



# LOS ANGELES COUNTY QUARTERLY FORECAST

JULY 2023

## Long-term Forecast for Los Angeles County

Prepared by

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# THE LOS ANGELES REPORT: HOLLYWOOD ON STRIKE

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## U.S. Economic Overview

The U.S. economy is sending mixed signals about whether we are heading into a recession. On the good news front, we have seen consistently good numbers for newly added payroll jobs: above 200K a month over the past year. Unemployment rates have hovered around 3.6%, the lowest in decades (Figure 1A). Headline inflation is dropping rapidly from 8.5% in May 2022 to 3.1% in June 2023. Wall Street is celebrating the seeming success of a soft landing engineered by the Fed.

On the bad news front, the inverted yields are persistent, which usually foretell a recession. Most importantly, the core inflation is still stubbornly high at 4.9% in June 2023 (Figure 2), the highest level since 1991. With high core inflation, the Fed needs to continue its rate hikes in the following months. Figure 1B shows the payroll changes before two recessions in 2001 and 2008. Note that payroll jobs were still robust (above 200K) in early 2000 and 2007. That said, despite the strong job creation now, it will not take long for the economy to turn sour if a negative shock hits the economy. The short-term real interest rates (Figure 3) have finally become positive. While real interest rates are finally in a more reasonable territory, rising costs of money cast a gloomy shadow over current economic expansion.

Lately, a technology breakthrough in Artificial Intelligence (AI) via Large Language Models (LLM) called ChatGPT has started to change the world in a profound way. As opposed to the past creative destructions, the economic impact might be different in this AI revolution. Based on some early assessment, this innovation could directly compete and potentially replace many people in the highly skilled, highly educated, and highly paid workforce. For instance, in the recent strike in Hollywood, actors asking for better pay and benefits are concerned the AI will replace their work. In this report, we will discuss AI's impact on American jobs and Hollywood's strike on the L.A. economy.

Figure 1A. Monthly Payroll Employment Changes and Unemployment Rates

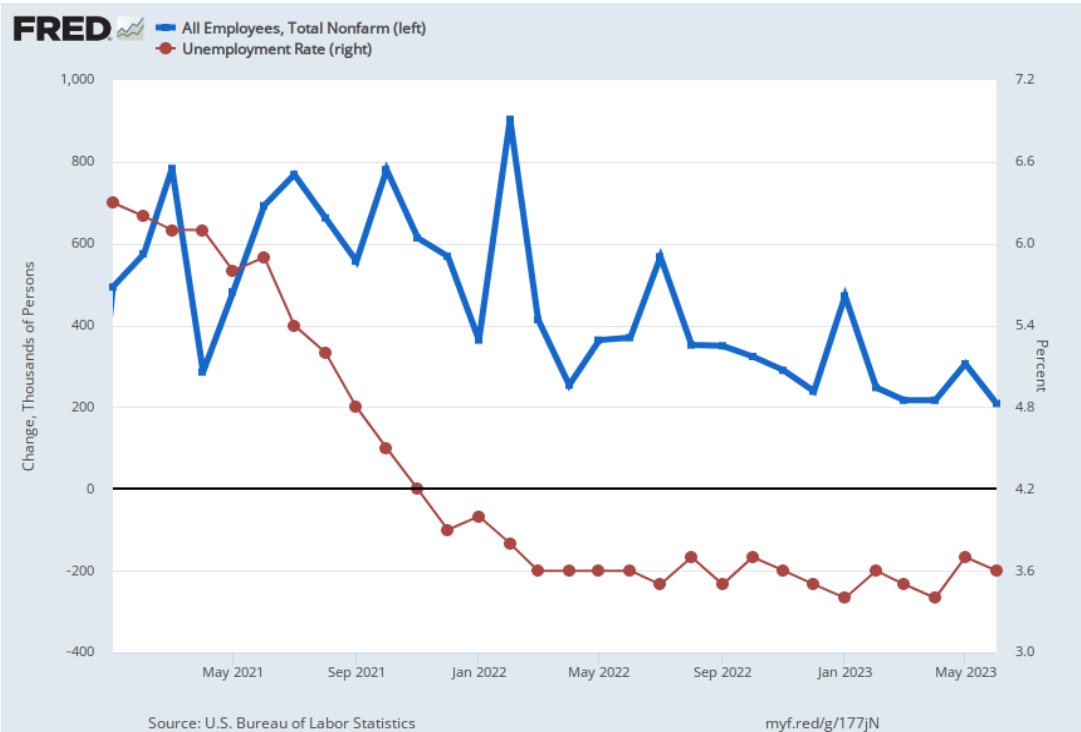


Figure 1B. Monthly Payroll Employment Changes, 1994 to 2008

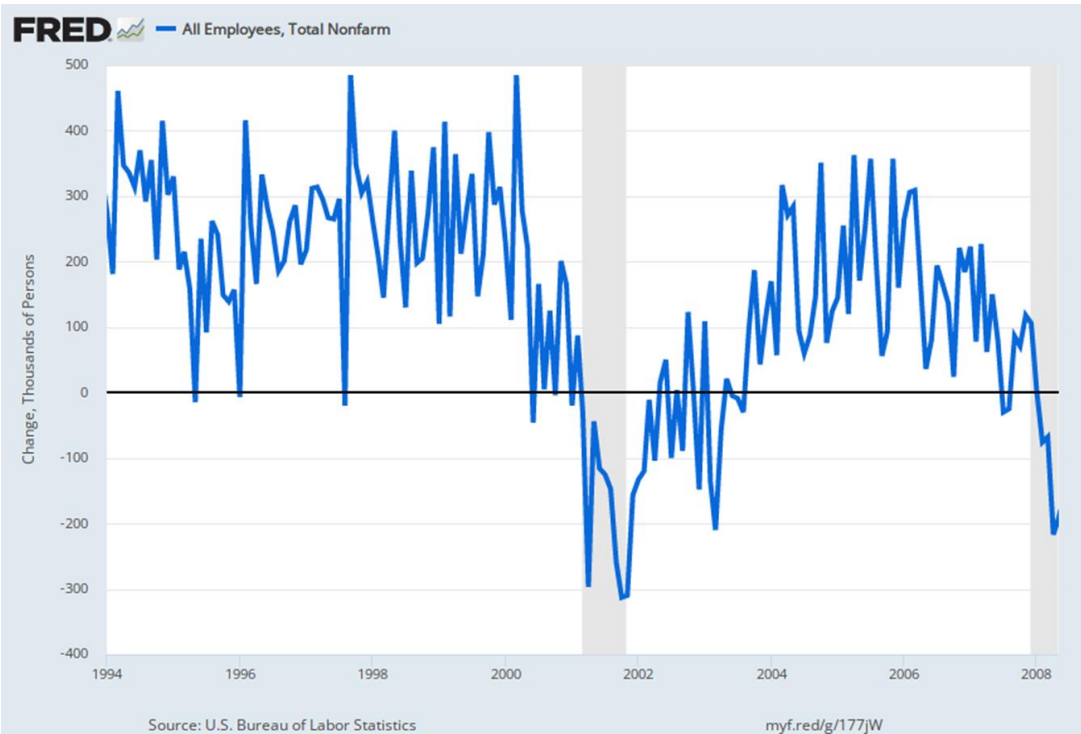


Figure 2. Year-over-year Core and Headline Inflation Rates of Consumer Price Index (CPI)

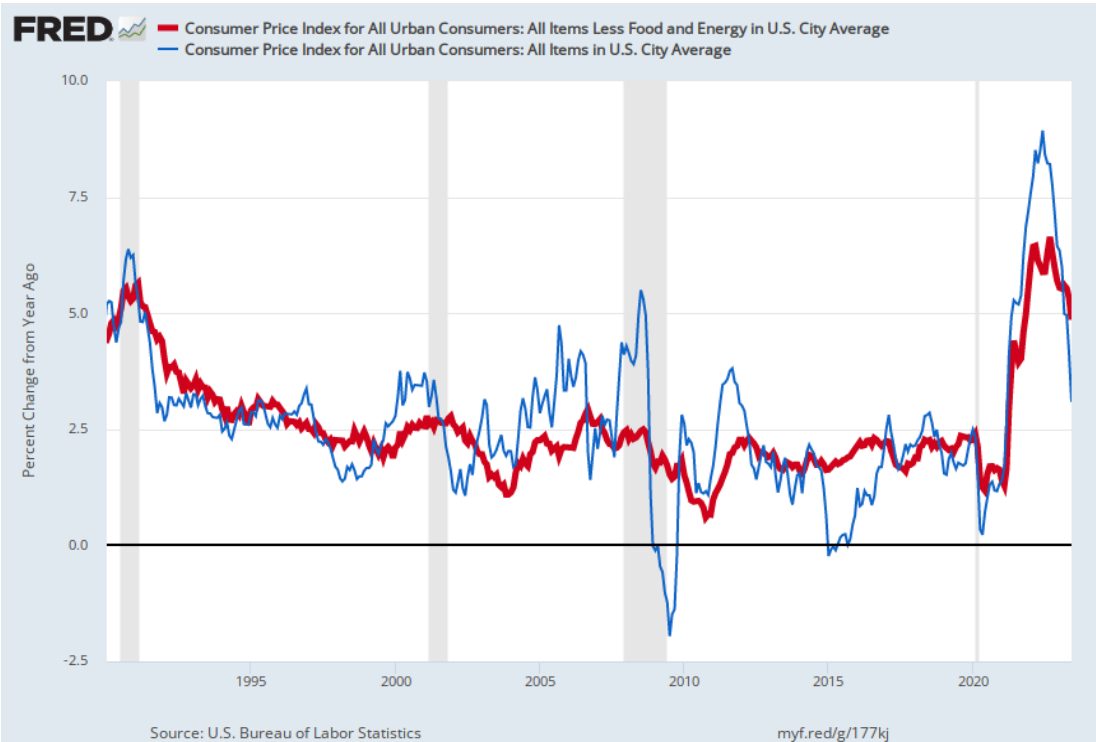
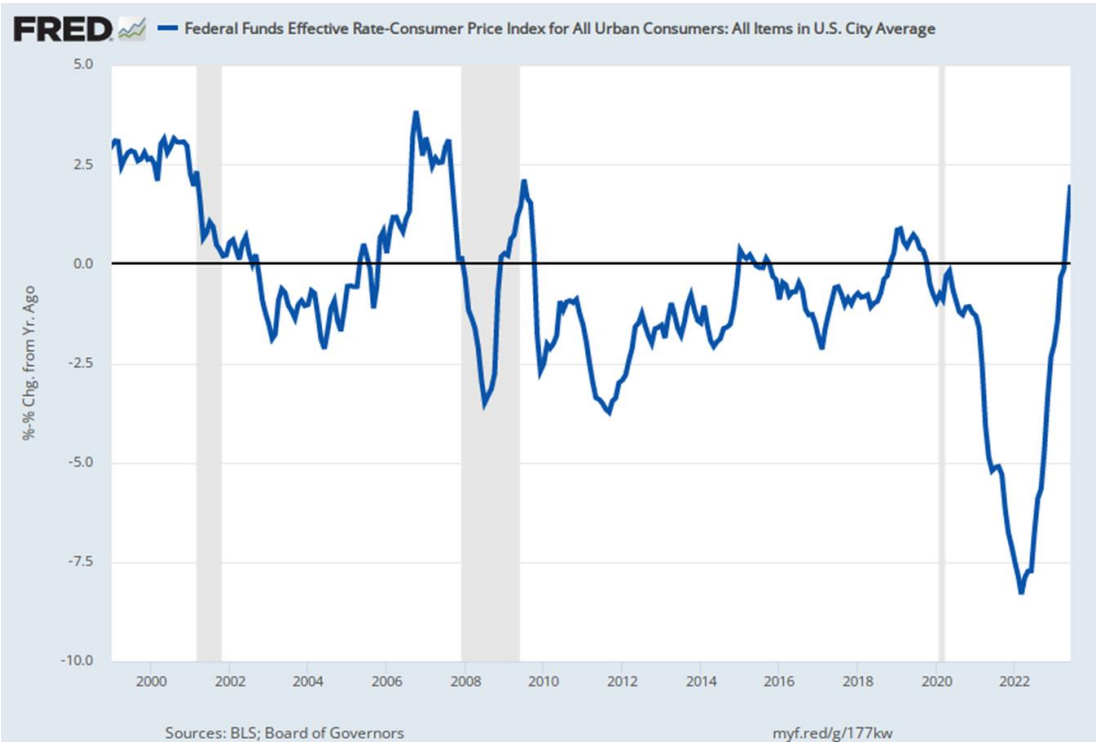


