

Recovery and Restructuring in the San Francisco Bay Area Economy

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Points in Brief

- National economy shows moderate growth
- Bay area beginning to turn around
- Conditions are changing for many occupations
- Costs of living, job stability and opportunities, remain issues

US GDP Real Growth

— Employment Recovery Lagging

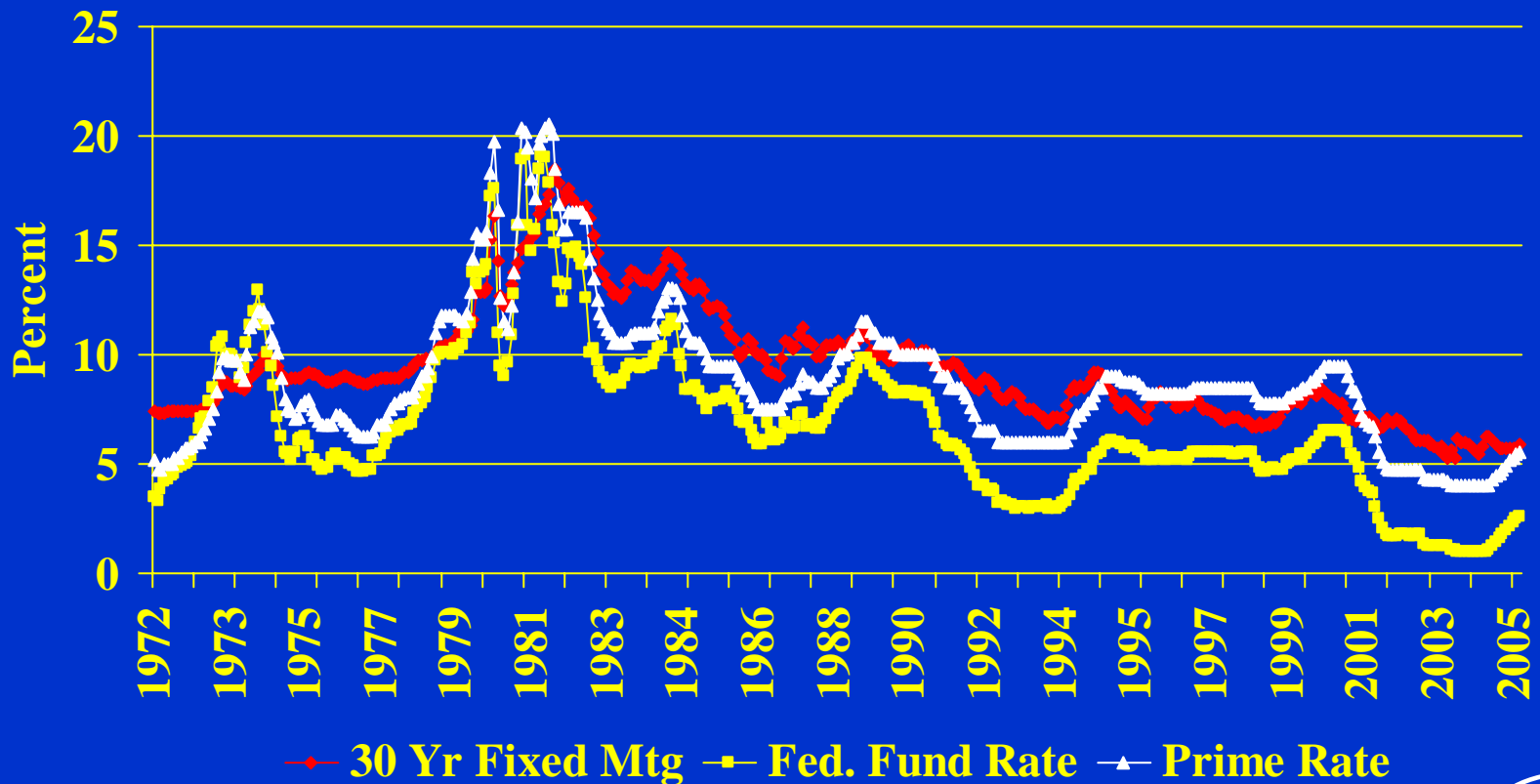
1980-2004 Annual Percent Change



Source: US Bureau of Economic Analysis

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Interest Rates Beginning to Rise (January 1972 - March 2005)

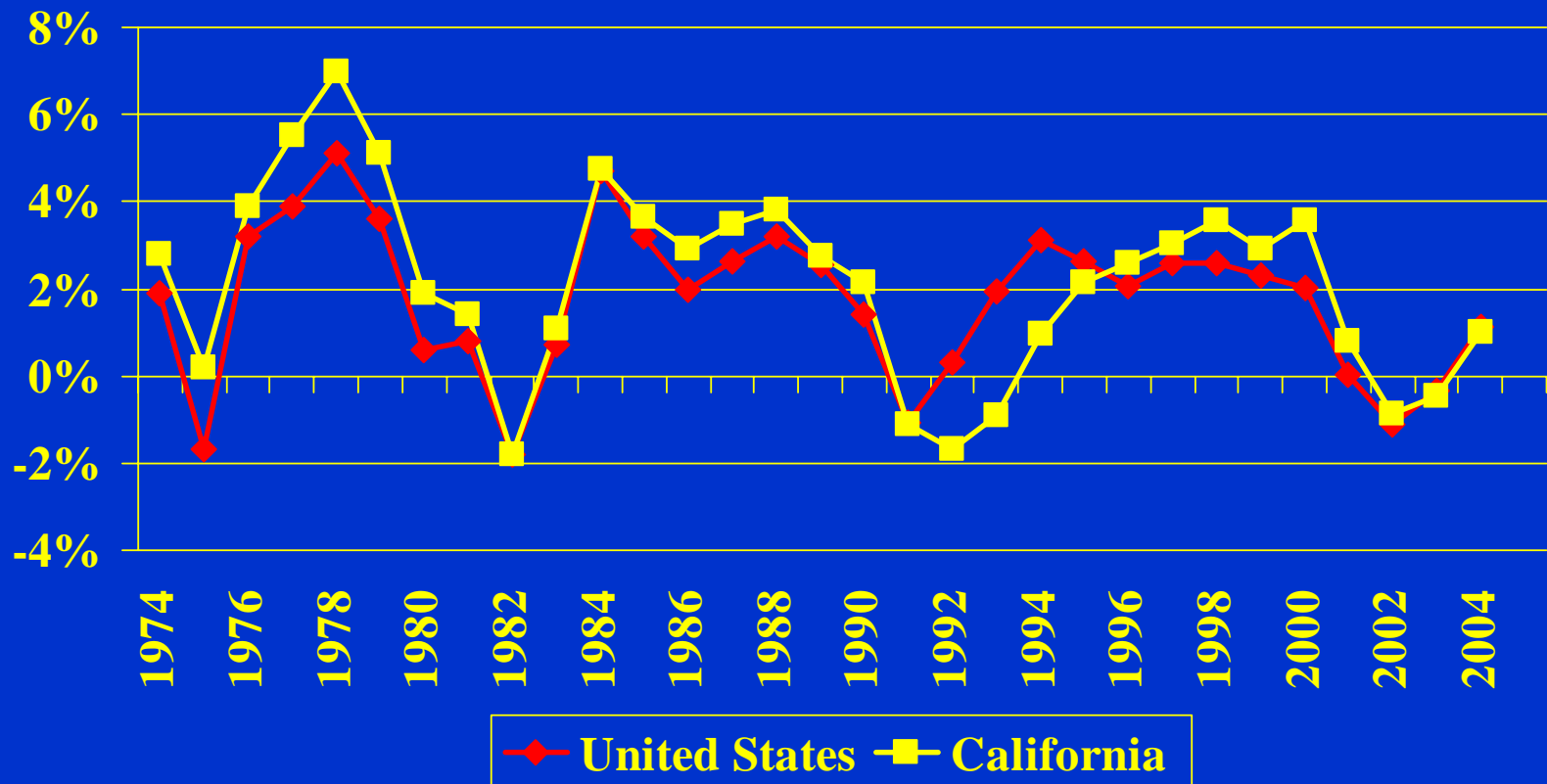


Source: Federal Reserve Board, Federal Home Loan Mortgage Corporation.

California

- California weathered the 2001 recession much better than 1991
- Construction and services dominate job growth
- Some strength in sectors employing chemical engineers

