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KERN ECONOMIC JOURNAL

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KERN ECONOMIC JOURNAL is a quarterly publication 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.

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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 both hard and electronic copies. Individual authors are responsible for the views and research results expressed in their published articles.

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Local Economy in Perspective:

Business Outlook Survey: Businesses managers are now pessimistic about local economic conditions. The Business Outlook Index declined 17 points from 112 in the third quarter to 95 in the fourth quarter of 2002.

Major factors perceived to hinder business outlook are:

- State budget cuts targeting education, local governments, and non-profit organizations
- The threat of war against Iraq, causing uncertainty in the Stock Market
- Cold weather adversely affecting local and state agriculture
- The outsourcing of production to Asian countries, resulting in a greater flow of cheap imports
- International unrest and national security measures affecting the travel and tourism industry

(Full story on page 2)

Consumer Sentiment Survey: Households have turned less optimistic about local economic conditions. The Consumer Sentiment Index fell 15 points from 118 in the third quarter to 103 in the fourth quarter of 2002. Compared to one year ago, 20 percent of the respondents said their families are doing financially *better*, 59 percent *the same*, and 21 percent *worse*. Anticipating one year from now, 19 percent of the respondents perceived their financial conditions to be *better*, 72 percent *the same*, and 9 percent *worse*. *(Full story on page 3)*

Kern County's unemployment rate rose to double digits. The unemployment rate increased from 9.8 percent in the third quarter to 10.4 percent in the fourth quarter of 2002. The county's unemployment rate was 3.9 percent higher than the state rate and 4.5 percent greater than the national rate. Nonfarm employment increased at an annual rate of 1.4 percent. Among the nonfarm industries, construction, wholesale trade, retail trade, business services, and state and local governments added jobs. But, mining, manufacturing, and federal government reduced employment. *(Full story on page 5)*

Kern County's economy grew at an annual rate of 1.5 percent. Its total personal income (in constant 1996 dollars) increased continually from \$13.75 billion in the first quarter of 2001 to \$13.57 billion in fourth quarter of 2002. Between the third and fourth quarters of 2002, the county's economy expanded by \$50 million. During this period, Kern's personal income per capita (in constant 1996 dollars) rose by \$50 from \$20,400 to \$20,450. *(Full story on page 6)*

Kern County's median price of single-family homes is merely 41 percent of the state's median price. The average of monthly median sales price of single-family homes (in current dollars) increased 2.5 percent from \$109,750 in the third quarter to \$112,500 in the fourth quarter of 2002. Compared with four quarters ago, the median price rose by \$5,800 or 16.4 percent. Kern County remains one of the most affordable counties of the state. According to the most recent data, Kern's housing affordability index is 16 percentage points greater than that of California. In the Central Valley, Kern County's housing is more affordable than Fresno, Merced, and San Joaquin. *(Full story on page 9)*

The quarterly average price for the San Joaquin Valley heavy crude oil has shown a significant increase in 2002. It rose continually from \$15.40 in the first quarter, \$21.20 in the second quarter, and \$23.60 in the third quarter of 2002. In the fourth quarter, the average price fell by \$1.40 to \$22.20 per barrel. Compared with four quarters ago, the price of crude oil rose by \$7.30 or nearly 49 percent. *(Full story on page 10)*

KERN BUSINESS OUTLOOK SURVEY

ABBAS P. GRAMMY
PROFESSOR OF ECONOMICS



This article presents opinions of business managers regarding current and expected economic conditions of Kern County in the fourth quarter of 2002. Over the first three weeks of January 2003, we surveyed randomly 100 members the Greater Bakersfield of Commerce. Responses were enumerated to construct a Business Outlook Index (BOI). The BOI value of 100 indicates *neutrality* about local business conditions, greater than 100 expresses *optimism*, and less than 100 *pessimism*. Results are illustrated in Figure 1 and Table 1.

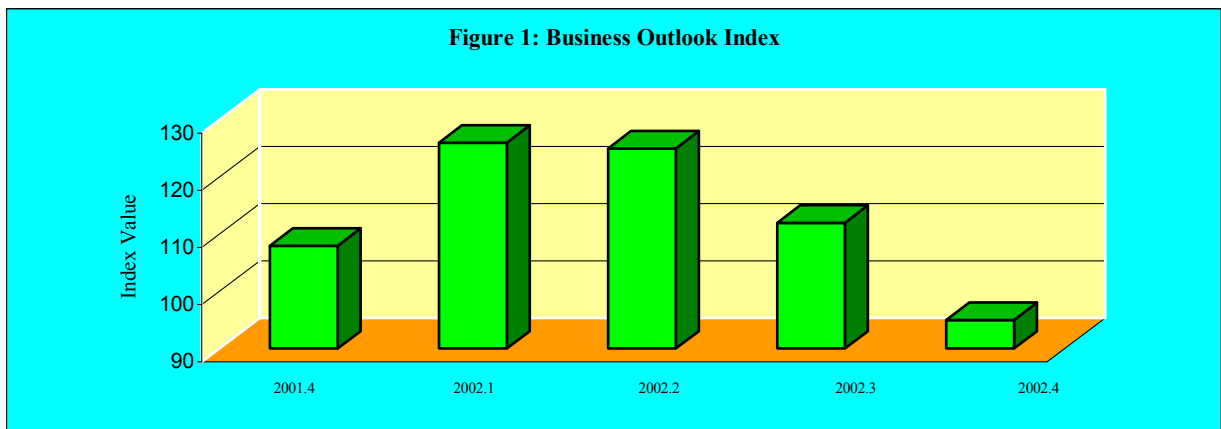
For the second consecutive quarter, the BOI declined. It fell 17 points from 112 in the third quarter to 95 in the fourth quarter. This rather sharp decline indicates that business managers have become *pessimistic* about local business conditions. Since the fourth quarter of 2001, the BOI has fallen by 13 points. In 2002, business ex-

pectations gradually turned *less optimistic* in the second and third quarters and eventually *pessimistic* in the fourth quarter. Over the past four quarters, the BOI has declined by a whopping 31 points.

An overwhelming majority of survey respondents reported that the number of jobs in their companies stayed the same as the previous quarter. They expected the number of jobs available in their companies to remain unchanged this quarter.

Most business managers perceived that financial conditions (sales or profits) of their companies were unchanged last quarter. They also projected no improvements this quarter.

