State of the Economy
Kern County, California
2000-2005

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KERN ECONOMIC JOURNAL is a quarterly publication (February, May, August, November) of California State University, Bakersfield. Its purpose is to track local trends and analyze regional, national, and global issues that affect the economic well-being of Kern County. The journal provides useful information and data that can help the community make informed economic decisions. Sources of funding for the journal include university contributions and sponsorship and subscription fees.

Editorial and analytical articles on important local, regional, national, and international issues and trends are invited for consideration of publication in the journal. Articles (not exceeding 800 words in length) must be submitted to the Managing Editor in hard or electronic copy. Individual authors are responsible for the views and research results.

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Preface

This special edition of Kern Economic Journal is prepared for the fourth annual Kern County Economic Summit. In this edition, I will present data on the state and outlook of the local economy. In addition, I will construct a methodology to break up the overall unemployment rate into “farm” and “nonfarm” unemployment rates. The topics covered are

1. Place in Regional Economy
2. Demography
3. Economy
4. Labor Market
5. Housing Market
6. Quality of Life

As shown below, the local economic outlook seems bright.

- Kern County the second largest economy in the San Joaquin Valley
- Kern County’s population exceeds 700,000 and is expected to grow 2% annually
- Kern County has a $15 billion economy, expanding over 2% per year
- Kern County will create sufficient jobs to accommodate its growing labor force
- Kern County’s “nonfarm” unemployment rate is in single-digits
- Kern County offers affordable housing, but housing prices will continue to appreciate
- Kern County’s quality of life index is improving

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The main data sources are RAND California, California Employment Development Department, and California Association or Realtors. The Forecast Pro software is used to make projections for 2004-05.
Place in the Region

**Population**
The San Joaquin Valley consists of eight counties: Fresno, Kern, Kings, Madera, Mariposa, Merced, San Joaquin, Stanislaus, and Tulare. The Valley is home to more than 3.5 million people. The most populated county of the Valley is Fresno and the least is Mariposa. With a population of over 700,000, Kern is the second largest county of the Valley. Residents of Kern County account for about 20% of the Valley population. The fastest growing counties are respectively San Joaquin, Stanislaus, Merced, Kern, Mariposa, Tulare, Kings, Fresno, and Madera. With an annual growth rate of 2%, Kern’s population will reach 1 million by 2020.

**Economy**
The San Joaquin Valley generates over $73 billion in real personal income. The Valley’s largest economy is Fresno and the smallest is Mariposa. Kern is the second largest economy of the Valley. With an inflation-adjusted personal income of nearly $15 billion, Kern accounts for about 20% of the Valley’s economy. The fastest growing economies of the region are respectively Madera, Stanislaus, Tulare, Mariposa, San Joaquin, Fresno, Kern, Kings, and Merced. With an annual growth rate of 2.1%, Kern’s economy is expected to double its size in about 34 years.

**Family Income**
The inflation-adjusted median family income averages $40,400 in the San Joaquin Valley. With a family income of $39,400, Kern places fourth in the region. Kern’s median family income is less than that of San Joaquin, Stanislaus, and Mariposa, but more than that of Madera, Fresno, Kings, Merced, and Tulare.

**Poverty Rate**
Nearly 15% of all families residing in the San Joaquin Valley live in poverty. In Kern County, 16.8% of families earn income below the poverty line. Tulare, Fresno, and Merced have a higher percentage of families living in poverty than Kern.

**Housing Price**
Housing prices are most affordable in the San Joaquin Valley compared with other regions of the state. In 2003, the Valley’s median housing sales price averaged $179,100 compared with the state average of $372,700. Among the Valley communities, Tulare offers the lowest and San Joaquin the highest home prices. With the median sales price of $130,800 for all homes, Kern County offers the second most affordable housing prices in the region.

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1 Data for Kings and Mariposa were not available.
Demography

**Population**
The county’s population is expected to grow 2.0% per year, increasing from 703,400 in 2003 to 717,500 in 2004 and 731,800 in 2005. Sources of population growth are threefold: natural increase 45%, net migration 40%, and immigration 15%.

**Gender Distribution**
The male population is projected to rise from 365,800 in 2003 to 372,200 in 2004 and 378,600 in 2005. On average, men consist of 52% of the total population. The female population is expected to incline from 337,600 in 2003 to 345,300 in 2004 and 353,200 in 2005. Women are comprised of 48% of the county population. The female population is projected to grow at an annual rate of 2.3%, whereas the male population will increase at 1.7% per year.