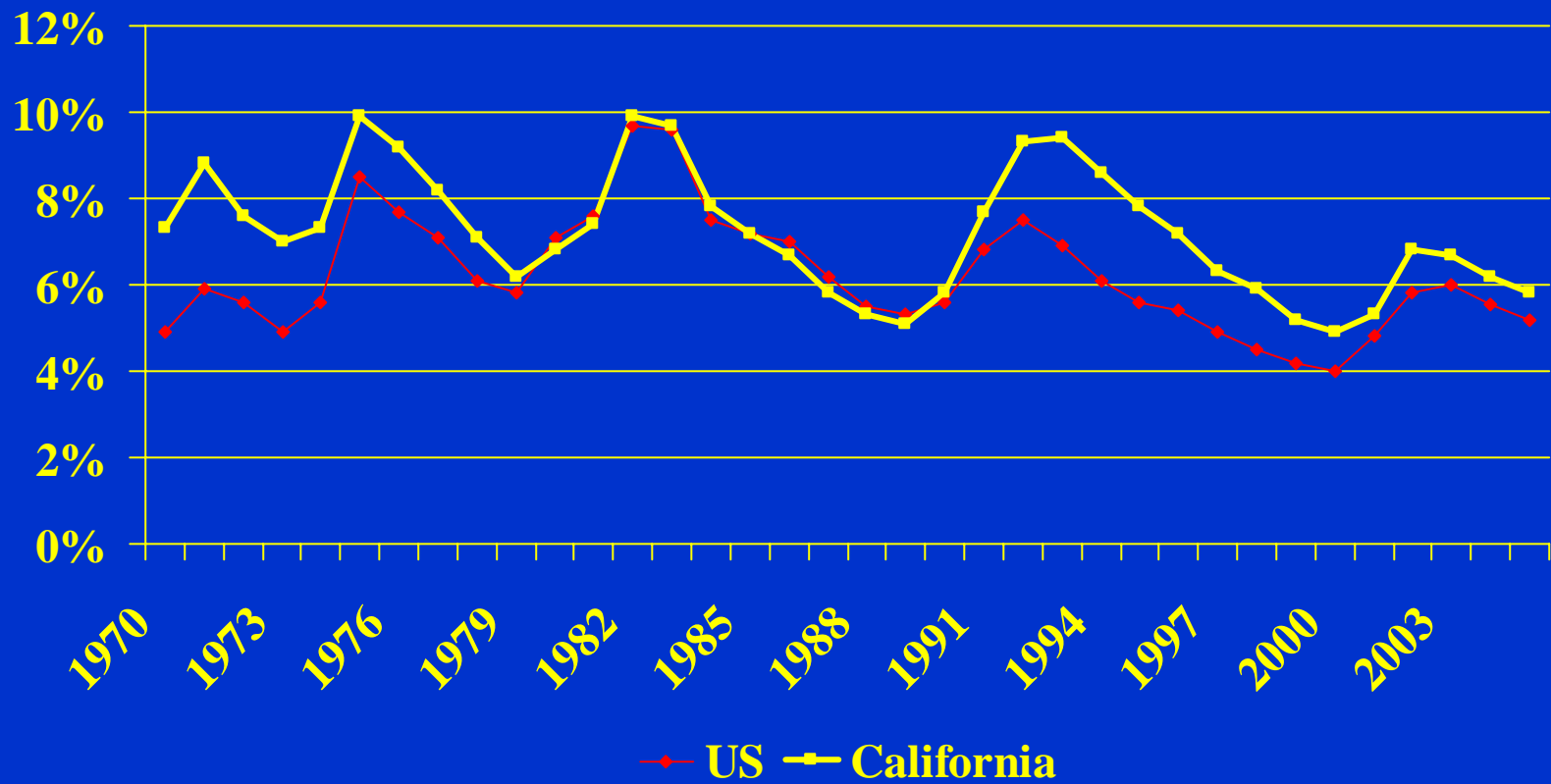
Employment Rate of Change, US and California, 1974-2004P (SA)



Source: FCREUE from BLS and California EDD data.

FCREUE
UCB

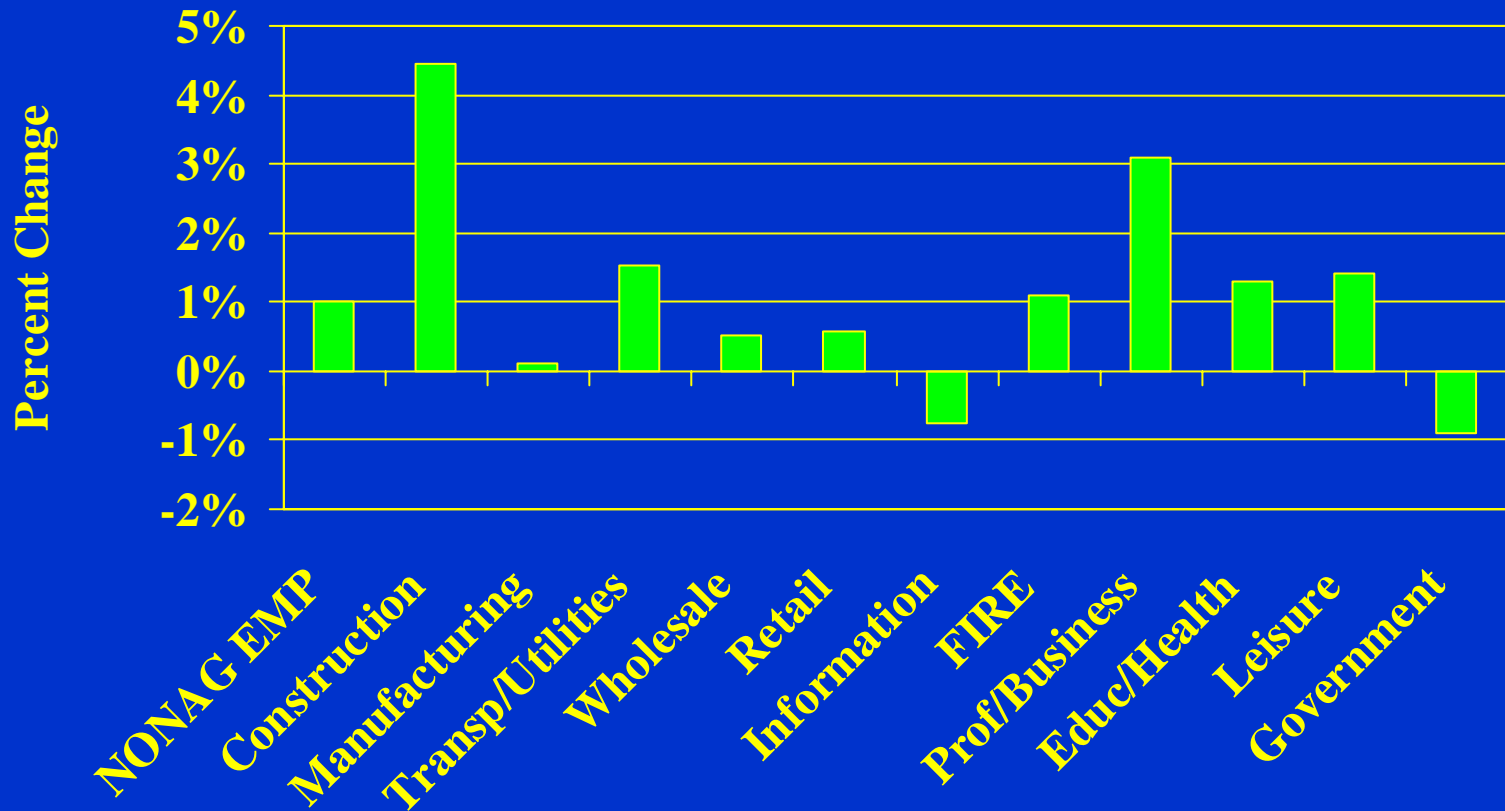
US and California Unemployment Rates 1970-2004, January 2005 (SA)



Source: California Employment Development Department.

FCREUE
UCB

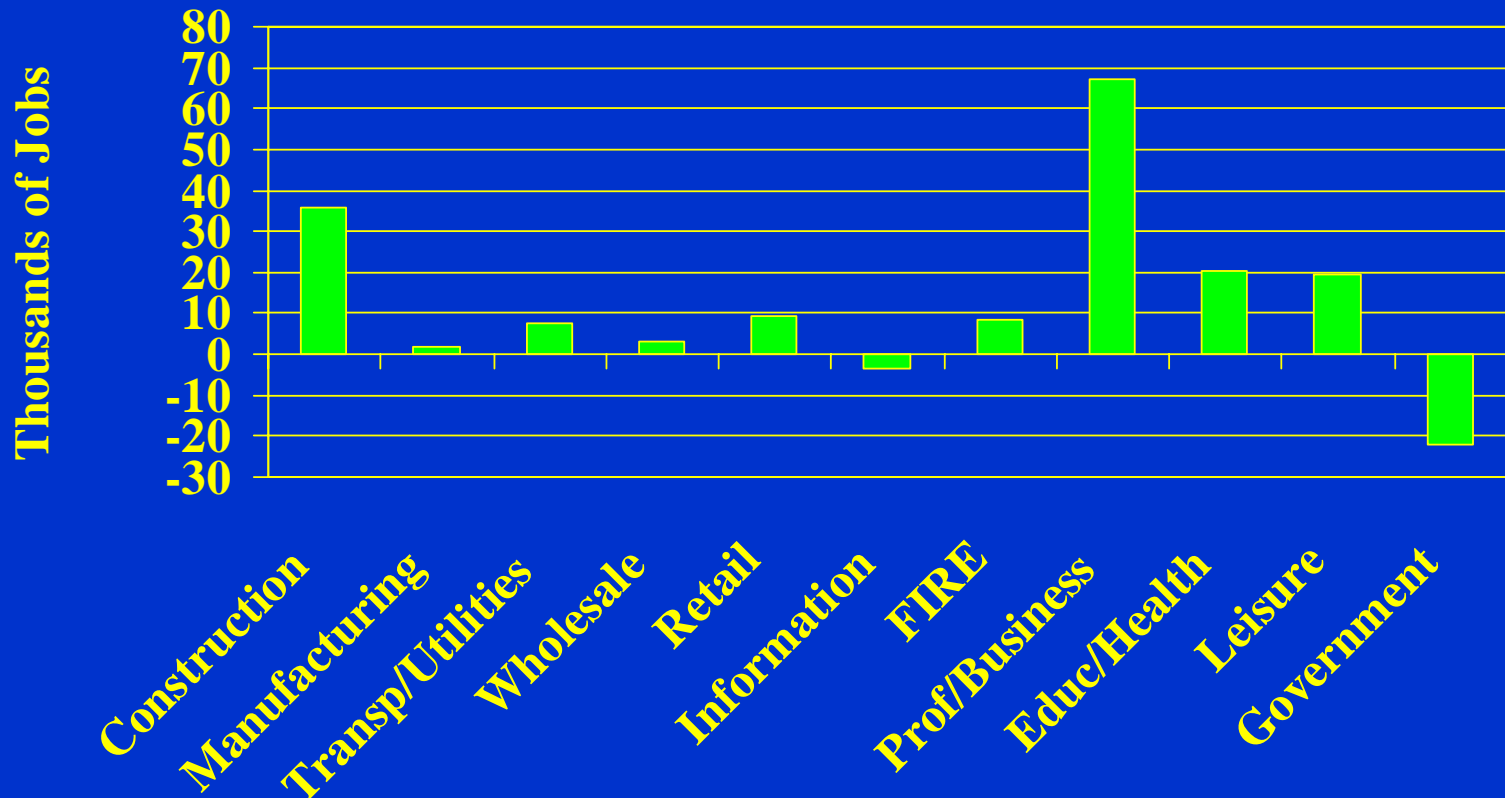
Annual California Job Growth Rate by Industry Q4 2004



Source: FCREUE from Bureau of Labor Statistics data.



