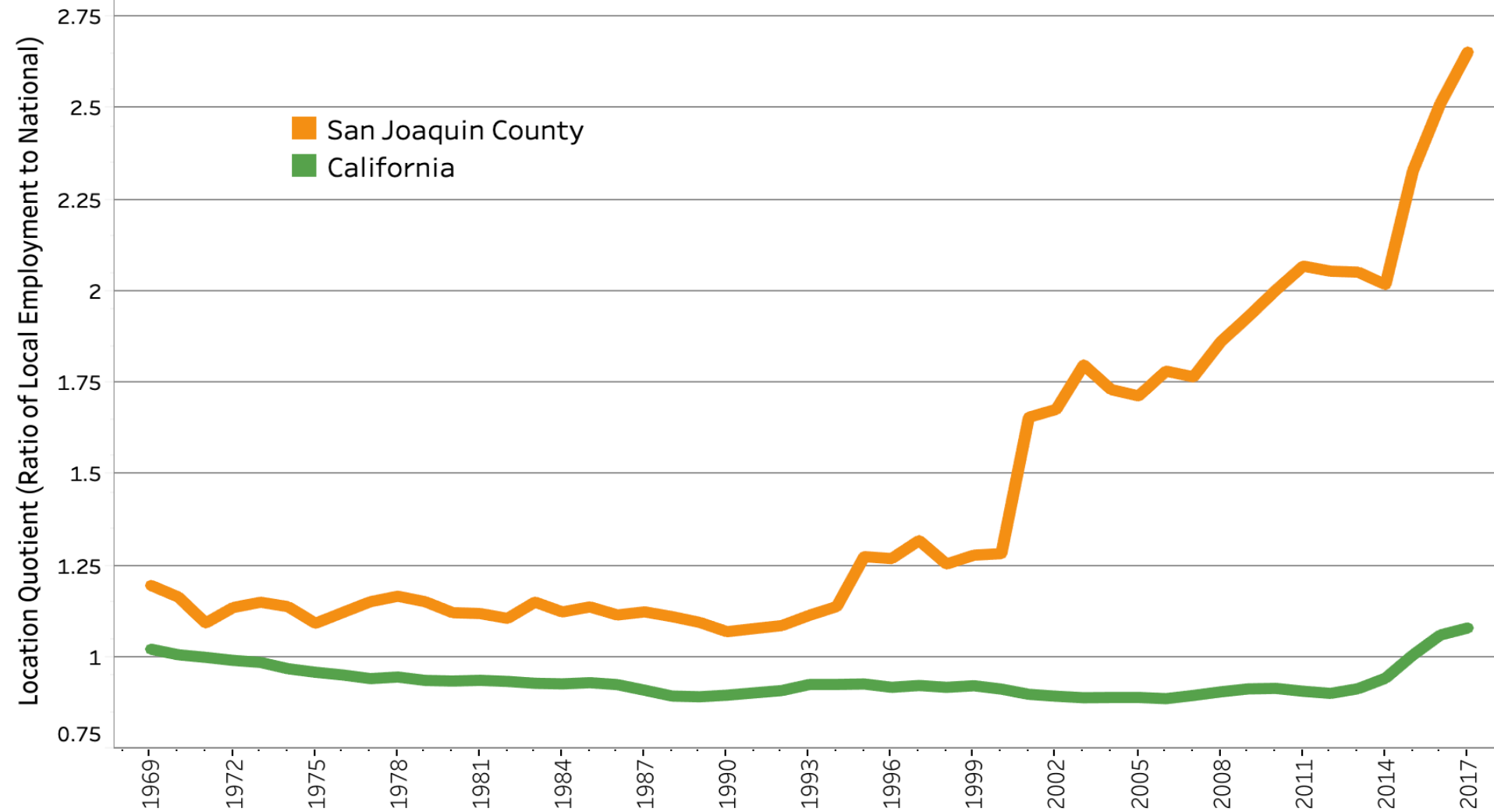
1. Growth of E-commerce: change in spending patterns across 12+ million person megaregion.
2. increasing integration across the Northern California Megaregion,
3. the County's extensive transportation infrastructure and locational advantage
4. the County's workforce profile

Transportation & Warehousing Sector Employment Shares



Source: Bureau of Economic Analysis, Total Full-Time and Part-Time Employment by Industry (CAEMP25) database

Transportation & Warehousing Location Quotient (U.S.)