Figure 3. Short-term Real Interest Rates, Federal Fund Rates Minus Core PCE Inflation Rates



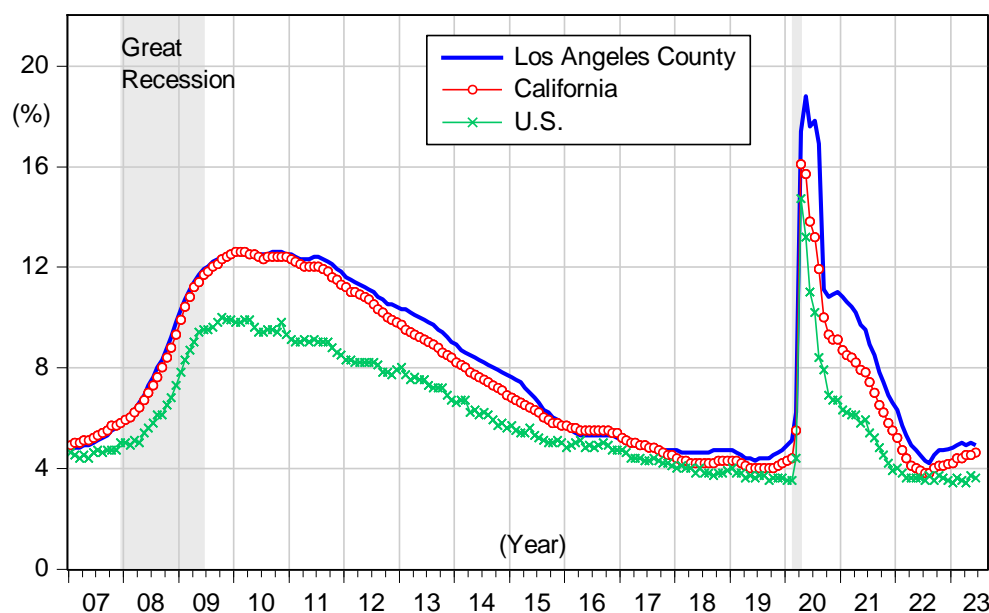
## The Los Angeles Economy

L.A.'s unemployment rate has been fluctuating around 5% over the past few months, versus California's 4.6% and the U.S.'s 3.6% (Figure 4). While LA's unemployment rate is higher than last year's, it remains the lowest in the past two decades. Figure 5 shows the percentage change of household survey employment since February 2020, which captures all employment and not just payroll jobs. Employment in L.A. experienced a lackluster performance over the past year (-4.3% compared to the pre-pandemic peak) compared to California (-1%) and the nation (+1.4%). The labor force in L.A. (Figure 6) has been growing over the past few months but is still at lower levels than before the pandemic (similar to the level in 2016).

To see how sector job shares changed during the pandemic in the U.S. and L.A., consider Figure 8, which presents the U.S.'s sector job share in June 2019 (blue circle) and June 2023 (blue bar) against L.A.'s for the same months (orange circle and yellow bar respectively). L.A.'s health care and social services sector is the largest sector and has an increased share. After three years of disruption by the pandemic, L.A.'s leisure and hospitality sector has fully recovered to the pre-pandemic level. L.A.'s transportation, warehousing, and utilities sector increased its share. L.A.'s information sector share, heavily dependent upon entertainment production and much larger than the national average, has fully recovered. In Appendix C of the report, we will discuss the economic impact of the ongoing Hollywood strike. The professional and management sector, a high-paying sector, had an increased share (8.5% share in June 2023). While L.A.'s durable goods sector has lost jobs overall, its aerospace subsector has seen increased jobs over the past year from 42,300 to 44,500 given that defense spending has been rising. L.A.'s wholesale trade has lost job share by almost 22,200 jobs since the pandemic.

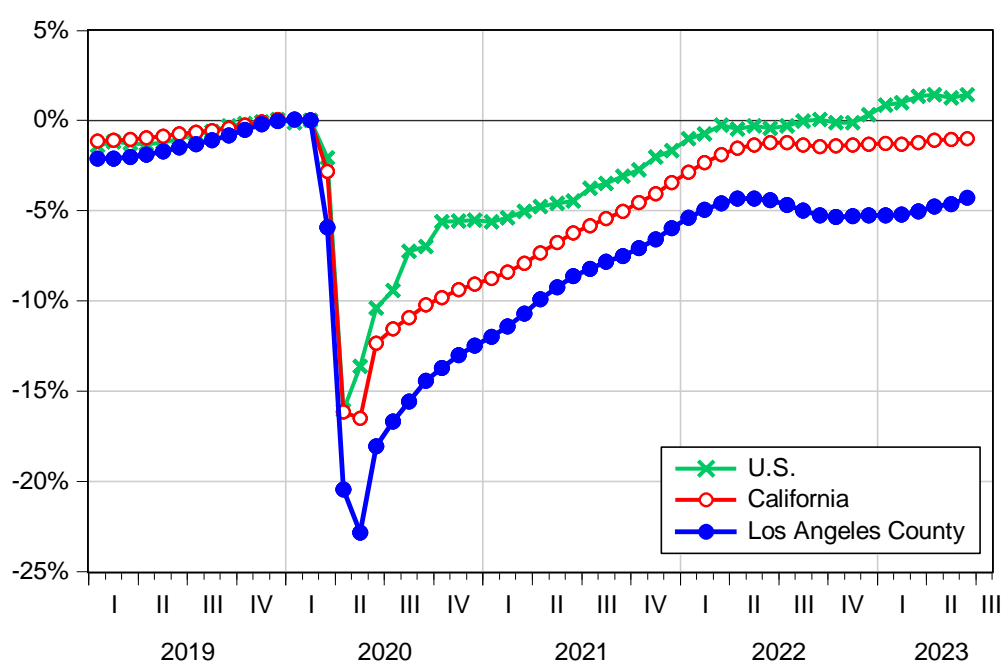


Figure 4. Unemployment Rates in Los Angeles County, California, and the U.S.



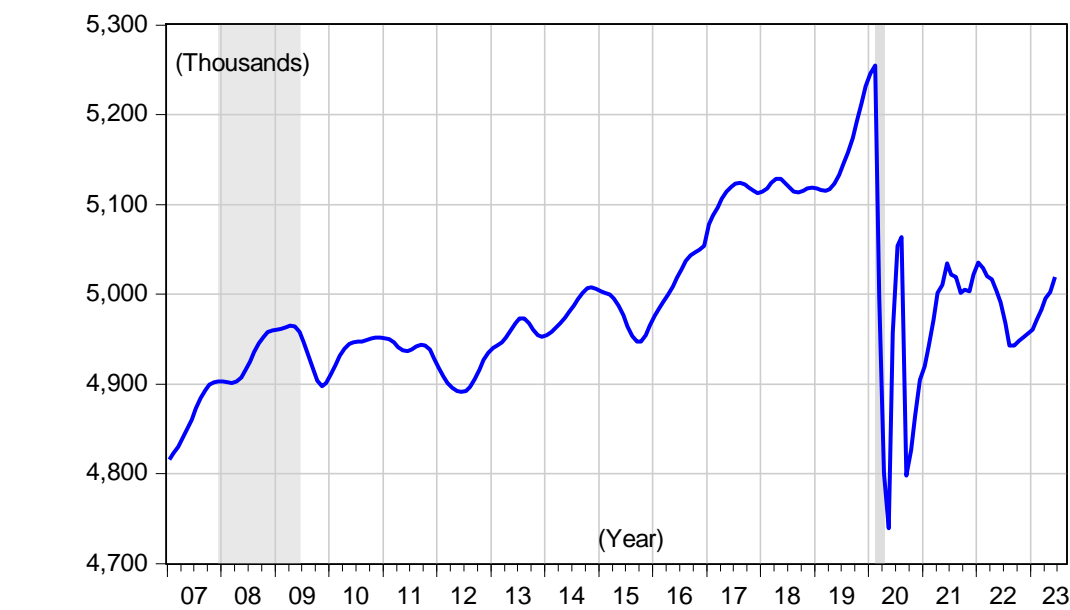
Sources: California Employment Development Department and Bureau of Labor Statistics