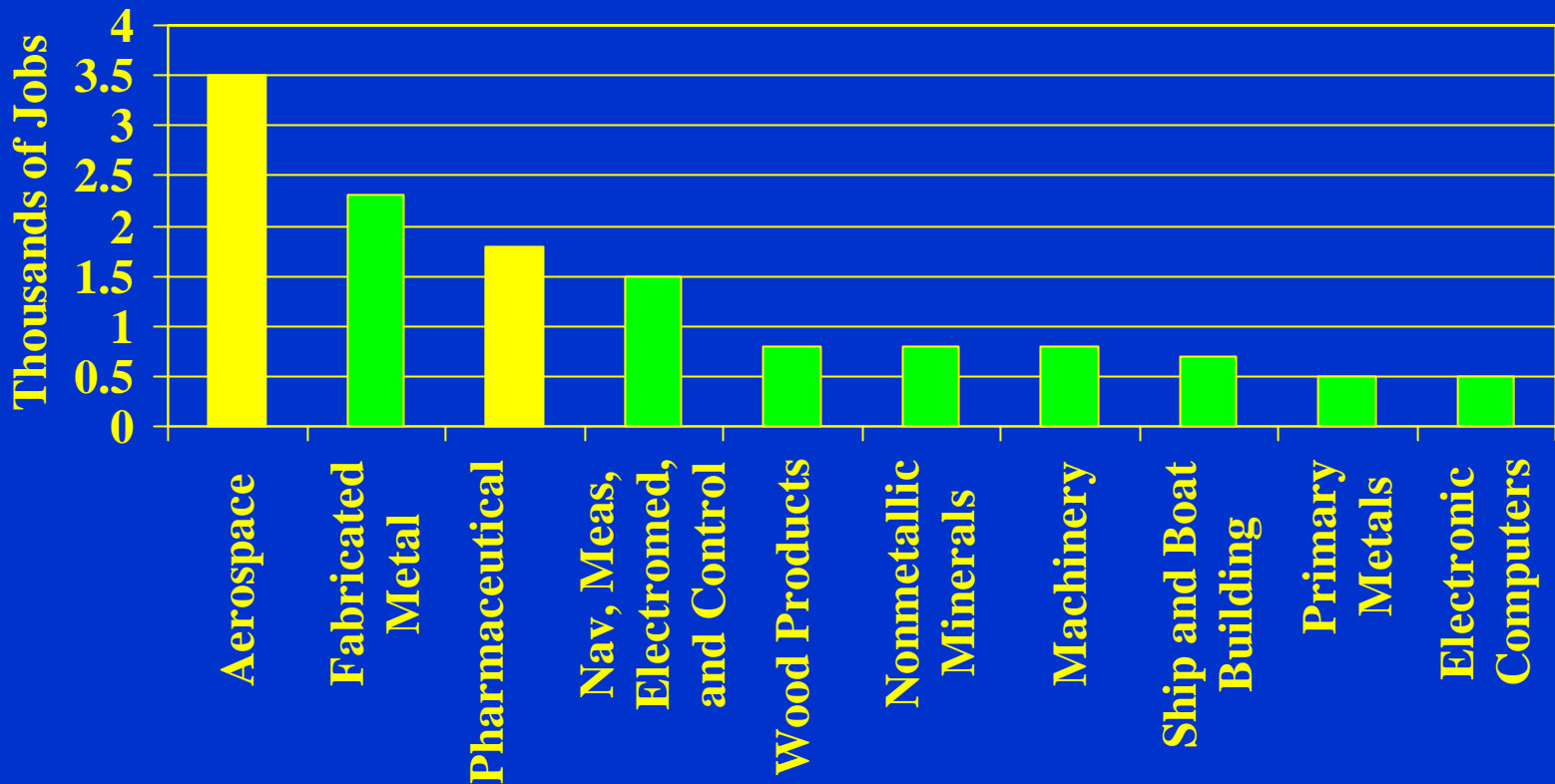
Annual California Job Change by Industry Q4 2004



Source: FCREUE from Bureau of Labor Statistics data.

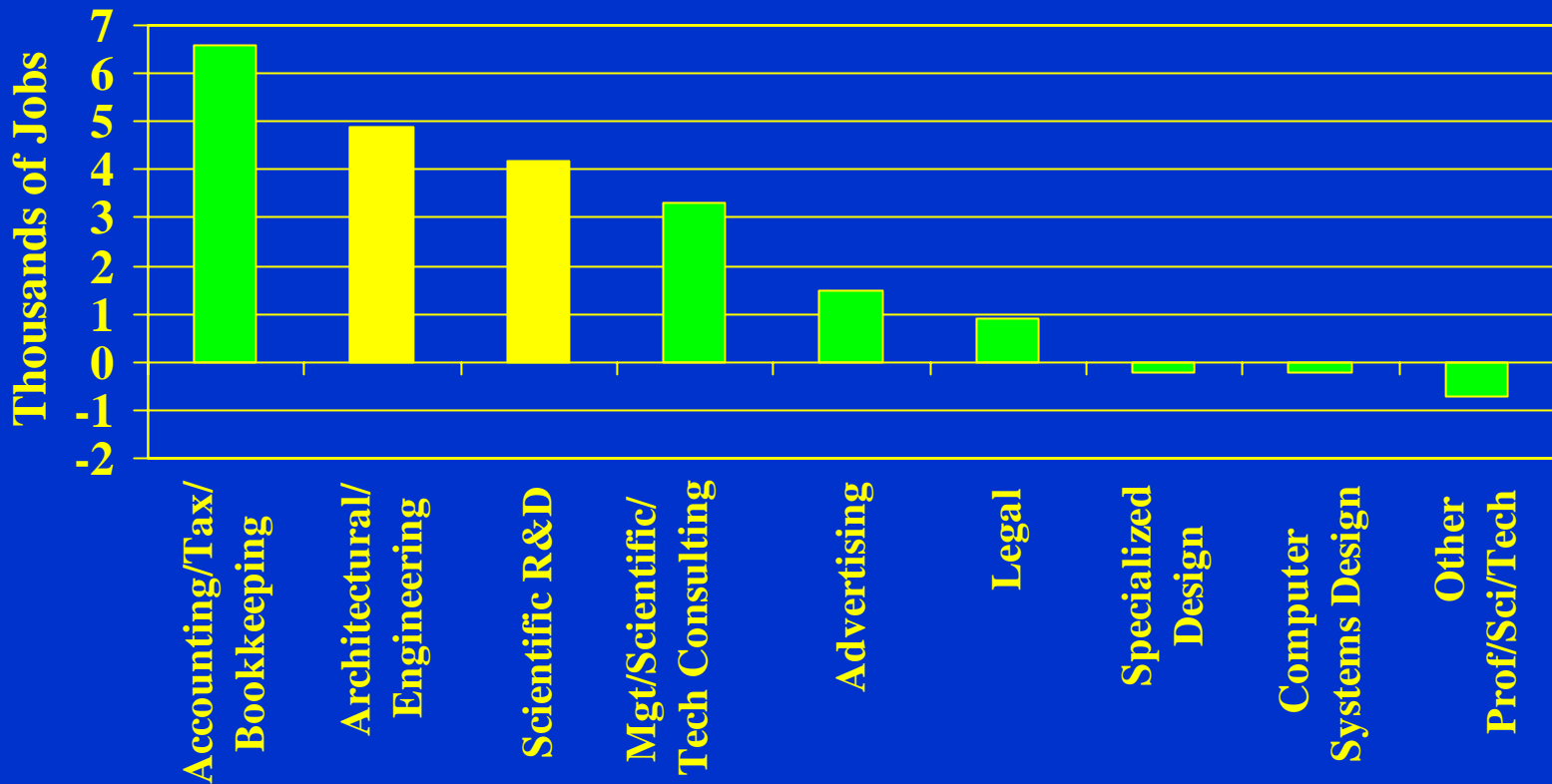
California Manufacturing Employment Growth

Q4 2004 (1-year gain–Top 10)



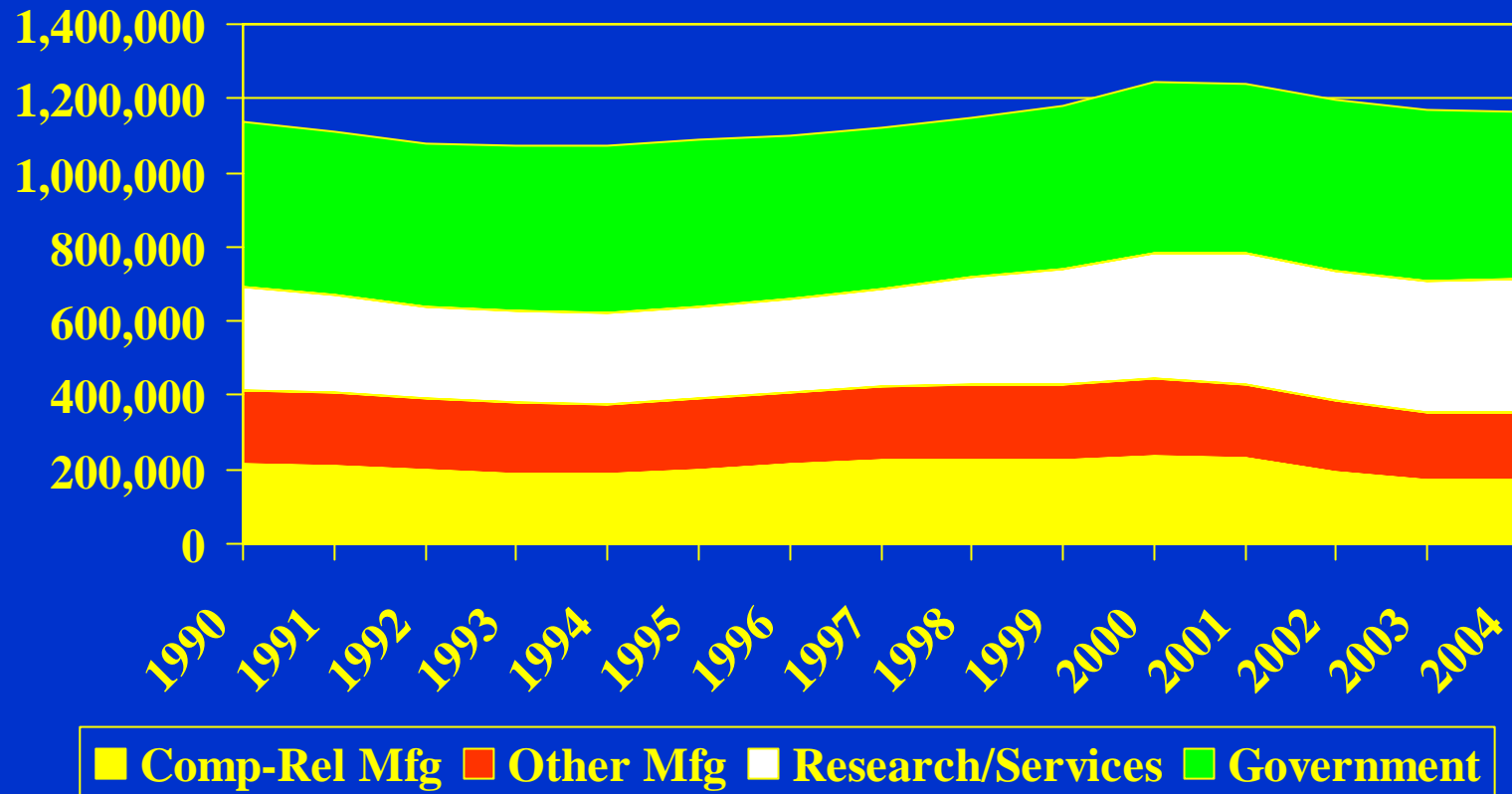
Source: FCREUE from Bureau of Labor Statistics data.