Source: Bureau of Economic Analysis, Total Full-Time and Part-Time Employment by Industry (CAEMP25) database

Top-10 Transportation & Warehousing MSAs in the U.S. by share of employment

Metropolitan Statistical Area	Employment	T&W as % of Total
Laredo, TX	20,271	14.3%
Stockton-Lodi, CA	34,202	10.4%
Memphis, TN-MS-AR	79,977	9.4%
Houma-Thibodaux, PA	10,249	9.0%
Chambersburg-Waynesboro, PA	6,733	8.4%
Harrisburg-Carlisle, PA	32,235	7.7%
Riverside-San Bernardino-Ontario, CA	155,837	7.6%
Joplin, MO	7,693	7.5%
Scranton--Wilkes-Barre—Hazleton, PA	23,722	7.3%
Reno, NV	21,309	7.0%

Source: Bureau of Economic Analysis, Total Full-Time and Part-Time Employment by Industry (CAEMP25) database

Transportation & Warehousing employment in NCMR, California & U.S.

Area		2013	2017	% Change 2013-2017
Northern California Megaregion	<i>Stockton-Lodi MSA</i>	6.8%	10.4%	53.2%
	Merced MSA	4.2%	5.0%	19.0%
	Modesto MSA	4.5%	4.8%	8.8%
	Vallejo-Fairfield MSA	2.7%	4.1%	51.1%
	Sacramento--Roseville--Arden-Arcade MSA	2.8%	3.7%	29.3%
	Napa MSA	2.1%	2.8%	29.4%
	San Jose-Sunnyvale-Santa Clara MSA	1.6%	2.4%	53.0%
	Salinas MSA	2.0%	2.3%	14.1%
	Santa Rosa MSA	1.9%	2.1%	13.0%
	San Francisco-Oakland-Hayward MSA	3.1%	N/A	N/A
	Santa Cruz-Watsonville MSA	N/A	N/A	N/A
California	3.0%	4.2%	40.0%	
United States	3.3%	3.9%	18.5%	