Figure 5. Household Survey Employment  
(Percentage Change Since February 2020)



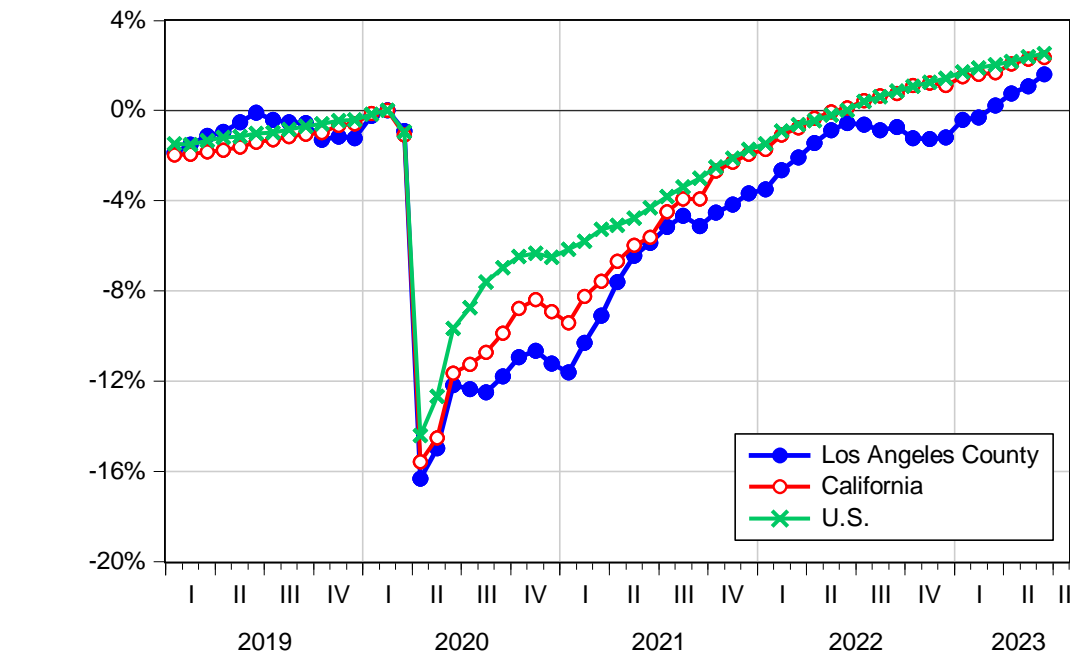
Sources: California Employment Development Department and Bureau of Labor Statistics

Figure 6. Labor Force in Los Angeles County



Source: California Employment Development Department

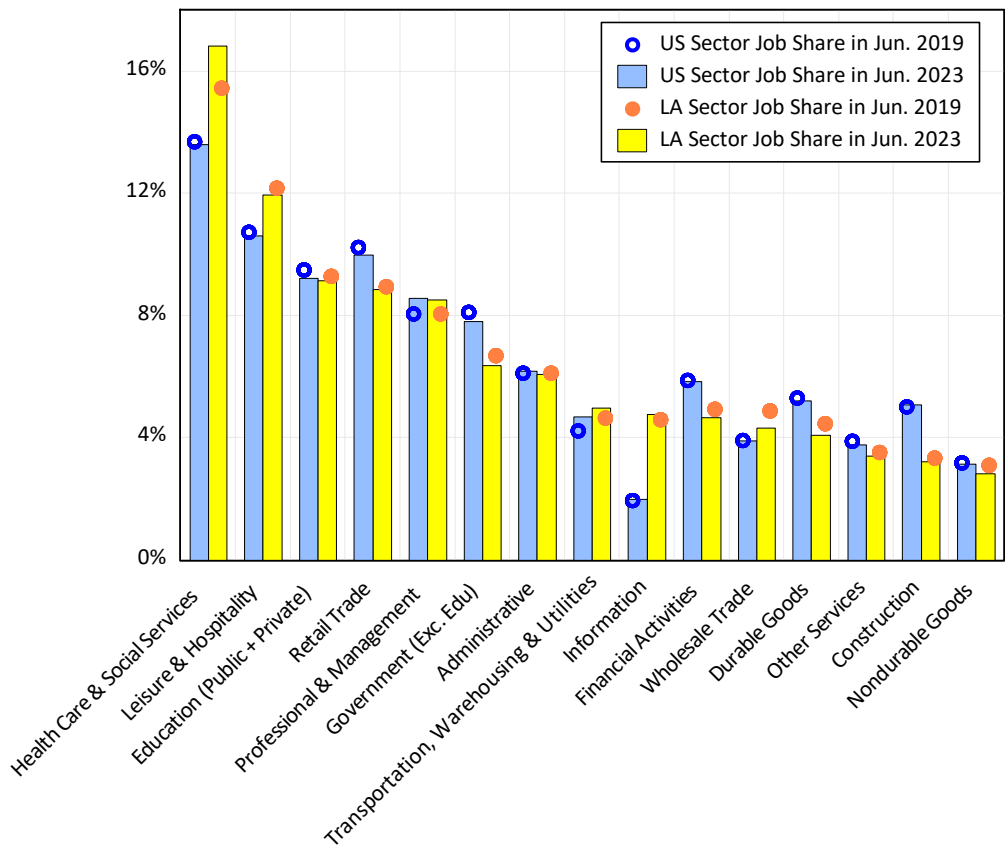
Figure 7. Nonfarm Payroll Jobs  
(Percentage Change Since February 2020)



Sources: California Employment Development Department (EDD) and Bureau of Labor Statistics



Figure 8. Sector Job Shares in the U.S. and L.A., June 2019 and June 2023



Sources: California Employment Development Department (EDD) and Bureau of Labor Statistics

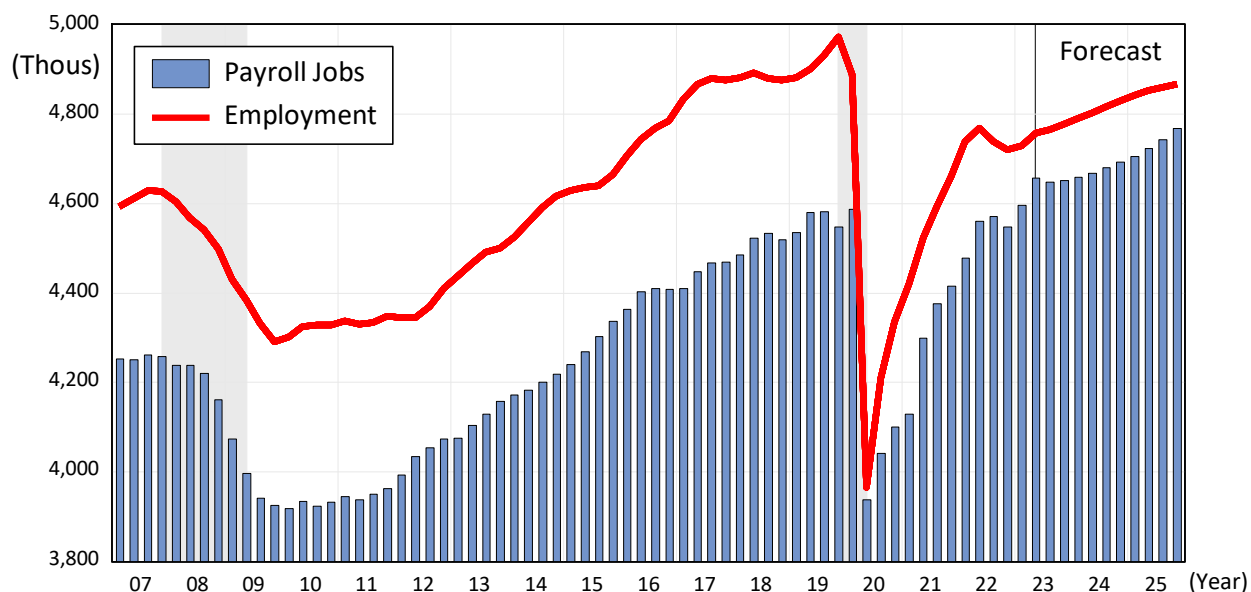
## Short-term Forecast for Los Angeles County

The tightening money cycle by the Fed could still bring a recession to the nation and L.A. in 2024 despite the continued good news from the job markets. It is too early to call it a soft landing when the core inflation rate remains around 4-5%. In general, we forecast a slow growth of employment and jobs over the next two years (Figure 9). We also forecast L.A. inflation will remain elevated through 2023.

We forecast the following for the Los Angeles County economy:

- **The unemployment rate** peaked at 18% in 2020 Q2 when the official pandemic recession ended. It is forecast to increase to an annual average of 5.3% in 2023, 5.7% in 2024, and 5.4% in 2025. Prior to the pandemic (2019 Q4) it was 4.4%.
- **Nonfarm payroll jobs** plunged by 8.7% in 2020 and recovered by 3.3% and 5.5% in 2021 and 2022. We forecast it will increase by 2.2% in 2023, increase by 0.8% in 2024, increase by 1.3% in 2025, reaching 4.65 million by the end of 2023, 4.69 million by the end of 2024, and 4.77 million by the end of 2025. Prior to the pandemic (2019 Q4), nonfarm payroll employment in Los Angeles County was 4.55 million.
- **Total employment**, including the self-employed, is forecast to decline to 4.78 million by the end of 2023, to 4.83 million by the end of 2024, and to 4.87 million by the end of 2025. Prior to the pandemic (2019 Q4), total employment in Los Angeles County was 4.97 million.
- **Real personal income** is estimated to decrease by 0.7% in 2023, increase by 1.2% in 2024, and 21.8% in 2025. With the Fed's aggressive tightening monetary policy, we forecast that high inflation will come down gradually. Our forecast of inflation is 4% in 2024, and 3.2% in 2025. Nominal personal income growth is estimated to be 3.2% in 2023, 5.3% in 2024, and 5% in 2025.
- **Nominal taxable sales** declined by 8.4% in 2020 and increased by 21.9% and 11.6% in 2021 and 2022. We forecast they will increase by 4.5% in 2023, by 1.5% in 2024, and by 3.5% in 2025. Nominal taxable sales are forecast to reach \$222 billion by the end of 2023, \$229 billion by the end of 2024, and \$240 billion by the end of 2025.