Professional/Scientific/Tech Growth Q4 2004 (1-year gain)



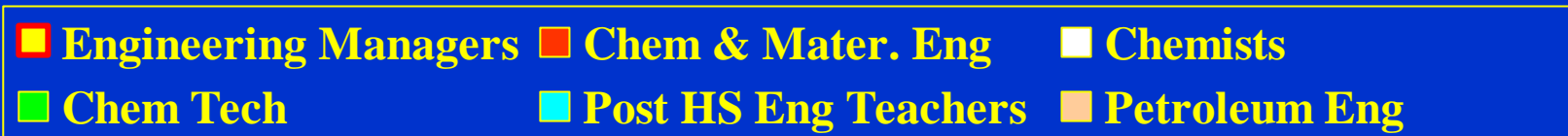
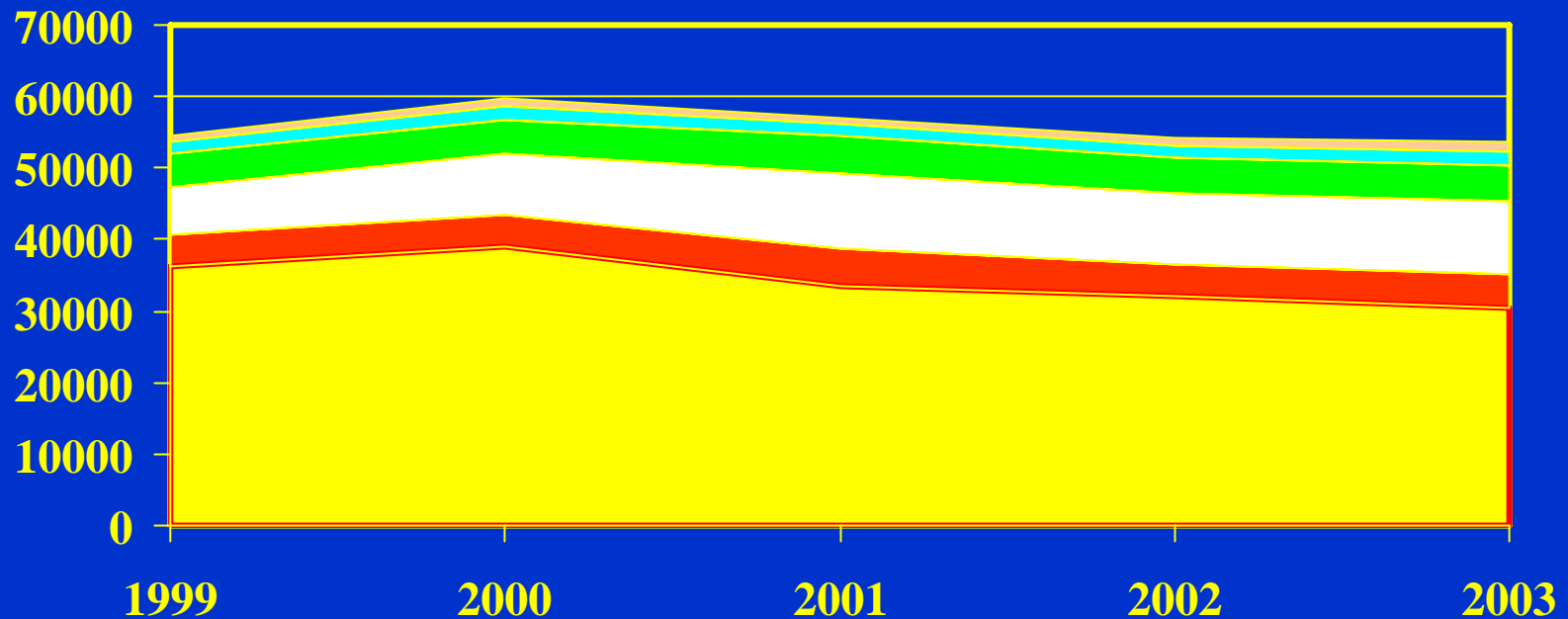
Source: FCREUE from Bureau of Labor Statistics data.

Employment Trends, Industries Hiring Chemical Engineers, California



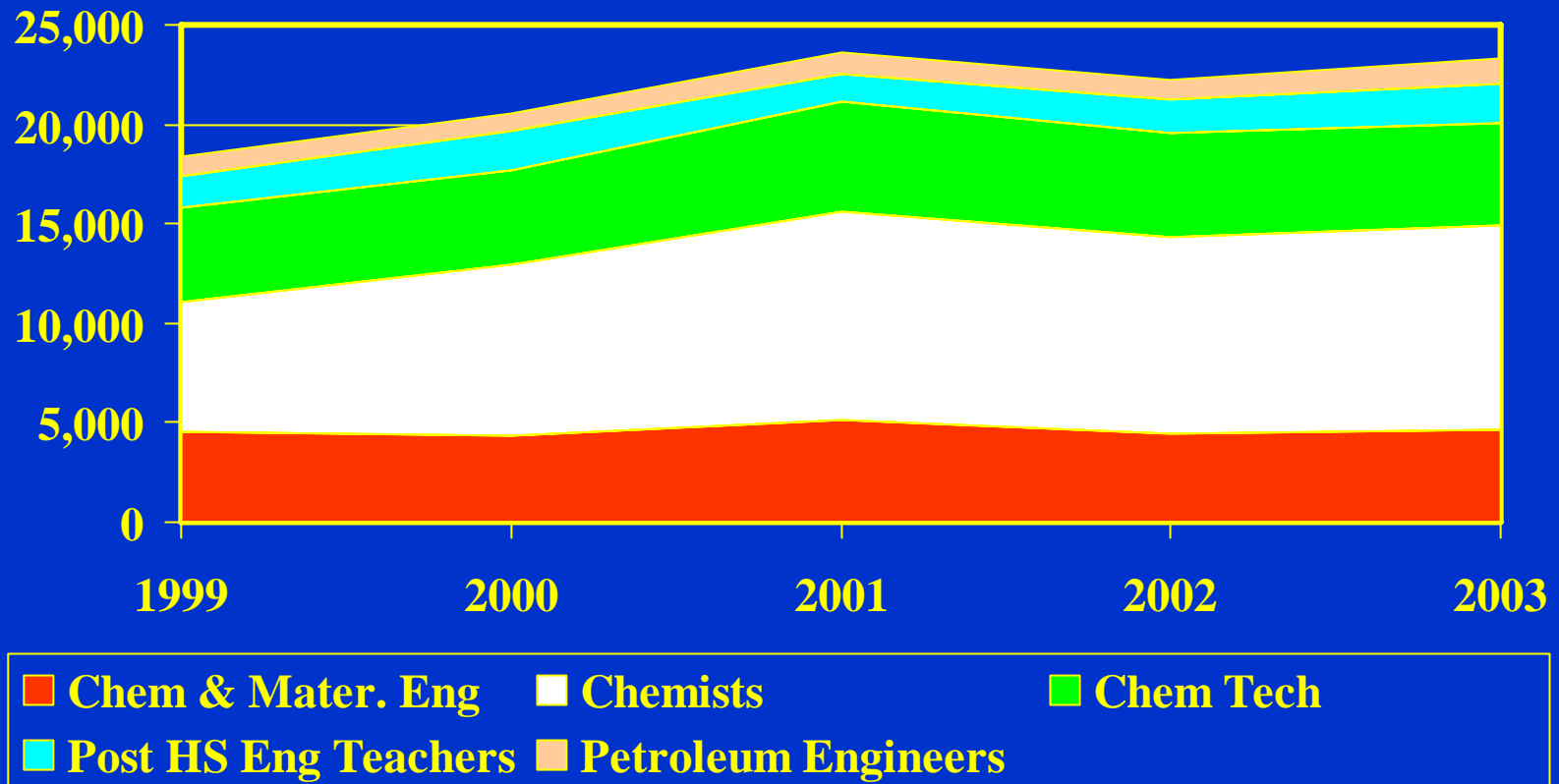
Source: FCREUE from California Employment Development Department data.

Employment Trends, Occupations Employing Chemical Engineers, California



Source: FCREUE from BLS OES data. Other includes Chemical Engineers, Materials Engineers, Chemists, Chemical Technicians, and post-secondary engineering teachers.

