The State Of The State's Labor Markets

Executive Briefing

The State of the State's Labor Markets - June 2001

Labor Market Information Division
Employment Development Department

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Dear Report Recipients:

The California Health and Human Services Agency's (CHHSA) vision is that all Californians – especially those most at risk or in need – are provided opportunities to enjoy a high quality of life as measured by: sound physical, mental, and financial health.

This publication, *The State of the State's Labor Markets* report, provides an overview of the economic conditions of the State and its many regions. This information can be used to develop and carry out strategies to broaden our economic strength, and to support the CHHSA mission of building strong and capable families, safe and sustainable communities, and dignity for all individuals.

We at CHHSA are dedicated to improving the quality of life for all Californians, and that includes helping California businesses to thrive during the current energy challenge. Each of us contributes to our State's continued economic success by taking simple energy conservation measures where possible. Thank you for your efforts.

Sincerely,

GRANTLAND JOHNSON, Secretary
California Health and Human Services Agency

Dear Colleagues:

My Department is proud to offer *The State of the State's Labor Markets* report to assist all of us faced with making decisions in a changing economic environment.

This report offers a summary of California labor market conditions as well as the industry and regional details behind the headlines.

Sincerely,

MICHAEL S. BERNICK, Director
Employment Development Department

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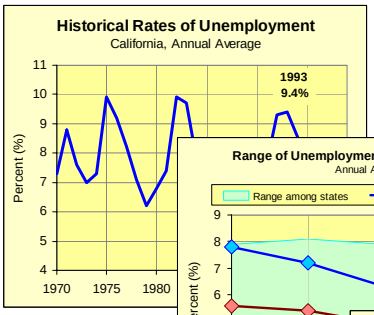
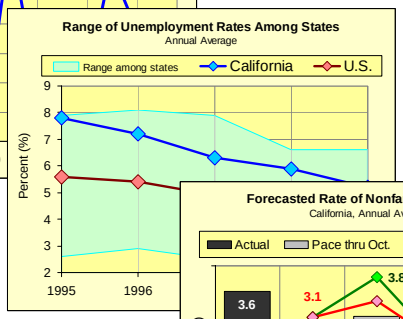
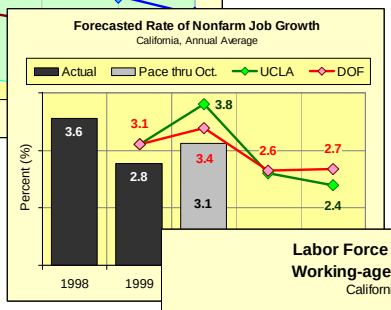
WHAT'S INSIDE

A snapshot of recent economic conditions and labor market trends in **Chapter 1** shows how California has joined the mainstream of economic well-being. Go beyond the usual economic headlines with discussions of how our state compares to other states and how individuals have fared in the strong economy. All-in-one-place comparisons of the current forecasts by California's leading economic organizations make the snapshot complete.

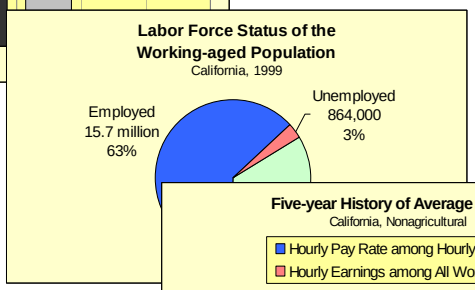


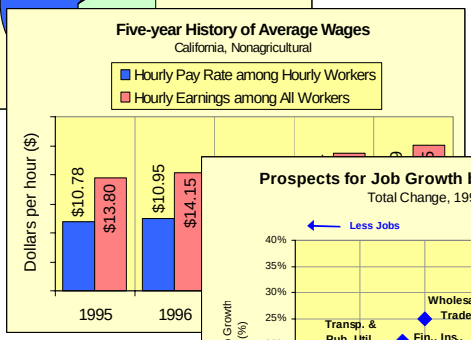


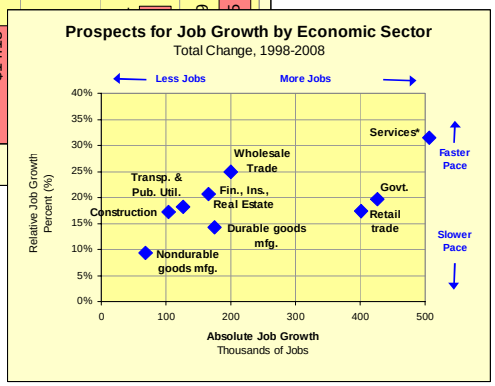


Chapter 2 answers the "why" and "what-if" questions behind California's economic outlook. Obvious factors, such as the strength of the national expansion and movements in interest rates, are put into context and quantified. Be alerted to the influence of a not-so-often-cited factor -- labor force participation rates – and find out why even economists outside of financial markets are paying more attention to stock market prices.

E-commerce is the new business frontier, but how will it change labor markets? Get an early answer in **Chapter 3**. Discussions of California wages and demographics give a factual grounding to other labor topics frequenting headlines.







Of course, generalizations about an economy as large and diverse as California's will miss some interesting details. **Chapter 4** and **Chapter 5** decompose aggregate statistics to describe the recent experience and outlook for individual industry sectors and geographic regions. Read the chapters in entirety for a comprehensive view of the California economy, or jump right to the story on your area of interest. For the most current information, visit our **website at www.calmis.ca.gov.**

EXECUTIVE SUMMARY

CALIFORNIA HAS JOINED THE MAINSTREAM OF ECONOMIC WELL-BEING

California's labor markets have converged with the economic growth and health of the U.S. economy as evidenced by the unemployment rate and growth of payrolls. The state unemployment rate averaged 5.2 percent in calendar year 1999, the second lowest annual average rate in 30 years. In the most recent five years, the unemployment rate in California has drawn considerably closer to the U.S. rate. (Less than 1 percentage point higher in October 2000, when the U.S. rate was 3.9 percent.)

California's year-over job growth has exceeded the comparable nationwide growth every year since 1996. In the first ten months of 2000, for example, California had added over 350,000 jobs, which accounted for 20 percent of U.S. job growth over the same period.

SIGNIFICANT FACTORS AFFECTING THE CALIFORNIA ECONOMY

Consumer spending and business investments have fueled California's economic expansion as demonstrated by increases in personal spending and capital investment. These gains and the viability of the California economy depend, in part, on Federal Reserve actions. The Federal Reserve Open Market Committee raised the federal funds rate six times in 1999 and 2000 in an effort to control inflation.

CALIFORNIA'S LABOR MARKETS AND WAGES

The structure of wage compensation is both important and complex, reflecting not only aggregate labor demand and supply but also occupation-specific demand and supply. Moreover, workers are compensated in a variety of ways (salary versus hourly, straight pay versus tips and commissions; and cash versus stock options).

Notwithstanding these qualifications, we know that average hourly earnings in 1999 were $16, and that the highest-paid 10 percent of workers earned more than $30

per hour in 1999, while the lowest-paid 10 percent of workers earned $6 per hour or less.

We also observe that wages across the board have risen faster than the rate of inflation in recent years with the greatest increase in the lowest wage ranges, and the earnings gap between the lowest and the highest paid workers appears to be decreasing.

CALIFORNIA'S AGING POPULATION WILL BE RETIRING

One significant change in the labor force beginning in 2001 will be the aging workforce. The baby boomers currently represent a large share of the California labor force. A smaller component of the 2000 labor force is the baby bust generation, who are 24 to 35 years in age. The next generation to enter the labor force will be the children of the baby boom or the echo boomers.

There are two obvious consequences of the changing labor force. Baby boomers will be retiring over the next 20 years. As this happens, echo boomers will begin to join the labor force offering up-to-date skills.

In addition, over the next several years, the need for school teachers will continue to increase. Demand for teachers will rise as the large echo boom moves through their school-age years, but even more importantly, large numbers of current teachers will be retiring, creating an occupational demand in education.

JOB GROWTH IS WIDESPREAD AMONG ECONOMIC SECTORS

Over the past five calendar years (1995 to 1999), nonfarm payroll employment in California rose 1.8 million jobs. Not surprisingly, the services sector, which accounts for nearly one-third of all jobs, added the most jobs among sectors over the five-year period, and is growing faster than total employment growth. In the future, services is expected to lead other sectors in both the number and rate of job growth.

Construction employment has been soaring over the past five years and in the first ten months of 2000. The rapid growth pace has translated into significant numbers of new jobs, and is expected to expand as California's population continues to increase.

REGIONAL ECONOMIES HAVE SEEN FIVE YEARS OF JOB GROWTH

All of California's nine regional economies saw uninterrupted annual job growth from 1995 to 1999 although 95 percent of the statewide job growth occurred in the five most populous regional economies. These regions included Southern California, the Bay Area, Southern Border, Greater Sacramento, and the San Joaquin Valley.

Additionally, unemployment rates were lower in October 2000 than five years earlier in all of California's regional economies. Regional unemployment rates in 1999 ranged from a low of 3.1 percent in the Bay Area to 12.1 percent in the San Joaquin Valley. One of the most dramatic changes is the growth in the Central Valley that has been spurred by spillover effects of the rapid growth in the San Francisco Bay Area.

TABLE OF CONTENTS

Executive Summary i

Table of Contents v

Purpose and Scope vi

Acknowledgements vii

Chapter 1
Recent Trends and Outlook 1
California Has Joined the Mainstream of Economic Well-Being 1
Labor Force Statistics Show Benefits of Economic Growth 4
Labor Markets Have Been Stronger Yet in 2000 8
California's Economic Outlook Includes Faster Growth This Year 8
...And an Unemployment Rate Under 5 Percent 9

Chapter 2
Factors Affecting the Outlook 11
Nationwide Expansion Fueled by Consumer Spending 11
Stock Prices Have Increased in Economic Importance 12
Walking the Interest Rate Tightrope 13
Export Once Again Contribute to Growth 14
The Participation Puzzle 14

Chapter 3
Labor Market Key Topics 17
E-commerce May Change the Structure of Markets 17
Not All Jobs Can Pay Above Average Wages 18
Pay Has Risen Across the Board, But Not at the Same Pace 21
California's Aging Population Will Be Retiring 22

Chapter 4
Industry Employment 25
Job Growth in 1999 Was Widespread Across Economic Sectors 25
Construction Had the Fastest Rate of Job Growth 29
Services Added Four of the Ten New Jobs Created 30
Trade Held Steady 33
Manufacturing Job Growth Stagnated 35

Government Led by Local Education 36
Transportation and Public Utilities Job Growth Accelerating.....37
Finance, Insurance, and Real Estate Expanding 38
Mining Lost Jobs 39

Chapter 5
Regional Conditions.....41
Similarities and Interdependence Define Regional Economies.....41
Most Area Job Growth Comes From Five Regions.....43
Unemployment Rates Are Lowest in Urbanized Regions.....45
Regional Unemployment Rates Have Fallen 47
Southern California is the Largest Regional Economy.....47
The Bay Area Region Is Noted For Low Unemployment.....49
Southern Border Links Two Vastly Different Counties 51
Greater Sacramento Growth Is Widespread 52
The San Joaquin Valley Is Diversifying from an Agricultural Base.....54

Appendices
A: Concepts and Definitions.....57
B: Differences Among Economic and Labor Market Forecasts.....58
C: Industry Definitions.....59

PURPOSE AND SCOPE

The State of the State's Labor Markets is intended to brief the Governor and other officials involved in statewide economic assessment and policymaking on the status of California's labor markets. The report provides an overview of the state's economic condition and the key factors affecting California labor markets. The Employment Development Department's Labor Market Information Division (LMID) provides this information as a result of its unique role in generating and analyzing official labor force and payroll employment statistics for California. LMID staff are available to provide additional information or answer questions from state policymakers, researchers, the economic development community and other interested parties.

This report identifies recent five-year trends and prospects for the next two to five years. The first chapter of the report reviews current conditions as indicated by monthly labor market statistics and presents the short-term outlook according to California forecasters. Chapter 2 examines the factors affecting the economic outlook while Chapter 3 summarizes the topics that will most significantly affect state labor markets in the coming years. The final two chapters present a more detailed look at industry and sub-state employment trends and prospects.

At the time this report was prepared, the latest labor market data available were preliminary estimates through October 2000, on the 1999 benchmark[1]. Readers will find definitions of the major concepts used throughout the report in Appendix A.

[1] The annual review and revision of labor market statistics to reflect more complete information than is available at the time monthly estimates are first made. Benchmark revisions to the 1999 and 2000 data used here will be released at the end of February 2001.

ACKNOWLEDGMENTS

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Any errors or omissions are our own. For questions concerning this report, contact Janet Austin at (916) 262-2255. For additional copies of the report, contact the Labor Market Information Division (LMID) Publication Center (916) 262-2162. Updated employment statistics are available monthly on the LMID home page at **www.calmis.ca.gov**.

Richard J. Holden, Chief
Labor Market Information Division

CHAPTER 1
RECENT TRENDS AND OUTLOOK

California is the largest state in the nation with 17 million people employed as of October 2000[2]. It is also one of the fastest growing labor markets, having outstripped nonfarm job growth nationwide for more than three years.

This chapter presents a snapshot of recent economic conditions and labor market trends evident in the most-watched labor statistics – job growth, the unemployment rate, and the number of unemployed. The chapter then summarizes the five-year economic outlook.

CALIFORNIA HAS JOINED THE MAINSTREAM OF ECONOMIC WELL-BEING

California's current employment expansion began in earnest in 1995. By late that year, California had regained the half a million nonfarm jobs lost during the 1990-93 recession. For the first time since 1990, the rate of job growth in 1995 topped 2 percent and was nearly equal to the average annual job growth over the previous 20 years. The rate of nonfarm job growth accelerated in each of the next three years, reaching 3.6 percent in 1998. That was the highest rate of annual job growth since 1988. As many economists (and the 1999 issue of this report) had predicted, job growth slowed in 1999 from 1998, but remained robust at 2.8 percent. Over the entire five-year period, 1995 to 1999, California nonfarm employment rose 14.9 percent, an average of 3.0 percent per year.

[2] In order to meet a publication deadline in February 2001, this report was prepared using October 2000 data. This report provides a longer-run perspective on recent and projected annual trends. For current monthly statistics, the reader is urged to visit the LMID Web site at **www.calmis.ca.gov**.

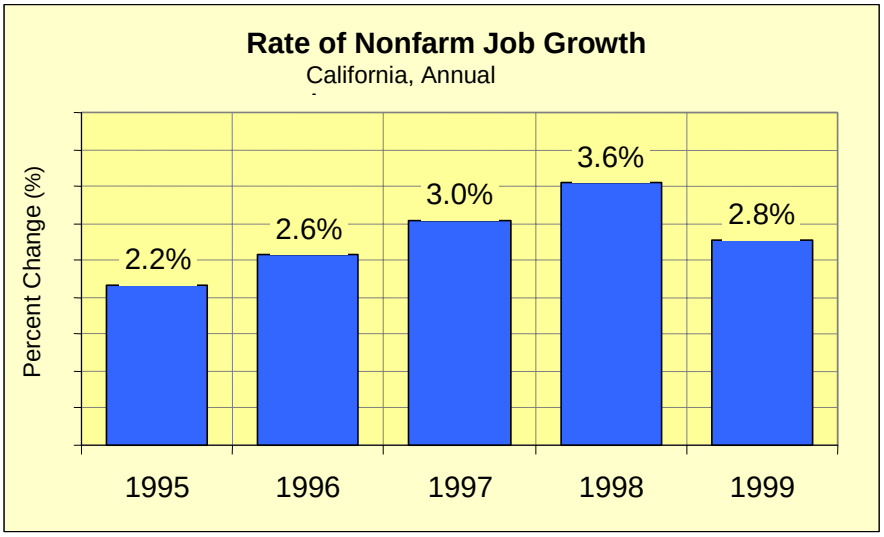

FIGURE 1-1

California job growth was strong in each of the past five years.

California exceeded the nationwide rate of nonfarm job growth (2.3 percent) in 1999, as it had in every year since 1996. California had the ninth fastest job growth rate among all states in 1999, much improved from the ranking of 36th in 1995. California's relative job growth over the five-year period 1995 to 1999 was the 13th highest among all states. Among the largest states[3], only Florida (3.6 percent) had a faster rate of job growth in 1999, and only Florida and Texas had faster growth over the past five years (an average 3.7 and 3.6 percent, respectively).

Despite such significant job growth, the state unemployment rate remained stubbornly high until recently. The annual average unemployment rate broke the 6 percent barrier for the first time in seven years in 1998. The 1999 unemployment rate, 5.2 percent, was the second lowest state annual rate since 1970[4].

[3] For this discussion, "large states" are the seven states with more than 5 million nonfarm jobs: California, Texas, New York, Florida, Illinois, Pennsylvania, and Ohio. Among the 12 additional states with more than 2.5 million nonfarm jobs, only Georgia recorded faster 1999 growth (4.0 percent) and faster 1995-99 growth (3.8 percent).

[4] Due to periodic changes in estimating methods, the comparable historical data series extends only to 1970. The lowest unemployment rate for California, 1970 to 1999, was 5.1 percent in 1989.