Figure 9. History and Forecast of Los Angeles County Employment



Sources: California Employment Development Department and UCLA Anderson Forecast

## Long-term Forecast for Los Angeles County

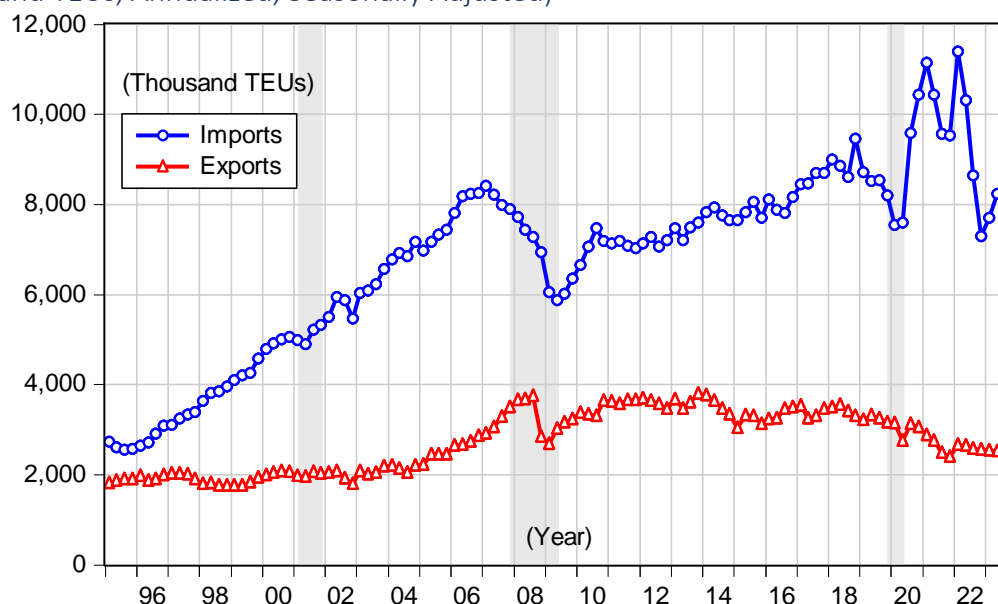
Due to the continued rising costs of living and declining fertility rates, we have not changed our long-term forecast for L.A. County's population growth rate from 0.3% in the 2030s and 2040s. This is similar to the recent estimates and forecasts for the L.A. population from the U.S. Census and California Department of Finance. In the long run, job growth is forecast to converge to a 0.5% annual growth rate. Two reasons explain the differential between population growth and job growth: (1) Increased commuting to L.A. County by people living in the Inland Empire partially. (2) Higher labor participation as L.A. attract more young adults to join the job markets. Nominal taxable sales growth is forecast to converge to a 2.6% annual growth rate. Nominal personal income is forecast to converge to a 3.7% rate. Real personal income is forecast to converge to a 1.8% annual growth rate. In conclusion, our forecast for the long-term L.A. County economy is steady but slow economic growth.

## Appendix A: Los Angeles Airport and Seaport Activity

Los Angeles' seaports and LAX are handling inbound cargo volumes that substantially declined over the past year. Figure A1 shows that the annualized seasonally adjusted import volume through the seaports of Los Angeles and Long Beach plunged in 2022 after the record high in 2022 Q1. There are two reasons: (1) domestic demand for goods has been declining. For example, real retail sales and food services in the U.S. have dropped from \$234 billion in April 2022 to \$227 billion in June 2023. (2) U.S.-China decoupling has intensified in the post-pandemic era. Figure A2 shows that Mexico has become the largest import source country with the U.S. Note that China had been the largest import source country for the U.S. since 2008. As a result, many imports via L.A. seaports have been relocated to land ports in Texas.

Figure A3 shows air cargo through Los Angeles International Airport (LAX) including both domestic and international traffic. The volume of high-value and time-sensitive airborne freight arrivals through LAX has been contracting rapidly over the past year, which returns to its long-term positive trend. Figure A4 shows domestic and international passenger traffic, including both arrivals and departures, through LAX. After two years of recovery, LAX air passenger traffic in 2023 Q1 is about 83% of the pre-pandemic peak level. Note that LAX air passenger traffic is a direct indicator of the L.A. tourism economy. With more international tourists coming, we have seen L.A.'s leisure and hospitality jobs fully recover.

Figure A1. Los Angeles Seaport Traffic, Ports of Los Angeles and Long Beach Combined (Thousand TEUs, Annualized, Seasonally Adjusted)



Sources: Ports of Los Angeles and Long Beach

Note: A "TEU" is a "twenty-foot equivalent," a standard shipping container

Figure A2. U.S. Imports of Goods from Three Main Trading Partners

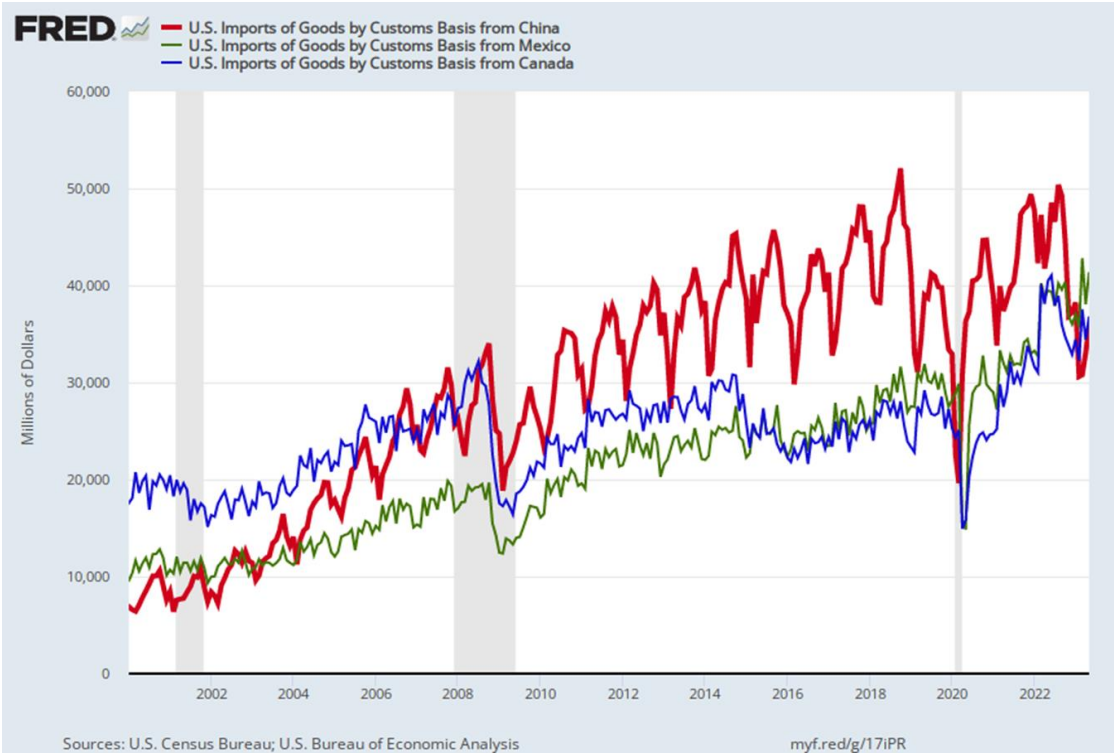
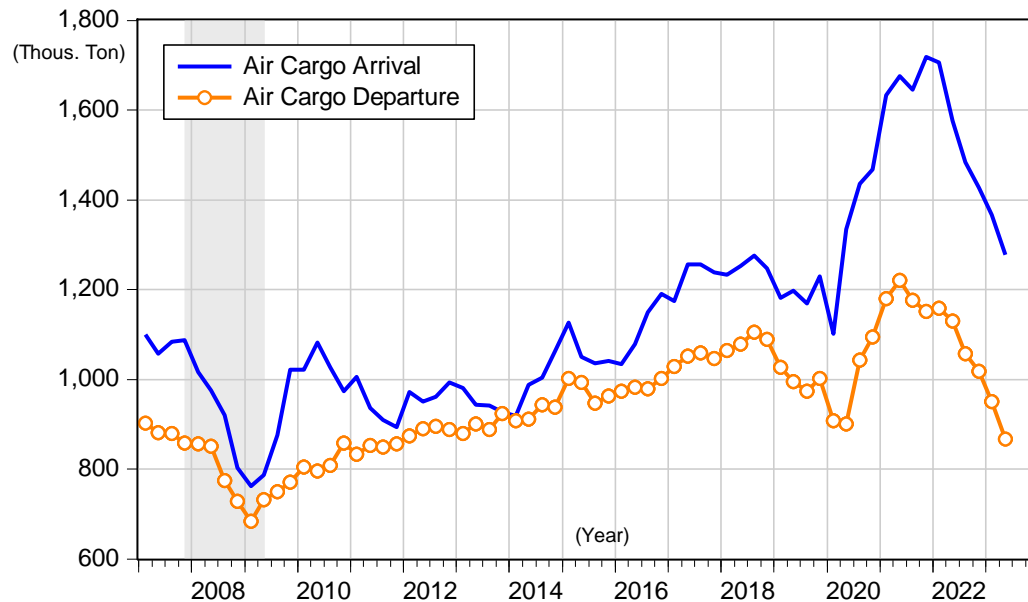
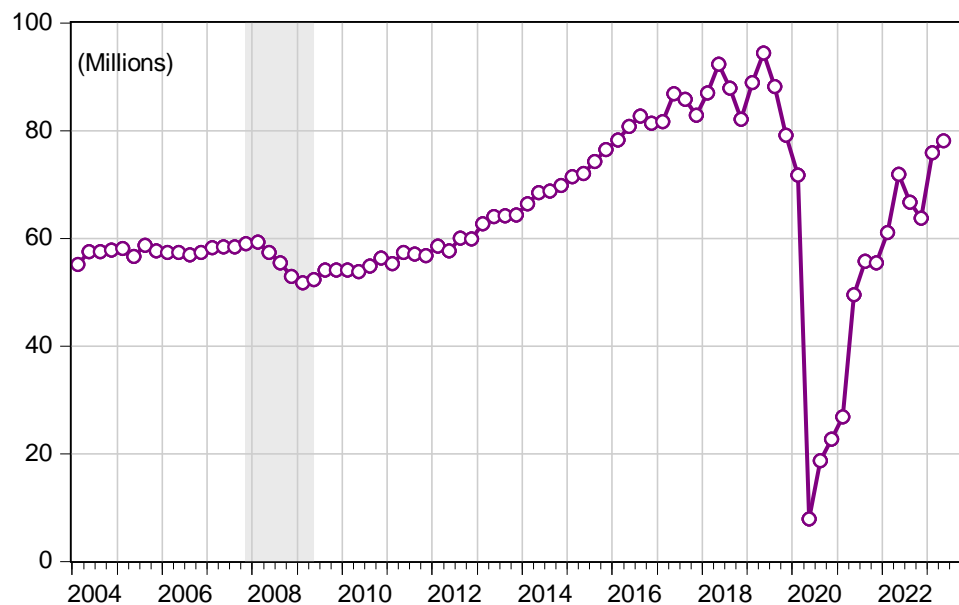