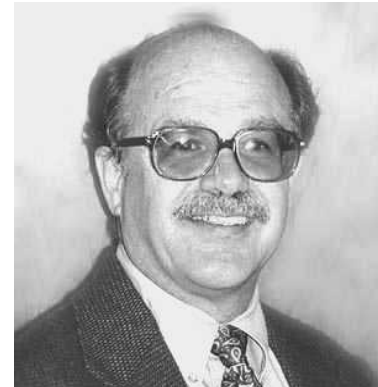
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Question	Response		
	Better	Same	Worse
	(Percentage of Total Responses)		
Employment in your company this quarter was	10	60	30
Employment in your company next quarter will be	4	73	23
Financial condition (sales or profits) of your company this quarter was	14	69	17
Financial condition (sales or profits) of your company next quarter will be	20	70	10
Employment and general business conditions in your industry this quarter were	10	78	12
Employment and general business conditions in your industry next quarter will be	4	83	13
Employment and general business conditions in Kern County this quarter were	3	65	32
Employment and general business conditions in Kern County next quarter will be	6	83	11

BAKERSFIELD CONSUMER SENTIMENT SURVEY

MARK EVANS
INTERIM DEAN, EXTENDED UNIVERSITY
DIVISION

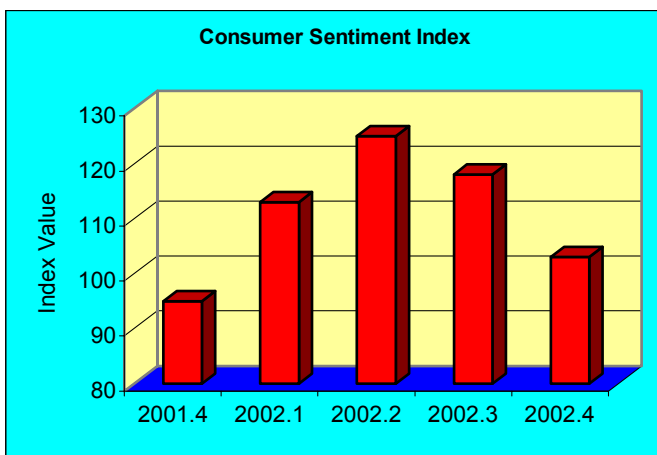


The Bakersfield Consumer Sentiment Index continued its downward slide in the fourth quarter and ended 2002 just slightly above the historical lows it recorded in the second half of 2001. The index registered a score of 103, compared to 125 and 118 in the second and third quarters, respectively. In the fourth quarter of 2001, the index was 95. Index values about 100 are indicative of consumer optimism, while values below 100 are rare and suggest considerable pessimism. The index is disaggregated into sub-indexes relating to recent trends and future expectations. Both sub-indexes registered declines. The Index of Recent Buying and Financial Trends decreased from 115 in the third quarter to 101 in the fourth quarter. The forward-looking Index of Future Expectations decreased from an optimistic 121 in the third quarter to a neutral 105 in the fourth. We began compiling the Bakersfield Consumer Sentiment Index in 1999.

It is constructed from telephone surveys administered to a random sample of households listed in the Bakersfield section of the phone book.

The Index of Recent Buying and Financial Trends is constructed from responses to questions relating to expenditures on discretionary items, financial status of the household compared to one year ago, and perceived financial condition of acquaintances in Kern County. There was no change in discretionary spending compared to the previous quarter and no change in the perceived financial condition of local acquaintances. The entire decrease in the recent trends subindex (from 115 to 101) was attributable to deteriorating the financial condition of the surveyed households. When asked how

(Continued on page 4)



	Most Recent Quarter	Previous Quarter	One Year Ago
Bakersfield Consumer Sentiment Index	103	118	95
Sub index: Recent Buying & Financial Trends	101	115	90
Sub index: Expectations	105	121	100

	More than usual	Same as usual	Less than usual
Your recent spending on discretionary items (dining out, weekend outings, entertainment)	29	41	30
	Better off	Same	Worse off
How your family is doing financially compared to one year ago.	20	59	21
How your acquaintances in Kern County are doing financially compared to one year ago.	20	65	15

Business Outlook (Continued from page 2)

Also, the business managers perceived that current employment and financial conditions of their industries were the same last quarter. They anticipated that employment and financial conditions of their industries would remain constant this quarter.

The majority of the business managers felt that employment and general business conditions in Kern County were the same as the previous quarter. They anticipated that employment and general business conditions would not improve this quarter.

Survey participants were asked to comment on local, regional, national, or international factors that have affected employment and financial conditions of their companies. Many survey respondents indicated that a low rate of interest on mortgage loans has increased business in the construction industry and real estate market.

However, they felt that several factors have hindered the business outlook in Kern County:

- State budget cuts targeting education, local governments, and non-profit organizations
- The threat of war against Iraq, causing uncertainty in the Stock Market
- Cold weather adversely affecting local and state agriculture
- The outsourcing of production to Asian countries, resulting in a greater flow of cheap imports
- International unrest and national security measures affecting the travel and tourism industry

For the first time in three years, business managers have become *pessimistic* about the local business outlook. Several local, regional, national, and international factors have contributed to forming these negative perceptions.

Consumer Sentiment (Continued from page 3)

the household was faring financially compared to one year ago, the percent indicating they were better off plummeted from nearly 50 percent to 20 percent. The percent indicating they were worse off nearly tripled from 8 percent to 21 percent. This is a troubling development.

To assess consumer expectations, households were asked how they thought the financial situation of their families would change over the coming year, how their acquaintances in Kern County view the coming year, and whether this is a safe or risky time to draw down savings or incur additional debt. There was almost no change from the previous quarter in the percent of households who thought this was a safe time to use savings or incur debt or in the percent that thought it was a risky time. There was also negligible change in perceptions of how

acquaintances viewed the future. Hence, the entire decline in the subindex relating to future expectations (from 121 to 105) was attributable to a decrease in optimism on the home front. In the third quarter, one-half of the sample thought the financial position of their household would improve over the coming year, while less than one-in-five was optimistic in the most recent quarter. The percent that thought their household would be worse off increased slightly from six to nine percent, so most of the decline in expectations was due to a shift within households from optimism to neutrality (rather than a shift toward pessimism).

Summarizing, the Bakersfield Index of Consumer Sentiment increased throughout the first half of 2002 from historical lows in the second half of 2001. However, the index slipped throughout the second half of the year and is now just slightly higher than it was in the aftermath of September 11.