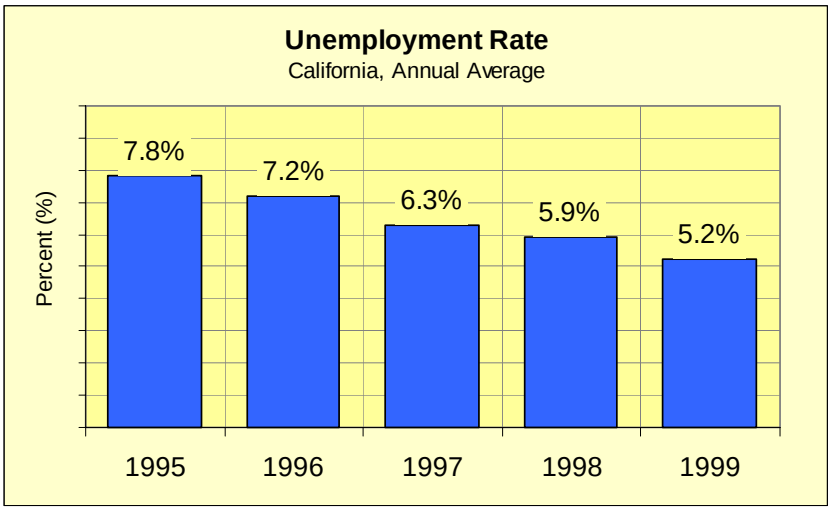

FIGURE 1-2

Over the past five years, California's unemployment rate fell from near 8 percent to near 5 percent.

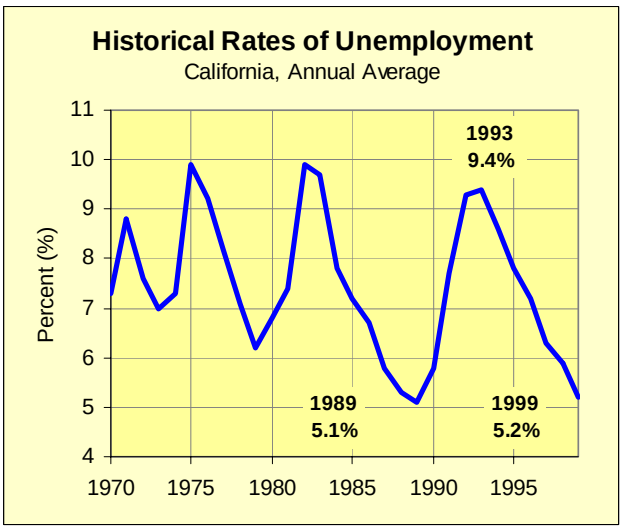

FIGURE 1-3

At 5.2 percent, the unemployment rate in 1999 was the second lowest rate in 30 years. It fell to that level from a recession high of 9.4 percent in 1993.

In 1995, the unemployment rate in California was more than 2 percentage points higher than the U.S. rate. Our state helped define the top range of state unemployment rates. California's rate of 7.8 percent in 1995 was the 2nd highest among the 50 states; only West Virginia's rate was higher (7.9 percent). Over the five years, 1995 to 1999, California's unemployment rate fell 2.6 percentage points. Over the same period, the U.S. rate fell 1.4 percentage points and the highest rate among states fell 1.3 percentage points. As a result, the California unemployment rate in 1999 was just 1 percentage point higher than the U.S. rate.

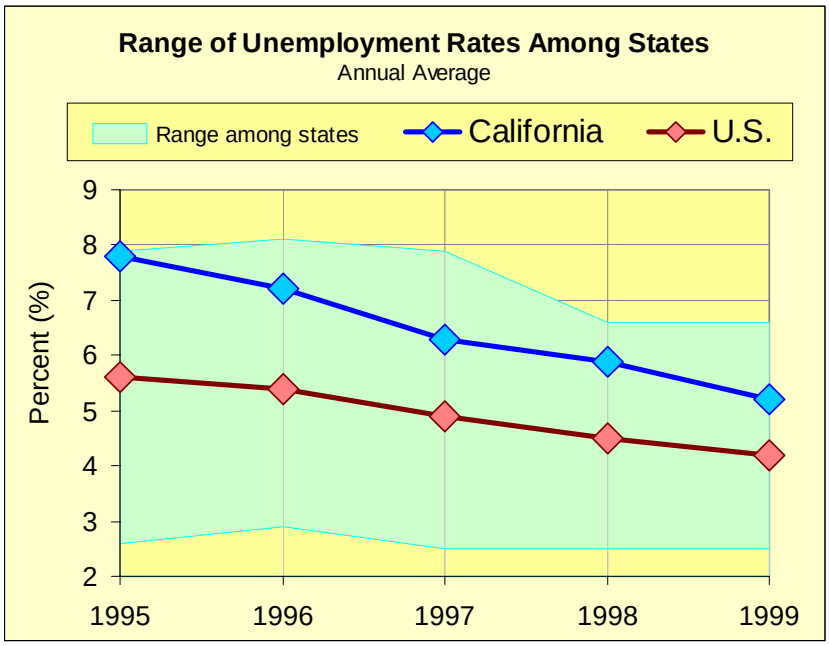

FIGURE 1-4

California no longer defines the high end of the range of unemployment rates among states.

LABOR FORCE STATISTICS SHOW THE BENEFITS OF ECONOMIC GROWTH

Economists generally use the growth rate in nonfarm jobs – a count of jobs reported by employers – and the unemployment rate as the primary statistics in judging economic conditions in California. However, other labor force statistics – including the count of persons employed and unemployed, unemployment rates by demographic group, and the reasons for and duration of unemployment – are useful in understanding how individuals have fared in the strong labor market that California now enjoys.

In the last several years, unemployment levels have fallen along with the unemployment rate. There were 864,000 unemployed Californians in 1999 or nearly half of a million people fewer than in 1994. By October 2000, the number of unemployed had fallen another 50,000 persons. Declines in unemployment have been driven by employment growth[5], which exceeded labor force growth in each of the past five years.

[5] Unemployment is compared to civilian employment, which is also a count of persons, rather than to payroll employment, which is a count of jobs.

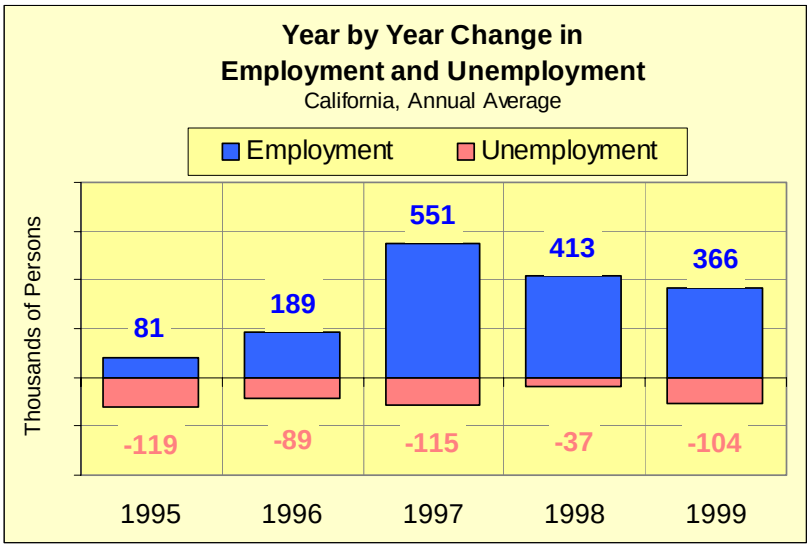

FIGURE 1-5

Over the past three years, increases in employment have exceeded decreases in unemployment more than 3 to 1.

Unemployment rates have fallen almost continuously across racial and ethnic groups. (See Figure 1-6.) The rate among Black Californians fell the most over the past five years to 8.4 percent in 1999, but still remains higher than other groups.[6] The unemployment rate among Hispanics was 7 percent, while the rates among whites and in total were near 5 percent.

[6] Race and ethnicity used in this report are as defined by the U.S. Bureau of Census using single categorical groupings for each. Because Hispanic is an ethnicity category, race groups are not Hispanic exclusive.

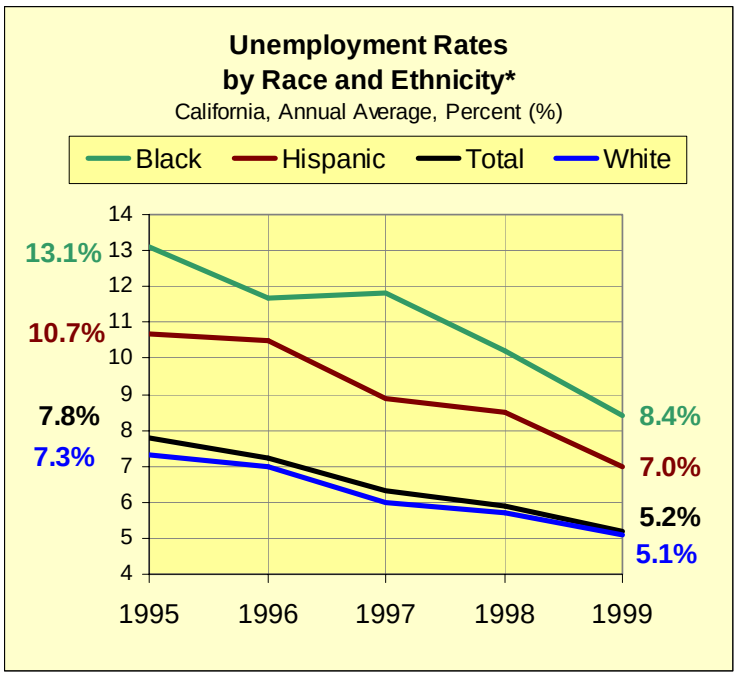

FIGURE 1-6

Unemployment rates have fallen almost continuously across all racial and ethnic groups.

* Race groups are not Hispanic exclusive.

The unemployed are categorized into one of four categories describing how they came to be unemployed: job losers, re-entrants (persons who had been out of the labor market before starting their current work search), new entrants (persons looking for their first job), and job leavers (persons who voluntarily left their previous job to look for work).

Job losers make up nearly half of the unemployed. Their number has fallen for more than 200,000 over the past five years. Re-entrants comprise about one-third of the unemployed. Their number has fallen more than 100,000.

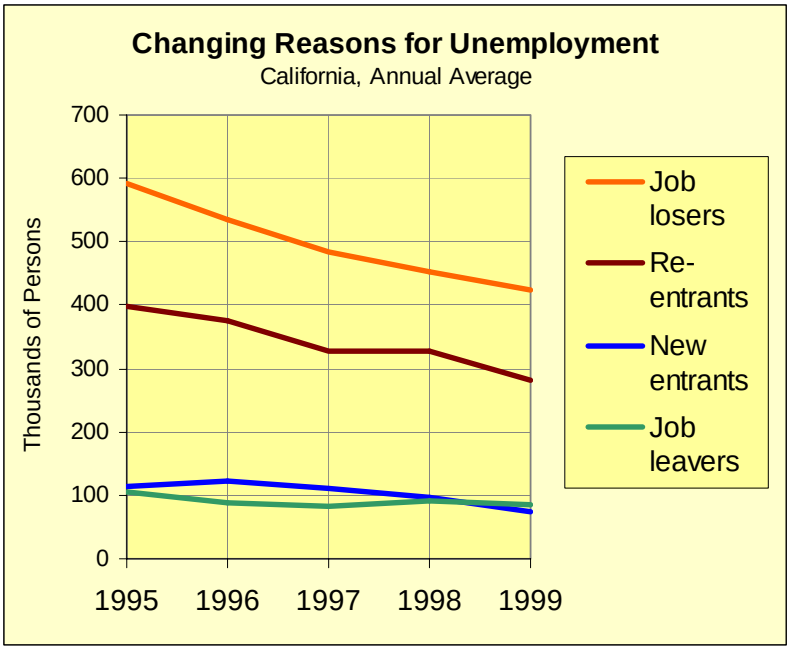

FIGURE 1-7

Although job losers remains the largest category of the unemployed, their number has fallen significantly over the past five years.

Categorized by the length of time they have been looking for work, the largest group of unemployed have been unemployed for a relatively short time – less than five weeks. The number of short-term unemployed has changed relatively little over the past five years. The number of unemployed has fallen in all longer duration categories.

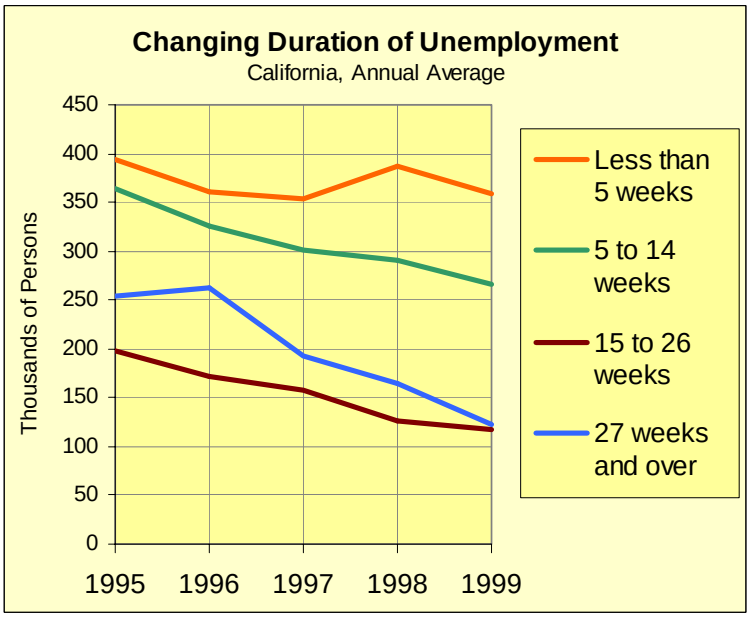

FIGURE 1-8

The largest group of the unemployed have been without a job and looking for work for less than five weeks.

LABOR MARKETS HAVE BEEN STRONGER YET IN 2000

In the first 10 months of 2000, California added over a third of a million jobs. If this pace is sustained in the remainder of the year, the annual rate of job growth in 2000 will be 3.1 percent, up from 2.8 percent in 1999. The California unemployment rate averaged 4.9 percent in the first 10 months of this year, already greatly improved from 5.2 percent in 1999, and moving closer still to the U.S. rate which averaged 4.0 percent year to date.

Notwithstanding this bright picture, we note that the state unemployment rate has shown greater month-to-month volatility than at any other time in recent history. Over the past 12 months, the California rate ranged between 5.3 to 4.6 percent – with three month-to-month changes of at least 0.3 percentage point. In contrast, the U.S. rate has been quite stable over the same period, varying only 0.2 percentage point (3.9 to 4.1 percent). Because the unemployment rate is sensitive not only to economic conditions, but also to the propensity of the working-aged population to work or look for work, the volatility in California is not alarming. This issue is explored further in Chapter 2.

CALIFORNIA'S ECONOMIC OUTLOOK INCLUDES FASTER GROWTH THIS YEAR …

The leading economic forecast organizations specializing in the California economy are the University of California, Los Angeles (UCLA), Anderson Forecast and the California Department of Finance (DOF).

In their most recent forecasts,[7] UCLA and DOF predict the current economic expansion will continue for the foreseeable future. Economic growth is anticipated to accelerate in 2000, compared to 1999, fueled by consumer spending, booming construction real estate activity, recovering exports, and slowing job losses in the aerospace/defense industries. The pace of the expansion is expected to slow in 2001 and 2002 as a result of moderation in stock market gains, higher interest rates, and a cooler national economy. These factors are detailed in the next chapter.

[7] Economic forecasts presented here are: Department of Finance (DOF), January 2001; UCLA Anderson Forecast, September 2000; Legislative Analyst's Office (LAO), California's Fiscal Outlook, November 2000. See Appendix B for a discussion of differences among forecasts.

Under these economic conditions, California nonfarm job growth in 2000 is projected to top 3 percent. Specifically, DOF projects California nonfarm employment will increase 3.6 percent in 2000, while UCLA projects growth of 3.8 percent. This would be a substantial acceleration in job growth from 2.8 percent in 1999 and on a par with growth recorded in 1998. Both UCLA and DOF predict California job growth to cool in 2001 to under 3 percent, then hold nearly the same pace or slow further in 2002, with a growth rate of 2.7 or 2.4 percent, respectively. Notably, both forecast organizations see California job growth being substantially higher than job growth nationwide throughout the forecast period.

Longer-term forecasts expect annual average job growth to remain near long-term average levels. LMID's industry projections suggest an annualized growth of 2.1 percent over the 1998 to 2008 period.

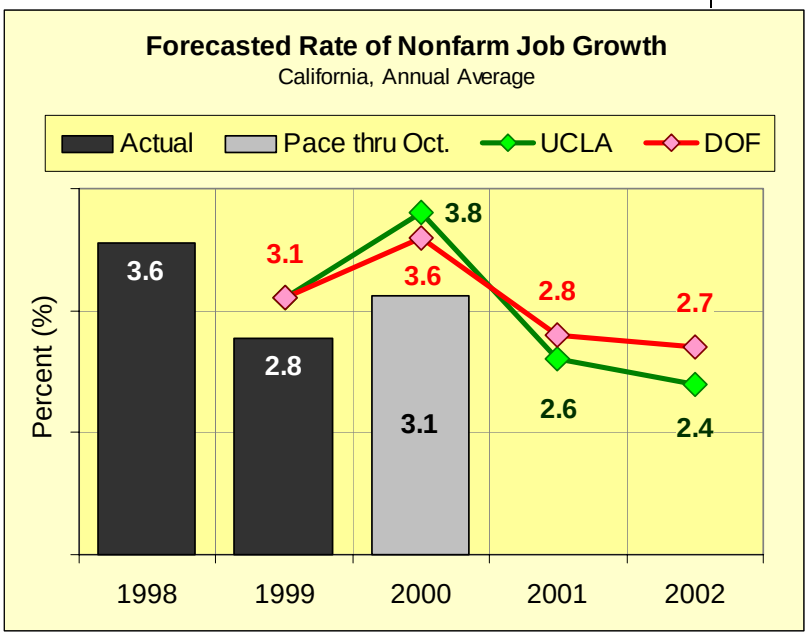

FIGURE 1-9

Nonfarm job growth is expected to accelerate in 2000 from 1999, then expand more slowly in 2001 and 2002.