Figure A3. Los Angeles Airport (LAX) Air Cargo  
(Thousand Tons, Annualized, Seasonally Adjusted)



Source: LA World Airports

Figure A4. Los Angeles Airport (LAX) Passenger Traffic  
(Arrival and Departure Combined, Annualized, Seasonally Adjusted, Scheduled Carriers)

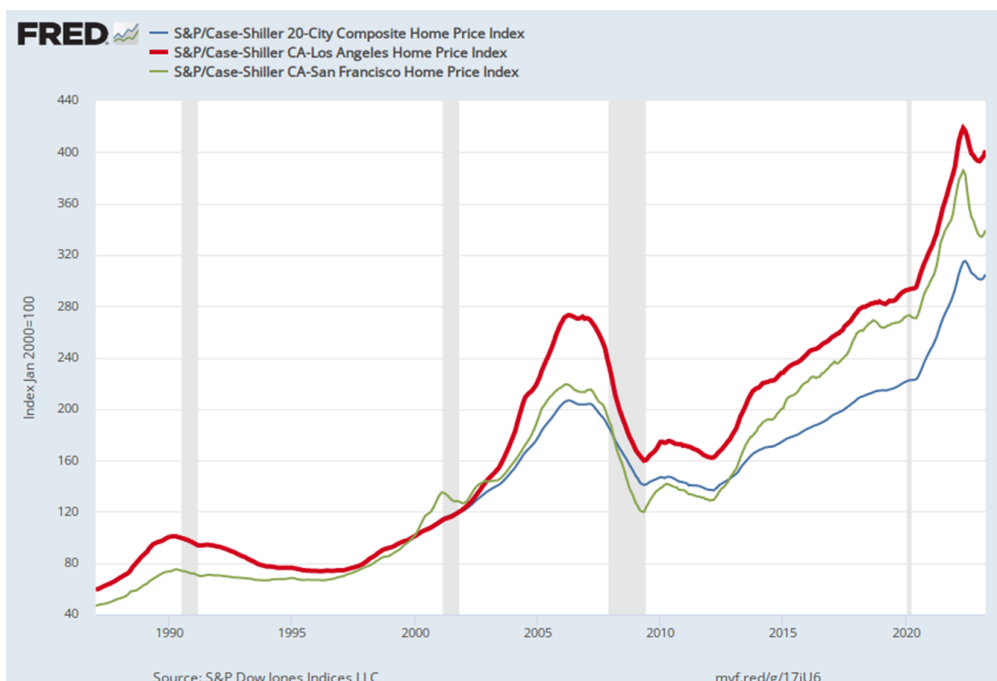


Source: LA World Airports

## Appendix B: Los Angeles Construction and Housing Markets

With high interest rates and mortgage rates, the housing markets have faced adjustment in prices and sales in 2022. Many metros are seeing their home prices dropping in the second half of 2022. As we predicted, this housing market adjustment is not a repeat of the housing slump in 2007-2010 because housing has not been in over-supply over the past decade. Figure B1 shows the home price indices for Los Angeles, San Francisco, and a 20-City average. All three regions have shown housing prices stop declining and becoming stabilized. Figure B2 lists the residential building permit numbers in L.A. County. We saw continued elevation in multi-unit and single-unit construction projects in L.A. One reason for L.A.'s robust housing starts activity has been the popularity of accessory dwelling units (ADUs) and the passage of SB9 and SB10.

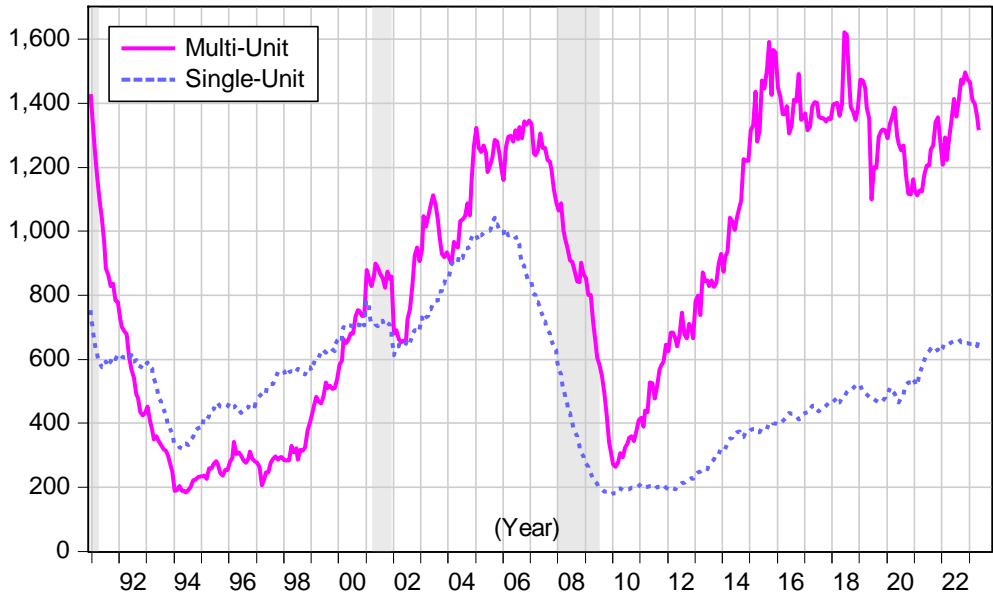
Figure B1. Case-Shiller Home Prices for 20-City Average, Los Angeles, and San Francisco



Source: Zillow



Figure B2. Los Angeles County New Residential Building Permits  
(Monthly, 12-Month Moving Average)

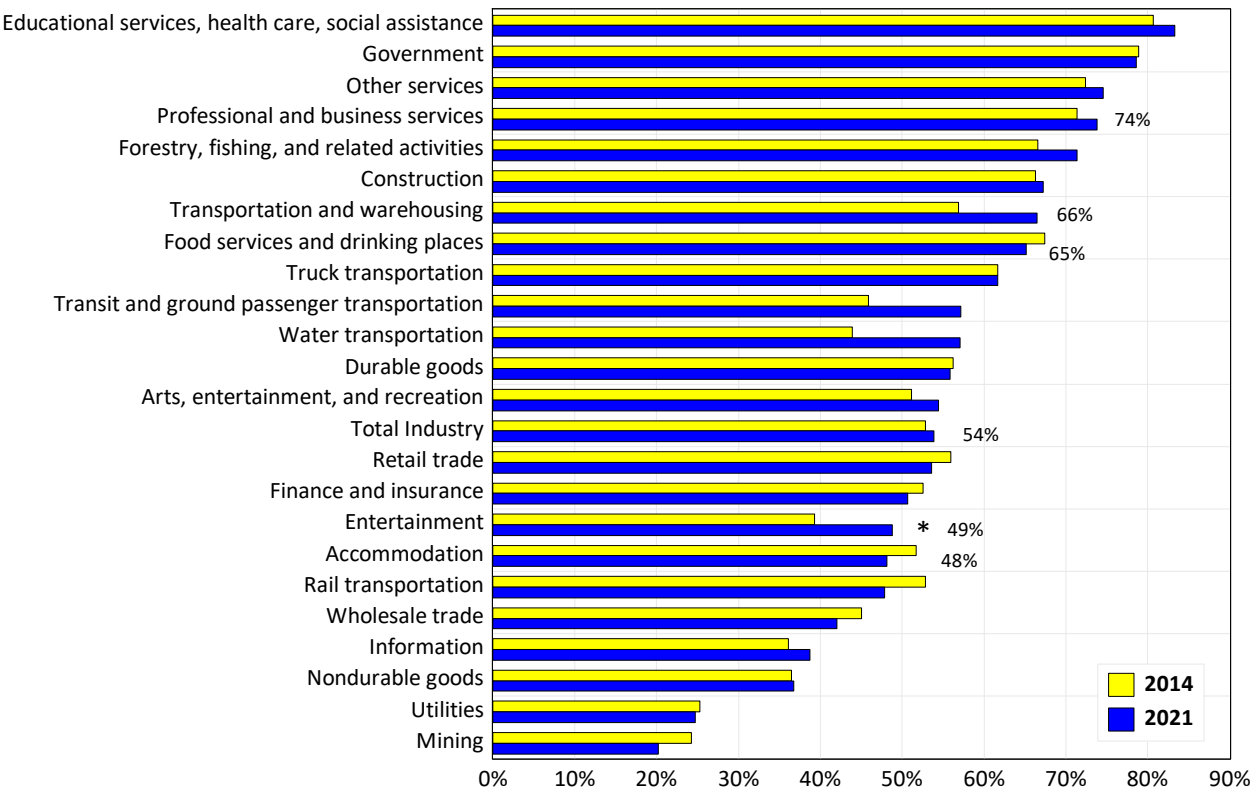


Appendix C: The Economic Impact of the Hollywood Strike

In the summer of 2023, a significant strike occurred in Hollywood by writers and actors in the entertainment industry. The workers are protesting against perceived unfair wages and poor working conditions. A major contributing factor was the introduction of streaming services, which complicated the structure of residuals and royalties. The strike halts production and necessitates renegotiations across the industry.