TABLE 3—FUTURE EXPECTATIONS (Percentage of Responses)

	Better or more stable	About the same	Worse or more risky
The most likely financial situation of your family one year from now	19	72	9
	Optimistic	Neutral	Fearful
How your acquaintances in Kern County view the coming year.	37	33	30
	Safe time to buy	Neutral response	Risky time to buy
Is now a safe or risky time for most people to use savings or incur debt to buy expensive goods?	24	50	26

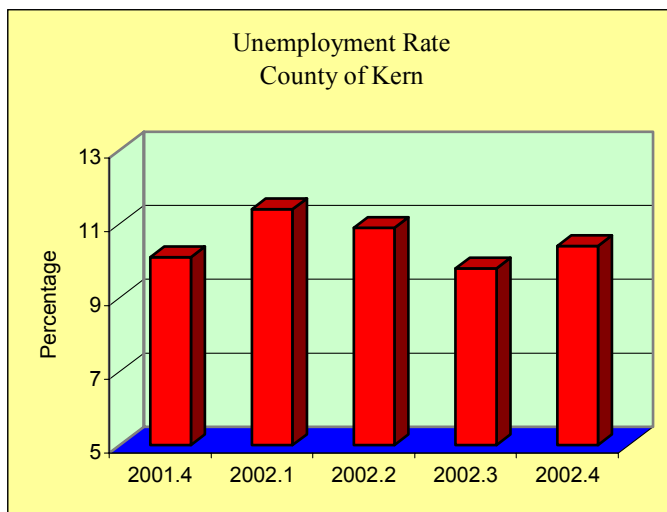
LOCAL ECONOMIC INDICATORS

ABBAS P. GRAMMY
PROFESSOR OF ECONOMICS

Note: In the previous issue, we began tracking quarterly data on six local economic indicators: unemployment, employment growth, personal income, personal income per capita, housing price, and housing price affordability for the County of Kern and City of Bakersfield. In this issue we add economic growth, mortgage interest rate, taxable sales, and price of crude oil to this list.

Unemployment Rate

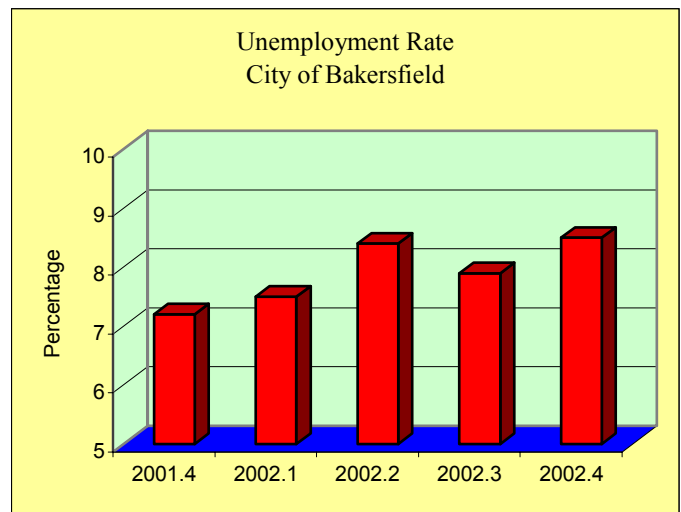
Analysis of *seasonally adjusted* labor market data indicates that Kern's unemployment rate increased from 9.8 percent in the third quarter to 10.4 percent in the fourth quarter of 2002. Kern's unemployment rate climbed from 10.1 percent in fourth quarter of 2001 to 11.4 percent in the first quarter of 2002, but fell gradually over the subsequent two quarters before rising in the fourth quarter. The county's unemployment rate was 3.9 percent higher than the state rate and 4.5 percent greater than the national rate.



Labor market data for cities are estimated from their shares of the county's labor force, employment, and unemployment. These shares are calculated from the census data and remain constant throughout the decade. As a consequence, the published data cannot accurately reflect the city's labor market conditions. We have established a methodology for calculating variable labor force shares for cities in order to obtain more accurate esti-

mates for labor market data.

In the City of Bakersfield, the rate of unemployment rose from 7.9 percent in the third quarter to 8.5 percent in the fourth quarter of 2002. Bakersfield's unemployment rate climbed from 7.2 percent in fourth quarter of 2001 to 8.4 percent in the second quarter of 2002, but fell to 7.9 percent in the third quarter before rising to 8.5 percent in the fourth quarter. The city's unemployment rate was 1.9 percent lower than the county rate, but 2.0 percent higher than the state rate and 2.6 percent greater than the national rate.



Employment Growth

In the fourth quarter of 2002, Kern's labor force increased by 1,000 persons, total employment declined by 900 persons, while unemployment increased by 1,900 persons. The decline in total employment accounted for 700 more jobs in the nonfarm sector, 1,300 less jobs in the farm sector, and 300 less jobs in the market for self-employed workers and those who work outside their place of residence.

In Kern County, **total employment** decreased at an annual rate of 1.3 percent in the fourth quarter of 2002. The growth of total employment has been unstable. The county experienced rapid employment growth in the fourth quarter of 2001 and in the second and third quarters of 2002. However, the county recorded negative employment growth rates in the first and fourth quarters of 2002. Kern's employment growth rate averaged 1.4 percent in 2002.

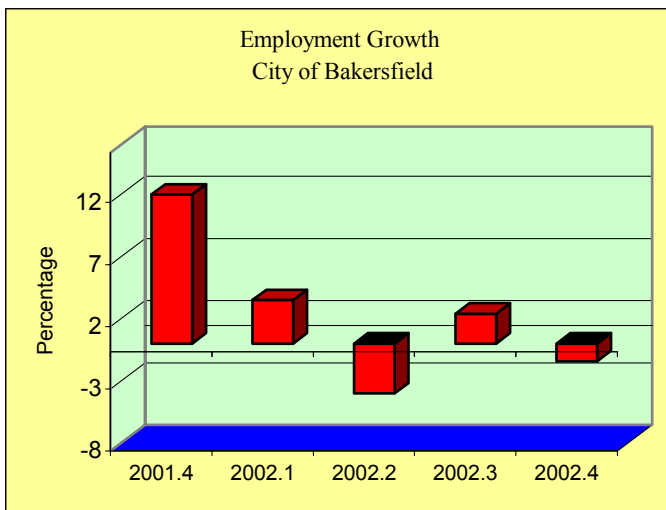
The rate of growth of **nonfarm employment** averaged 2.0 percent in 2002. In the fourth quarter of 2002, nonfarm

(Continued on page 6)

employment increased at an annual rate of 1.4 percent. Among the nonfarm industries, construction, wholesale trade, retail trade, business services, and state and local governments added jobs. But, mining, manufacturing, and federal government reduced employment.



In Bakersfield, employment decreased at an annual rate of 1.4 percent in the fourth quarter of 2002. Similar to the county's trend, the city's employment growth has been unstable. Bakersfield experienced positive employment growth rates in the fourth quarter of 2001 and the first and third quarters of 2002. But, the city's employment declined in the second and fourth quarters of 2002. Bakersfield's employment growth averaged 0.5 percent in 2002.