… AND AN UNEMPLOYMENT RATE UNDER 5 PERCENT

Even under pessimistic scenarios – such as if inflation-fighting interest rate hikes go too far and push the economy into retreat – the California unemployment rate would most certainly decline compared to the 5.2 percent recorded in 1999. Under the positive outlook for job growth foreseen by most economists, the California

unemployment rate is predicted to fall to 5 percent or less on an annual average basis in 2000.

Specifically, DOF projects an unemployment rate of 4.9 percent in 2000 and UCLA predicts a rate of 5.0 percent. DOF expects the rate to continue to fall throughout the forecast period, reaching 4.7 percent in 2002. UCLA expects the state rate to remain at 5.0 percent in 2001 before increasing slightly to 5.1 percent in 2002.

How the California unemployment rate will compare to the U.S. rate varies by forecaster. DOF projects that the U.S. rate will fall from 4.2 percent in 1999 to 4.1 in 2000 before rising to 4.7 percent in 2002. This would eliminate the difference between the U.S. and California rates by 2002. On the other hand, UCLA predicts the nationwide unemployment rate will increase from 4.2 percent in 1999 and 4.1 percent in 2000 to 4.6 percent in 2002.

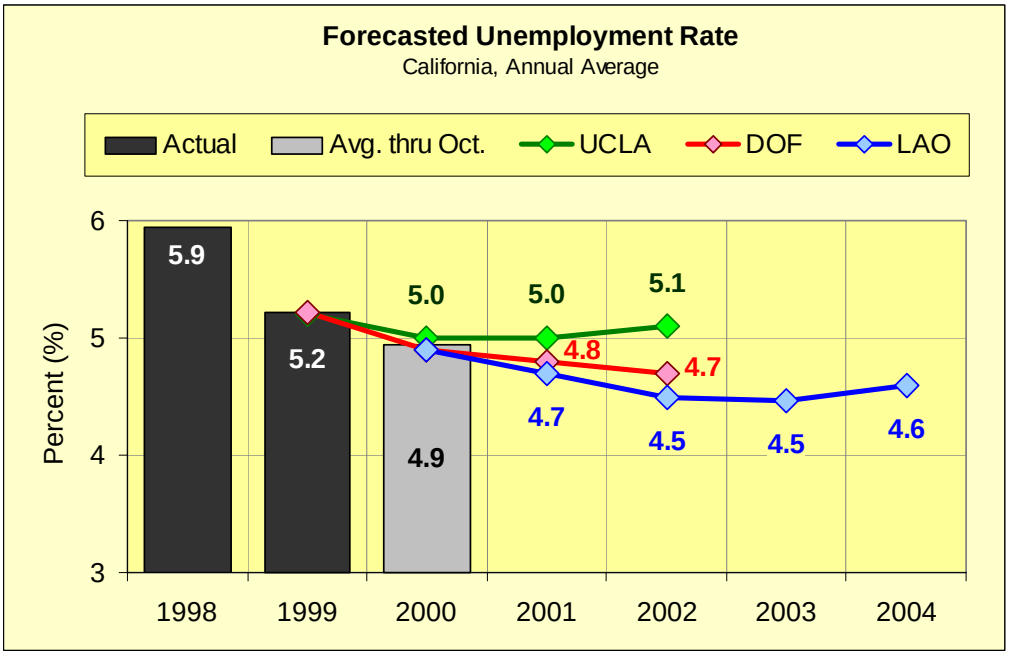

FIGURE 1-10

Most forecasters expect California's unemployment rate to fall to 5 percent or less on an annual average basis in 2000 then record slight declines or increases through 2004.

There is greater uncertainty regarding the unemployment rate forecast than for the jobs outlook. This uncertainty is a result of recent volatility in the rate and the potential for changes in labor force participation – a factor not usually considered in economic models. The "participation puzzle" is described in Chapter 2.

CHAPTER 2
FACTORS AFFECTING THE OUTLOOK

This chapter discusses the overarching, or macroeconomic, factors that will have the most significant effect on California's economy in the next couple of years – national economic growth, personal consumption, stock prices, and changes in interest rates. The chapter concludes with a discussion of labor force participation rates. Participation rates are not a macroeconomic variable *per se*, but changes in participation rates could have a profound effect on macroeconomic indicators, particularly the unemployment rate.

CALIFORNIA IS RIDING A NATIONWIDE EXPANSION FUELED BY CONSUMER SPENDING

Even after more than nine years of expansion, the continued strength of the national economy is an obvious reason for California's economic health. Real gross domestic product (GDP) – the output of goods and services produced by labor and property located in the United States – has remained at 4.2 to 4.3 percent for three consecutive years. Real GDP increased at an annual rate of 5.5 percent in the first quarter of 2000. While this was slower than the record pace in the previous quarter, it was still extremely high by historical standards.

The largest contributor to the economic expansion has been consumer spending. Personal consumption, which accounts for two-thirds of GDP, rose by 5 percent in 1999 and by nearly 8 percent in the first quarter of 2000. Spending has been fueled not only by the income gains and consumer confidence that accompanies steady job growth, but also by the skyrocketing stock market. The increased role of stock market valuation in determining economic growth, and the increased uncertainty it brings to the economic outlook, is discussed in more detail in the following section.

In 1999, personal income in California rose 7.4 percent. Higher incomes, stock gains, and high consumer confidence have fueled consumer spending during the expansion. Taxable sales were up 9.3 percent from 1998. All of the factors driving

expenditures in the past few years are expected to moderate during the second half of 2000 and in 2001.

Business investment in durable equipment and software has also recorded strong growth, to the benefit of California's high technology manufacturing and business services industries. Producers' investment in durable equipment and software was up 24.7 percent in the first quarter of 2000 and rose 15.8 percent in 1999.

Strengthening exports, discussed in a following section, and slower job losses in aerospace and defense-related manufacturing industries, discussed in Chapter 4, have also contributed to the strong economy. (Both factors were highlighted in the 1999 *State of the State's Labor Markets* report.)

STOCK PRICES HAVE INCREASED IN ECONOMIC IMPORTANCE

During 1999, the stock market showed tremendous appreciation, particularly in technology-oriented businesses. The NASDAQ, a technology-oriented stock index, recorded a year-over increase of 86 percent in 1999. California taxable capital gains tripled from 1994 to 1998, from less than $20 billion to almost $60 billion, and rose another 30 percent in 1999[8].

But capital gains are only part of the story. Stock options, which are counted in wages when exercised, also ballooned in 1999[9], and consumer spending was boosted by the "wealth effect" – where people increase their current spending as a result of holding higher valued assets.

Economic forecasts do not typically include a prediction of stock prices. Stock prices are volatile, inherently unpredictable and, heretofore, considered the "tail" on the proverbial economic "dog". But, that and other tenets of economic theory have been challenged by recent economic events.

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[8] Betty Yee, California Department of Finance, "California's Fiscal Picture: A Cautionary Note," UCLA Business Forecast Conference, March 2000.

[9] In a recent *Economic Letter*, the Federal Reserve Bank of San Francisco (FRBSF) emphasized the importance of initial public offerings playing a particularly significant role in employee compensation in 1999. FRBSF estimated that there were more than 100,000 Californians who had employee equity stakes in firms that went public in the past three years, and that, on average, their stakes are worth several hundred thousand dollars per person. ("California's IPO Gold Rush," FRBSF *Economic Letter*, Number 2000-07, March 10, 2000.

In their March forecast, UCLA predicted that the peak of the wealth effect would occur in 2000. The Department of Finance (DOF), the agency responsible for state revenue forecasting, predicts that there will be a small decline in capital gains, and slower wage and stock option growth in 2000. DOF cited the following quote from the Securities and Exchange Commission: "Please keep in mind that triple-digit and high double-digit returns are highly unusual and cannot be sustained. Recent returns were primarily achieved during favorable market conditions, especially within the technology sector." For example, the Standard & Poor Index of 500 stocks is expected to appreciate only
3 percent in 2000 and 5 percent in 2001 following gains of nearly 20 percent in 1999.

WALKING THE INTEREST RATE TIGHTROPE

The Federal Reserve Open Market Committee (Fed) has raised the federal funds rate six times since the end of 1998, three times in all of 1999 and three times in the first five months of 2000. Most recently, the Fed raised the federal funds rate one-half percentage point in May 2000 to 6.5 percent. The Fed has taken these rate actions for fear that rapid GDP growth and low unemployment rates will conspire to ignite inflation, although there is only limited evidence that general price levels have risen substantially. As the Fed themselves stated in announcing a recent rate increase:

> "*Against the background of its long-term goals of price stability and sustainable economic growth and of the information already available, the [Federal Open Market] Committee believes the risks are weighted mainly toward conditions that may generate heightened inflation pressures in the foreseeable future*."[10]

Higher short-term interest rates act as a brake on the national economy. Interest rate-sensitive industries, such as construction, real estate and financial services, will likely see slower growth as a result of the Fed action. UCLA estimated that in 1999, 1.3 million California jobs were related to real estate, including 681,000 jobs in construction, 201,000 jobs in real estate, 137,000 jobs in manufacturing (furniture and fixtures, lumber and wood products, and structural metal) and 235,000 jobs in retail trade (building materials and furniture).

Homebuilding may be the construction sector hardest hit because the recovery in that segment has been quite weak. Total residential building permits reached a high of over 300,000 units in 1986, fell to just 85,000 units in 1995, before reaching 140,000 units in 1999. Both UCLA and DOF expect residential building permits to remain below 200,000 units per year in the next five years. This slow growth in housing construction could in of itself pose a threat to the continued economic expansion if the tightening housing market seen in the San Francisco Bay Area continues, raising prices and reducing affordability.

Nonresidential building will also be affected by the Fed rate hikes, but to a lesser extent. Nonresidential construction valuation rose 110 percent from 1995 to 1999, an annual average increase over 20 percent. Both DOF and UCLA predict nonresidential valuation will increase at a more moderate pace in the next five years, but still at rates of 10 to 15 percent per year.

WITHOUT CRISES, EXPORTS ONCE AGAIN CONTRIBUTE TO GROWTH

In 1998, California exports fell 5 percent, primarily due to a fall-off in exports to Asia, where many economies were in financial crisis. Exports fell further in the first half of 1999, but recovered in the second half of the year. For 1999 as a whole, exports were up 2.4 percent. In the first quarter 2000, California exports rose 17.5 percent compared to the year-ago quarter, the strongest growth since 1995. Only exports to South and Central America fell.

Most economists predict stronger export growth in the short-run outlook for the nation generally and California particularly. A continuing Asian recovery, stronger economic growth in Europe, and a more sound economic footing for Mexico will boost exports. The value of the U.S. dollar is expected to weaken in the next couple of years as well, which will make U.S. made goods and services more competitive in world markets.

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[10] Press release, May 16, 2000, U.S. Federal Reserve.

THE PARTICIPATION PUZZLE

About two-thirds of California's civilian, noninstitutional population 16 years and older participate in the labor force by either having a job, or are actively looking for work. The remaining one third of the population are not in the labor force, a category that includes homemakers, students, retirees and a very few (less than 40,000) discouraged workers – individuals who want a job but aren't looking for work because they are discouraged over job prospects.

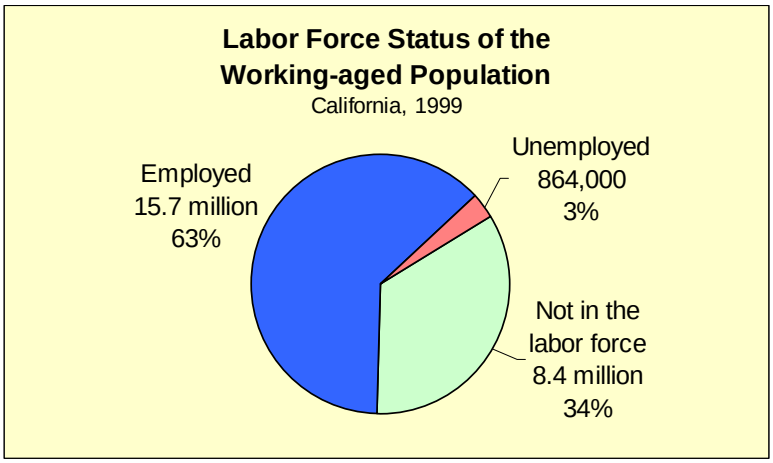

FIGURE 2-1

Every adult that is 16 years and older is classified as either employed, unemployed, or not in the labor force. The sum of the percent employed and unemployed – 66 percent in 1999 – is known as the labor force participation rate.

The share of the working-aged population, either employed or unemployed, is known as the labor force participation rate. The participation rate is an important social and economic statistic because it reflects how individuals evaluate the tradeoff between work, leisure and other activities. Changing social values, such as whether women should work outside the home or whether young adults need to work immediately out of high school or while in school, affect participation rates. Public policies, such as income tax provisions, affect individuals' decisions to seek work. Finally, changing economics, such as wages, the strength of labor demand, and availability of desirable work, affect the trade off between work and leisure.

Ten years ago, the labor force participation rate in California was 67.6 percent, quite high by any historical or national comparison. This was largely due to the State's rapid population growth. California has been a Mecca for immigrants from other

countries and other states, which are population groups that tend to be highly motivated toward work.

As state economic conditions deteriorated during the 1990-93 recession, the state attracted fewer immigrants. Layoffs reduced employment and difficulty in finding jobs discouraged the unemployed. As a result, the state participation rate fell.

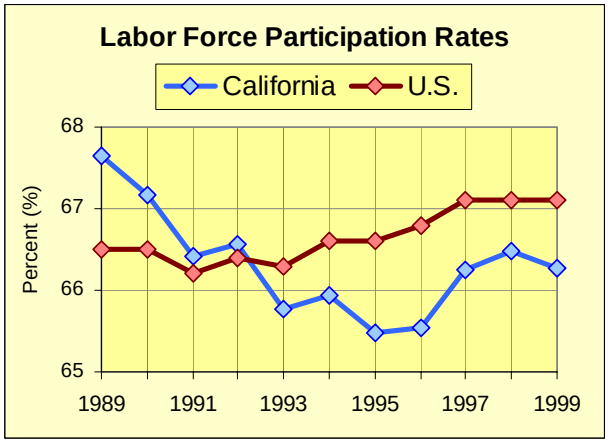

FIGURE 2-2

The California labor force participation rate – the share of working aged population either employed or looking for work – has risen over the past five years but remains below the U.S. and below levels registered in the late 1980s.

The decline during the recession was consistent with economic theory and historical patterns. However, participation rates continued to fall until 1995, well past the recession trough in 1993. Californians participated in the labor market at a significantly lower rate than nationwide until this 2000, pulling to within 1 percentage point in October. Nevertheless, participation remains well below pre-recession levels

The participation rate is also important because small changes in participation rates have a big impact on labor market conditions. For any given level of civilian employment, a percentage point change in the state participation rate causes a percentage point change in the state unemployment rate in the same direction.

CHAPTER 3
LABOR MARKET KEY TOPICS

This chapter examines current topics in labor economics; those influencing policymaking as well as making headlines. The topics covered are labor markets and the Internet, wages, and long-term trends in the age composition of California's population.

E-COMMERCE MAY CHANGE THE STRUCTURE OF MARKETS

BUT EFFECT ON EMPLOYMENT IS HARD TO QUANTIFY

Electronic commerce or e-commerce, the on-line sales of goods and services over the Internet, has attracted considerable public attention during the past few years. A number of recent studies by universities and research organizations suggest that e-commerce will shortly become a major component of the U.S. economy. The Boston Consulting Group estimates that U.S. business-to-business sales via e-commerce (or e-business) will more than triple from 7 percent ($671 billion) of total sales in 1998 to 24 percent ($2.8 trillion) by 2003. Business to consumer sales (or e-tailing), a much smaller portion of the e-commerce market, are estimated to grow from $14.9 billion in 1998 to $184 billion by 2004, a twelve-fold increase. Forrester Research predicts smaller e-business sales growth, to $1.3 trillion by 2003, still a projected 9.4 percent of total U.S. business-to-business sales.

Notwithstanding these studies, reliable data on the economic and employment effects of e-commerce are difficult to come by. Measuring employment is especially difficult. For example, when employers submit their quarterly employment tax reports to the government, they list all employees working for them during the months specified. Therefore, for businesses that perform some e-commerce activities, employees engaged in e-commerce activities are not separated from those who are not. Moreover, because on-line selling is a recent phenomenon, its effects on the economy as a whole, and employment in particular, are just beginning to be felt. The e-commerce industry is

in the process of sorting itself out. Within a few years the industry will be better defined, with its size and nature, major players, and employment patterns all becoming clearer.

While the effects of e-commerce on employment are difficult to quantify, LMID has been interested in understanding how the occupational and recruiting needs of e-commerce firms might be different from other firms. In a study of 10 e-tailing firms, LMID found that e-tailing employers were: 1) having difficulty recruiting qualified candidates, 2) having less difficulty retaining employees, 3) outsourcing many of their positions in customer service and warehousing, and 4) rarely using telecommuting arrangements. In addition, e-tailing employer concerns tend to be business-specific, with few employers expressing larger public policy concerns. The study concluded that e-tailing firms' workforce needs may be addressed by investing in training and by offering more internship opportunities and advised California communities to be alert to the growing opportunities for customer service/call centers and warehousing/distribution facilities.

We have recently witnessed a dramatic fall in the stock values of technology companies and, in particular, dot-com firms. Most experts anticipated the fall given the extraordinary values the market was assigning to companies that had yet to make a profit. The experts predict that the volume of e-commerce transactions will continue to boom, but stock values and therefore compensation will adjust to reflect real, rather than exaggerated, profitability of companies.

NOT ALL JOBS CAN PAY ABOVE AVERAGE WAGES …

Many of the current policy debates and labor-related topics of public interest revolve around wages. While there are many statistics available to measure wages and income, the most comprehensive data on what working Californians earn come from the Current Population Survey (CPS), a monthly household survey conducted nationally by the U.S. Bureau of Census. One-quarter of the CPS sample households each month is asked questions about earnings.