Employment Trends, Occupations Employing Chemical Engineers, California

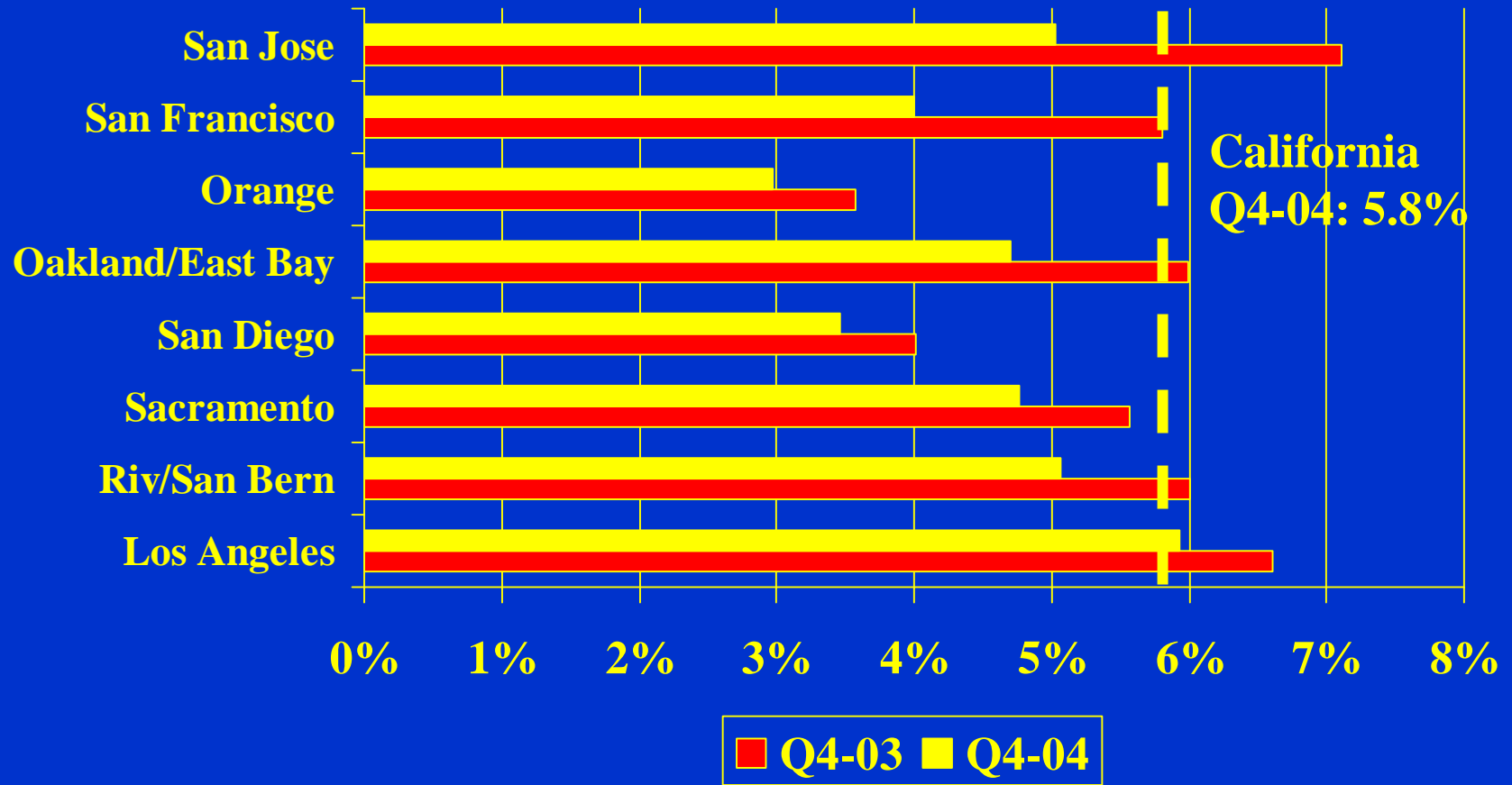


Source: FCREUE from BLS OES data. Other includes Chemical Engineers, Materials Engineers, Chemists, Chemical Technicians, and post-secondary engineering teachers.

San Francisco Bay Area

- Employment conditions improving
- Still lags the state, especially in the South Bay
- Costs remain high, even in recession

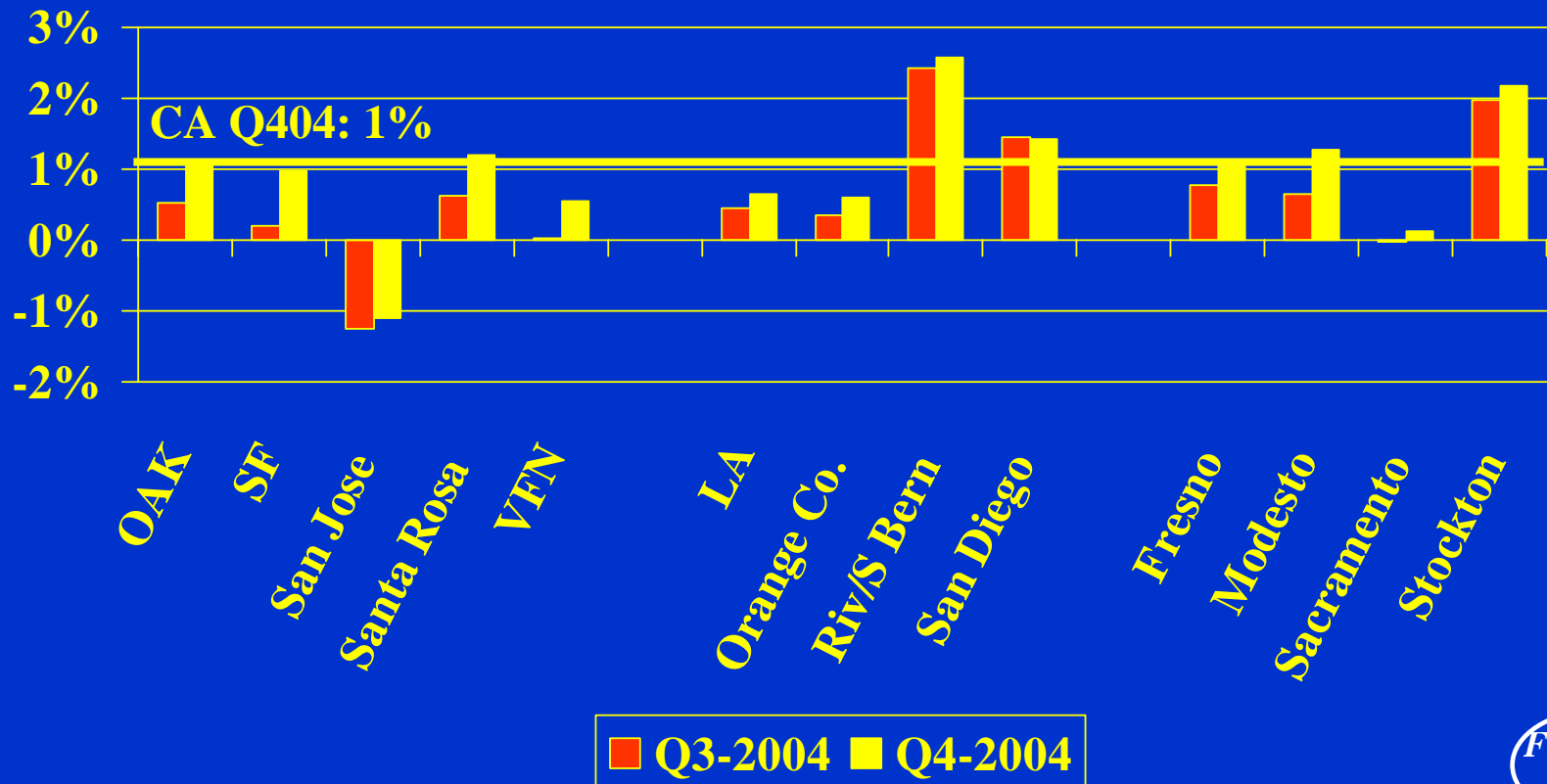
Unemployment Rates, California MSAs Q4 2003 and Q4 2004 (NS)



Source: FCREUE from California EDD data.

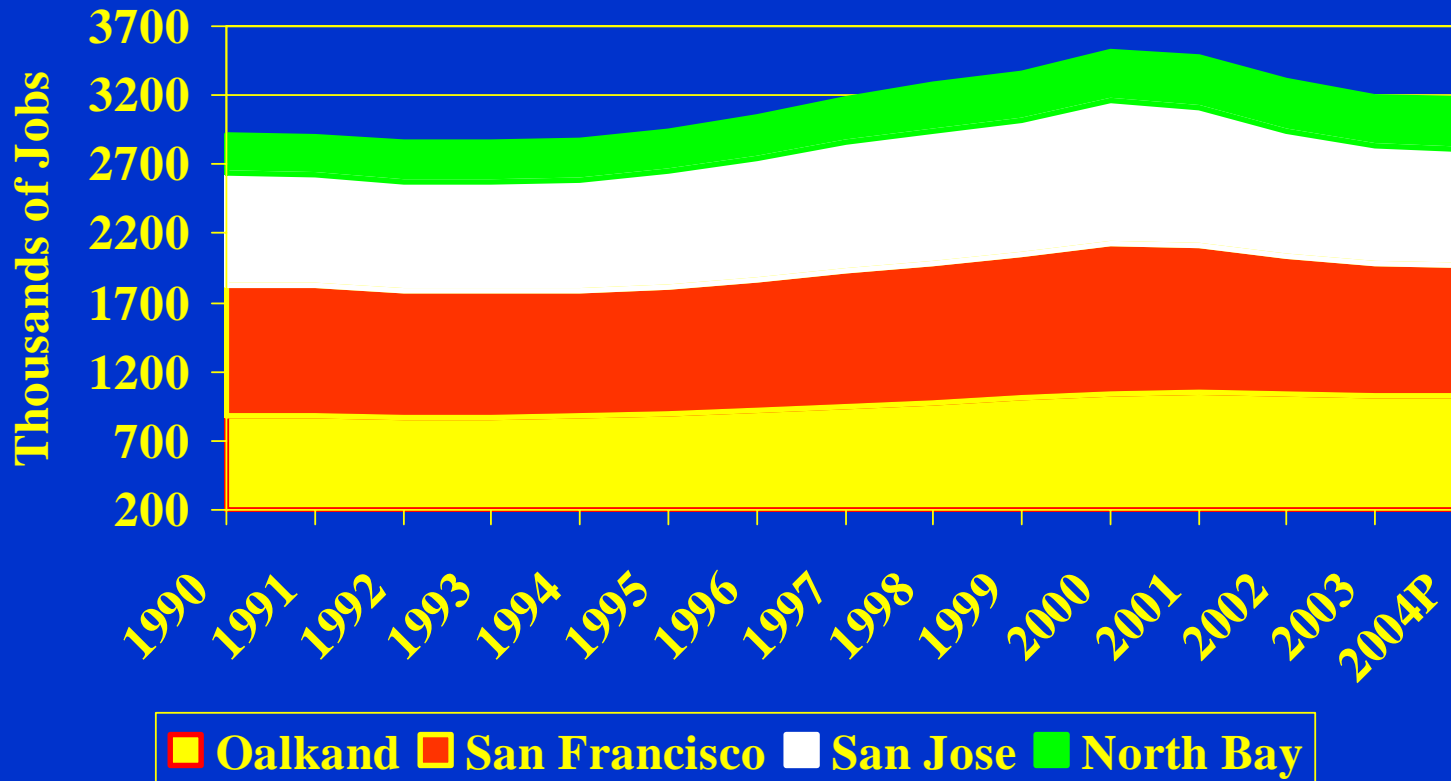
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Employment Growth in California Regions 2004, 3rd and 4th Quarter, Annual Rate of Growth