**Age Distribution**
The age distribution of county’s population has remained fairly stable. Nearly 36% of the population is younger than 20 years of age. The majority of county residents, 51%, are between 20 and 60 years of age. The remaining 13% of the population is 60 years and older. The fastest growing age groups are 20 and under (2.2% per year) followed by 60 and older (1.8% per year) and those between 20 and 59 years of age (1.1% per year).

**Ethnic Composition**
Kern County has a diverse population. The county residents are 55% White, 35% Hispanic, 6% African American, 3% Asian and Pacific Islander, and 1% Native American.

The fastest growing ethnic groups are respectively Hispanic, Asian & Pacific Islander, African American, Native American, and White. As a result of such growth differentials, the ethnic composition of county residents is expected to evolve in favor of the non-White population. In particular, the population share of the White residents is projected to fall from 55% in 2003 to 54% in 2005, whereas the Hispanic share will rise from 35% to 36%.

**Summary**
Kern County’s population will continue to grow at a rapid rate. With a growth rate of 2% per year, the county’s population will reach 1.0 million by 2020 and 1.5 million by 2040. The county’s population is expected to remain youthful as 36% of the residents are under 20 years of age. Over the next 5 to 10 years, the youth will reach the reproduction age, accelerating the momentum of population growth. The data also indicate that the ethnic composition of the county population will evolve in favor of the non-White residents.
**Economy**

**Personal Income**
At the county level, the size of the economy is measured by total personal income. It is calculated as the sum of labor income (net earnings by place of work), capital income (dividends, interest, royalty, and rent), and transfer payments (welfare benefits). To adjust for the effect of price variations, personal income is converted from current into constant dollars. Since there is not a local or regional price index to make this conversion, we apply the national Implicit GDP Deflator (2000 base year). Also at the county level, data on personal income is available with a two-year delay. Hence, we estimate the historical data to forecast values for the past and next two years. The percentage change of personal income measures the rate of economic growth.

The county’s personal income has had a rising trend from $13.6 billion in 2000 to $14.2 billion in 2003 and is expected to incline to $14.9 billion in 2004 and $15.2 billion in 2005. Kern’s economy is projected to grow at an inflation-adjusted, annual rate of 2.1% in 2004 and 2.0% in 2005.

**Personal Income Per Capita**
Personal income per capita is used to approximate the standard of living. It is calculated as personal income (in constant dollars) divided by population. Because of the rapid growth rate of population in the county, personal income per capita is expected to grow at a very slow pace. Personal income per capita inclined from $20,540 in 2000 to $20,710 in 2003 and is expected to rise to $20,750 in 2005.

**Farm and Nonfarm Personal Income**
Personal income in generated by productive activities in the nonfarm and farm sectors. Nonfarm income consists of 97% of personal income, whereas farm income is 3%. Nonfarm income (in constant dollars) climbed from $13.3 billion in 2000 to $14.3 in 2003 and is expected to rise to $14.6 billion in 2004 and $15.0 in 2005. Nonfarm income is projected to grow at an average rate of 2.4% in 2004-05. In contrast, farm income is showing a sharp declining trend, falling from $387 million in 2000 to $274 million in 2003 and could plunge to $239 million in 2004 and $206 million in 2005.

**Components of Personal Income**
Personal income is the sum of labor income, capital income, and transfer payments. Labor income is 66% of personal income. It climbed from $8.7 billion in 2000 to $9.7 billion in 2003 and may rise to $9.9 billion in 2004 and $10.1 in 2005. Capital income is 15% of personal income. It ascended from $2.1 billion in 2000 to $2.2 billion in 2003 and could to climb to $2.2 billion in 2004 and $2.3 billion in 2005. The income share of transfer payments is 19%. It increased from $2.3 billion in 2000 to $2.7 billion in 2003 and is projected to rise to $2.8 billion in 2004 and $2.9 billion in 2005.

**Components of Nonfarm Income**
Nonfarm earnings consist of private and public sector earnings. Private sector earnings are 72% and public sector earnings are 28% of nonfarm earnings. Private earnings account for earnings in goods-producing industries and earnings in services providing industries. The services-providing industries account for 74% and the goods-producing industries for 26% of nonfarm earnings.
The goods-producing sector consists of three major industries. They are classified as natural resources and mining, construction, and manufacturing. The natural resources and mining industry consist of agricultural services, fishery and forestry, and oil and natural gas extraction and well drilling and support services. The construction industry is comprised of residential and commercial investment. The manufacturing industry produces durable goods and nondurable goods. Natural resources and mining account for 53%, construction 26%, and manufacturing 21% of earnings in the goods-producing industries.