Among workers paid on an hourly basis, the CPS collects information on the straight hourly pay rate. In 1999, of the 13.8 million nonagricultural wage and salary

workers in California, 8.4 million, or 61 percent, were paid on an hourly basis and the average pay rate was $11.89 per hour.

The comparable pay of all workers, including those not paid hourly (for example those paid salaries or a daily rate), can only be derived from CPS data. Specifically, hourly earnings can be imputed by dividing responses to a question on usual weekly earnings by the responses to a question on usual weekly hours. Thus the imputed average hourly earnings among all California wage and salary workers in 1999 was $16.05 per hour[11].

Average wages are a handy benchmark but, by the very definition of "average," some people must earn more than the average and some must earn less. The following chart looks beyond averages to the entire cumulative distribution of workers by wage.

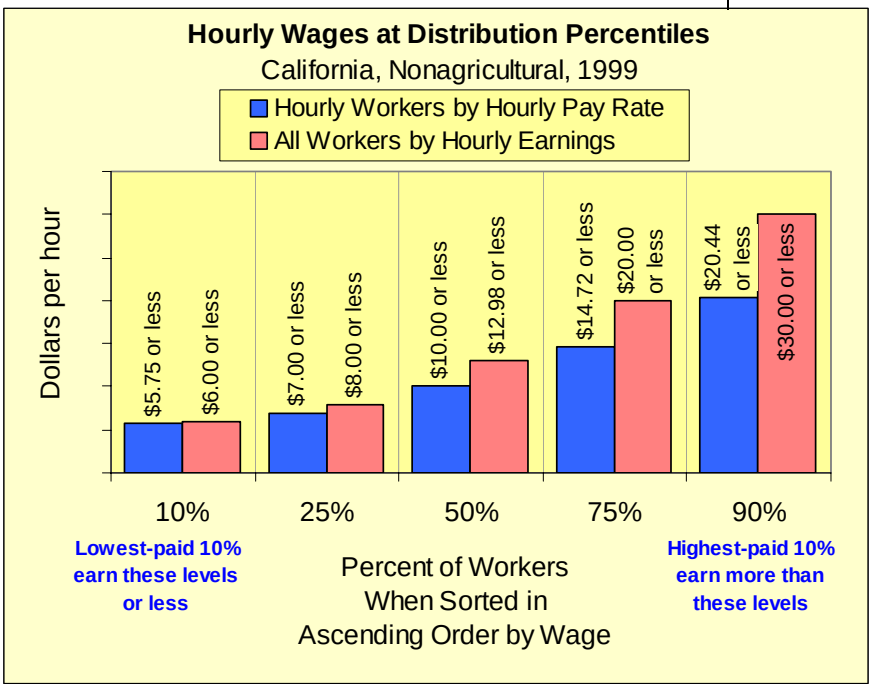

FIGURE 3-1

Distribution percentiles show how earnings change as statistics include progressively more individuals at higher pay scales. In 1999, the lowest paid 10 percent of California hourly workers earned $5.75 per hour or less. Including the lowest-paid 25 percent of workers brings earnings up to $7 per hour.

There are a number of interesting points that can be gleaned from Figure 3-1. First, the median hourly wage for California hourly workers in 1999 was $10 per hour. Which is to say, one-half of hourly workers earned more than $10 per hour, and one-

[11] Average hourly earnings imputed among all workers is higher than the average hourly pay rate among hourly workers for two reasons. First, imputed hourly earnings includes nonwage renumeration (i.e., overtime and commissions). The hourly pay rate excludes nonwage renumeration. Second, nonhourly workers tend to make more than hourly workers, so their inclusion pushes up the overall average.

half earned less. The median hourly earnings among all wage and salary workers was $13 per hour.

That these medians are less than the corresponding averages indicates that the wage distributions are "skewed." That is, workers are bunched toward lower pay, rather than being distributed evenly on either side of the average. This is illustrated in Figure 3-2.

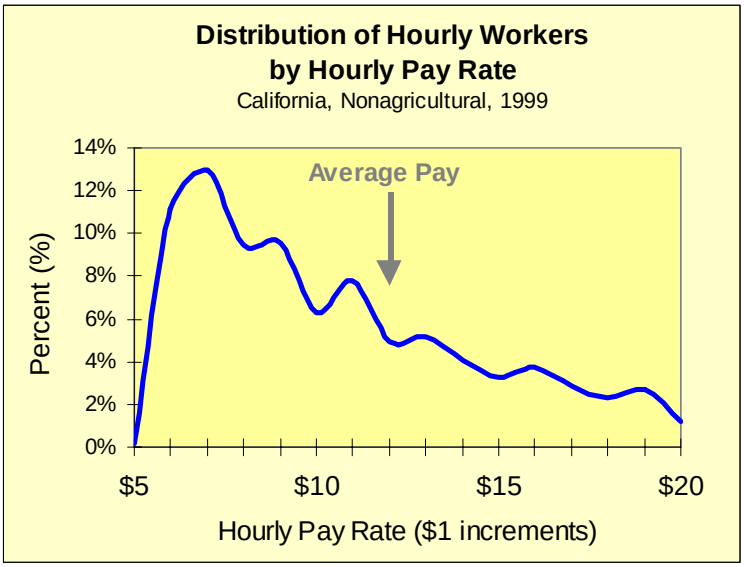

FIGURE 3-2

Most individuals earn less than the average hourly pay.

Figure 3-1 also shows that the lowest-paid 10 percent of hourly workers were paid $5.75 per hour or less in 1999 – equivalent to the current minimum wage. In 1995, pay for the lowest-paid 10 percent of California's hourly workers was $4.75 per hour or less. The increase tracks changes to the minimum wage, which rose four times in the past four years, beginning with an increase from $4.25 to $4.75 per hour in October 1996.

The highest paid 10 percent of hourly workers in 1999 earned more than $20.44 per hour. This was three and a half times the pay of the lowest-paid 10 percent, a ratio that has been termed the "earnings gap." The 1999 earnings gap was larger when stated for all workers because salary workers are compensated at a higher rate and the pay being counted includes non-wage renumeration such as overtime and commission. Among all workers (hourly and salary combined) the highest-paid 10 percent earned more than $30.00 per hour, five times the earnings of the lowest-paid 10 percent, who earned $6 per hour or less.

… PAY HAS RISEN ACROSS THE BOARD, BUT NOT AT THE SAME PACE

Most sources of pay and income statistics show increases, with the pace and pattern of increases reflecting the varying components of pay included in the statistic. In general, statistics reflect factors such as minimum wage increases, the value of other non-wage compensation, including overtime at the low end and stock options at the high end, and faster earnings growth in more skilled occupations.

From 1995 to 1999, the average pay rate among California hourly workers rose 10 percent (from $11 to $12 per hour), pay for the lowest-paid 10 percent rose 21 percent, and pay for the highest-paid 10 percent rose just 5 percent. The increase in the average is nearly the same as the rate of California inflation over the period (9 percent). The four-year growth in the pay rate at the low-end of the pay scale primarily reflects changes in the minimum wage, while hourly pay at the high-end of hourly paid work has been little affected.

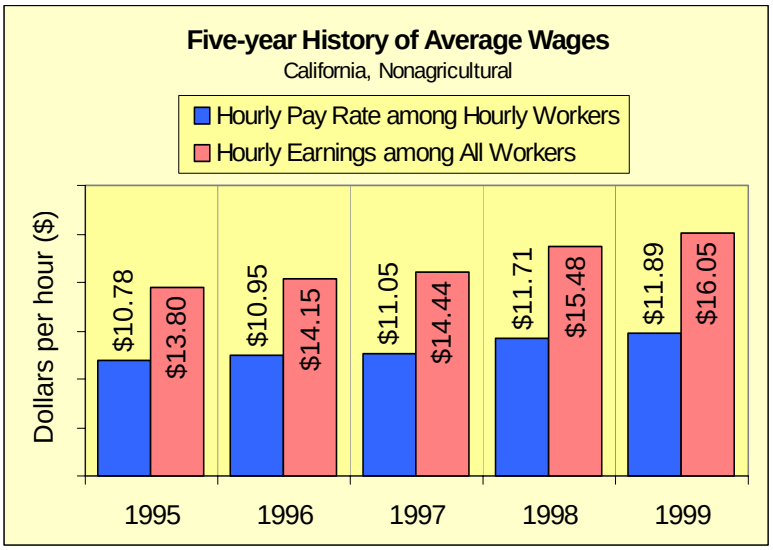

FIGURE 3-3

For wage and salary workers overall, increases in average hourly wages over the past four years more than kept pace with inflation. Increases in the average hourly wage for hourly-paid workers were more moderate.

From 1995 to 1999, average hourly earnings among all nonagricultural California workers rose 16 percent (from just under $14 to $16 per hour), pay for the lowest-paid 10 percent rose 20 percent, and pay for the highest-paid 10 percent rose 18 percent. Earnings growth reflect not only increases in pay rates, but also changes in nonwage renumeration, such as tips, commissions, and overtime. Earnings growth has also been

boosted by much greater earnings growth at the higher end of the earnings scale, 20 percent in the upper decile among all earners compared to just 5 percent in the upper decile of hourly workers.

Aggregate annual wages, which totals payrolls for all employees covered by unemployment insurance and related programs, reached $541 billion in 1999.[12] This was up 45 percent from 1994, nearly 20 percent more than can be explained by employment growth and wage inflation. The strongest growth occurred in 1998 and 1999, reflecting the growing value and use of stock options, a source of pay not considered in the CPS statistics.

In recent years, wages have risen at or above the rate of inflation. The earnings gap, which depicts the difference between the lowest and highest level of wages, appears to be decreasing over the past five years. Some of the increases at the lower wage scales may be “catching up” to the long-term loss in real wages. At the same time, the continued increase in wages at the higher wage scales reflect other compensation such as bonuses and stock options that are typically available to salaried workers.

The distribution of workers at lower hourly rates may reflect the skills and education needs of the economy. As occupational projections reports have indicated in recent years, most of the occupational demands are in the entry-level jobs which mostly require on the job or little formal training. At the same time, there is an intense need for highly skilled computer and engineering professionals. Under these circumstances – an extraordinarily large demand for low skill workers and a not so large demand for the highly skilled – an earnings gap would be apparent. The pattern of occupational demand and associated compensation arrangements may be the most important factors in the earnings gap.

CALIFORNIA'S AGING POPULATION WILL BE RETIRING

The age distribution of a population may be depicted graphically in a population pyramid. Such pyramids for California's current population and projected population in

[12] Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employment and Wages, Annual Averages," for 1990 to 1998. Data for 1999, which are preliminary, are from the LMID Employment and Payroll Group.

2020 are shown in Figure 3-4. Longer bars on either side of the axis show age groups that are large relative to other age groups and signify bulges or booms by their common names. These two population pyramids show how the age distribution of the population is expected to change over the next 20 years.

The baby boom cohort comprises the bulge in the middle of the California age/sex distribution pyramid in 2000. The smaller baby bust generation, also known as generation X, are ages 24 to 35 years. Near the bottom of the 2000 pyramid is another boom referred to as the baby boom "echo" or "echo boom" or generation Y.

In 2020, the echo boom can be seen more clearly as a growing percentage of the labor force. Also, the chart shows a third bulge emerging at the bottom of the pyramid – the children of the echo boom.

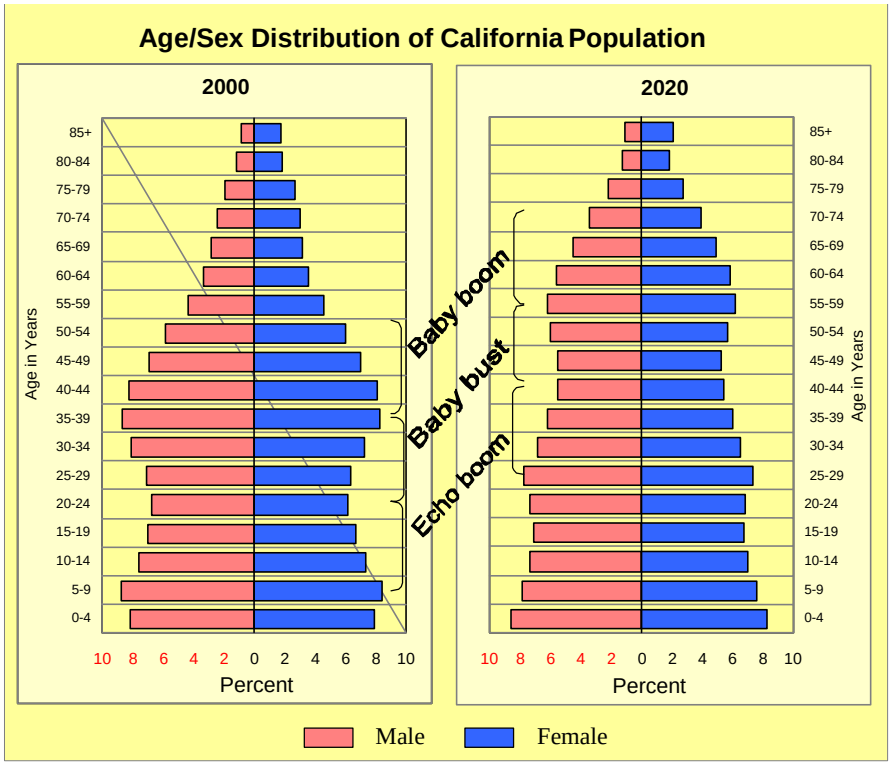

FIGURE 3-4

These "pyramids" show how the age composition of the California population will change as population cohorts age over the next 20 years.

[13]

Changes in the age distribution have two major implications for California labor markets. The first is the looming retirement of the baby boom generation. From 2000

[13] Source of Population Projections: California Department of Finance, *Race/Ethnic Population with Age and Sex Detail, 1970-2040, 1998.*

to 2020, the size of the most labor-force active cohorts will increase only 10 percent, while the size of the least labor-force active cohorts will rise 40 percent.[14]

As this large baby boom cohort readies for retirement, there is the possibility of a sizeable exodus among managers, skilled workers, and those in experience-oriented positions. Scenarios vary as policy makers, interest groups, demographers, and employers ponder the various possibilities as this event nears. Employers are responding with company-sponsored seminars on intergenerational workplaces, mentoring, and more ergonomic workplaces that accommodate an aging workforce.

The second implication of the changing age distribution is the need for school teachers. California public school enrollments are projected to surpass the 6 million mark next year and add about 242,000 more pupils in total over the next ten years. Fast-growing areas around the state such as Placer, San Benito, and Riverside Counties could experience a 30 percent increase in their student population within this decade.[15] This growth undoubtedly underscores the continuing need for school teachers. Demand for teachers will rise as the large echo boom moves through their school-age years, but even more importantly, large numbers of current teachers will be retiring.

The retirement of the baby boom generation poses a host of questions for employers including whether there will be an adequate labor supply to replace them, whether companies will need to offer semi-retirement or part-time work to boomers in order for the company to operate effectively, or whether boomers themselves will want or need to continue to work long past the traditional retirement age.

The silver lining to the baby boom retirement cloud is the fact that echo boomers are now starting to enter the workforce. This new generation of workers will not be able to fully replace the experience and skills of the boomers – at least not immediately – but they will supply employers with a workforce that is motivated, which may have more up-to-date skills than their predecessors, and at a lower cost to employers.

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[14] The most active cohorts are those with a labor force participation rate greater than 85 percent, which are men, 25 to 54 years. The least active cohorts are those with a labor force participation rate under 40 percent, persons 65 years and older.

[15] State of California, Department of Finance, *California Public K-12 Projections by County, 1999 Series.*

CHAPTER 4
INDUSTRY EMPLOYMENT

This chapter focuses on employment trends and prospects by major industry sector. The analysis is based on net employment change – the difference between industry employment levels in the most recent period and employment levels in a historical period. Definitions of industry sectors are provided in Appendix C.

The first section offers a general discussion of how sectors compare to one another by absolute and relative job growth from 1995 to 1999. Then, each sector is discussed individually with attention given to the performance of constituent industry groups. The sectoral discussion begins with the industry sector with the fastest rate of job growth – construction. Remaining sectors are discussed in order of the number of jobs added to payrolls over the five-year period.

JOB GROWTH IN 1999 WAS WIDESPREAD ACROSS ECONOMIC SECTORS

California's economy is based on a broad spectrum of industries. Goods-producing industries include resource-based sectors: mining, forestry, and agriculture. Construction is a major job-generating sector fueled by population growth. Manufacturing industries produce everything from aircraft and electronics to apparel. California's world-renowned tourism destinations, movie production, and software programming are the backbone of a thriving services sector.

Most industries recorded year-over employment growth in 1999, adding to already substantial employment growth in 1995 through 1998. The services sector contributed the most new jobs in 1999, accounting for 41 percent of the total net job growth in nonfarm industries. Trade, government and construction each added about one of five new jobs. The exceptions to widespread employment growth were the mining and manufacturing sectors, where several industry groups recorded job losses. Manufacturing payrolls fell in 1999 after four consecutive years of increases. Mining payrolls continued a nine-year string of employment declines.

Over the past five years, as a whole (1995 to 1999), nonfarm payroll employment in California rose 1.8 million jobs. The share of job growth contributed by each sector is shown in Figure 4-1. As was true in 1999 , the services sector added the most jobs over the five-year period, followed by trade, construction, manufacturing, and government.