Figure C1 shows the percentage of employee compensation over industry output in 2014 and 2021, respectively. The industry with the highest share of output to its employees is the education and health care industry, at 83% in 2021, followed by government of 79%. The utilities and mining industry are lowest because they are capital intensive. The overall industry average for employee compensation is 54%. The entertainment industry is below that average at 49% in 2021. That said, it is understandable the entertainment workers are on strike due to their relatively lower share of the industry revenue. Note that some prior strikes in the transportation and warehousing industry might have contributed to its higher share of workers' compensation from 57% in 2014 to 66% in 2021.

Figure C1. The Percentage of Compensation of Employees over Its Industry Output



Source: Bureau of Economic Analysis

The direct and indirect economic impact of the strike could be substantial if the strike lasts a long time. In 2021, the total output/revenue of the entertainment industry was \$88 billion in the U.S. It is fair to assume that around half of the output occurred in L.A. County. The total compensation of employees in the entertainment industry was \$43 billion in 2021 and around \$21 billion was in L.A. That translates to about \$120 million of direct loss maximum a day for the L.A. economy. However, it is important to note that, some films are getting exempted from the strike and continue their production. And after the end of the strike, there might be some extra hours scheduled to compensate for the halted production. That said, the actual loss will be less than the above maximum estimation.

One of the concerns brought up by the strike workers are related to AI. The Hollywood actors worry that the studios will use their pictures and acts to generate new products via AI without appropriate compensation to these actors. We suggest that this will be the beginning of many future discussions and debates about how to deal with the AI revolution and its creative destruction on society and the economy.

## Appendix D: The Occupation Exposure to the Latest Development of AI and LLMs

The recent advances in generative Artificial Intelligence (AI), including Large Language Models (LLM) and image generation, has caused discussions about their impact on the economy. Besides its impressive functions to provide users satisfactory and creative answers, researchers started to investigate how it will impact the job market in the future. Felten et al (2022)<sup>1</sup> provide a first look at the occupational exposure to generative AI.

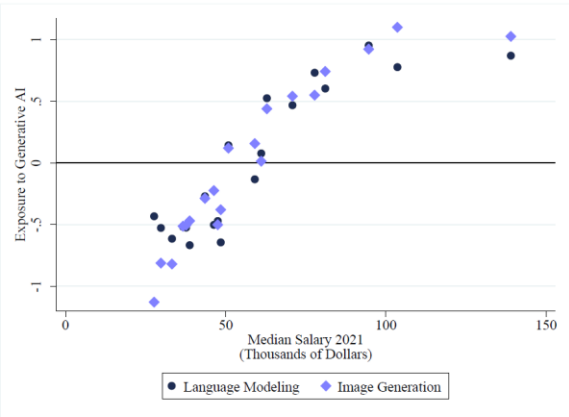
They used the database from Occupational Information Network in which over 800 occupations are measured by a combination of 52 human abilities. They then link 10 AI applications (abstract strategy games, real-time video games, image recognition, visual question answering, image generation, reading comprehension, language modeling, translation, speech recognition, and instrumental track recognition) to see how similar they are with 52 human abilities. With this connection, they calculate the relative occupational exposures to generative AI.

Their conclusions are that the occupations with high education, high salary and high creativity will be in higher exposure. For example, the correlation charts below are from their paper. According to their research, most college instructors, public relations specialists, lawyers, reporters, personal financial advisors, graduate teaching assistants, and writers, to name a few, will be in tough competition with AI. In contrast, those who conduct manual work, such as construction workers and electricians will be less exposed to job loss.

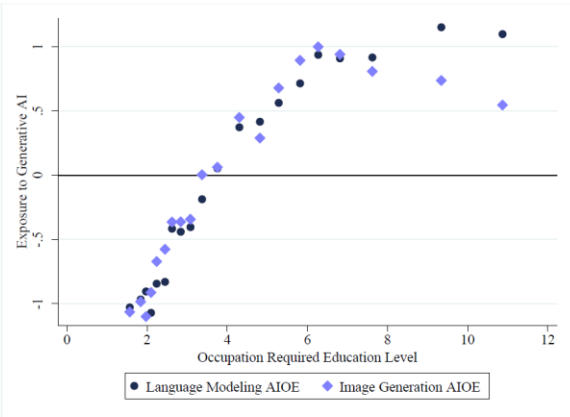
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<sup>1</sup> Ed Felten, Manav Raj, Robert Seamans, “Occupational Heterogeneity in Exposure to Generative AI”.

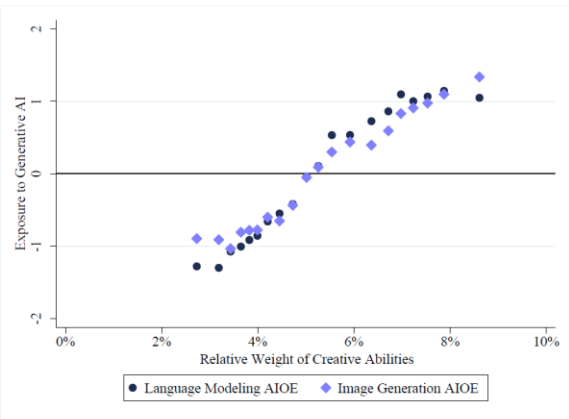
Panel A. Exposure to Generative AI and Median Salary.



Panel B. Exposure to Generative AI and Required Level of Education.



Panel C. Exposure to Generative AI and Presence of Creative Abilities.



**Summary of the UCLA  
Anderson Forecast for Los  
Angeles County by Quarter**

	2023Q1	2023Q2	2023Q3	2023Q4	2024Q1	2024Q2	2024Q3	2024Q4	2025Q1	2025Q2	2025Q3	2025Q4
<b>Personal Income and Taxable Sales</b>												
Personal Income												
(Billion \$)	731.1	738.0	750.7	762.0	771.8	780.9	789.7	798.2	811.0	820.1	829.3	838.4
(%Change)	2.9	3.9	7.0	6.2	5.2	4.8	4.6	4.4	6.5	4.6	4.6	4.5
Real Personal Income												
(Billion 2012\$)	545.4	548.3	549.9	551.5	553.1	554.7	556.4	558.0	562.4	564.4	566.2	568.1
(%Change)	-1.6	2.1	1.2	1.2	1.2	1.2	1.2	1.1	3.3	1.4	1.3	1.3
Taxable Sales												
(Billion \$)	209.6	216.2	219.8	222.4	224.2	225.9	227.5	229.4	231.7	234.0	236.7	239.7
(%Change)	3.7	13.3	6.8	4.8	3.2	3.2	2.9	3.2	4.1	4.1	4.6	5.3
Real Taxable Sales												
(Billion 2012\$)	156.3	160.6	161.0	160.9	160.6	160.5	160.3	160.3	160.7	161.0	161.6	162.4
(%Change)	-0.8	11.4	1.0	-0.2	-0.8	-0.4	-0.4	0.0	0.9	0.9	1.4	2.1
<b>Price Inflation</b>												
Consumer Prices (%Change)	4.6	1.7	5.8	4.9	4.0	3.6	3.3	3.2	3.2	3.2	3.2	3.1
<b>Employment and Labor Force (Household Survey, %Change)</b>												
Employment	0.6	2.5	0.6	1.1	1.0	1.2	1.2	1.0	1.0	0.9	0.6	0.6
Labor Force	1.6	2.8	3.1	1.6	1.3	1.1	1.0	0.6	0.6	0.5	0.5	0.6
Unemployment Rate (%)	4.9	4.9	5.5	5.7	5.7	5.7	5.7	5.6	5.5	5.4	5.3	5.3
<b>Nonfarm Employment (Payroll Survey, %Change)</b>												
Total Nonfarm	4.4	5.4	-0.8	0.4	0.5	0.9	1.0	1.0	1.2	1.5	1.7	2.0
Natural Resources & Min.	-4.1	5.7	-2.7	-2.5	-2.3	-2.1	-1.9	-1.6	-1.7	-2.4	-3.7	-5.9
Construction	-10.7	7.1	2.2	1.1	0.2	-0.1	-0.1	-0.5	0.2	1.2	2.4	3.4
Manufacturing	-2.9	2.4	1.7	1.5	1.5	1.4	1.3	1.2	1.3	1.2	1.3	1.5
Nondurable Goods	-1.7	2.9	1.8	1.6	1.6	1.3	1.1	1.0	1.1	1.1	1.4	1.7
Durable Goods	-3.7	2.0	1.6	1.5	1.4	1.4	1.4	1.4	1.3	1.3	1.3	1.3
Tran., Warehousing & Utility	5.1	9.8	5.2	4.9	3.9	2.8	1.5	0.9	0.5	0.5	0.8	1.4
Trade	3.9	7.2	-3.4	-0.2	-1.0	-1.0	-0.7	-1.3	-0.8	0.6	0.3	0.9
Information	-12.5	20.5	-1.3	0.0	1.4	1.9	2.6	2.9	3.3	3.7	4.2	4.8
Financial Activities	1.2	2.7	1.9	0.6	-0.3	-0.9	-1.2	-1.4	-1.3	-1.2	-1.1	-1.0
Professional & Bus. Servs.	3.2	2.7	0.5	0.5	0.5	0.9	1.1	1.2	1.2	1.3	1.4	1.4
Educational & Health Servs.	8.3	8.4	-8.2	-3.2	-1.2	0.1	1.0	1.7	2.5	3.2	4.0	4.9
Leisure & Hospitality	19.4	9.1	-2.1	3.4	3.4	4.3	4.1	3.5	3.2	2.7	2.3	2.3
Other Services	3.8	5.9	5.6	-0.3	-1.4	-0.3	0.4	0.3	0.7	0.5	0.6	0.8
Federal Government	7.3	0.1	0.9	-0.7	-0.9	-0.8	-0.7	-0.7	-0.7	-0.8	-0.7	-0.7
State and Local Government	3.1	2.8	2.2	1.5	1.0	0.7	0.5	0.3	0.2	0.1	0.0	-0.1
<b>Nonfarm Employment (Payroll Survey, Thousand)</b>												
Total Nonfarm	4596.2	4657.1	4647.7	4652.2	4658.2	4668.3	4680.5	4692.2	4706.2	4723.9	4743.6	4767.6
Natural Resources & Min.	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5
Construction	145.1	147.6	148.4	148.9	148.9	148.9	148.9	148.7	148.7	149.2	150.1	151.3
Manufacturing	319.1	320.9	322.3	323.5	324.7	325.8	326.8	327.8	328.8	329.9	330.9	332.1
Nondurable Goods	130.4	131.4	132.0	132.5	133.0	133.4	133.8	134.2	134.5	134.9	135.4	136.0
Durable Goods	188.6	189.6	190.3	191.0	191.7	192.3	193.0	193.6	194.3	194.9	195.6	196.2
Tran., Warehousing & Utility	228.9	234.3	237.3	240.1	242.4	244.1	245.0	245.6	245.9	246.2	246.7	247.6
Trade	610.2	620.9	615.6	615.2	613.7	612.1	611.0	609.1	607.9	608.9	609.3	610.7
Information	218.9	229.4	228.6	228.7	229.5	230.6	232.0	233.7	235.6	237.8	240.2	243.1
Financial Activities	215.8	217.2	218.3	218.6	218.5	217.9	217.3	216.5	215.8	215.1	214.5	214.0
Professional & Bus. Servs.	678.2	682.8	683.6	684.5	685.4	686.9	688.8	690.8	692.9	695.1	697.5	700.0
Educational & Health Servs.	905.2	923.8	904.2	896.9	894.1	894.3	896.6	900.5	906.0	913.1	922.1	933.3
Leisure & Hospitality	540.0	551.8	548.9	553.5	558.1	564.1	569.7	574.7	579.2	583.0	586.4	589.7
Other Services	155.8	158.0	160.2	160.1	159.5	159.4	159.5	159.7	159.9	160.1	160.4	160.7
Federal Government	47.9	47.9	48.0	47.9	47.8	47.7	47.6	47.6	47.5	47.4	47.3	47.2
State and Local Government	524.1	527.7	530.7	532.7	534.0	534.9	535.6	536.0	536.3	536.5	536.5	536.4
<b>Construction Activity, Registered Autos and Population</b>												
Residential Building Permits												
(Thous. Units)	19.0	23.1	19.9	17.8	16.3	15.7	15.6	16.3	17.5	19.0	20.3	21.6
Nonresidential Construction												
Real (Mil. 2012 \$)	1182.4	1141.1	1328.5	1430.1	1412.7	1380.9	1405.8	1493.2	1529.8	1649.2	1752.3	1835.1
Nominal (Mil. \$)	1587.8	1543.2	1809.4	1961.1	1950.5	1919.4	1967.4	2103.8	2170.2	2355.2	2519.3	2655.8
Registered Autos (Thous.)	6397.2	6398.7	6398.2	6397.4	6397.7	6398.9	6400.8	6402.8	6404.7	6406.6	6408.8	6411.7
Net Immigration (Thous.)	-11.4	-9.4	-7.7	-6.2	-6.1	-4.7	-3.0	-1.2	0.5	2.9	5.8	9.0
Population (Thous.)	9851.3	9855.3	9859.3	9863.3	9866.4	9870.7	9875.4	9880.4	9884.6	9890.7	9897.6	9905.3
(%Change)	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3