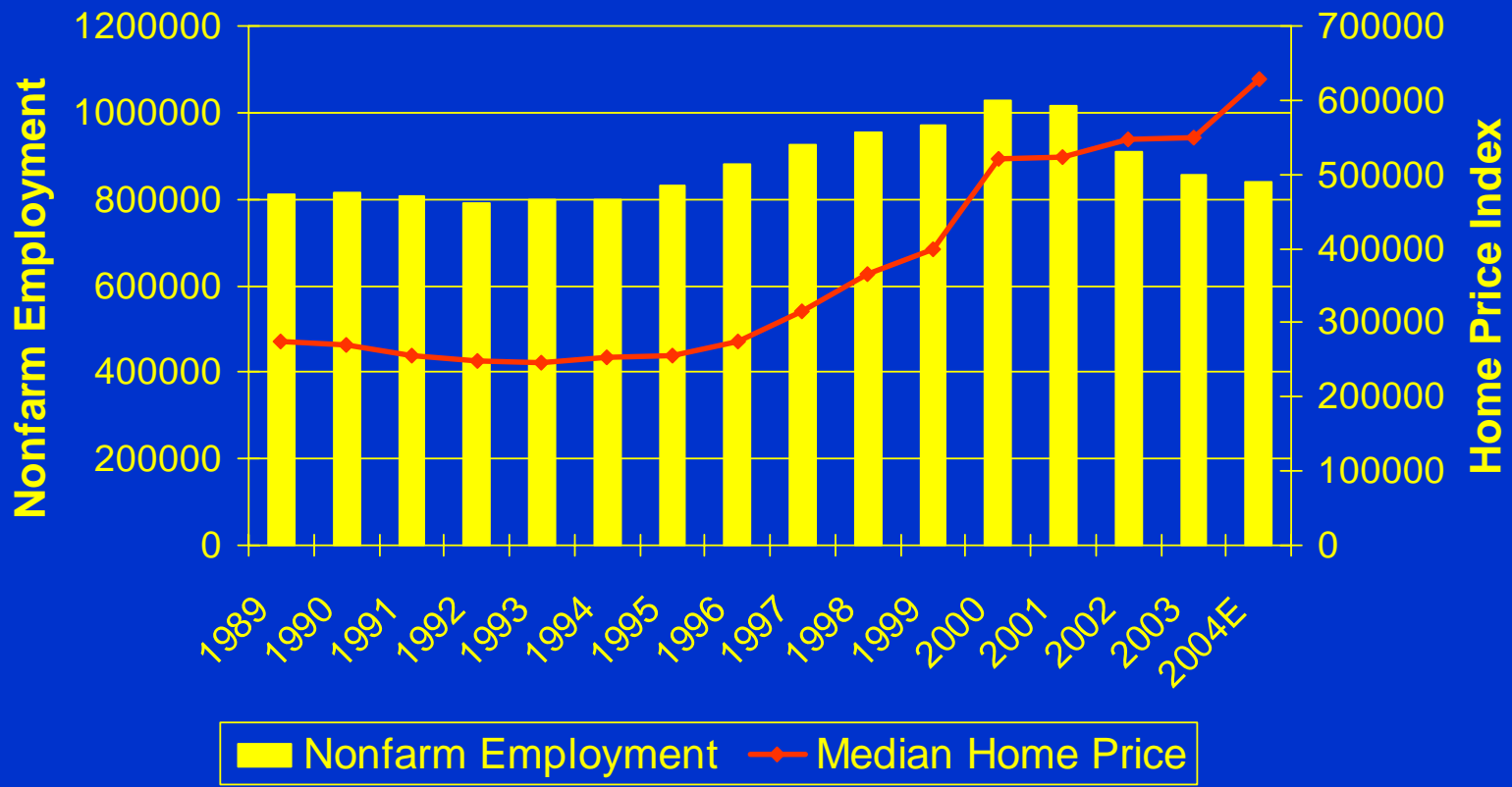
Source: FCREUE from California Employment Development Department data.

SF Bay Area Employment by Region 1990-2004



Source: FCREUE from Bureau of Labor Statistics data.

Santa Clara County Employment Levels and Median Home Price, 1989-2004

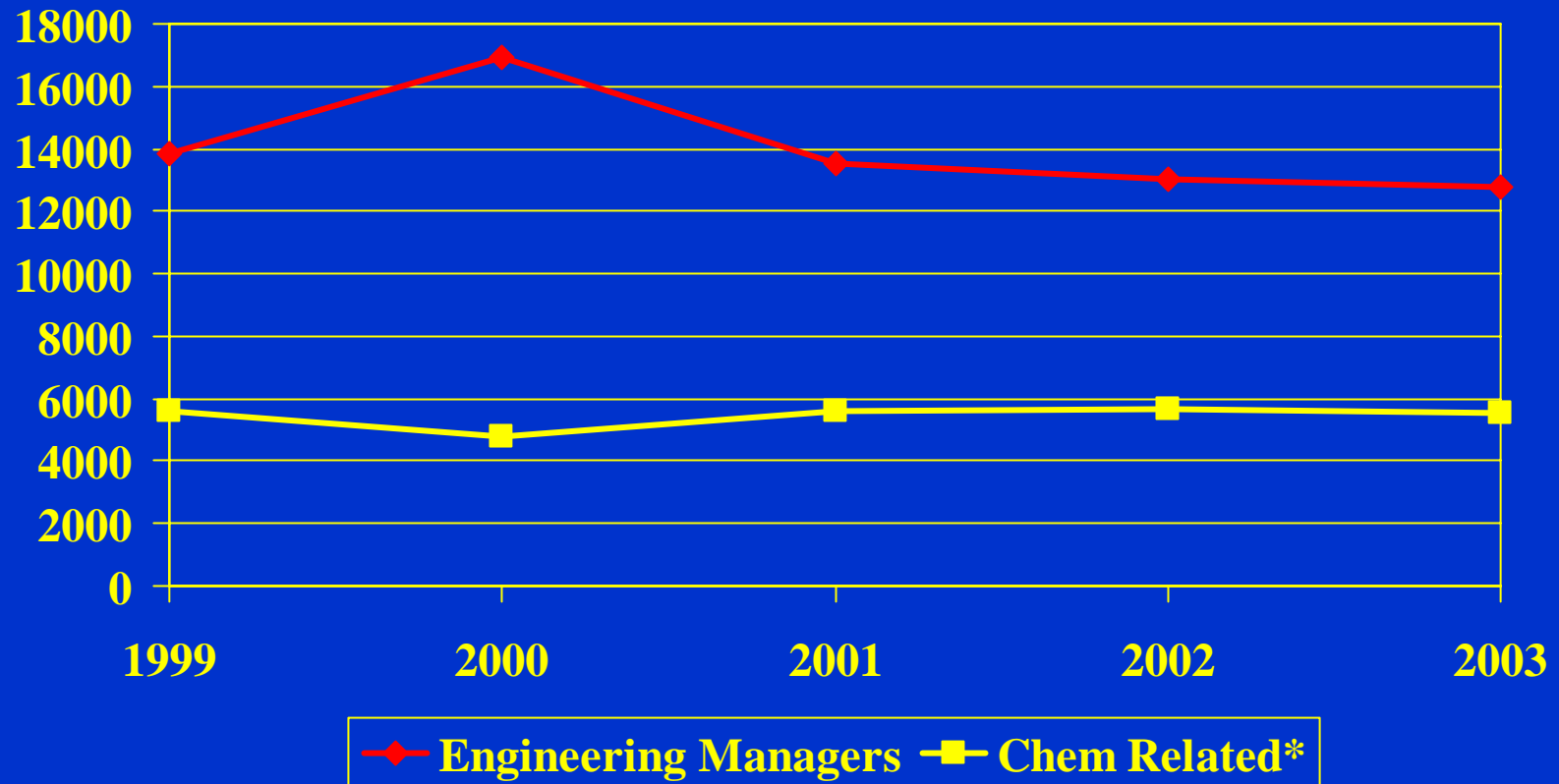


Source: Authors from California Employment Development Department and California Association of Realtors data.