The services-providing sector consists of seven major industries. They are classified as trade, transportation and utilities, financial activities, professional and business services, educational and health services, leisure and hospitality, information and other services, and government. Earnings shares of these industries have remained fairly stable over time. With an income share of 39%, government is the largest industry. The income shares of other services-providing industries are 28% trade, transportation and utilities, 15% professional and business services, 10% educational and health services, 5% financial activities, 2.5% leisure and hospitality, and 0.5% information and other services.

In the public sector, federal government earnings account for 41%, state government for 10%, and local government (including public education) for 49% of total earnings.

**Summary**

Kern County’s is a large and growing economy. With a growth rate of over 2.1% per year, the county’s economy will exceed $15 billion by 2005. Because of rapid population growth the county’s per capita income will continue to increase at a very slow pace. Labor income accounts for two-thirds of total earnings and the private sector creates over 70% of total nonfarm earnings. With large agriculture, oil, manufacturing, and construction industries, Kern’s economy is strong in the provision of services. The largest service-providing industries are government, trade, transportation and utilities, and professional and business services.
Labor Market

**Labor Force**
Population consists of members of the civilian labor force and those who are not participating in labor market transactions (e.g., children, elderly, members of the armed forces, and prisoners). The local civilian labor force is 43% of the county population. With an average annual growth rate of 2%, the county’s labor force is expected to increase from 305,400 in 2003 to 311,500 in 2004 and 318,400 in 2005.

**Employment**
Members of the labor force are either employed for pay or unemployed. Nearly 88% percent of the county’s labor force is employed and 12% unemployed. Civilian employment is expected to rise from 267,900 in 2003 to 273,800 in 2004 and 280,600 in 2005. These projections indicate that the rate of job creation would accelerate from 1.5% in 2003 to 2.2% in 2004 and 2.5% in 2005.

**Unemployment**
The number of unemployed workers is projected to increase from 37,600 in 2003 to 37,700 in 2004 and 37,800 in 2005. Since the number of unemployed workers is increasing at a slower rate than the labor force, the annual unemployment rate would fall from 12.3% in 2003 to 12.1% in 2004, and 11.8% in 2005.

**Employment by Industry**
Total employment is comprised of farm and nonfarm employment. On average, farm employment is 7% of total employment and nonfarm unemployment is 93%. Farm employment is projected to increase from 40,300 in 2003 to 41,400 in 2004 and 41,500 in 2005. Nonfarm employment is expected to rise from 204,800 in 2003 to 207,200 in 2004 and 209,300 in 2005. Residual employment is the difference between civilian employment and industry employment. It accounts for self-employed workers and those who work outside their county of residence. Residual employment could ascend from 22,800 in 2003 to 25,200 in 2004 and 29,800 in 2005.

**Nonfarm Employment**
Nonfarm employment is comprised of private sector and public sector employment. Private sector employment consists of goods-producing and service-providing industries, while public sector employment includes federal, state, and local government jobs.

The goods-producing category accounts for 22% of private sector employment. It includes three industrial groups: natural resource and mining, construction, and manufacturing. Employment in natural resources and mining industries is 25% of total goods-producing employment. It is projected to incline slowly from 7,800 in 2003 to 7,900 in 2005.

Employment in the construction industry is 42% of total goods-producing employment. The industry is expected to continue its
boom, increasing employment from 13,800 in 2003 to 14,000 in 2004 and 14,300 in 2005.

The manufacturing industry accounts for one-third of total goods-producing jobs. The industry’s employment is expected to fall from 10,800 in 2003 to 10,600 in 2004 and remain constant in 2005.

The services-providing industries account for 78% of private sector employment. They consist of eight groups: wholesale and retail trade, transportation, warehousing and utilities, financial activities, professional and business services, educational and health services, leisure and hospitality, information and other services, and government. In terms of the number of employees, the largest industries are government, retail trade, business and professional services, health and educational services, and leisure and hospitality.

After three consecutive years of job creation, the public sector is expected to decline. The forecast results indicate a loss of 400 government jobs in three years: from 54,800 in 2003 to 54,700 in 2004 and 54,400 in 2005. These job losses are projected to occur in state and local government agencies.

Trade, transportation, and utilities industries are likely to add 300 more jobs in two years. Wholesale trade employment is expected to remain constant at 6,200 in 2004-05. Employment in retail trade is projected to rise from 24,700 in 2003 to 24,900 in 2004 and 25,000 in 2005.

The financial services industries (including finance, insurance, and real estate) are projected to add 300 jobs in two years. Firms providing professional and business services are expected to increase employment by 1,200 from 23,800 in 2003 to 24,300 in 2004 and 25,000 in 2005.