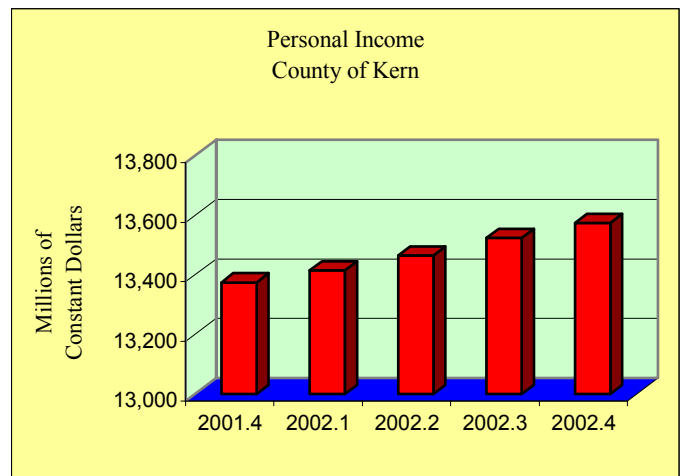
Total Personal Income

Total personal income for counties are published on an annual basis with a time lag of at least one year. At the state level, however, quarterly data are available with a

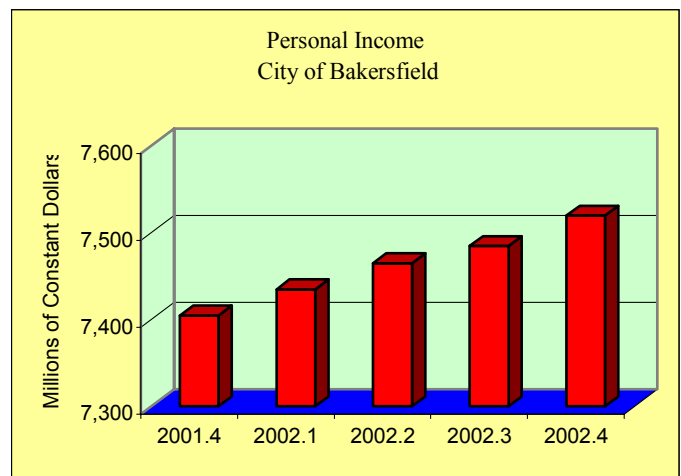
two-quarter delay. To establish a quarterly database for Kern County, we constructed a statistical method to calculate variable income shares. We then generated forecasts for the most recent quarters.

Total personal income is the sum of labor income, capital income, and transfer payments, less payroll taxes. Personal income is adjusted for seasonal variations and converted from current to constant dollars to measure economic growth.

Kern County's total personal income (in constant 1996 dollars) increased continually from \$13.57 billion in the first quarter of 2001 to \$13.75 billion in the fourth quarter of 2002. Between the third and fourth quarters of 2002, the county's economy expanded by \$50 million.



In Bakersfield, total personal income (in constant 1996 dollars) rose from \$7.41 billion in the fourth quarter of 2001 to \$7.52 billion in the fourth quarter of 2002. Between the third and fourth quarters of 2002, the city's economy expanded by \$35 million.

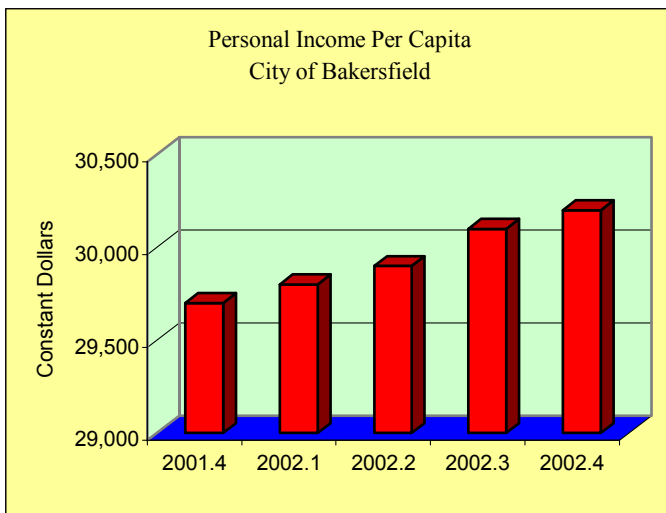
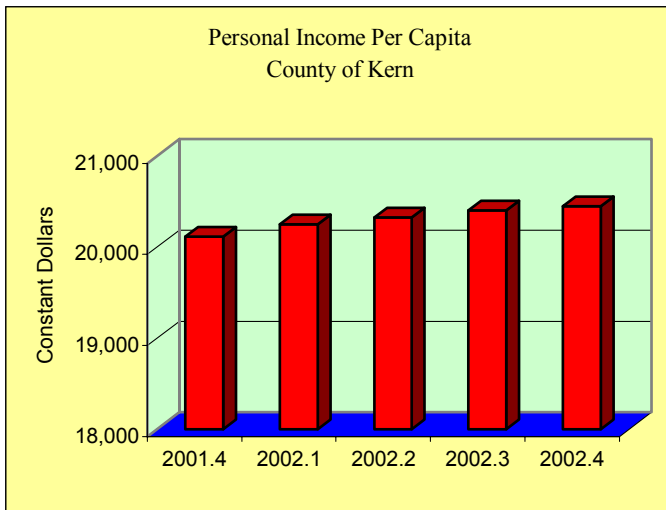


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Personal Income Per Capita

Personal income per capita is calculated as total personal income divided by population. Per capita personal income would increase if total personal income grows faster than population.