Occupational Effects of Economic Change

- Increasing specialization in high-end jobs
- Cost savings in less specialized jobs
 - Automation
 - Outsourcing
 - Offshoring

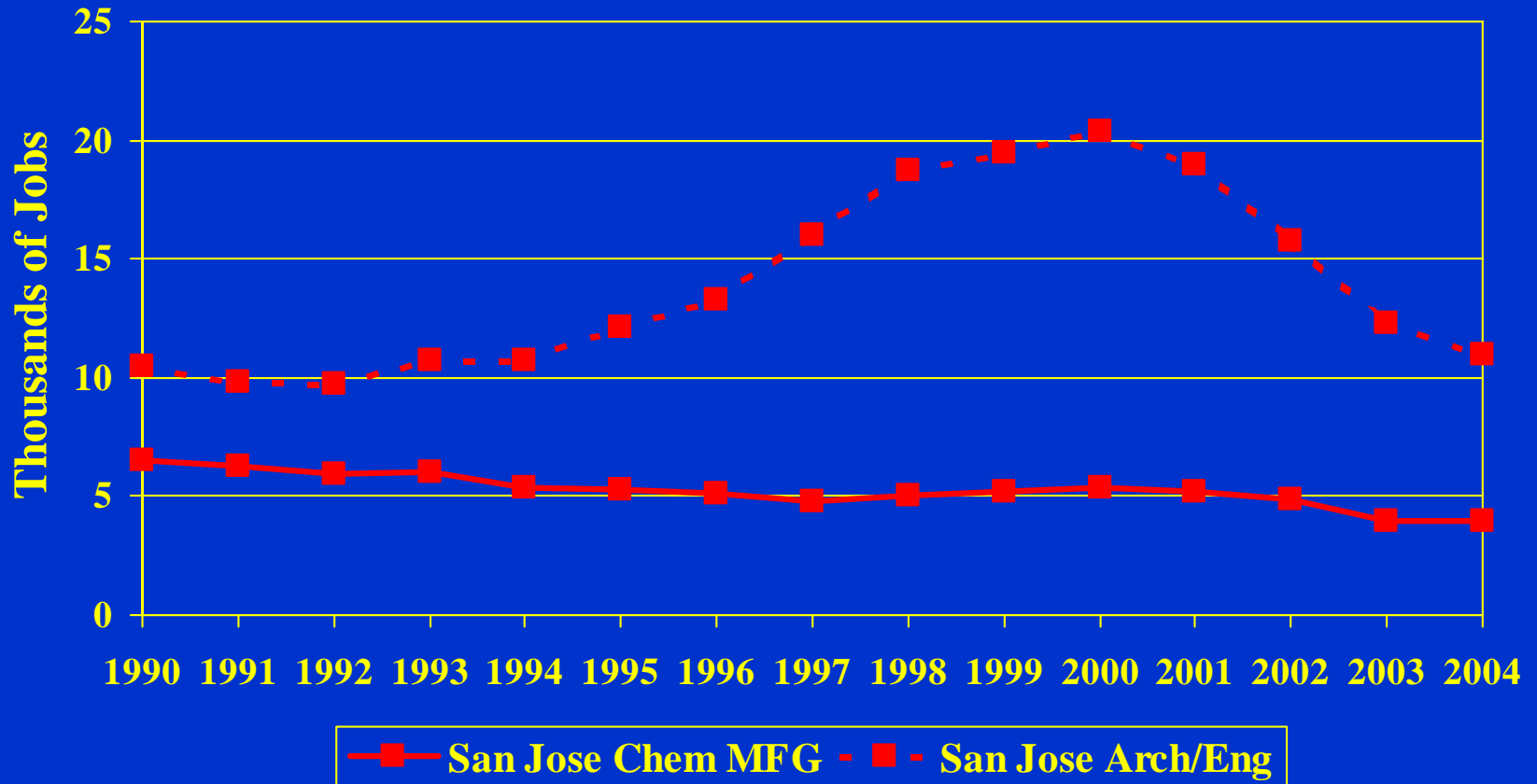
SFBA Employment Trends, Occupations Employing Chemical Engineers



Source: FCREUE Estimates based on BLS OES data.

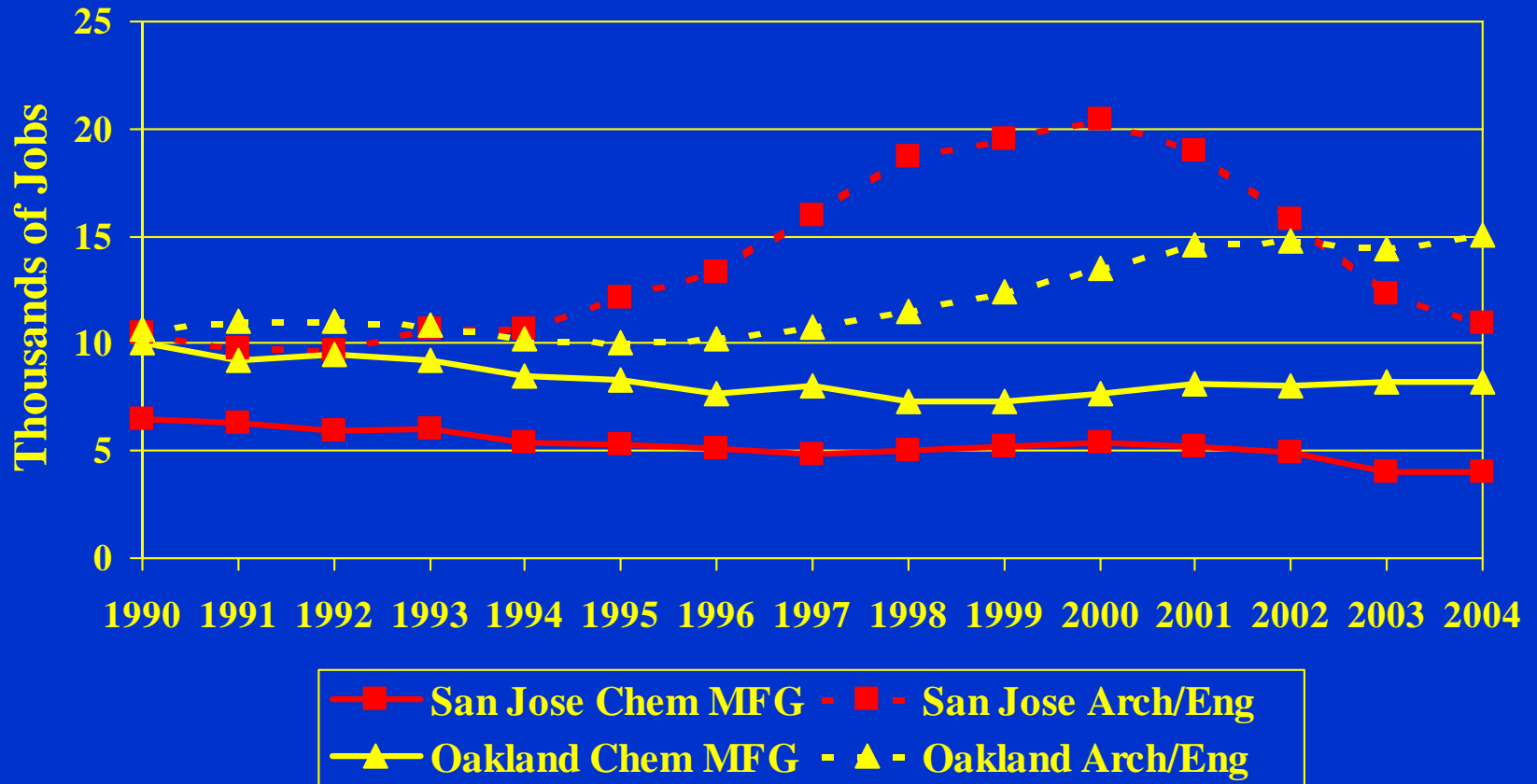
* Includes Chemical Engineers, Chemists, and Chemical Technicians.