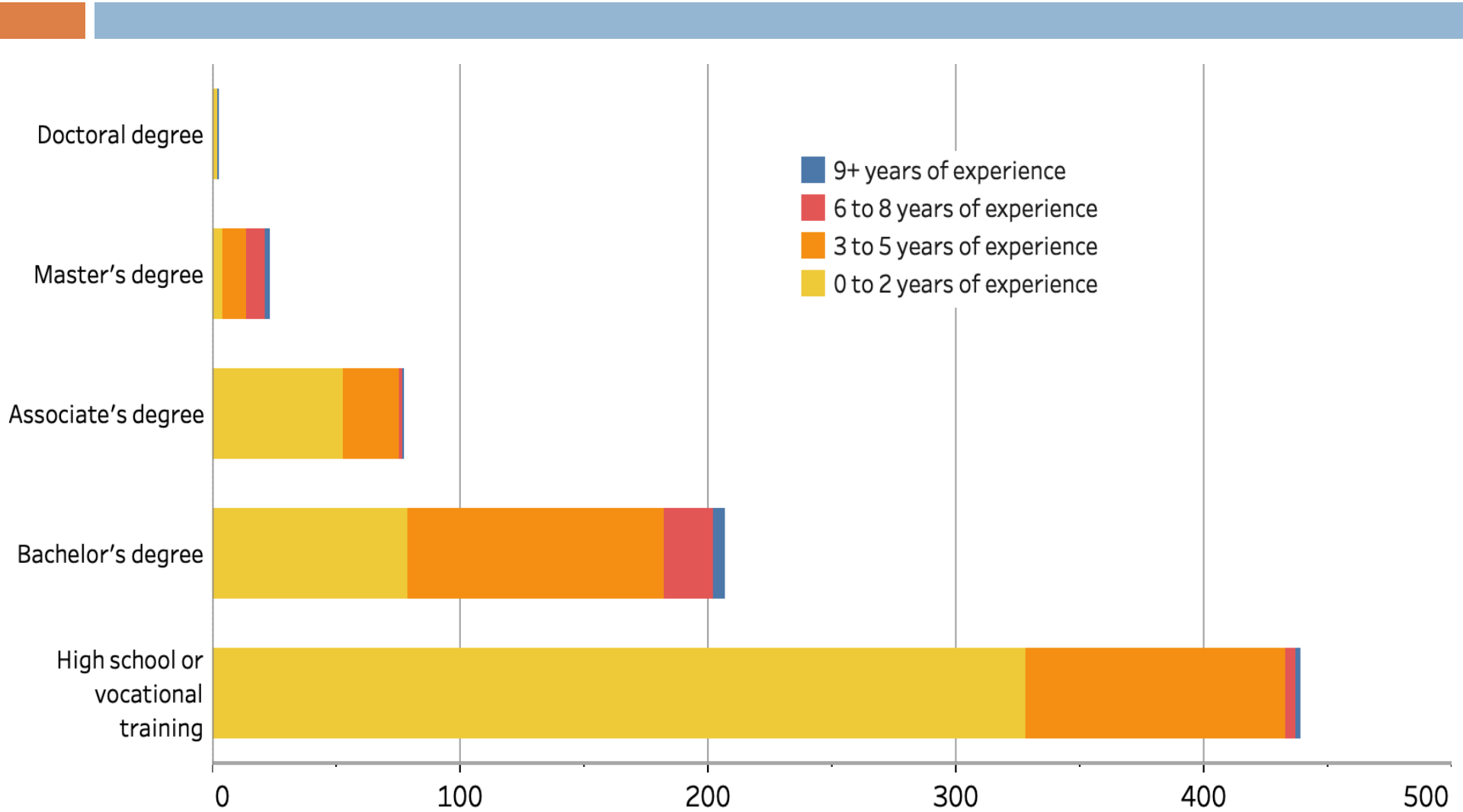
Source: Bureau of Economic Analysis, Total Full-Time and Part-Time Employment by Industry (CAEMP25) database

Ratio of Retail to Transportation & Warehousing Employment

Area	2008 Ratio	2013 Ratio	2018 Ratio
Laredo, TX	1.02	0.93	0.77
Memphis, TN-MS-AR	1.08	0.99	0.96
Stockton-Lodi, CA	1.79	1.52	0.93
California	3.21	3.15	2.63
United States	3.35	3.28	3.01