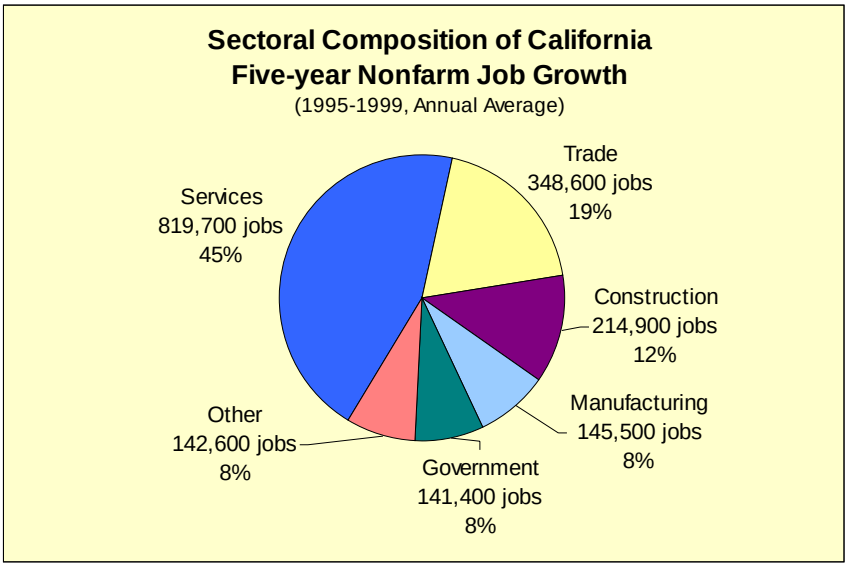

FIGURE 4-1

The services sector accounted for almost half of all nonfarm jobs added economy-wide in the past five years. The dominance of the sector will continue, as it will add slightly more jobs annually in the next five years than it did in the past five years.

The substantial contribution of the services sector to overall job growth is not all that surprising given that it accounts for the largest share – nearly one third – of all nonfarm jobs. Nevertheless, its share of growth exceeded its share of total jobs. Construction's share of job growth was nearly four times its share of total employment.

Relative job growth is reflected in a comparison of job growth rates – the percentage change in employment over the five years by economic sector. Construction and services employment rose 46 and 23 percent, respectively, from 1995 to 1999, well in excess of the overall nonfarm job growth rate of 15 percent. Job growth in transportation, communications, and public utilities was slightly faster than the economy-wide rate, while in other sectors, job growth was slower, ranging from 7 to 12 percent.

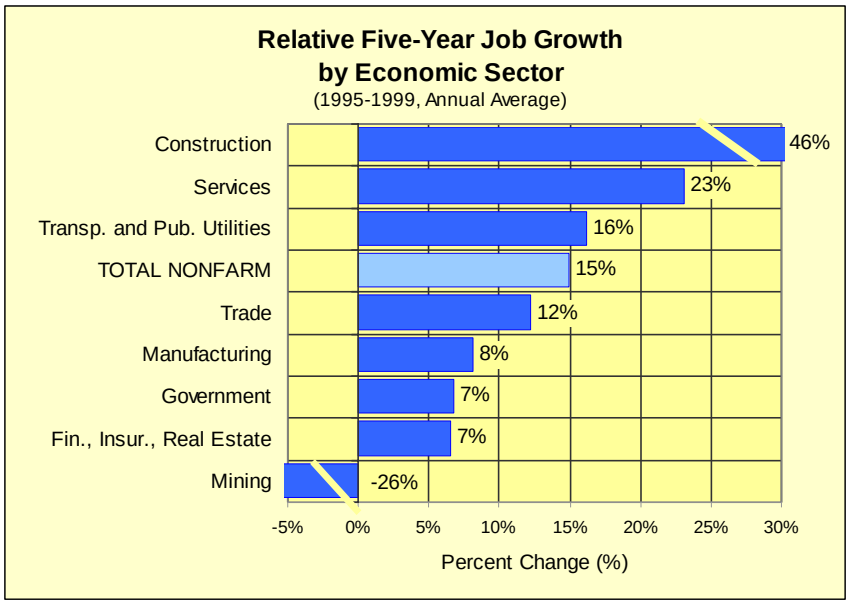

FIGURE 4-2

Construction registered the strongest relative job growth over the past five years – twice the rate seen in services with the second-strongest cumulative growth rate. Job growth in construction is expected to slow in the next few years, to a still-healthy annual rate, at only half the pace of the past five years.

Prospects. As the preceding discussion demonstrates, the comparative performance of industries can be judged by absolute job growth (that is, the number of new jobs) or by relative job growth (that is, the pace or rate of growth in percent). Both dimensions are important. The number of jobs relates more directly to the issue of putting a growing population to work. The rate of growth is more useful in comparisons among industries of unequal size.

Analyzing absolute and relative growth separately is unsatisfying because rankings of industries by the two measures will usually differ. So the following "growth grid" was designed to show projected absolute and relative job growth among major sectors on the same chart. Horizontal position on the grid indicates absolute job growth. Sectors further to the right are expected to add more jobs than those further left. Vertical position on the grid indicates relative job growth. Sectors nearer the top of the grid are expected to add jobs at a faster pace than those further down.

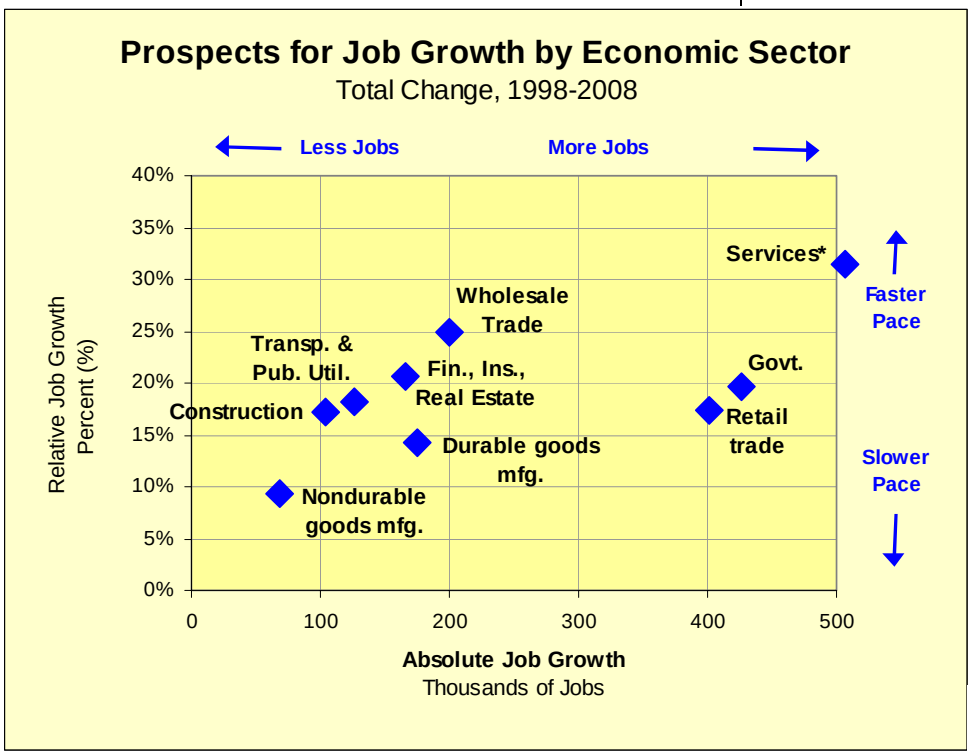

FIGURE 4-3

Ten-year projections by LMID show that services is expected to add more jobs than any other sector, as well as to expand at the fastest pace. Nondurable goods manufacturing is expected to add the fewest jobs and set the slowest pace of growth among sectors.

* Absolute job growth in services exceeds the scale shown.

Charting growth prospects in this way reveals that services is expected to lead other sectors in both absolute and relative job growth, signified by its upper right most position on the grid. On the other hand, nondurable goods manufacturing is expected to add the fewest new jobs as well as the slowest pace of growth signified by its lower left most position. Another interesting observation that can be drawn from the grid is that construction and retail trade employment are expected to expand at about the same pace, but of the two, retail trade will generate far more jobs.

The grid in Figure 4-3 can be simplified into a classification of major sectors by their prospects for job growth. By picking a break point in absolute job growth and a break point in relative job growth, the grid can be divided into four quadrants. The breakpoints, quadrants, and the list of sectors in each quadrant are shown in Figure 4-4.

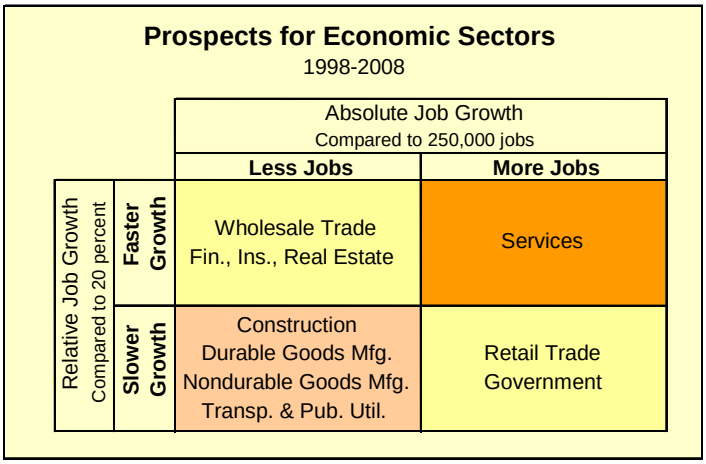

FIGURE 4-4

This figure shows how economic sectors fall into four categories according to the absolute and relative job growth projected in California from 1998 to 2008.

CONSTRUCTION HAD THE FASTEST RATE OF JOB GROWTH

Construction payroll employment was 679,200 jobs in 1999, accounting for 5 percent of the nonfarm jobs in California. Construction employment increased by more than 60,000 jobs in both 1998 and 1999, bringing the five-year increase to 214,900 jobs, or 46 percent. Relative job growth in California's construction sector was more than double the national growth rate of 4.6 percent. Employment growth over the past five years also topped job growth recorded from 1984 to 1989, the period often characterized as the heyday of California's real estate boom.

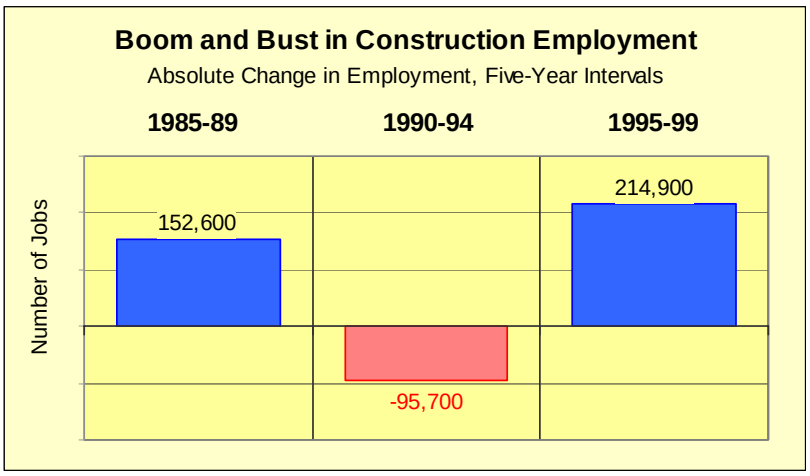

FIGURE 4-5

The construction sector added more jobs from 1994 to 1999 than in the five-year period 1984 to 1989 – the period often cited as California's most vigorous construction boom.

Among construction industry groups, special trades had the most vigorous growth, rising 157,500 jobs (54 percent) over the past five years and up 50,700 jobs (13 percent) in 1999 specifically. In comparison, employment with general building

contractors and heavy construction, combined, rose just 17,300 jobs (10 percent) in 1999, and 57,300 jobs over the past five years.

Prospects. In the future, the driving forces for construction employment will be California's expanding population (especially as echo boomers enter adulthood and form their own households), continuing economic expansion, and relatively low interest rates.

SERVICES ADDED FOUR OF THE TEN NEW JOBS CREATED ECONOMYWIDE

Services payroll employment accounted for 4.4 million jobs in 1999, or 31 percent of the total nonfarm jobs in California. From 1995 through 1999, employment increased 819,700 jobs, or 23 percent. In 1999 alone, sector employment rose 153,600 jobs, or 4 percent. While this slightly outpaced the nationwide growth in the sector, it was below the growth recorded in 1998 (5 percent).

Among industry groups within the sector, business services is the largest, employing 1.2 million workers, or 28 percent of sector-wide employment. It is also the fastest growing – with growth averaging 10 percent per year over the five-year period, and the largest job generator – adding an additional 410,400 jobs from 1995 to 1999, half of the jobs added in the whole sector. Employment in business services is comprised of personnel supply (also known as temporary help services), computer programming and software, and other business services (janitorial services, for example). Although other business services make up the largest share (40 percent of 1999 employment), personnel supply and computer programming have recorded the most job growth in recent years.[16]

[16] Estimated employment data are available for these detailed industries in 1997, 1998, and 1999. Over this period, personnel supply and computer programming added 80,900 and 65,400 jobs, respectively, accounting for 85 percent of business services employment growth overall.

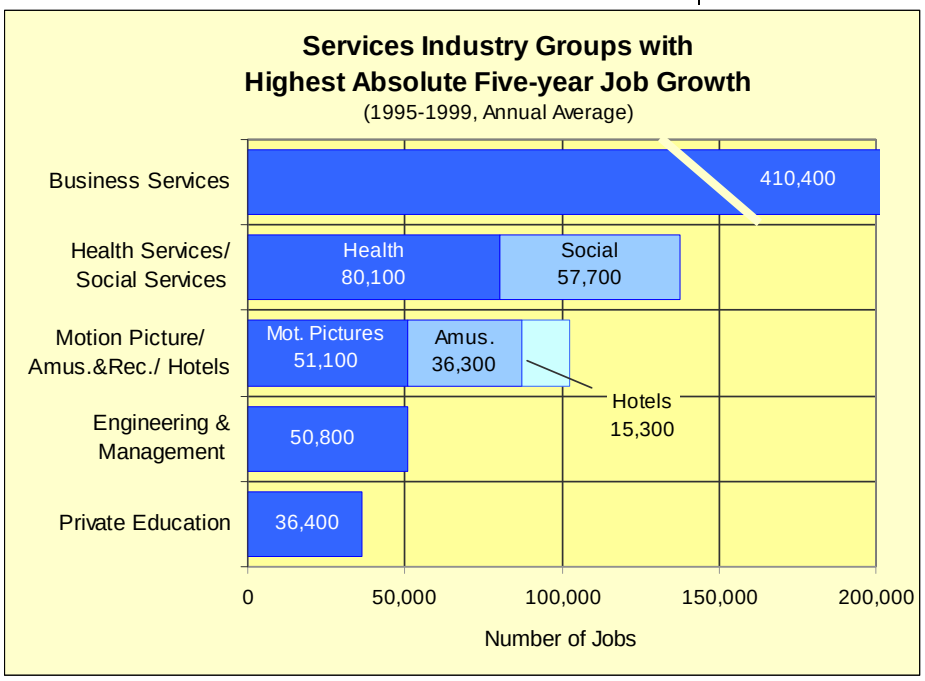

FIGURE 4-6

Business services made up half of five-year job gains in services. Health services saw the next largest employment increase, but its rate of job growth was low.

Health services and social services are the second and fourth largest employers within the services sector, with almost as many jobs combined as business services, 912,900 and 277,200 jobs, respectively, in 1999. Despite expectations that an aging and prosperous population would demand substantially greater health care, employment in health services averaged job growth of only 2 percent per year, 1995 to 1999. In absolute numbers, health services created an additional 80,100 jobs over the period, the second largest job growth within the sector. Employment in social services averaged a faster growth rate, 5 percent per year, but created fewer jobs, 57,700.

Entertainment and tourism-related service industries – including motion pictures, amusement and recreation services, and hotels and other lodging places – saw substantial employment growth over the past five years. The motion picture industry added 51,100 jobs from 1995 to 1999, but only a small amount of that increase – 3,100 jobs – occurred in 1999. The 1999 increase reflected a 1,000-job gain in motion picture production and a 2,100-job increase in other motion pictures (primarily movie theatres and motion picture distribution). Some industry analysts contend that the trend toward computer animation and computer-generated special effects has shifted motion picture related employment growth into other industry categories, including computer

programming in the business services industry group. The slower growth has also been attributed to run-away production, where films are being made in other states or Canada.

Amusements and hotels each employed about 200,000 workers in 1999. Amusement payrolls grew 8,000 jobs, or 4 percent, in 1999, bringing its five-year job growth to 36,300 jobs. As noted under "expansion trends," new and larger amusement facilities in the state are expected to continue spurring job growth in this industry. Hotel and other lodging places payrolls rose 5,700 jobs in 1999, the largest annual increase in five years. From 1995 to 1999, hotels added 15,300 jobs.

Engineering and management services is the third largest services industry with 440,000 jobs in 1999 and was one of five industry groups in services to add more than 50,000 workers from 1995 to 1999. The largest growth in the industry was recorded in 1998, when it added 17,400 jobs to payrolls. Payrolls rose 6,000 jobs in 1999. Although accounting for relatively few jobs, museums, botanical, and zoological gardens posted a growth rate of 10 percent per year, 1995 to 1999, – the same as business services and fastest in the sector. Agricultural services posted the third fastest average growth rate at 8 percent.

Prospects. Services will be the largest and the fastest-growing sector in California during the next five years with business services continuing as the leading industry in the services sector. This lead is a result of increased employment opportunities in several occupations including temporary help services, computer programming, and Internet related services. New positions expected in temporary help services include administrative support, technical, and professional positions. Computer programming and data processing services will have additional positions available in prepackaged software, computer systems design, and information retrieval services. Internet and related services employment will increase as a result of technological advancement and increased use.

Employment for all tourist related industries such as hotels and lodging places, amusement and recreation services, and motion pictures will grow significantly due to new and expanded amusement parks, as well as the introduction of new technologies into movie production.

Health services will expand due to population growth and longevity. These two factors will increase the demand for nursing care facilities, home health care (these are firms that provide skilled nursing or medical care in the home, under the supervision of a physician), personal related health care, and health practitioners.

Substantial employment gains in social services are expected due to an increase in residential care (this is when medical care is at a minimum). The growth in residential care is driven by an aging population with the desire of the elderly to maintain an independent life style with various degrees of assistance.