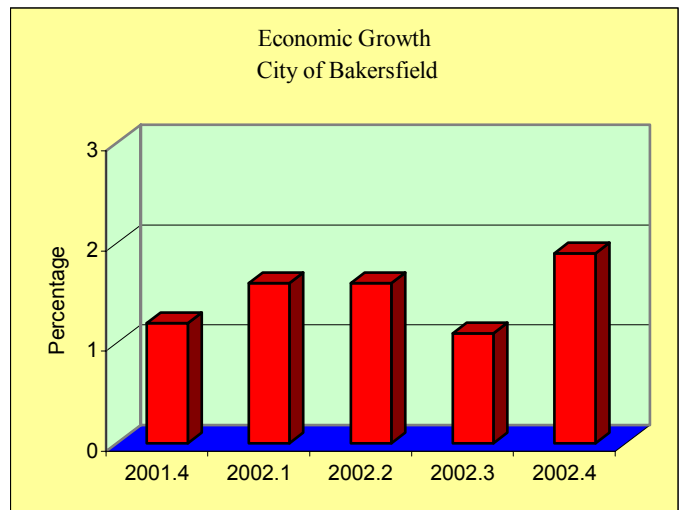
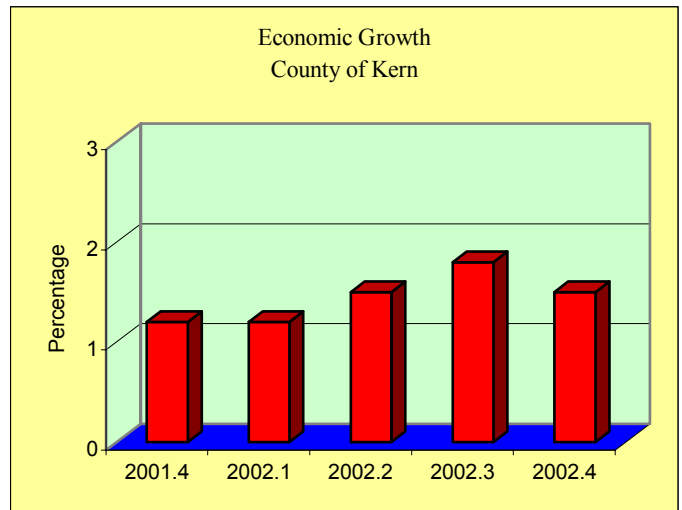
Between the third and fourth quarters of 2002, Kern’s personal income per capita (in constant 1996 dollars) rose by \$50 from \$20,400 to \$20,450. In 2002, residents of Kern County gained, on average, \$200 dollars. Kern’s personal income per capita increased from \$20,100 in the fourth quarter of 2001 to \$20,450 in the fourth quarter of 2002. The county’s personal income per capita is nearly \$10,000 less than the national average and about \$12,000 less than the state average.



Economic Growth

We measure economic growth by the percentage change of total personal income over the previous quarter. In Kern County, the rate of economic growth slowed from 1.8 percent in the third quarter to 1.5 percent in the fourth quarter of 2002. In the year 2002, the economy of Kern County expanded at an annual rate of 1.5 percent.

In Bakersfield, economic growth accelerated from 1.2 percent in the third quarter to 1.9 percent in the fourth quarter of 2002. In the year 2002, the economy of Bakersfield expanded at an annual rate of 1.6 percent.



Housing Price

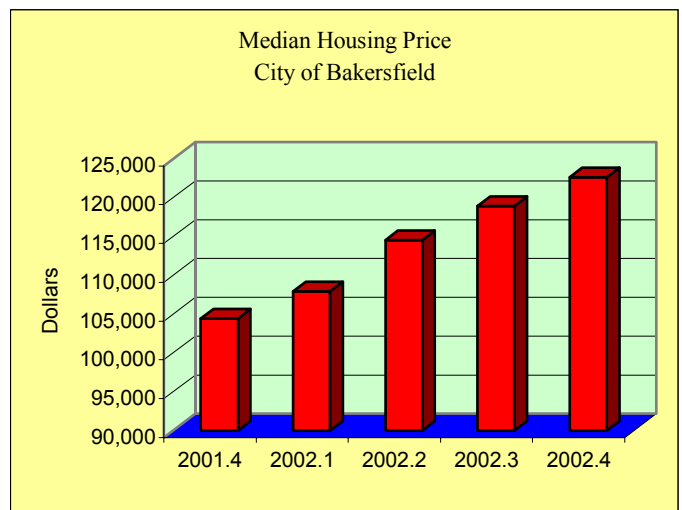
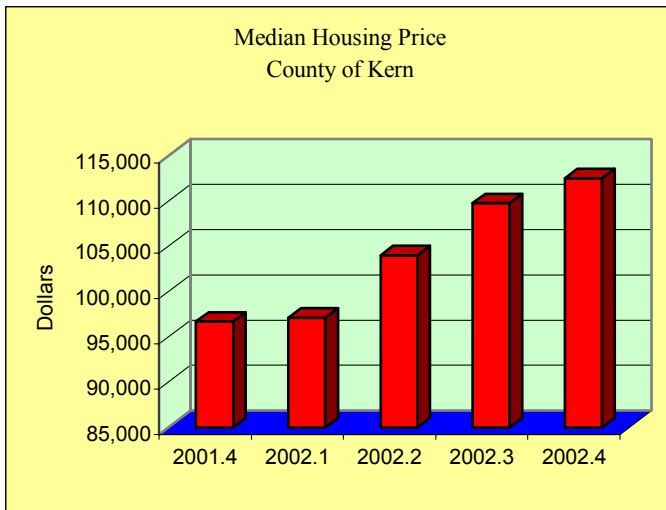
In Kern County, the average of monthly median sales price of single-family homes (in current dollars) increased 2.5 percent from \$109,750 in the third quarter to \$112,500 in the fourth quarter of 2002. Compared with four quarters ago, the median price rose by \$5,800 or 16.4 percent.

In Bakersfield, the average of monthly median sales price of single-family homes (in current dollars) jumped 3.1 percent from \$118,900 in the third quarter to \$122,600 in the fourth quarter of 2002. Compared with four quarters ago, the median price rose by \$18,200 or 17.9 percent. In the fourth quarter of 2002, the city's median price was \$10,100 or 9 percent higher than the county's average.

In the year 2002, the median sales price of single-family homes averaged \$105,200 in Kern County, \$115,300 in Bakersfield, and \$282,700 in California. The county's median price was merely 37 percent of the state average. Likewise, the city's median price average was 41 percent of that of the state. However, the city's median price was 110 percent of the county's average.

In Kern County, the median sales price of single-family homes ranged between \$46,250 in Mojave and \$123,500 in Rosamond. Bakersfield, Rosamond, and Tehachapi had housing prices above \$100,000. In Arvin, Bakersfield, California City, McFarland, Lake Isabella, Rosamond, Shafter, and Wasco, the median price increased from the previous quarter. However, the median price declined in Delano, Mojave, Ridgecrest, Lamont, Taft, and Tehachapi. Compared with a year ago, all cities except Mojave, Taft and Wasco recorded price increases.