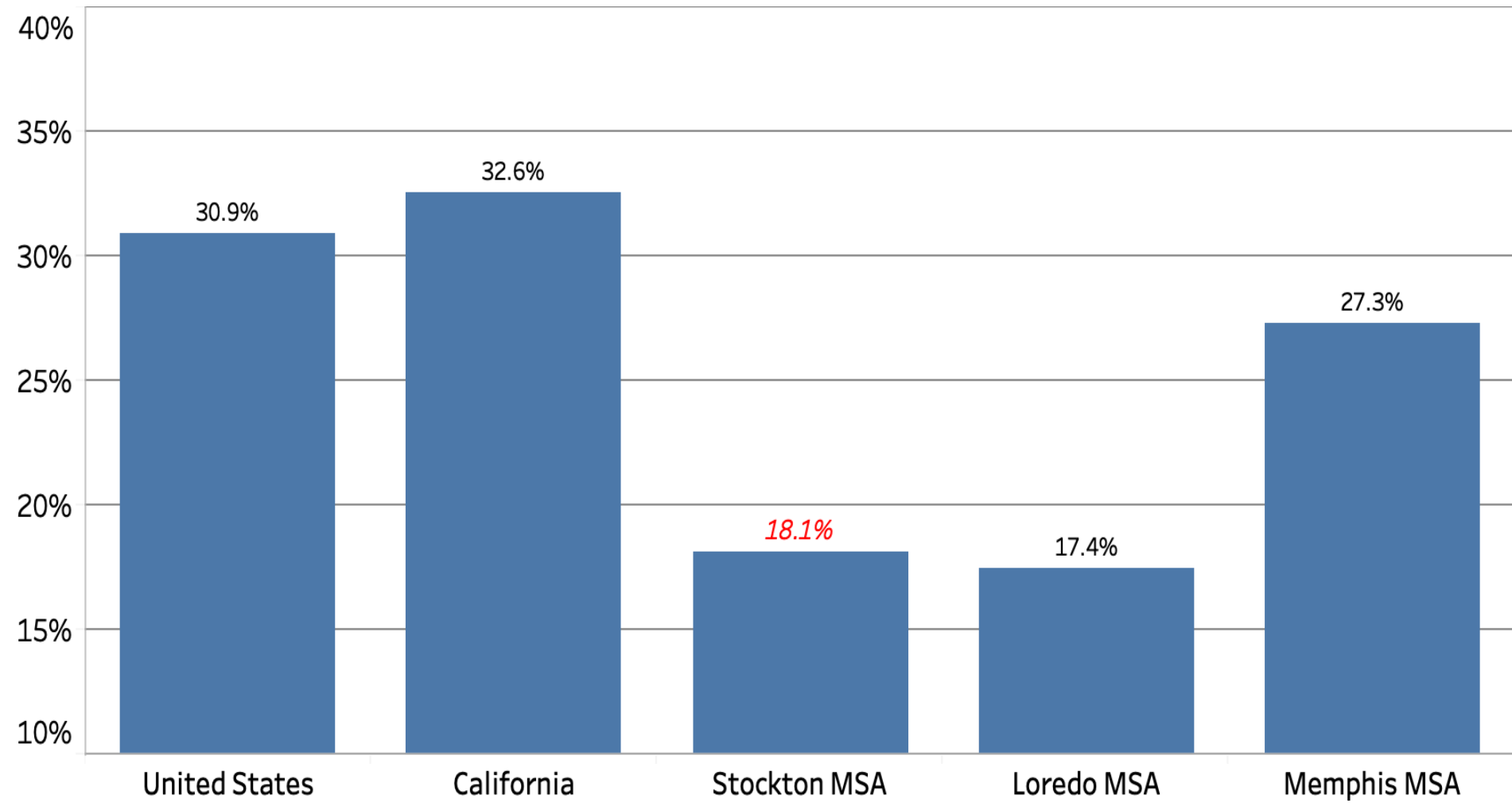
Source: Bureau of Labor Statistics, Current Employment Statistics database