Engineering and management services will grow at a strong rate due to a great demand in physical, biological, sociological, and educational research. There will also be a notable increase in development and testing services.

TRADE HELD STEADY, DOMINATED BY EATING AND DRINKING ESTABLISHMENTS

The trade sector accounts for 3.2 million jobs in California, or 23 percent of the total nonfarm jobs. From 1995 through 1999, trade employment increased 348,600 jobs, or 12.3 percent. In 1999 alone, employment in this sector increased 70,100 jobs, or 2 percent, about the same as the nationwide increase.

About one-quarter of trade jobs, or 813,700, were in wholesale trade in 1999. Wholesale trade accounted for almost one-third of five-year job growth in trade, even though the rate of job growth was slower in 1999 than in any of the preceding four years. Wholesale trade employment increased 14,700 jobs, or 2 percent, in 1999, consistent with the national average. Employment in the industry increased between 3 to 4 percent each year from 1995 through 1998.

Retail trade employment rose 55,500 jobs, or 2 percent, in 1999. This was the second consecutive year of job growth of 50,000 or more. Over the five-year period, total employment in the sector rose 236,500 jobs.

Eating and drinking establishments are the largest employer within retail trade and registered the greatest job growth in 1999 and over the five-year period. Three other retail trade groups added more than 30,000 jobs each from 1995 to 1999 – furniture, home furnishings and home electronics stores, automotive dealers, and miscellaneous

retail trade (for example, bookstores and florists). The relative five-year job growth in furniture stores (31 percent) was the highest of any retail trade industry.

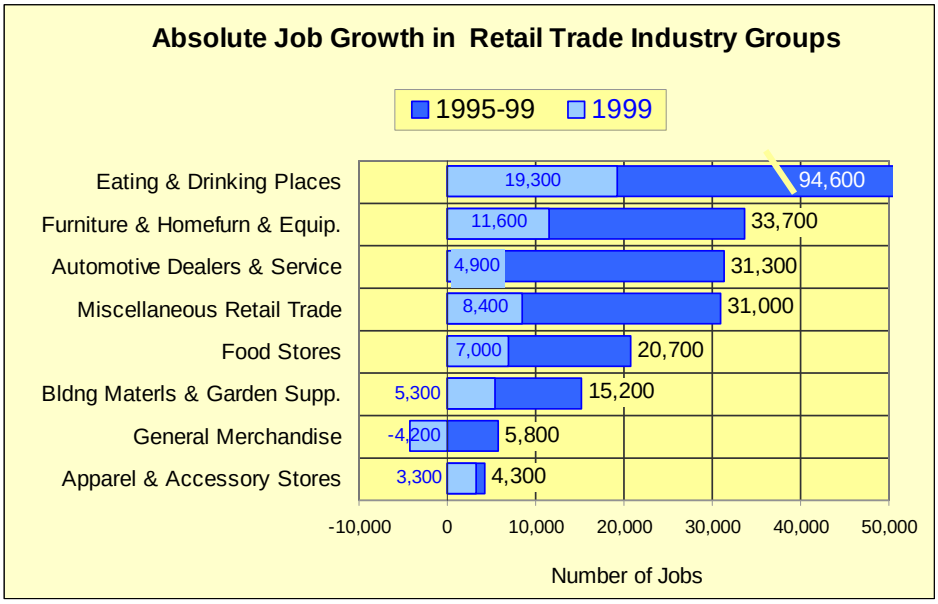

FIGURE 4-7

Eating and drinking places added the most new jobs in retail trade, followed by furniture (where jobs in the expanding home electronics segment are counted).

Other groups with job gains over 15,000 in retail trade were food stores and building materials and garden suppliers. The latter industry recorded one of the most rapid growth rates, 20 percent over five years.

General merchandise stores were the only retail trade category to record an employment loss in 1999, 4,200 jobs, which dropped its five year growth total to only 5,800 jobs, or 2.4 percent. Apparel and accessory stores added fewer than 4,000 jobs a year 1997 through 1999, following employment declines in 1995 and 1996. As a result, employment in such stores was up just 4,300 jobs over the five-year period. Average annual job growth in both retail groups was less than 1 percent per year, 1995 to 1999.

Prospects. In the next five years, eating and drinking establishments will continue to show a solid gain during the economic expansion. Also, building materials and garden supplies will post increases due to an expanding population, a strong economy and the growth momentum in the construction industry. One uncertainty in retail trade is the impact of Internet retailing (E-tailing) on employment as an increasing amount of retail business is conducted online.

MANUFACTURING JOB GROWTH STAGNATED

Manufacturing payroll employment was 1.9 million jobs in 1999, or 14 percent of the nonfarm jobs in California. Employment in the sector decreased 28,200 jobs, or 1.4 percent, in 1999, following four consecutive years of increases. This employment loss was greater than the nationwide trend, which was an overall loss of 0.5 percent. Over the five-year period, 1995 to 1999, sector payrolls rose 145,500 jobs, or 8 percent, a lower growth rate than all other economic sectors except government and finance, insurance and real estate.

Durable goods manufacturing accounts for over 60 percent of California manufacturing employment, led by electronic equipment (260,300 jobs), industrial machinery (225,900 jobs), instruments and related products (174,600 jobs), and transportation equipment (161,600 jobs), principally composed of aircraft manufacturing. Detailed industries within these four industry groups are usually identified as California's high technology manufacturing. These industries continue to provide a large employment base despite significant industry restructuring prompted by defense cuts, consolidations, and changing international conditions.

Over the past five years, electronic equipment and industrial machinery recorded the largest job growth in durable goods. Instruments and related products registered almost no net employment growth over the period 1995 to 1999, while transportation equipment employment in 1999 was down 10 percent from its level in 1994.

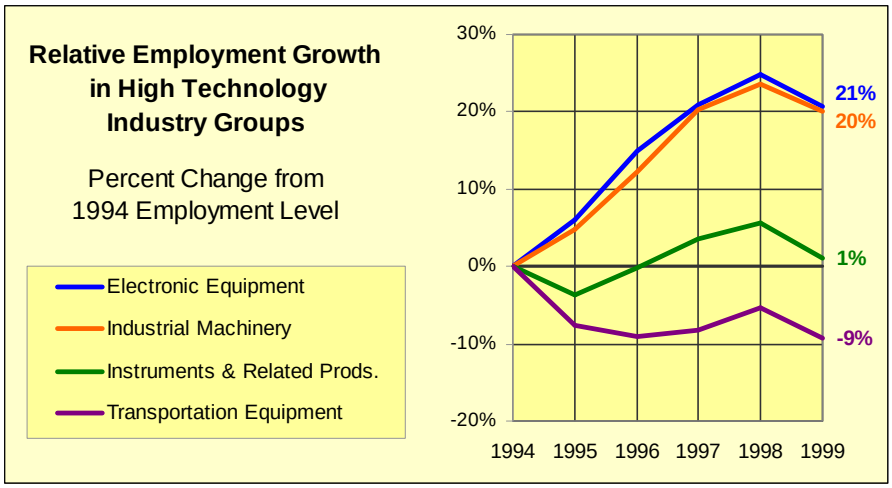

FIGURE 4-8

All four technology industries lost jobs in 1999, but over the five-year span, electronics and industrial machinery recorded job gains more than twice those of any other manufacturing industry.

Nondurable goods manufacturing employed nearly three-quarters of a million Californians in 1999, despite trimming payrolls by 2,300 jobs that year. Over the five year period 1995 to 1999, nondurable goods employment rose 21,600 jobs, or 3 percent. The largest employment is in food and kindred products, printing and publishing, and apparel and other textile products.

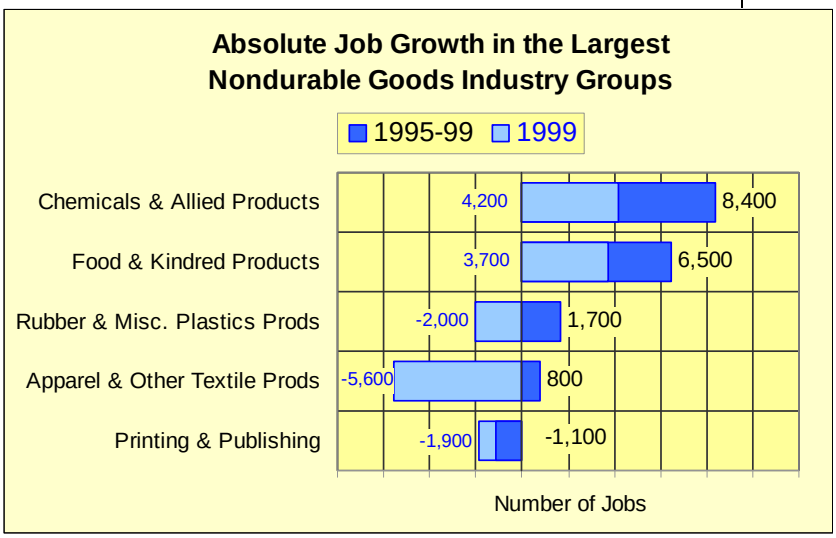

FIGURE 4-9

Chemicals, a large employer with about 80,000 jobs, led nondurable goods in absolute five-year job gains.

The greatest absolute job growth in nondurable goods manufacturing from 1995 to 1999 was recorded by chemicals and allied products and food and kindred products.

Prospects. Over the next five years, manufacturing employment will grow with most of the gains in fields associated with high technology. Industrial machinery, electronic equipment, and instruments and related products will sustain growth to meet the needs of the exploding world of Internet and wireless technologies. Manufacturers of such equipment will need to improve service and transfer speeds of voice communications and data over cable, fiber and wireless networks.

GOVERNMENT LED BY LOCAL EDUCATION

Government payroll employment accounts for more than 2.2 million jobs, or 16 percent of the total nonfarm jobs in California. From 1995 through 1999, employment has increased 141,400 jobs, or 28 percent, as gains in state and local government jobs more than offset the losses in the federal sector. Government gained 68,500 jobs, or 3 percent, in 1999, slightly above the national growth of 2 percent.

The largest job growth was in local government, specifically in local education, which accounted for 39,700 of the 57,300 jobs gained in 1999 and 133,400 of the 165,200 jobs gained in the past five years. Job growth in education reflects the state mandate for smaller class size, the hiring of new teachers, and the building of some 150 new schools.

State government added 33,500 jobs from 1995 to 1999, with half of the increase occurring in 1999. Like local government, the five-year increase in state government employment was largest in education. An exception, the 1999 increase was largely in non-educational state government.

Federal government employment declined by 57,300 jobs from 1995 to 1999, with the Department of Defense losing 38,000 jobs and other federal government losing 19,400 jobs. The largest declines in Federal defense employment over the five years were recorded in 1995 and 1996, while the largest drop in other federal employment was in 1996.

Prospects. In the next five years, government will be dominated by growth in local education. Employment in both local and state education will expand to meet the increasing school-age population, and as a result of more State funds committed to K-12 education. In general, all local government employment will increase with an expanding population and increasing demands for services.

Federal government employment will increase in year 2000 due to the hiring of temporary Census workers. However, the overall employment will decline over the next four years as federal downsizing continues.

TRANSPORTATION AND PUBLIC UTILITIES

JOB GROWTH ACCELERATING

Transportation and public utilities payroll employment was 718,900 jobs in 1999, or 5 percent of the total nonfarm jobs in California. This sector posted an employment gain of 99,900 jobs, or 16 percent, from 1995 through 1999, with almost one-half of the increase occurring in just 1998 and 1999. The acceleration in job growth was primarily due to a turnaround in communications and public utility employment which fell in 1995 and 1996 as a result of telephone company divestitures. Both the communications and transportation components of the sector recorded their largest employment increases of

the five-year period in 1998. Within transportation, the greatest recent employment growth was in trucking and warehousing (8,700 of the 14,500 jobs added in 1999). Within communications and public utilities, communications recorded increased employment (9,900 jobs in 1999), while public utility employment fell (1,000 jobs in 1999).[17]

Prospects. Increased air travel and expansion of aircraft maintenance will contribute to transportation job growth over the next five years. Additionally, trucking and warehousing should have solid employment gains with the demand for movement of goods remaining high during this period due to the strong economy. Substantial employment gains will also occur in communication due, in part, to the increase in the number of call centers.

FINANCE, INSURANCE AND REAL ESTATE
EXPANDING DESPITE LOSS AT BANKS

Finance, insurance and real estate payroll employment in 1999 accounted for 821,500 jobs, or 6 percent of the total nonfarm jobs in California. From 1995 through 1999, total employment in the sector rose 50,900 jobs, despite a 25,100-job drop in employment at depository institutions. As the chart in Figure 4-10 illustrates, layoffs in the sector, primarily due to mergers and downsizing in banking, continued well past the 1993 turnaround in total nonfarm employment. Offsetting the five-year decline in depository institutions, employment was a 23,400-job gain in nondepository institutions and a 20,900-job gain in security and commodity brokers. These industries have benefited from the continuing stock market boom.

[17] At the time this report was being prepared, California began to experience energy supply problems. No employment level changes were observed at the time of this report, but future monthly data may indicate changes in this sector.

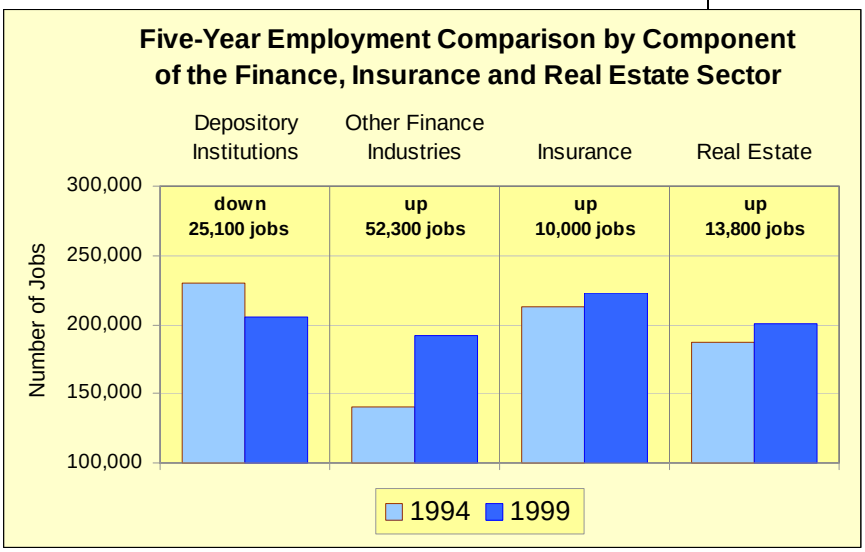

FIGURE 4-10

Job gains in non-depository institutions and securities brokers more than made up for job losses at banks in the past five years. Insurance and real estate saw relatively small job gains over the period.

Real estate employment increased 13,800 jobs over the past five years, with 9,900 jobs added in 1999 alone, reflecting the strong rebound of the real estate market in California. The insurance component of this sector recovered from job losses in the first two years of the five-year period, 1995 to 1999, to post a gain of 10,000 jobs.

Prospects. In the next five years, the rate of employment growth will be strong among security and commodity brokers due to increasing trading volumes attributed to investments by individuals, institutions, and retirement plans. Growth in employment in real estate is expected to continue with the anticipation that interest rates will remain relatively low.

MINING LOST JOBS

Mining is the smallest employer among the major sectors with payroll employment of just 23,700 jobs in 1999, or less than 0.2 percent of California's nonfarm jobs. Mining has lost a quarter of its employment over the past five years, including a decline of 1,500 jobs recorded in 1999.

California mining consists of metal mining (primarily, precious metals), nonmetalic minerals (primarily sand and gravel), and other mining (primarily oil and gas extraction). Other mining is the largest employer – 16,900 jobs in 1999 – and has seen the largest absolute decline – down 7,600 jobs from 1995 to 1999. These job losses are due to company mergers which affected headquarters employment and to reduced extraction.

Metal mining is the smallest employer – 1,200 jobs in 1999 – and has seen the largest relative decline – down 52 percent from 1995 to 1999. Nonmetalic minerals was the only mining category to see increased employment over the five years, up 700 jobs from 1995 to 5,600 jobs in 1999. This industry group has benefited from California's construction boom.

Prospects. The nonmetallic minerals industry group will continue to be buoyed by the construction industry. However, additional cutbacks in oil and gas extraction, and at central administrative offices by major employers in the other mining industry group will result in future decreases in mining employment.

CHAPTER 5
REGIONAL CONDITIONS

This chapter presents an overview of labor market conditions and trends in California's nine distinct regional economies. Comparisons among regions are made first, identifying the regions with the fastest job growth and regions having the lowest unemployment rates. The conditions in and prospects for individual regions are then discussed.

SIMILARITIES AND INTERDEPENDENCE DEFINE CALIFORNIA REGIONAL ECONOMIES

There are 49 California areas for which core labor market statistics – including unemployment rates and job growth – are estimated monthly. These substate areas are composed of Metropolitan Statistical Areas (MSAs) and counties not in MSAs. MSAs themselves are single urbanized counties or groups of contiguous urbanized counties meeting certain population thresholds.[18] Counties in multi-county MSAs must also share a common labor pool as indicated in commuting pattern data. Examples of single county MSAs are the Chico-Paradise MSA, comprised of Butte County in Northern California, and the Los Angeles-Long Beach MSA, comprised of Los Angeles County. Multi-county MSAs in California include, for example, the Riverside-San Bernardino MSA, comprised of its two namesake counties, Riverside and San Bernardino.

As can be imagined, labor markets and economic linkages often extend beyond the boundaries of individual MSAs and counties to what can be termed regional economies. Regional economies are characterized by a homogeneous and/or interdependent industry structure and active economic exchange of labor, goods and services among the constituent areas. Labor market conditions of constituent areas in a regional economy may be widely different, but would generally move together.

[18] MSAs are defined annually by the U.S. Office of Management and Budget.