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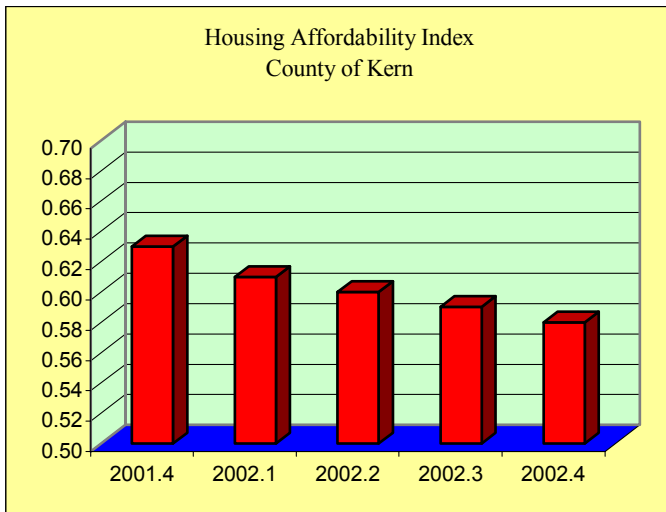


Housing Price for Selected Cities (Fourth Quarter 2002)			
City	Median Sales Price (\$)	Change from Previous Quarter (%)	Change from Previous Year (%)
Kern	112,500	2.5	16.4
Arvin	76,250	6.5	43.3
Bakersfield	122,600	3.1	17.9
California City	90,700	5.2	4.4
Delano	82,800	-5.5	1.4
Lake Isabella	79,400	33.8	14.6
Lamont	71,750	-11.5	2.0
McFarland	75,750	0.9	19.0
Mojave	46,250	-36.1	-12.0
Ridgecrest	89,150	-3.4	26.4
Rosamond	123,500	4.6	23.6
Shafter	78,750	1.2	2.7
Taft	57,900	-9.6	-16.2
Tehachapi	102,900	-16.8	5.9
Wasco	83,750	1.7	-15.6

Housing Price Affordability

The index of housing affordability measures whether or not a family could qualify for a mortgage loan on a median-priced, single-family home. In calculating the index several indicators are taken into account: the median price of existing single-family homes, the prevailing mortgage rate, the monthly mortgage payment including the loan principal and interest, and the median household income. Also, the calculations assume a 20 percent down payment and a qualifying ratio of 25 percent. Hence, an index value of 100 means that a family with the median income has exactly enough income and down payment to qualify for a mortgage on a median-priced home.

In the fourth quarter of 2002, the affordability index declined by 1 percentage point from 59 to 58 in Kern County. Between the first and fourth quarters of 2002, the index fell 3 percentage points. The index plummeted 5 percentage points between the fourth quarter of 2001 and fourth quarter of 2002. This index value for the most recent quarter indicates that a family earning the median household income has 58 percent of the income necessary to qualify for a conventional loan covering 80 percent of a median-priced existing single-family home.



In spite of the recent decline in the housing affordability index, Kern County remains one of the most affordable counties of the state. According to the most recent data, Kern is the most affordable county among the major metropolitan areas of California. Kern's housing affordability index is 2 percentage points less than that of the United States, but 16 percentage points greater than that of California. In the Central Valley, Kern County's housing is more affordable than Fresno, Merced, and San

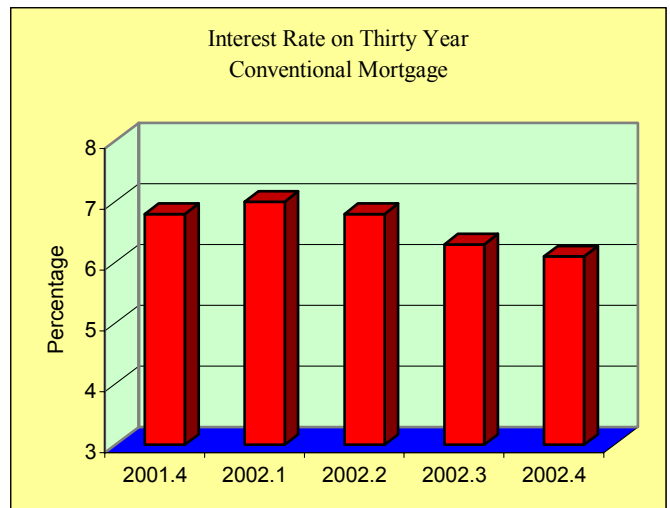
Housing Price Affordability (November 2002)	
Location	Housing Affordability Index
Unites States	58
California	30
Fresno	46
Kern	56
Los Angeles	30
Merced	34
Orange	25
Riverside	37
Sacramento	43
San Diego	22
San Francisco	14
San Joaquin	33
San Luis Obispo	23
Santa Barbara	20
Santa Cruz	20
Sonoma	22
Ventura	32

Joaquin.

Mortgage Interest Rate

Purchasing new homes is counted as residential investment in the national income account. This investment decision depends, in part, on the rate of interest charged on mortgage loans. Lower rates help investors qualify for higher loan amounts and reduce the monthly home mortgage payments. As a result, the demand for housing would tend to increase. Given the stock of housing, the short-run effect of a larger demand would be higher prices and faster sales.

In recent years, the expansionary policy of the Federal Reserve System has resulted in low interest rates. Interest rate of thirty-year conventional mortgage loans rose



(Continued on page 10)

from 6.8 percent in the fourth quarter of 2001 to 7.0 percent in the first quarter of 2002. However, the mortgage interest rate fell continually to 6.8, 6.3, and 6.1 percent in the subsequent quarters. Given the slow economic recovery, it is likely that mortgage interest rates would stay low in 2003.