Experience & Education in County T&W Job Postings



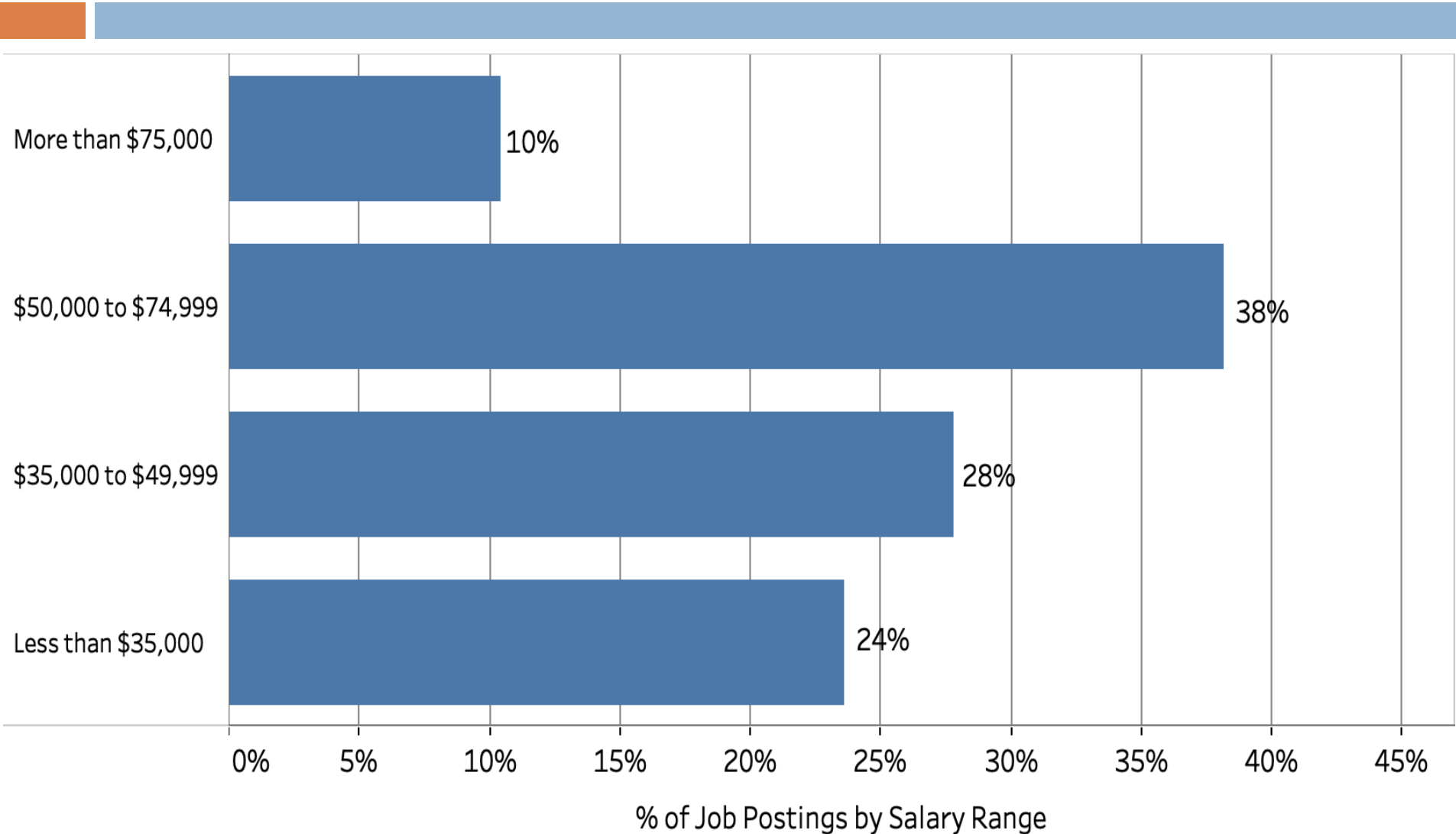
Source: Labor Insight Jobs (Burning Glass Technologies)