Employment Trends, Selected Industries and Bay Area MSAs



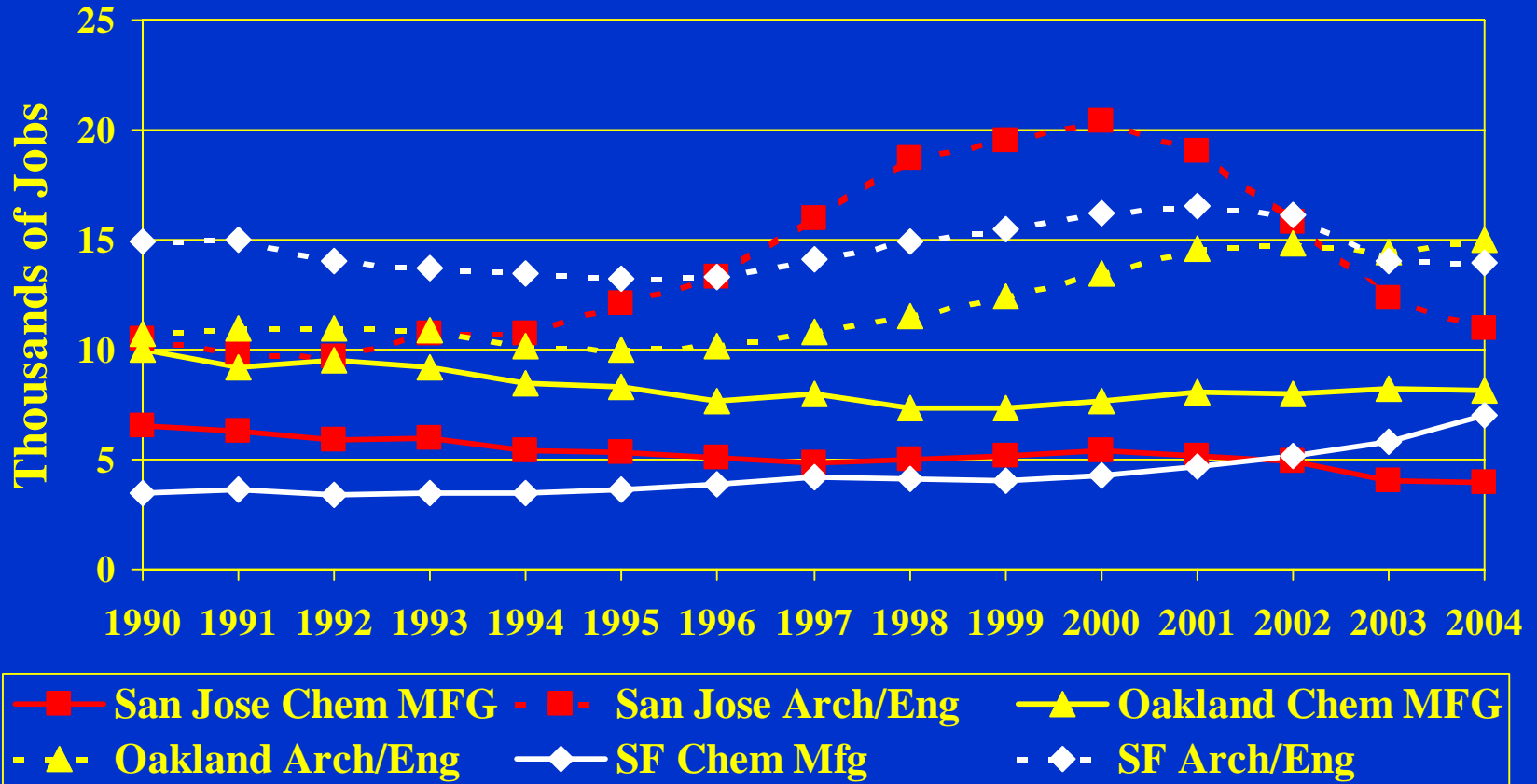
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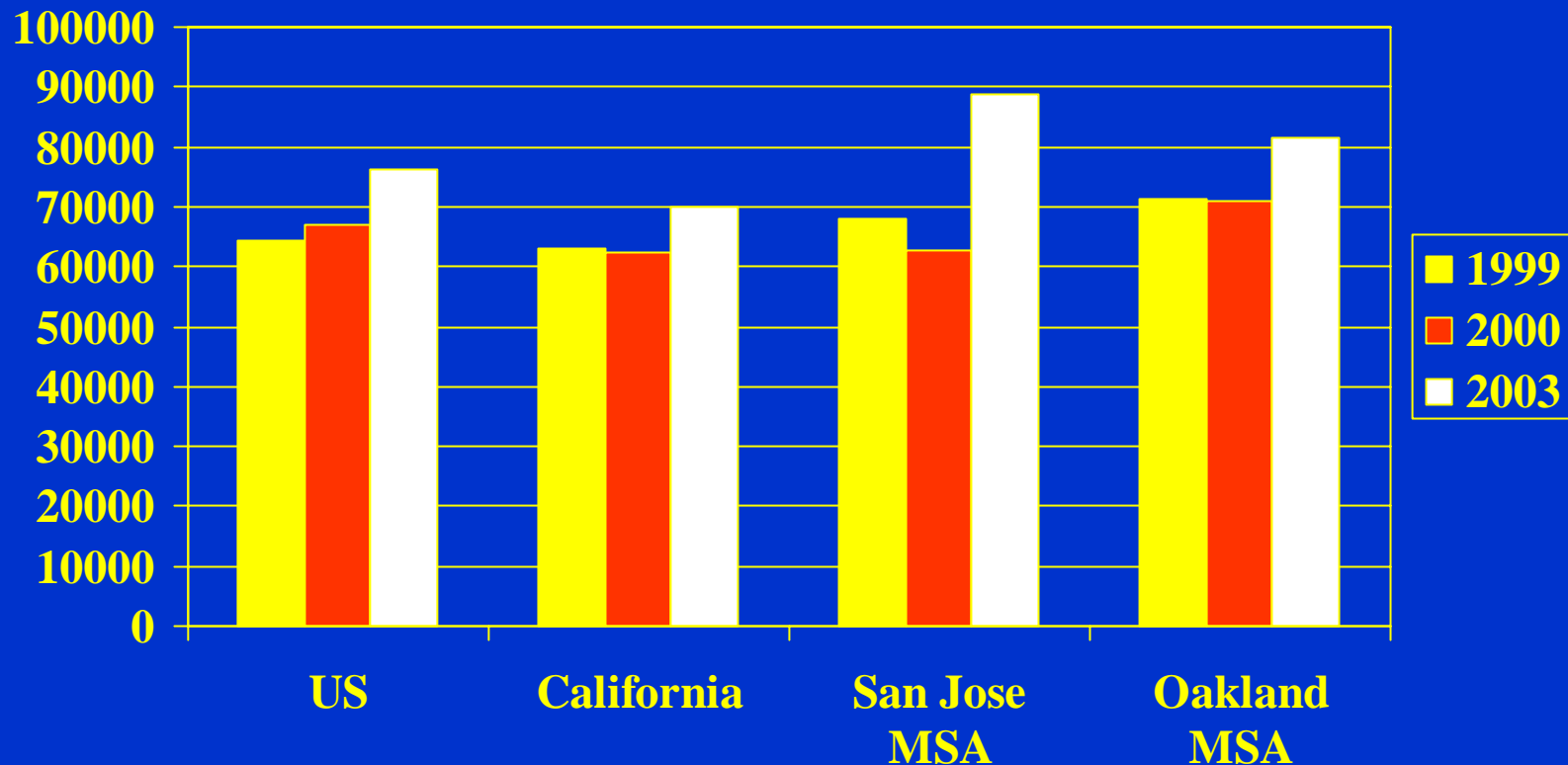
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Employment Trends, Selected Industries and Bay Area MSAs



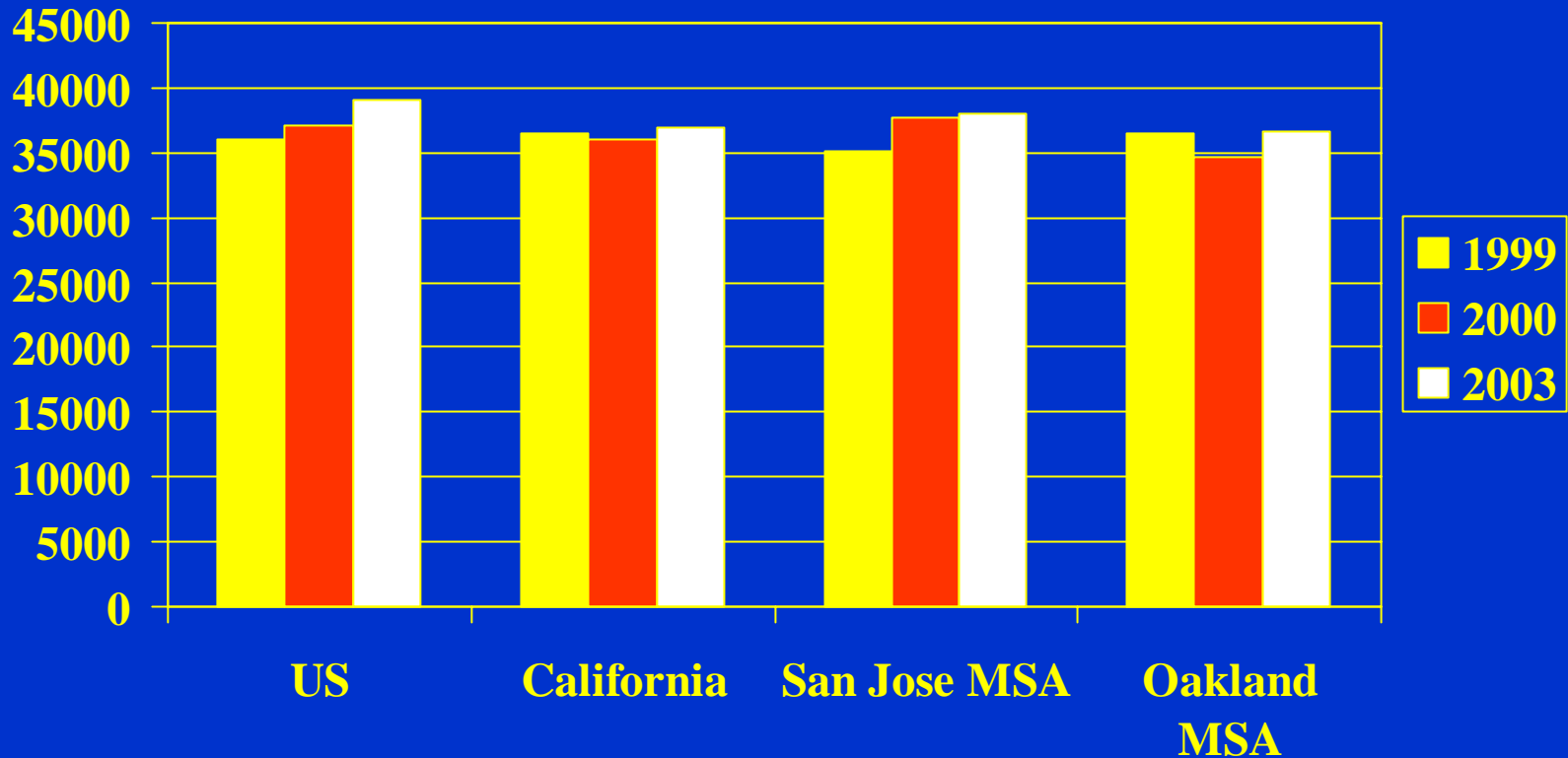
Source: FCREUE Estimates based on California Employment Development Department data.

Wage Trends, Chemical Engineers (Average Wage)



Source: FCREUE from BLS OES data.

Wage Trends, Chemical Technicians



Source: FCREUE from BLS OES data.

Chemical Engineering and Offshoring/Outsourcing Prospects

- Small share of labor force, even in dominant sectors => lower gains from offshoring
- Small share of labor force => may have higher gains from outsourcing in some instances
- Bay Area costs => outsourcing may reach beyond the region; but agglomeration could also be a factor.

Factors Affecting Future of SFBA Economy

- **Positives**
 - Strong economic base
 - Skilled labor force
 - Natural environment, location
- **Negatives**
 - Costs (improvements in commercial space, not housing)
 - Congestion (but some improvements)
- **Outcomes => Uneven Growth**
 - Specialized concentration
 - Routine jobs may continue to move out of region

Thank you