While there is no universally agreed-to definition of California's regional economies, the nine California regions adopted by the California Economic Strategy Panel have proven useful for labor market analysis. (See Figure 5-1.) Their regional scheme respects the way counties are grouped for data collection conventions (i.e. MSAs and "consolidated" MSAs), physical geographic barriers (such as the Sierra Nevada Mountains), and commute patterns. Although a decade old, commute data weighed particularly heavily in the classification of counties that seemed to "fit" in more than one region.[19] This definition of California's regional economies is used throughout this chapter.

[19] For additional information regarding regional economies and the work of the Economic Strategy Panel, visit the Web site for the California Trade and Commerce Agency, http://commerce.ca.gov/california/esp/.

FIGURE 5-1

The California Economic Strategy Panel identified nine distinct regional economies in California. These regions are used throughout this chapter to discuss regional labor market conditions.

MOST AREA JOB GROWTH COMES FROM FIVE REGIONS

All of California's nine regional economies have seen uninterrupted job growth over the past five years.[20] Figure 5-2 shows the annual rate of job growth averaged from 1995 to 1999 among the regions and in comparison to California as a whole. Four regional economies recorded faster job growth on average over the past five years than

[20] To fairly represent employment growth in all areas, including agricultural areas, "jobs" in this chapter refer to total, all industry employment, unless otherwise noted.

did the state as a whole, while five recorded slower growth.[21] Annual rates of total job growth have ranged from a low of 0.8 percent in the Central Sierra in 1997 and in Northern California in 1998, to a high of 5.3 percent in Greater Sacramento in 1999.

In 1999, three regional economies recorded economy-wide job growth over 4 percent (Greater Sacramento, Central Coast and the Southern Border). Two additional regions saw job growth exceeding 3 percent (Northern Sacramento Valley and the Central Sierra).

All regions except Northern California saw faster job growth in 1999 than in 1995. Six regions, including Northern California, saw job growth accelerate in 1999 from 1998. Explaining the statewide trends, the three regions whose growth slowed in 1999 from 1998 were the largest regions – Southern Border, Bay Area, and Southern California.

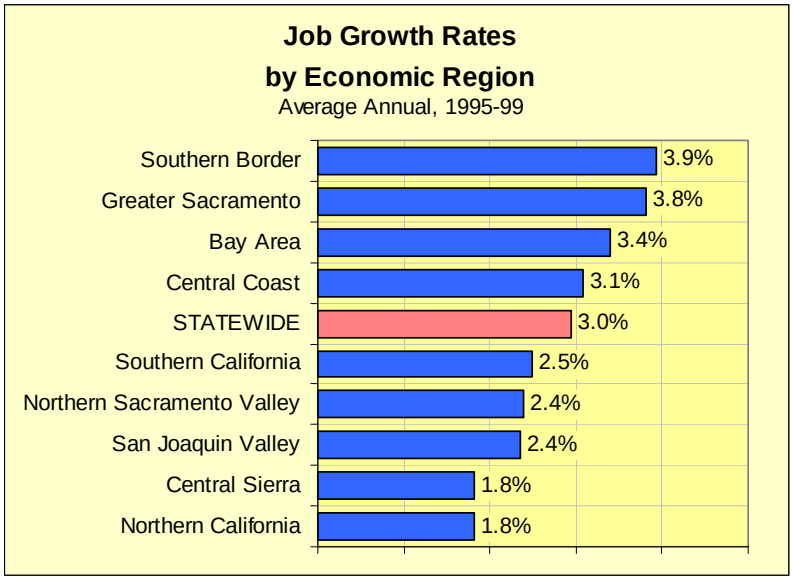

FIGURE 5-2

The fastest average annual rate of job growth from 1995 to 1999 was recorded by the Southern Border economy. Also, Greater Sacramento, Bay Area, and Central Coast saw faster average job growth than for the state as a whole.

As shown in Figure 5-3, five regions accounted for 95 percent of all area job growth from 1995 to 1999. The regions in order of absolute job growth were: Southern California (which by itself added nearly three quarter of a million jobs), the Bay Area (which added more than half a million jobs), the Southern Border region, the Greater Sacramento area, and the San Joaquin Valley. The other four regional economies

[21] Readers should note that job growth statewide exceeds the sum of job growth across regional economies. This is due to "statewide reporting" by some large employers in the collection of payroll statistics. This prohibits the apportionment of their employment, and employment change, to the individual areas where those jobs were actually located.

added relatively few jobs from a statewide perspective, but growth was nevertheless significant from the perspective of their smaller size.

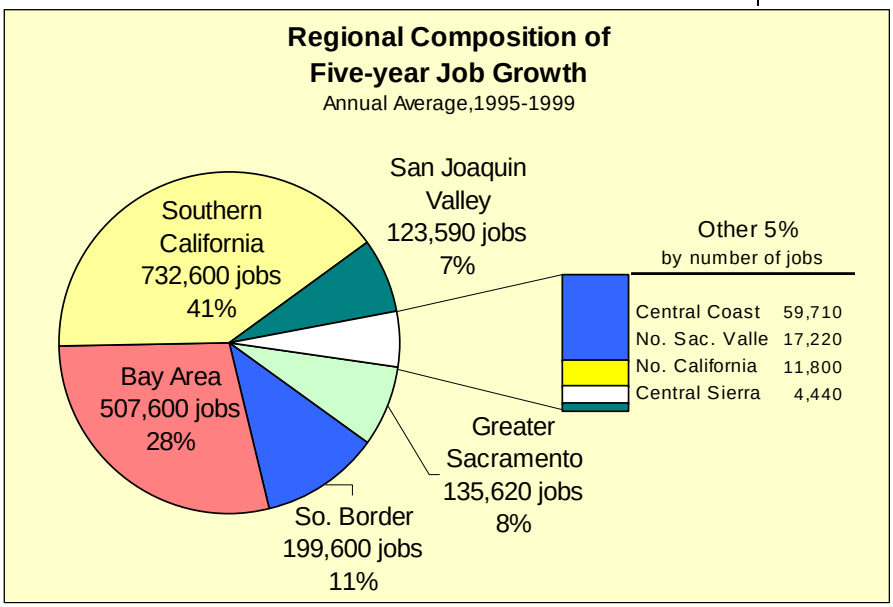

FIGURE 5-3

Just five regional economies contributed 95 percent of area job growth in California over the past five years.

UNEMPLOYMENT RATES ARE LOWEST IN MORE URBANIZED REGIONS

In 1999, four regions recorded unemployment rates below the comparable statewide rate of 5.2 percent, and five regional economies had higher rates. Rates ranged from a low of 3.1 percent in the Bay Area to 12.1 percent in the San Joaquin Valley.

Generally, the more urban the region, the lower the unemployment rate, as shown in Figure 5-4. The geographic pattern of unemployment also favors coastal areas, with Greater Sacramento being the only region away from the coast to record an unemployment rate lower than the statewide average in 1999.

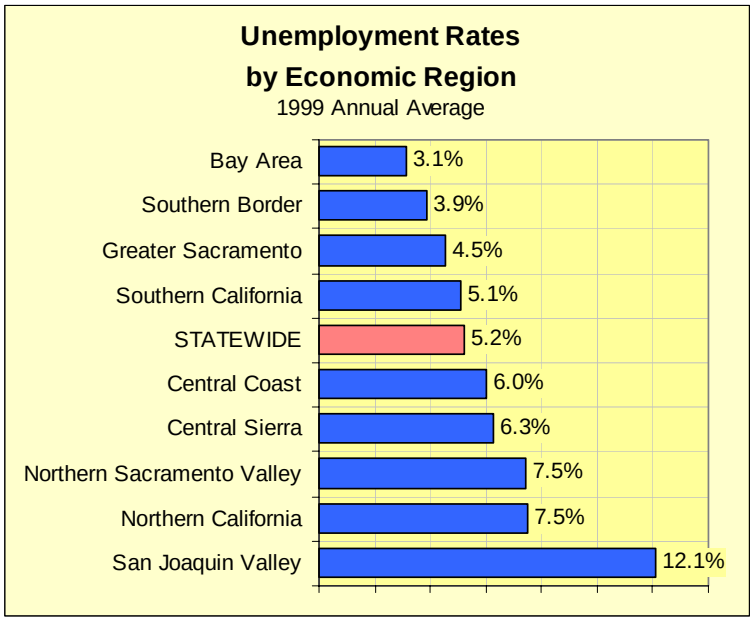

FIGURE 5-4

In 1999, four regions recorded unemployment rates below the comparable statewide rate of 5.2 percent, and five regional economies had higher rates. Rates ranged from a low of 3.1 percent in the Bay Area to 12.1 percent in the San Joaquin Valley.

The pattern of regional unemployment rates indicates rural areas have higher unemployment across the board. There are a number of contributing factors, but one of general signficance is that there are large seasonal employment swings in agricultural industries. Such seasonal variation would in of itself tend to inflate annual average unemployment rates.

Three regions recorded both an unemployment rate below the statewide figure and job growth above the statewide rate in 1999. These were the Bay Area, Southern Border, and Greater Sacramento. The San Joaquin Valley, Northern California, Central Sierra, and Northern Sacramento Valley saw above statewide average unemployment and below statewide average job growth in 1999.

However, these data do demonstrate the pull that strong labor markets have on the size of the labor force. All the regions with below statewide average unemployment rates in 1999 saw above statewide average labor force growth in the five year period, 1995 to 1999. The greatest average annual rate of labor force growth over the past five years was in the Greater Sacramento region (1.9 percent), Southern Border (1.8 percent), Southern California (1.6 percent) and Bay Area (1.6 percent). The comparable statewide average annual labor force growth rate was 1.5 percent.

REGIONAL UNEMPLOYMENT RATES HAVE FALLEN WITH LITTLE CHANGE IN RELATIVE RANKINGS

California's regional economies experienced falling unemployment rates from 1995 to 1999. Over the entire five year period, regional rates fell 2.4 to 4.0 percentage points at the same time the statewide rate fell 2.6 percentage points.

Interestingly, despite varying rates of job growth, labor force growth and unemployment rate declines, the ranking of California's regional economies by unemployment rate in 1999 was little different from rankings in 1995, as demonstrated in Figure 5-5.

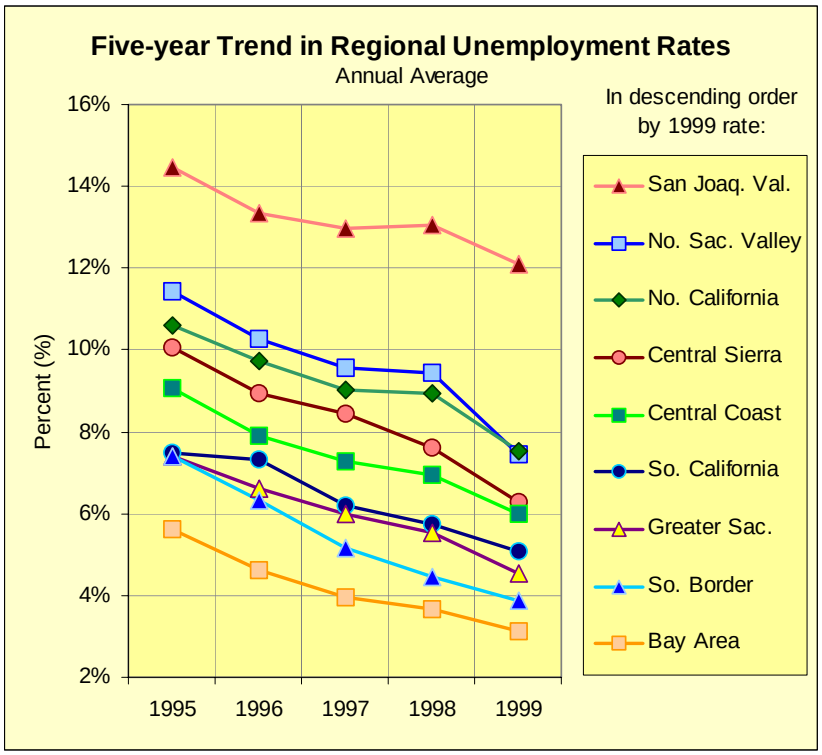

FIGURE 5-5

Unemployment rates have fallen over the past five years in all nine of California's regional economies. However, the rankings of regional rates have changed very little.

SOUTHERN CALIFORNIA IS THE LARGEST REGIONAL ECONOMY

Southern California is the state's largest regional economy, with 6.6 million total jobs in 1999, just under half of all jobs statewide. The region is comprised of four MSAs: Los Angeles-Long Beach MSA, Orange County MSA, Riverside-San Bernardino MSA, and Ventura County MSA.

In absolute terms, the greatest numbers of additional jobs from 1995 to 1999 were created in the Los Angeles-Long Beach MSA. The fastest rate of job growth over the five years was recorded by the Riverside-San Bernardino MSA, up 23.6 percent, an average of 4.7 percent per year. The lowest unemployment rate in 1999 was 2.7 percent in the Orange County MSA while the highest was 5.9 percent in the Los Angeles-Long Beach MSA.

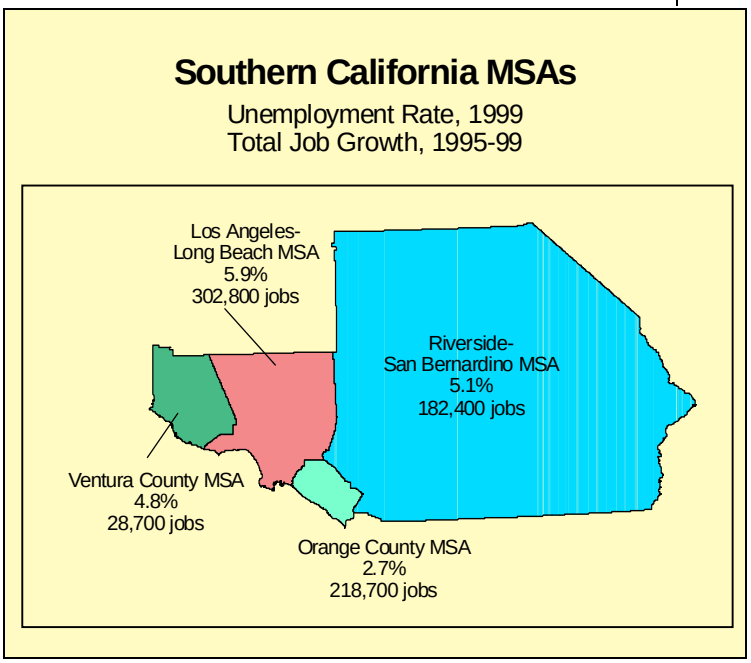

FIGURE 5-6

The Southern California economy is comprised of four MSAs.

Job growth in the Southern California region was 2.6 percent or better in each of the last three years. Job growth has been widespread among industry sectors, particularly in the services sector, where business services, motion picture production, and engineering and management services have added thousands of jobs. Rapid job growth in construction has been reminiscent of the region's real estate boom of the late 1980s and is being fueled by rapid population growth. Riverside County's population rose an average of 2.6 percent from 1995 to 1999, while population in the rest of the region rose an average of 1.1 percent per year. Manufacturing continues to act as a brake on the regional economy with the aerospace industry shedding jobs as the result of acquisitions and mergers.

Prospects. Industry employment projections[22] indicate that most of the future nonfarm wage and salary jobs in the region will be in services, government, and retail trade. These sectors combined are expected to account for two-thirds of new jobs over the next two to four years. Manufacturing is expected to account for 15 percent of future job growth in the region, with transportation equipment turning the corner through adding only an average of 2,000 jobs a year. Population growth is expected to accelerate in Riverside and San Bernardino Counties over the next five years, fueling further construction job growth.

THE BAY AREA REGION IS NOTED FOR LOW UNEMPLOYMENT

The Bay Area is comprised of Santa Cruz County and the Oakland MSA, San Francisco MSA, San Jose MSA, Santa Rosa MSA, and Vallejo-Fairfield-Napa MSAs. This region is the second-largest economic region in the state and has far-and-away the lowest unemployment rates.

In absolute terms, the greatest numbers of additional jobs created in the region from 1995 to 1999 came in the San Jose MSA, with the San Francisco and Oakland MSAs following closely behind. Four of the six areas in the region saw relative job growth averaging 3 percent or more per year over the past five years. The highest growth rate was recorded by the Santa Rosa MSA, which just edged out the San Jose MSA, with average annual rates of 4.4 and 4.2 percent, respectively. The lowest unemployment rate in 1999 was 2.4 percent in San Francisco MSA. The highest unemployment rate in the region was in its most rural county, Santa Cruz, at 6.3 percent.

[22] Industry employment projections used here and in the remainder of this chapter are from the LMID Industrial Projections. Projections are made for seven-year periods, with the span of the seven years varying by area. The earliest period for the projections are 1995 to 2002, and the most recent period for area projections are 1997 to 2004.

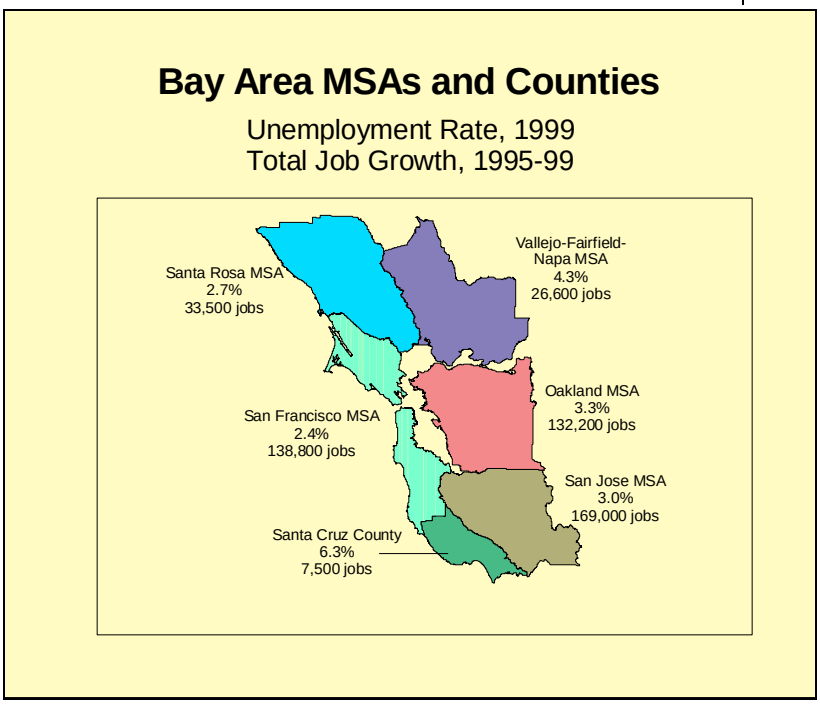

FIGURE 5-7

The Bay Area economy is comprised of six areas, all but one of which are MSAs.