**Summary of the UCLA Anderson  
Forecast for Los Angeles County  
by Calendar Year**

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Personal Income and Taxable Sales</b>										
Personal Income (Billion \$)	728.8	722.3	745.4	785.1	824.7	857.2	897.8	954.9	971.2	993.1
(%Change)	6.4	-0.9	3.2	5.3	5.0	3.9	4.7	6.4	1.7	2.3
Real Personal Income (Billion 2012\$)	599.3	552.8	548.7	555.5	565.3	574.4	585.3	605.1	609.4	620.1
(%Change)	2.5	-7.8	-0.7	1.2	1.8	1.6	1.9	3.4	0.7	1.7
Taxable Sales (Billion \$)	192.1	213.3	217.0	226.7	235.5	245.6	255.8	267.9	271.9	275.1
(%Change)	21.8	11.0	1.8	4.5	3.9	4.3	4.2	4.7	1.5	1.2
Real Taxable Sales (Billion 2012\$)	157.8	163.2	159.7	160.4	161.4	164.6	166.8	169.8	170.6	171.8
(%Change)	17.3	3.4	-2.1	0.4	0.6	1.9	1.3	1.8	0.5	0.7
<b>Price Inflation</b>										
Consumer Prices (%Change)	3.8	7.4	3.9	4.0	3.2	2.3	2.8	2.9	1.0	0.5
<b>Employment and Labor Force (Household Survey, %Change)</b>										
Employment	4.6	4.2	0.3	1.1	1.0	1.2	0.9	2.0	1.4	0.7
Labor Force	0.7	-0.2	0.8	1.5	0.7	1.7	1.3	1.1	0.6	1.0
Unemployment Rate (%)	8.9	4.9	5.3	5.7	5.4	5.8	6.1	5.3	4.5	4.8
<b>Nonfarm Employment (Payroll Survey, %Change)</b>										
Total Nonfarm	3.3	5.5	2.2	0.8	1.3	1.0	1.0	1.9	1.7	0.8
Natural Resources & Min.	-6.7	1.0	-2.8	-1.8	-2.4	-0.9	2.0	6.0	0.0	0.0
Construction	1.7	1.3	-2.3	0.9	0.7	2.9	1.7	-1.6	0.0	0.0
Manufacturing	-0.7	2.8	-0.1	1.5	1.3	3.0	6.7	5.0	3.9	0.8
Nondurable Goods	1.6	4.0	-0.5	1.5	1.2	6.7	4.6	4.3	0.0	0.0
Durable Goods	-2.2	1.9	0.2	1.5	1.3	0.4	8.3	5.5	6.6	1.4
Tran., Warehousing & Utility	3.5	4.7	4.4	3.9	1.0	-0.3	-0.6	-1.0	0.5	0.5
Trade	3.9	2.3	0.5	-0.6	-0.4	0.9	1.1	0.9	0.3	0.1
Information	9.6	12.7	-3.8	2.2	3.3	2.3	-14.8	17.2	0.5	0.5
Financial Activities	-0.0	1.3	0.8	0.0	-1.2	-0.3	4.0	2.7	0.1	0.0
Professional & Bus. Servs.	5.0	6.2	2.0	0.8	1.2	0.5	0.1	-0.2	0.6	0.5
Educational & Health Servs.	2.8	3.5	3.9	-1.2	2.5	0.4	2.2	0.8	3.4	1.2
Leisure & Hospitality	10.0	17.9	7.3	3.3	3.2	2.8	3.2	4.0	3.8	2.4
Other Services	5.4	13.1	3.3	0.6	0.5	0.9	1.1	1.0	1.3	1.0
Federal Government	-4.9	-1.2	1.7	-0.5	-0.7	0.2	0.5	0.6	0.0	0.0
State and Local Government	-1.4	1.7	1.4	1.2	0.2	-0.2	0.0	0.0	0.2	0.2
<b>Nonfarm Employment (Payroll Survey, Thousand)</b>										
Total Nonfarm	4304.0	4538.8	4638.3	4674.8	4735.3	4783.2	4829.0	4922.6	5006.1	5047.2
Natural Resources & Min.	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.6	1.6	1.6
Construction	149.0	150.9	147.5	148.8	149.8	154.1	156.7	154.1	154.2	154.2
Manufacturing	313.1	321.8	321.4	326.3	330.4	340.4	363.2	381.3	395.9	399.2
Nondurable Goods	127.1	132.2	131.6	133.6	135.2	144.3	150.9	157.4	157.4	157.4
Durable Goods	186.0	189.6	189.9	192.7	195.2	196.1	212.3	223.9	238.6	241.9
Tran., Warehousing & Utility	215.2	225.3	235.1	244.3	246.6	245.9	244.5	242.0	243.3	244.6
Trade	598.8	612.3	615.5	611.5	609.2	614.9	621.4	626.8	629.0	629.7
Information	208.8	235.3	226.4	231.4	239.2	244.7	208.6	244.5	245.8	247.1
Financial Activities	213.1	215.8	217.5	217.5	214.9	214.1	222.7	228.7	228.8	228.8
Professional & Bus. Servs.	630.0	669.0	682.3	688.0	696.4	700.2	701.2	700.0	704.1	708.0
Educational & Health Servs.	844.4	873.6	907.5	896.4	918.6	922.0	942.2	949.8	982.1	994.0
Leisure & Hospitality	433.4	511.1	548.6	566.7	584.6	600.9	620.3	644.8	669.5	685.6
Other Services	135.7	153.4	158.5	159.5	160.3	161.7	163.5	165.2	167.3	169.0
Federal Government	47.7	47.1	47.9	47.7	47.3	47.4	47.7	48.0	48.0	48.0
State and Local Government	512.6	521.4	528.8	535.1	536.4	535.4	535.5	535.7	536.6	537.4
<b>Construction Activity, Registered Autos and Population</b>										
Residential Building Permits (Thous. Units)	22.8	25.4	20.0	16.0	19.6	21.5	22.8	21.0	20.9	20.8
Nonresidential Construction										
Real (Mil. 2012 \$)	1173.5	970.0	1270.5	1423.1	1691.6	2089.6	2412.6	2494.5	2661.8	2800.1
Nominal (Mil. \$)	1505.5	1279.6	1725.4	1985.3	2425.1	3075.4	3644.4	3865.8	4232.5	4569.2
Registered Autos (Thous.)	6452.3	6381.0	6397.9	6400.0	6407.9	6421.9	6438.2	6452.1	6464.5	6476.3
Net Immigration (Thous.)	-130.9	-17.7	-8.7	-3.8	4.5	18.9	17.9	17.5	15.7	16.2
Population (Thous.)	9829.5	9841.4	9857.3	9873.2	9894.6	9928.3	9959.2	9987.6	10013.8	10040.0
(%Change)	-1.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3