Likewise, businesses offering educational and health care services are expected to add 1,200 jobs, increasing their total employment from 19,300 in 2003 to 20,100 in 2004 and 20,600 in 2005. Employment in the leisure and hospitality industry is projected to incline from 17,200 in 2003 to 17,500 in 2004 and 17,800 in 2005.

**Summary**

Kern County will create jobs to accommodate its rapidly growing labor force. Employment data remain volatile due to the sizable variations in farm employment during the course of the year. Nevertheless, the nonfarm sector and the self-employed labor market are projected to create more jobs. Although the rate of unemployment will remain in double-digits, it is expected to fall this and next year. While public sector employment is contracting, private sector industries shall assume greater responsibility for job creation.
Housing Market

Housing Price
Kern County offers one of the most affordable housing prices in California. In 2003, the median housing price in the county was one-third of that in the state. Even in the San Joaquin Valley, Kern offers the second most affordable housing prices. The market for residential investment is experiencing a boom. Housing prices have appreciated at a very rapid rate. The median sales price of all homes (i.e., existing and new condominiums and single-family detached homes) climbed by a whopping $50,100 in four years. It soared from $81,700 in 2000 to $130,800 in 2003. If this trend continues, the median sales price will rise to $145,500 in 2004 and $155,900 in 2005.

To convert these current dollar prices into constant dollars prices, we apply the national Implicit GDP Deflator (2000 base year). The inflation-adjusted median sales price has shown sizeable appreciation as well. It ascended from $81,000 in 2000 to $124,800 in 2003. The largest gain occurred in 2003 when the median price climbed by $24,300 or 24.2%. The median housing price is expected to rise 7.1% per year to $135,600 in 2004 and $143,000 in 2005.

Housing Demand
The boom in the market for residential investment is partly caused by the rise in the demand for housing. An increase in the demand for “existing” homes would result in higher prices. Since the supply of “existing” homes is constant, more “new” homes are built at higher prices. The monthly average number of new housing permits increased continually from 238 in 2000 to 457 in 2003 and is expected to climb to 488 in 2004 and 532 in 2005. While fluctuating, the average number of monthly transactions has had a rising trend. It jumped from 515 in 2000 to 607 in 2003 and is expected to rise to 635 in 2004 and 715 in 2005.

Housing Supply
On the supply side, increased housing prices are due to greater construction cost and larger home area. The median price per square foot (in constant dollars) is expected to rise from $78 in 2003 to $79 in 2004 and $81 in 2005. Using a reasonable mark-up of 10%, we estimate the per square foot construction cost rising from $70 in 2003 and to $73 in 2005. The median housing area for all homes is calculated by the division of the total price and the unit price. The median housing area is projected to increase from 1,600 square feet in 2003 to 1,700 in 2004 and 1,800 in 2005.

Housing Affordability
The index of housing affordability plunged from 62 in 2000 to 54 in 2003 and is expected to further decline to 52 in 2004 and 50 in 2005. The latter index value indicates that-- given the rate of interest on mortgage loans-- a family earning the median household income would have 50 percent of the income necessary to
qualify for a conventional loan covering 80% of a median-priced, existing single-family home.

Some households who qualify for mortgage loans are unable to make their monthly mortgage payments, hence forced to foreclose. The most recent data (1997-2002) indicate that on average 90 homes are foreclosed each month in Kern County. For these homes, the average homeownership is 30 months and the price paid is 48% of the county’s median price.

Summary
Kern County offers affordable housing for its growing population. The median price of housing is expected to approach $156,000 in 2005. When adjusted for inflation, the 2005 median price is projected to be $143,000. Housing prices will continue to appreciate due to the rising demand, increased production cost, and enlarged home area. The median housing price is projected to increase by 7% per year in 2004-05.
The Quality of Life

We measure the quality of life as a composite index of twenty economic (1-7), social (8-17), infrastructural and environmental indicators (18-20). These indicators are