Taxable Sales

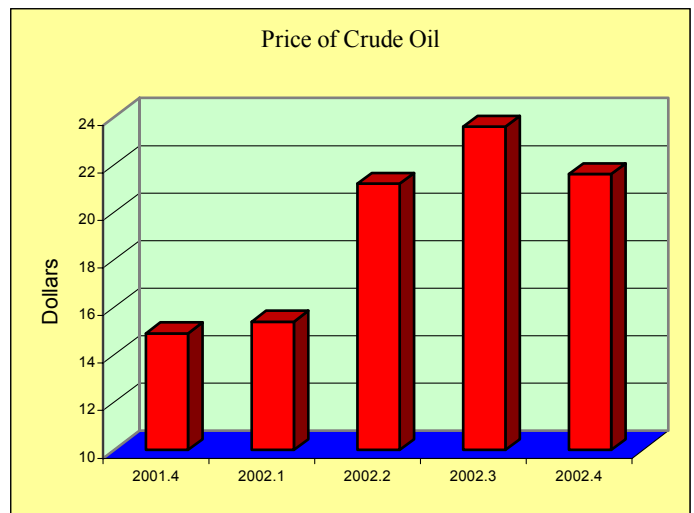
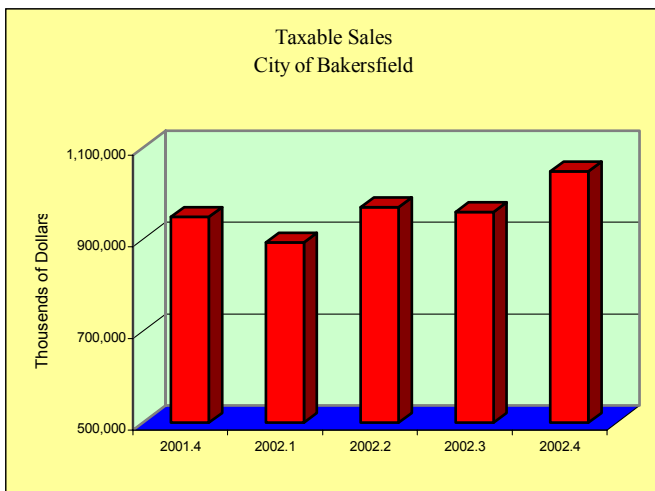
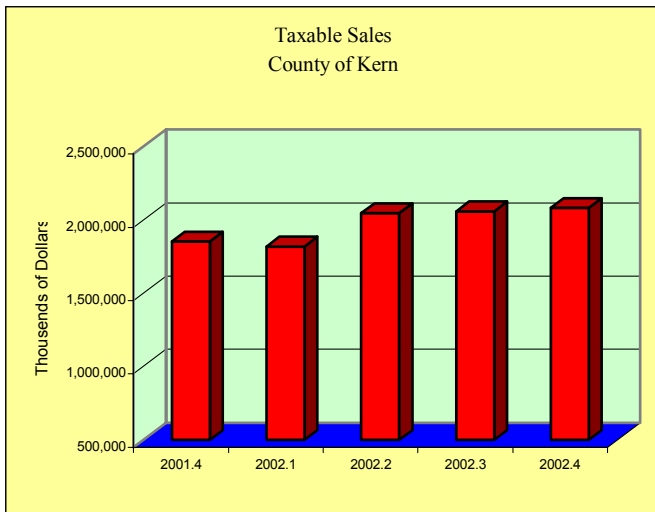
Data on taxable sales are provided by a lengthy delay of four quarters. To construct a database, I adjusted the available quarterly data for seasonal variations. Next, I applied a statistical forecasting method to generate estimates for the year 2002.

In Kern County, taxable sales declined from \$1.85 billion in the fourth quarter of 2001 to \$1.82 billion in the first quarter of 2002, but rose continually to \$2.08 billion in the fourth quarter of that year. Compared with a quarter prior, taxable sales rose by nearly \$30 million or 1.2 percent. Relative to four quarters ago, retail sales in-

creased about \$240 million or 12.3 percent. On average, the city's taxable sales are nearly fifty percent of that of the county. Bakersfield's taxable sales declined from \$929 million in the fourth quarter of 2001 to \$893 million in the first quarter of 2002, but rose continually to \$1.05 billion in the fourth quarter of that year. Compared with a quarter prior, taxable sales rose by nearly \$89 million or 9.2 percent. Relative to four quarters ago, taxable sales increased about \$119 million or 10.5 percent.

Price of Crude Oil

The price the San Joaquin Valley heavy crude oil-- updated at each posting change by date-- is averaged to calculate the monthly and quarterly prices. The quarterly average price for the San Joaquin Valley heavy crude oil has shown a significant increase in 2002. It rose continually from \$14.90 per barrel in the fourth quarter of 2001 to \$15.40 in the first quarter, \$21.20 in the second quarter, and \$23.60 in the third quarter of 2002. In the fourth quarter of 2002, the average price fell by \$1.40 to \$22.20 per barrel. Compared with four quarters ago, the price of crude oil rose by \$7.30 or nearly 49 percent.



DETERMINANTS OF DEMAND FOR HOUSING

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CSUB ECONOMICS STUDENT



Homeownership is a wise investment decision. In addition to possible price appreciation, homeowners deduct mortgage loan interest from their income tax liability. These benefits have resulted in an ever-increasing demand for housing and massive investment in the construction of new homes. Rising residential investment has contributed to economic stability in a profound way. While the economy is slowly recovering from a recession, the housing market has remained strong. Indeed, economists believe that the housing market has kept the national economy from falling into a full-blown or double-dip recession. To stimulate the economy, the Federal Reserve System has reduced the interest rate. Lower mortgage rates have given rise to a higher demand for housing. In many areas of the country, the increased demand for housing has resulted in a construction boom and higher home prices.

In this study, I attempt to explain the determinant of the demand for housing. In doing so, I have designed a model in which the number of new homes purchased (*Housing*) depends on the following variables:

1. Personal income (*Income*) determines the purchasing power of the family. We expect *Income* to exert a positive effect on *Housing* since a higher level of household income enables families to purchase homes.
2. The rate on interest charged on mortgage loans (*Interest*) has a negative impact on *Housing*. A drop in the interest rate will help households qualify for mortgage loans and hence give rise to a higher demand for housing. It is estimated that, all being equal, a one percent decline in mortgage interest rates would result in the purchase of nearly 250,000 new homes across the nation.
3. Availability of new homes is measured by housing starts with a one-year delay (*Start*). I expect *Start* to show a positive effect on *Housing*.
4. Profitability of residential investment is measured by the expected annual price increase in the housing

market. Expectation of appreciation in home values (*Price Increase*) would induce households to invest in residential units.

5. The final variable I considered was the annual unemployment rate (*Unemployment*). Researchers suggest that the expected effect of *Unemployment* on *Housing* is ambiguous. On the one hand, an increase in the rate of unemployment would result in a loss of income, which hinders household ability to qualify for mortgage loans. On the other hand, homeownership could help prolong unemployment if unemployed workers could not relocate or would require additional education and training to be hired again.

To estimate this model, I collected annual data for the 1967-2001 period. I transformed the data into natural logarithms and estimated the model by a statistical software package. As it is customary in time-series data estimation, the model suffered from the autocorrelation problem. I corrected this problem by re-estimating the model with an iterative procedure. The explanatory power of the model was 0.80, which indicated that the independent variables explain eighty percent of variations in *Housing*. As expected *Income*, *Starts*, and *Price Increase* had positive and significant effects on *Housing*. The impact of *Interest* on *Housing* was negative and significant. In this model estimation, *Unemployment* exerted a positive effect on *Housing*.

In this demand model, the estimated coefficients were elasticity measures. For example, the coefficient of *Income* was the income elasticity of demand, which indicated that for a one-percent increase in the nation's personal income, all being equal, the demand for new homes (*Housing*) increased by three-fourth of one percent. Likewise, for a one-percent drop in the mortgage rate (*Interest*), the housing demand (*Housing*) increased by one-half of one percent.