The regional economy has benefited from growth in its largest sectors: services, manufacturing, and retail trade. The electronics, industrial machinery and related industries have recovered from the shock of the Asian Financial Crisis. The area saw tremendous growth over the past five years in data processing and software services.

Prospects. Future regional job growth is expected to average 78,000 jobs a year over the next two to five years with the largest sectors continuing to lead the way. The services sector will account for over half of annual nonfarm job growth, and business services alone will add more than 20,000 jobs a year. Manufacturing is expected to contribute 10 percent of the region's new jobs, including 5,000 jobs a year in electronics, industrial machinery and allied industries.

While population growth statewide is expected to accelerate slightly over the next five years, population growth in the Bay Area region is expected to slow.[23] The number of persons in the region is expected to increase an average 1.2 percent from 2000 to 2004, down from the 1.5 percent annual growth seen 1995 to 1999. The expected slower population growth is due to housing affordability and availability in the region.

[23] Population projections in this chapter are from the California Department of Finance.

SOUTHERN BORDER LINKS
TWO VASTLY DIFFERENT COUNTIES

The Southern Border region is comprised of just two areas: the San Diego MSA and Imperial County. The areas are located along the border with Mexico, and trade and immigration from that country strongly influences their economies. By the numbers, however, economic conditions in the two areas are strikingly different.

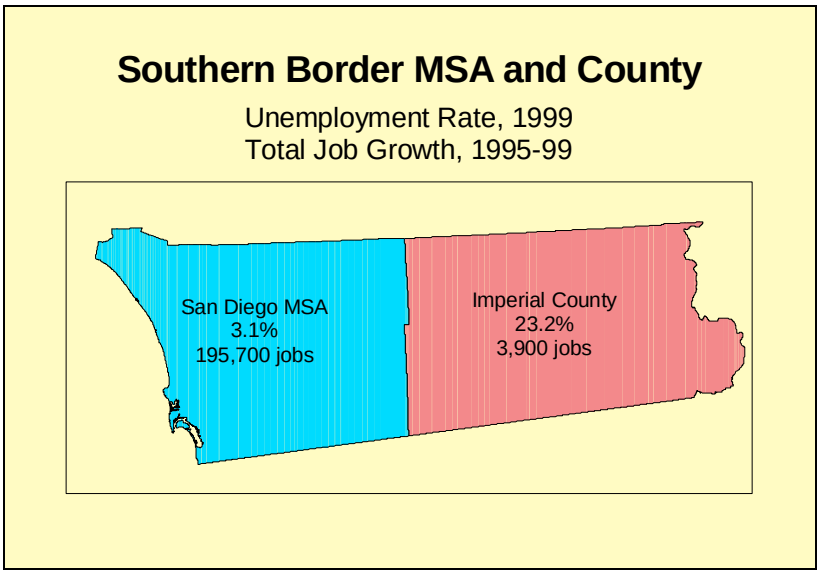

FIGURE 5-8

The Southern Border region is comprised of just two areas: the San Diego MSA and Imperial County.

The bulk of economic activity in the region occurs in the San Diego MSA. In 1999, the MSA had 1.2 million jobs in all industries, compared to 52,300 jobs in Imperial County. From 1995 to 1999, San Diego saw 195,700 new jobs while employment in Imperial County rose 3,900 jobs, thanks largely to a signficant one-year jump in Imperial County jobs totals in 1999. There is also a significant difference in relative job growth, 4.1 percent per year in San Diego and 1.6 percent per year in Imperial.

Imperial County had the highest unemployment rate among all California counties in 1999, at 23.2 percent, while San Diego's rate was the fifth lowest, at 3.1 percent.

Prospects. The economy of the Southern Border region is based on employment in the services, trade and government sectors, with employment in the latter concentrated in local government education. The region is expected to record average annual job growth of 27,000 jobs a year over the next four years with services, trade and government adding the most jobs. Construction and manufacturing are each expected to contribute a little more than 2,000 jobs a year each.

As an underlying source of job growth, population growth in the region exceeded the statewide rate of growth over the five-year period 1995 to 1999, 1.8 and 1.4 percent, respectively. Over the next five years, the rate of population growth is expected to accelerate substantially to 2.0 percent. In fact, Imperial County alone is expected to add twice as many people from 2000 to 2004 as it did from 1995 to 1999.

GREATER SACRAMENTO GROWTH IS WIDESPREAD AMONG INDUSTRIES AND SPREADING OUT AMONG ITS AREAS

This region is defined by four areas: Nevada and Yolo Counties and the Sacramento and Yuba City MSAs. Although eastern parts of Placer and El Dorado Counties (in the Sacramento MSA) and Nevada County are closely aligned with the Lake Tahoe economy, most of the new growth in these counties is occurring in the parts nearest Sacramento. Similarly, the northern part of the Yuba City MSA is closely aligned with the Northern Sacramento Valley agricultural areas, but new growth is occurring along Highways 65, 70, and 99 in the direction of the Sacramento area.

Accounting for the lion's share of total jobs in the region, the Sacramento MSA added far-and-away the greatest numbers of jobs in the region from 1995 to 1999, as well as the most robust growth rate of 4.1 percent. This was almost double the slowest job growth of 2.4 percent for both Yuba City MSA and Yolo County. In 1999, the Yuba City MSA had an unemployment rate of 12.5 percent, significantly higher than the 4.0 to 4.4 percent recorded in the region's other three areas.

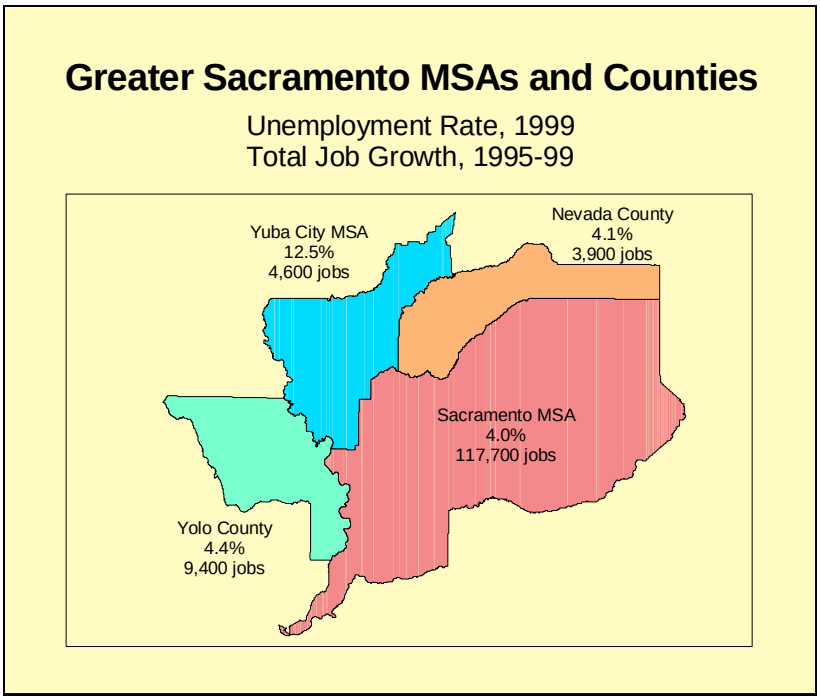

FIGURE 5-9

The Greater Sacramento economy is comprised of four areas. The largest area, the Sacramento MSA, is made up of three counties, Sacramento, Placer and El Dorado.

Government is the largest employer in the region, both as a result of being the seat for state government and the home to numerous public colleges and universities. Other important industry sectors are services and retail trade.

Prospects. Over the next two to four years, regional employment is expected to increase by over 20,000 jobs a year with half of the new jobs coming in services and trade. Manufacturing is one of the fastest growing industry sectors, and is projected to increase employment by nearly 3,500 jobs per year. Manufacturing is projected to account for 17 percent of future annual job growth, a higher share from manufacturing than in any of the other five largest regions.

All counties in the region are expected to see population growth accelerate substantially over the next five years compared to that recorded over the past five years. The regional population will rise 2.3 percent annually from 2000 to 2005, up from 1.7 percent from 1995 to 1999, and well ahead of the statewide projected pace of 1.6 percent per year. Growth is spreading out geographically. Placer County, which is one-fifth the size of Sacramento County, recorded population growth half as large as did Sacramento from 1995 to 1999.

THE SAN JOAQUIN VALLEY IS DIVERSIFYING FROM AN AGRICULTURAL BASE

This region is defined by physical geography – a wide, 300-mile long valley bounded by the Coastal Range and Sierra Mountains. It is comprised, from north to south, of the Stockton-Lodi MSA, Modesto MSA, Merced County, Fresno MSA, Kings County, Tulare County and Bakersfield MSA.

Fresno MSA added the most jobs over the five-year period 1995 to 1999, while the two northern-most areas, Modesto MSA and Stockton-Lodi MSA, recorded the fastest rates of job growth, both averaging 3 percent per year or more. Job growth in the region reflects the changing character of employment, from dispersed employment in agricultural-based industries to urban-based industries and services. The slowest job growth occurred in the three non-MSA counties in the region in which there are no cities with populations over 100,000 and only two cities with populations between 50,000 and 100,000.

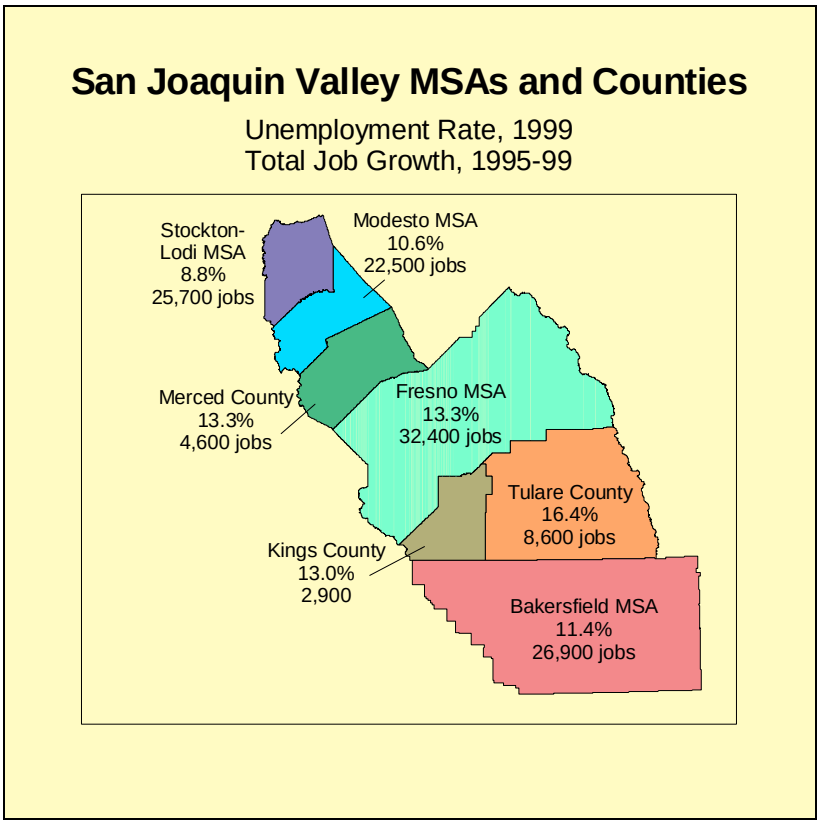

FIGURE 5-10

The San Joaquin Valley economy is dominated by agricultural-based industries, but other business types are establishing a presence in the Valley's urban areas.

Unemployment is relatively high throughout the region, with the highest rate in 1999 recorded by Tulare County (16.4 percent). Only Stockton-Lodi MSA saw an unemployment rate below 10 percent in 1999.

Prospects. Future regional job growth is expected to be fueled by population growth and industrial diversification. Of the 18,000 new jobs per year projected in the next two to four years, 4,300 jobs (24 percent) will occur in the trade sector. This reflects the region's growing importance as a distribution and warehousing center, as well as the need for expanded retail businesses to tap growing bedroom communities. Another 7,000 jobs per year are expected in the services sector. Many of these jobs will result from the trend toward the establishment of "call centers" in the region. Manufacturing will provide less than 10 percent of net new jobs. Excess-capacity and changing competitive factors in food processing industries will restrict growth in the region's traditional source of industrial jobs.

From 1995 to 1999, the region saw a population increase of more than 250,000 persons, an average 1.7 of percent per year. This was just slightly faster than in the Bay Area and the same as in Greater Sacramento. From 2000 to 2005, however, population in the San Joaquin Valley will jump 370,000, an annual rate of 2.3 percent. This will match the pace of population growth in Sacramento, as both regions, to some extent, absorb the impact of slower growth in the Bay Area.

APPENDICES

APPENDIX A

CONCEPTS AND DEFINITIONS

Payroll jobs are the number of workers on payrolls during the pay period including the 12th of the month. Estimates are based on payroll data collected directly from employers in the Current Employment Statistics (CES) Survey or "establishment survey." It does not include the self-employed, unpaid family workers, and private household employees.

Civilian Labor Force includes all non-institutional civilians 16 years of age and older who are working or looking for work: the sum of employed and unemployed.

Civilian Employment includes all individuals 16 years of age and older who are working for a wage or salary, are self-employed, or are working at least 15 unpaid hours in a family business during the week including the 12th of the month. Those who are on vacation, other kinds of leave, or involved in a labor dispute, are also counted as employed. Each employed person is counted only once, even if he or she holds more than one job. Estimates of employment and unemployment are derived from a regression model specified by the U.S. Bureau of Labor Statistics (BLS). One independent variable in the regression model is the level of civilian employment from the Current Population Survey (CPS), a monthly survey of households administered by the Bureau of the Census.

Unemployment Rate is the number of unemployed as a percentage of the labor force.

Seasonally Adjusted. Over the course of a year, the size of the Nation's labor force, the levels of employment and unemployment, and other measures of labor market activity undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. Because these seasonal events follow a more or less regular pattern each year, adjusting the statistics from month to month can eliminate their influence on statistical trends. These adjustments make it easier to observe the cyclical and other nonseasonal movements in the series. In evaluating changes in a seasonally adjusted series, it is important to note that seasonal adjustment is merely an approximation based on past experience. Seasonally adjusted estimates have a broader margin of possible error than the original data on which they are based, because they are subject not only to sampling and other errors but are also affected by the uncertainties of the seasonal adjustment process itself.

APPENDIX B

DIFFERENCES AMONG ECONOMIC FORECASTS

Economic forecasting organizations, including the University of California at Los Angeles (UCLA) and the Department of Finance (DOF), employ sophisticated and well-tested "demand-driven" economic models. That is to say, they model how changes in exogenous factors (such as interest rates and price levels) will affect aggregate demand (such as federal defense spending, consumer spending, exports). Job growth, and to a lesser extent the unemployment rate, fall out of the model as the "derived demand" for labor on a major industry sector basis.

The Legislative Analyst's Office (LAO) forecast includes projections of the General Fund revenues and expenditures. The California Fiscal Outlook report includes LAO's independent assessment of the outlook for the economy, demographic, revenues and expenditures.

LMID long-term projections of California payroll employment add value by forecasting the number of jobs at a very high level of area, industry and occupational detail. Long-term projections are based on conservative economic assumptions which overlook short-term economic ups and downs to produce a forecast of job counts for a single year in the future. LMID statewide projections currently forecast California industry levels and occupational demands in 2008, and as such are helpful to look beyond the three year forecast horizon of UCLA and DOF.

APPENDIX C
INDUSTRY DEFINITIONS

Mining includes all establishments involved in the extraction of minerals, crude petroleum, and natural gas. It includes quarrying, well operations, milling, and other related activities.

Construction includes establishments engaged in contract construction. This includes new work, additions, alterations, and repairs performed by general and special trade contractors.

Manufacturing includes establishments which are usually described as plants, factories, or mills that are engaged in producing or processing non-durable or durable goods. These characteristically use power-driven machines and material-handling equipment.

Transportation and Public Utilities includes enterprises engaged in passenger and freight transportation by surface, water, air; trucking and warehousing, and other transportation services. It also includes the communications complex of telephone, telegraph, radio, and television; and the utilities providing gas, electric, and sanitary services.

Wholesale Trade includes establishments involved in the selling of merchandise to retailers; to industrial, commercial, farm, construction contractors, or professional business users; or to other wholesalers.

Retail Trade includes establishments involved in the selling of merchandise for personal or household consumption and rendering services incidental to the sale of goods.

Finance, Insurance, and Real Estate includes banks, savings and loan institutions, and security and commodity brokerages, insurance agencies and carriers, real estate sales and management offices, and rental and planning agencies.

Services includes establishments such as hotels, laundries, auto repair shops, theaters, legal services, advertising services, private schools, and hospitals, and nonprofit organizations which are engaged in rendering a variety of services to individuals and businesses.

Government includes the legislative, judicial, administrative, and regulatory activities of federal, state, local, and international governments. It also includes federal, state, and local government hospitals, and education.