Population 25 & Over with a Bachelor's Degree or Higher



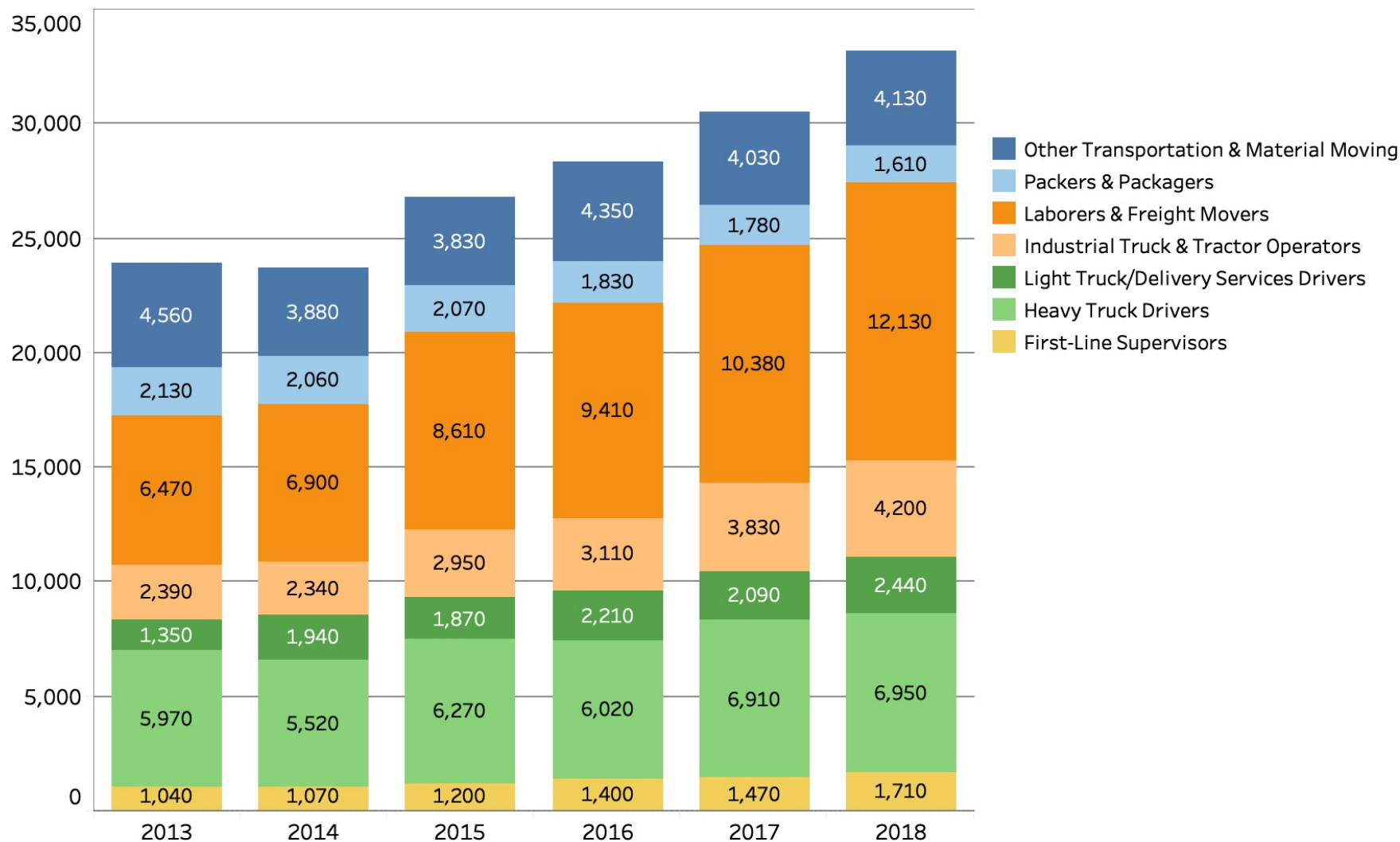
Source: Census Bureau, American Community Survey, 2017 5-Year Estimates (2013-17)

Salaries for Transportation & Warehousing Job Postings in 2018



Source: Labor Insight Jobs (Burning Glass Technologies)