1. **Per Capita Income**: Personal income per person in constant dollars
2. **Economic Growth**: Percentage growth rate of total personal income
3. **Housing Price**: Median sale price of all single-family homes in constant dollars
4. **Taxable Sales**: Total taxable transactions in constant dollars
5. **Labor Force Growth**: Percentage growth rate of the labor force
6. **Nonfarm Employment Growth**: Percentage growth rate of nonfarm employment
7. **Unemployment Rate**: Average annual rate of civilian unemployment
8. **Class Size**: The pupil-teacher ratio
9. **College Preparation**: Total score in the Scholastic Aptitude Test
10. **Family Environment**: Percentage of mothers with “some” college education
11. **Language Proficiency**: Enrollments with limited English proficiency per 10,000 students
12. **Medical Services**: Number of physician per 10,000 persons
13. **Infant Survival**: Percentage of live birth reaching first birthday
14. **Drug Use**: Number of admissions for drug and alcohol treatment per 10,000 persons
15. **Public Assistance**: Family assistance per capita in constant dollars
16. **Public Health**: Percentage of population eligible for Medical
17. **Crime Rate**: The FBI crime index
18. **Air quality**: Number of days that the ozone level exceeds the federal 8-hour standard
19. **Public Safety**: Expenditures on police and fire protection per capita in constant dollars
20. **Road condition**: Average number of accidents per year divided by the segment length in miles

The year 1992 is selected as the base-year, for which the index value equaled 100. For the years following 1992, we adjusted the base-year value by the percentage change relative to 1992. The composite quality of life index (QLI) climbed from 121 in 2000 to 133 in 2001, fell to 129 in 2002, and rose again to 134 in 2003. We expect the QLI to record modest gains, reaching 135 in 2004 and 137 in 2005.

These data indicate that the quality of life-- as measured by these twenty indicators-- has improved 34 percent in 2003 relative to 1992. Collectively, all the indicators explain 92% percent of variations in the QLI. The economic indicators are responsible for 42%, social indicators account for 26%, and infrastructural and environmental indicators describe the remaining 32% of the explained variations of the QLI. These data demonstrate that the county’s quality of life will continue to improve.
What? Double-Digit Unemployment Rate!

A resource-based economy such as Kern County is expected to have high unemployment. In particular, farming is a seasonal activity subject to structural and transitional unemployment. Structural unemployment is caused by farm mechanization where labor is by capital equipment, while transitional unemployment is due to the waiting time for work between seasons. Hence, we have an outflow of displaced workers from agriculture and an inflow of seasonal workers into agriculture. In a previous study, we measured the “natural” rate of unemployment, which accounts for both transitional and structural unemployment, to be 10.5% in Kern County.1

Historically, Kern County has recorded double-digit unemployment rates. The rate of unemployment climbed from 10.8% in 1990 to 15.7% 1992. It then declined gradually to 10.7% in 2001 before rising to 12.3% 2003. Kern’s unemployment rate is projected to fall to 12.1% in 2004 and 11.7% in 2005.

Intuitively, we realize the key to reducing double-digit unemployment in the transformation of resource-based industries from raw material exportation to manufacturing goods production. However, the lack of sector-based unemployment data provides little information about the location of unemployment.

To remedy this shortcoming, we use an estimation method to break up the aggregate unemployment rate into farm and nonfarm unemployment rates. The missing link in computing the farm unemployment rate is data on the farm labor force. To estimate the farm labor force, we calculate the ratio of farm employment to total employment. We then multiply this ratio by the labor force to find a preliminary estimate for the farm labor force. We increase this estimate by an educated guesstimate to account for the net inflow of seasonal labor. Next, we find farm unemployment as the difference between the farm labor force and farm employment and calculate the rate of farm unemployment. We apply a similar method, but with no adjustment factor for seasonal labor, to estimate the rate of unemployment for the residual sector. Finally, we utilize the data on aggregate unemployment rate and the estimated farm and residual unemployment rates to find the rate of unemployment in the nonfarm sector.

Our estimates of the farm unemployment illustrate consistent double-digit rates rising from 15.9% in 1990 to 20.4% in 1992-93, falling gradually to 15.7% 2001, and rising again to 17.3% in 2003. We project the rate of farm unemployment to drop to 17.0% in 2004 and 16.9% in 2005.

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1 See Kern Economic Journal, 2001 First Quarter
2 Here, we assume an adjustment factor of 6%.
The nonfarm unemployment rate follows a similar trend. It recorded single-digit rates in all years, but in the recession of 1992-94. Nonfarm unemployment rate increased from 5.7% in 1990 to 11.0% in 1992, declined gradually to 7.5% again in 2001, but inclined to 7.8% in 2003. We anticipate the rate of nonfarm unemployment to fall to 7.6% in 2004 and 7.5% in 2005.

As shown in Table 2, the county’s nonfarm unemployment rate is above both the national and state unemployment rates. For example, Kern’s nonfarm unemployment was 1.8% above the national rate and 1.1% greater than the state rate in 2003. Nevertheless, the county’s single-digit unemployment rate presents a more accurate portrayal of its labor market condition and economic well-being.
Kern Economic Journal

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