**Summary of the UCLA Anderson  
Forecast for Los Angeles County  
by Calendar Year**

	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
<b>Personal Income and Taxable Sales</b>										
Personal Income										
(Billion \$)	1034.0	1076.3	1120.0	1165.1	1211.7	1259.9	1309.6	1360.9	1414.0	1468.7
(%Change)	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.9
Real Personal Income										
(Billion 2012\$)	630.9	642.0	653.2	664.6	676.2	688.0	700.1	712.3	724.8	737.4
(%Change)	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Taxable Sales										
(Billion \$)	283.2	291.1	298.8	306.4	313.7	320.9	327.7	336.9	346.2	355.6
(%Change)	2.9	2.8	2.7	2.5	2.4	2.3	2.1	2.8	2.8	2.7
Real Taxable Sales										
(Billion 2012\$)	172.8	173.6	174.3	174.8	175.1	175.2	175.2	176.3	177.4	178.6
(%Change)	0.6	0.5	0.4	0.3	0.2	0.1	-0.0	0.6	0.6	0.6
<b>Price Inflation</b>										
Consumer Prices (%Change)	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1
<b>Employment and Labor Force (Household Survey, %Change)</b>										
Employment	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5
Labor Force	1.0	1.0	1.0	-0.9	0.8	0.8	0.8	0.8	0.8	0.8
Unemployment Rate (%)	5.1	5.5	5.9	4.4	4.7	4.9	5.2	5.4	5.7	5.9
<b>Nonfarm Employment (Payroll Survey, %Change)</b>										
Total Nonfarm	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5
Natural Resources & Min.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.0	0.0
Construction	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Manufacturing	0.8	0.8	0.6	0.4	0.4	0.4	0.2	0.1	0.1	0.1
Nondurable Goods	0.0	0.0	-0.3	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
Durable Goods	1.4	1.4	1.1	1.0	1.0	1.0	0.7	0.5	0.5	0.5
Tran., Warehousing & Utility.	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4
Trade	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Information	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Financial Activities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Professional & Bus. Servs.	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4
Educational & Health Servs.	1.2	1.1	1.1	1.0	1.0	1.0	1.0	1.0	0.9	0.9
Leisure & Hospitality	2.1	1.9	1.8	1.6	1.5	1.5	1.3	1.3	1.2	1.1
Other Services	0.1	0.0	0.0	0.0	0.0	0.0	-0.0	-0.0	0.0	0.0
Federal Government	0.0	0.0	0.0	0.0	0.0	0.0	-0.0	-0.0	0.0	0.0
State and Local Government	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
<b>Nonfarm Employment (Payroll Survey, Thousand)</b>										
Total Nonfarm	5084.5	5120.4	5153.6	5184.7	5214.8	5244.6	5272.7	5299.9	5325.8	5350.6
Natural Resources & Min.	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Construction	154.2	154.2	154.2	154.2	154.2	154.2	154.2	154.2	154.2	154.2
Manufacturing	402.6	406.0	408.2	409.9	411.5	413.1	414.0	414.4	414.8	415.2
Nondurable Goods	157.4	157.4	156.8	156.0	155.1	154.2	153.4	152.5	151.6	150.8
Durable Goods	245.2	248.6	251.4	253.9	256.4	258.9	260.6	261.9	263.2	264.4
Tran., Warehousing & Utility	245.9	247.1	248.4	249.7	250.7	251.7	252.6	253.6	254.5	255.5
Trade	630.4	631.1	631.8	632.6	633.3	634.0	634.7	635.4	636.1	636.8
Information	248.4	249.6	250.9	252.1	253.4	254.6	255.8	257.0	258.3	259.5
Financial Activities	228.8	228.8	228.8	228.8	228.8	228.8	228.8	228.8	228.8	228.8
Professional & Bus. Servs.	711.6	715.0	718.3	721.5	724.8	728.0	731.2	734.2	737.0	739.8
Educational & Health Servs.	1005.6	1017.1	1028.0	1038.5	1049.0	1059.5	1069.9	1080.4	1090.2	1099.7
Leisure & Hospitality	700.2	713.8	726.5	738.4	749.5	760.4	770.4	780.3	789.8	798.5
Other Services	169.1	169.1	169.1	169.1	169.1	169.1	169.1	169.1	169.1	169.1
Federal Government	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0
State and Local Government	538.2	539.0	539.7	540.3	541.0	541.6	542.2	542.9	543.4	544.0
<b>Construction Activity, Registered Autos and Population</b>										
Residential Building Permits (Thous. Units)	20.7	20.7	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6
Nonresidential Construction										
Real (Mil. 2012\$)	2913.0	3004.2	3077.4	3135.8	3182.1	3218.7	3247.6	3270.3	3288.1	3302.1
Nominal (Mil. \$)	4878.1	5163.0	5427.6	5675.7	5910.7	6135.6	6353.2	6565.5	6774.6	6982.0
Registered Autos (Thous.)	6488.3	6500.2	6512.1	6524.1	6536.1	6548.1	6560.2	6572.2	6584.3	6596.4
Net Immigration (Thous.)	16.7	17.3	17.8	18.4	18.4	18.5	18.5	18.6	18.6	18.7
Population (Thous.)	10066.2	10092.6	10119.0	10145.5	10172.0	10198.7	10225.4	10252.1	10278.9	10305.8
(%Change)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3

**Summary of the UCLA Anderson  
Forecast for Los Angeles County by  
Calendar Year**

	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
<b>Personal Income and Taxable Sales</b>										
Personal Income										
(Billion \$)	1525.2	1583.6	1643.8	1706.0	1770.1	1836.4	1904.7	1975.2	2047.9	2123.0
(%Change)	3.8	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.7
Real Personal Income										
(Billion 2012\$)	750.3	763.4	776.8	790.4	804.2	818.2	832.5	847.1	861.9	877.0
(%Change)	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Taxable Sales										
(Billion \$)	365.3	375.1	385.1	395.3	405.7	416.3	427.1	438.1	449.2	460.6
(%Change)	2.7	2.7	2.7	2.6	2.6	2.6	2.6	2.6	2.6	2.5
Real Taxable Sales										
(Billion 2012\$)	179.7	180.9	182.0	183.2	184.3	185.5	186.7	187.9	189.1	190.3
(%Change)	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
<b>Price Inflation</b>										
Consumer Prices (%Change)	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9
<b>Employment and Labor Force (Household Survey, %Change)</b>										
Employment	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4
Labor Force	-0.3	0.7	0.7	0.7	0.7	-0.7	0.7	0.7	0.7	0.6
Unemployment Rate (%)	5.2	5.4	5.6	5.8	6.0	4.9	5.1	5.3	5.5	5.7
<b>Nonfarm Employment (Payroll Survey, %Change)</b>										
Total Nonfarm	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3
Natural Resources & Min.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Construction	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Manufacturing	0.1	0.1	0.1	0.1	0.0	-0.0	-0.0	-0.0	-0.0	-0.0
Nondurable Goods	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
Durable Goods	0.5	0.5	0.5	0.5	0.3	0.2	0.2	0.2	0.2	0.2
Tran., Warehousing & Utility	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
Trade	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Information	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Financial Activities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Professional & Bus. Servs.	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Educational & Health Servs.	0.9	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7
Leisure & Hospitality	1.1	1.1	1.1	1.2	1.2	1.2	1.0	0.7	0.7	0.7
Other Services	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Federal Government	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
State and Local Government	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
<b>Nonfarm Employment (Payroll Survey, Thousand)</b>										
Total Nonfarm	5375.2	5399.3	5423.0	5447.2	5470.4	5493.2	5514.6	5533.6	5552.5	5571.5
Natural Resources & Min.	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Construction	154.2	154.2	154.2	154.2	154.2	154.2	154.2	154.2	154.2	154.2
Manufacturing	415.6	416.0	416.5	416.9	416.9	416.7	416.5	416.3	416.1	415.9
Nondurable Goods	149.9	149.1	148.3	147.4	146.6	145.7	144.9	144.1	143.2	142.4
Durable Goods	265.7	266.9	268.2	269.5	270.3	271.0	271.6	272.2	272.9	273.5
Tran., Warehousing & Utility	256.2	256.8	257.5	258.1	258.5	258.8	259.2	259.5	259.8	260.1
Trade	637.5	638.0	638.0	638.0	638.0	638.0	638.0	638.0	638.0	638.0
Information	260.7	261.9	263.0	264.2	265.4	266.6	267.7	268.9	270.1	271.2
Financial Activities	228.8	228.8	228.8	228.8	228.8	228.8	228.8	228.8	228.8	228.8
Professional & Bus. Servs.	742.6	745.5	748.2	751.0	753.8	756.6	759.4	762.2	764.9	767.7
Educational & Health Servs.	1109.1	1118.5	1127.9	1136.7	1145.1	1153.6	1162.0	1170.4	1178.8	1187.1
Leisure & Hospitality	807.2	815.9	824.7	834.5	844.5	854.5	863.1	869.4	875.7	882.0
Other Services	169.1	169.1	169.1	169.1	169.1	169.1	169.1	169.1	169.1	169.1
Federal Government	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0
State and Local Government	544.5	545.0	545.5	546.0	546.4	546.7	547.0	547.2	547.5	547.8
<b>Construction Activity, Registered Autos and Population</b>										
Residential Building Permits (Thous. Units)	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6
Nonresidential Construction										
Real (Mil. 2012\$)	3313.1	3321.6	3328.3	3333.6	3337.7	3340.9	3343.4	3345.3	3346.8	3348.0
Nominal (Mil. \$)	7189.1	7396.9	7606.4	7818.4	8033.5	8252.3	8475.3	8702.9	8935.4	9173.3
Registered Autos (Thous.)	6608.5	6620.6	6632.7	6644.9	6657.0	6669.2	6681.5	6693.6	6706.2	6715.2
Net Immigration (Thous.)	18.7	18.8	18.8	18.9	18.9	19.0	19.0	19.1	19.1	19.2
Population (Thous.)	10332.8	10359.9	10387.0	10414.2	10441.4	10468.7	10496.1	10523.6	10551.1	10578.8
(%Change)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3