Transportation & Material Moving Occupational Employment



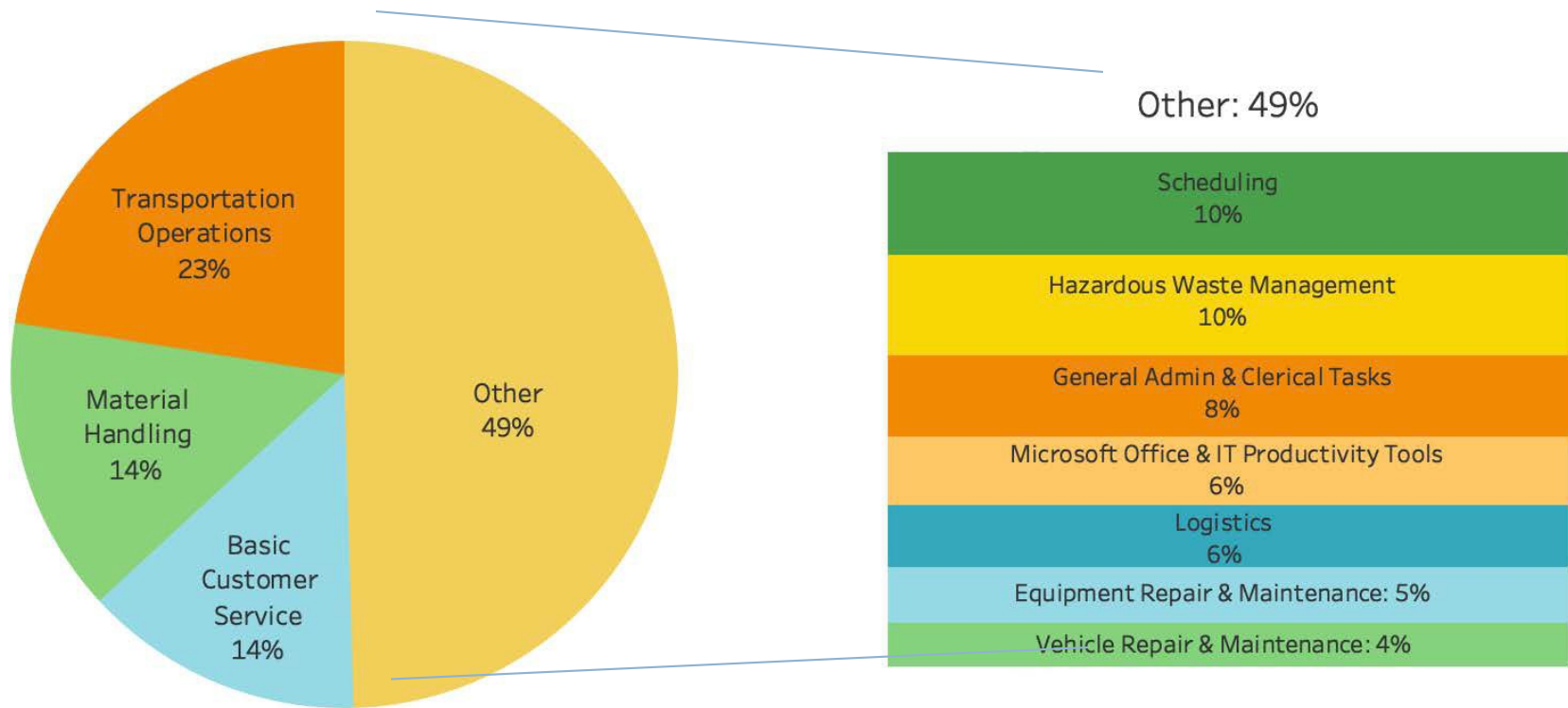
Source: Bureau of Labor Statistics, Occupational Employment Statistics database

Real Annual Mean Wage of Transportation & Material Moving Occupations

Occupation	2013 (Real\$ 2018)	2018
First-Line Supervisors	\$56,133	\$57,710
Heavy Truck Drivers	\$44,917	\$47,130
Light Truck/Delivery Services Drivers	\$38,665	\$38,010
Industrial Truck and Tractor Operators	\$37,673	\$36,520
Laborers & Freight Movers	\$30,817	\$38,480
Packers and Packagers	\$23,984	\$30,150
Other Transportation & Material Moving Occupations	\$36,303	\$41,237

Source: Bureau of Labor Statistics, Occupational Employment Statistics database & Consumer Price Index

Skill Clusters in Transportation & Warehousing Jobs in 2018



Source: Labor Insight Jobs (Burning Glass Technologies)

Profile of Select Transportation & Warehousing Jobs in 2018

Occupation	2008 Job Postings	Median Salary	Location Quotient	LQ Rank (CA)	Projected Growth '16-'26
Tractor-Trailer Truck Driver	4,284	\$59k	2.7	#1	11.9%
Laborer / Warehouse Worker	1,558	\$26k	2.7	#1	15.6%
Forklift / Pallet Jack Operator	567	\$28k	5.8	#1	17.9%
Light Truck Delivery Driver	488	\$31k	2.3	#1	12.1%
Packager	94	\$23k	2.2	#2	6.2%

Source: Labor Insight Jobs (Burning Glass Technologies)

Policy Opportunities and Challenges

- Automation
- Changing production geography of the NorCal mega-region
- Employment opportunities → sustained advancement
- New integrated business models

THANK YOU!

For more information: go.pacific.edu/cbpr