Although this model proved to be a reasonable approximation for the housing demand, it had several limitations. One could improve the results by expanding the

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EFFECT OF URBAN DEVELOPMENT ON PRICE OF HOUSING

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The effect of urban redevelopment on the price of housing is subject to controversy. While redevelopment critics and supporters alike state that redevelopment alters the price of housing and income of household in affected areas, the direction and amount of change are debatable. Critics state redevelopment policies have the effect of replacing lower- and middle-income residents with upper-income residents; hence, redevelopment tends to raise the median price of housing. In contrast, redevelopment advocates assert that redevelopment provides better and affordable homes for lower- and middle-income residents. Therefore, the median housing price tends to be lower in cities where redevelopment projects take place.

The purpose of this study is to investigate whether a change in the price of housing is related to urban redevelopment. Studies in urban redevelopment have concentrated upon single cities or a small group of cities and the redevelopment accomplishments therein. As my goal was to ascertain the possibility of a trend, I selected a sample of sixty-three urban areas in the United States including eleven cities in California: [Bakersfield](#), [Merced](#), [Oakland](#), [Sacramento](#), [San Diego](#), [San Francisco](#), [San Jose](#), [San Luis Obispo](#), [San Mateo](#), [Santa Barbara](#), and [Stockton](#). In some of the sample cities, redevelopment agencies carried out plans for urban revitalization, which included housing construction. In other cities, however, urban redevelopment plans were nonexistent, or not yet mature.

Typical redevelopment plans include housing as one of the sub-areas of urban revitalization. The plan for downtown development normally includes maintaining density levels to retain area vitality and improving a “downtown look” with street level activity and multi-functional business establishments. Several cities had implemented successful redevelopment plans.

The City of Denver’s Lower Downtown (LoDo) district was a shambles of unused industrial and warehouse buildings centered on the Union Pacific rail yard. Modern truck shipping, along with decreasing import to assembly-line plants ate into LoDo’s activities, and by the latter half of the previous century, liquor stores became the area’s most prominent resource. In 1988, the Wynkoop Brewery, a brewpub funded by private developers with low cost public loans, opened in the LoDo area. Building space was about

\$1 per square foot. As Wynkoop struggled and eventually prospered, copycat businesses entered and flourished. Building space is currently over \$100 a square foot in the LoDo district.

The City of Oakland’s Community and Economic Development Agency took a proactive look at the key elements in successful redevelopment. This review produced a set of objectives for the revitalization of the city: long term commitment, effective partnerships, investment in blighted and disadvantaged areas, established community organization involvement, and coordinated city services are all required parts of the revitalization process. Focusing on those specifics allowed Oakland to revitalize the entire city, and renewed business confidence in the area.

San Francisco has been undergoing urban renewal almost since its initial boom during the Gold Rush era. As the materials and people moved into the area to partake of the wealth available in fledgling primary sector industries such as mining, agriculture, fishing and timber the city shot up, with distinct financial, wholesale and retail districts well established by 1875. The 1906 earthquake and fire leveled downtown. The city was rebuilt from the ashes, not stopping until the Great Depression. In 1959, a wave of skyscrapers began going up, again revitalizing downtown while adding such notables to the skyline as the fifty-two-story Bank of America World Headquarters and the unique forty-eight-story Transamerica Pyramid. Redevelopment continues today with the South of Market district, the Mission Bay project, and Candlestick Park.

In recent years, the City of Bakersfield has completed several revitalization projects including the Chester, Union and, South Union Avenues, the Convention Center and Centennial Garden, and other main streets in that area. The City Council has allocated funds to jump-start economic activity in southeast Bakersfield in addition to revitalizing the Lakeview (now renamed after Dr. Martin Luther King, Jr.) neighborhood. Another major project is Baker Street in Old Town Kern where there are opportunities for mixed land use including a housing and commercial project in a four-block area. Bakersfield’s newest downtown project will encompass about 70 craftsman-style cottages on 21st, across from Central Park.

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To investigate the effect of urban redevelopment on the price of housing, I designed a statistical model in which the dependent variable, **Housing Price** defined as the median price of housing, was dependent upon three variables:

1. **Population**: population of urban area
2. **Income**: change in the level of personal income
3. **Redevelopment**: implementation of urban redevelopment plans.

Here, **Redevelopment** was a binary variable that took the value of one for cities that have redeveloped with housing as a component of the redevelopment plan, and zero for cities that have not had substantial housing redevelopment. The main sources of data were the Census Population, Bureau of Economic Affairs, and Census Financial Housing Characteristics. I employed the Weighted Least Squares method to estimate the model, using **Population** as the weight.

The independent variables explained over eighty percent of the variations in the median housing price. The effect of **Income** on **Housing Price** was positive and statistically significant. This effect indicated that an increase in the level of personal income would give rise to a higher demand for residential units, thus causing home prices to appreciate. In contrast, the effect of **Redevelopment** on **Housing Price** was significantly negative. All being equal, the model predicted that **Redevelopment** reduced **Housing Price** by nearly \$40,000 in this sample of sixty-three cities. The negative effect of **Redevelopment** on **Housing Price** supported the assertion that urban redevelopment increases the supply of

affordable housing for low- and middle-income residents. On average, these residential units tend to be priced less than the remainder of the city's housing stock.

Redevelopment zones require continuous nurturing and are subject to fluctuations during political cycles and changes in civil service personnel assignments. Furthermore, redevelopment laws are controlled by states. They must comply with federal guidelines in order to receive redevelopment funds. However, these guidelines are broad and allow local administration. Further studies incorporating additional data could help throw more light on the effect of redevelopment policy on home ownership.

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time-period, using quarterly data, enhancing the model to improve its explanatory power, and resolving the **Unemployment-Housing** causality issue. It would be also interesting to see if there has been a significant structural shift in the model during the recession and slow recovery of the past three years.

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ECONOMIC CONTRIBUTIONS OF KERN SCHOOLS FEDERAL CREDIT UNION

NORMAN RANALLO
SENIOR VICE PRESIDENT AND CHIEF
FINANCIAL OFFICER, KSFCU

Kern Schools Federal Credit Union (KSFCU) is proud of the strong relationship it has built with its members over the past sixty-two years. What began as a one-person operation using a shoebox to hold all records and assets has grown to the largest financial institution headquartered in Kern County with over one billion dollars in total assets and 130,400 members. This growth is accomplished by serving what the members expect: friendly environment, lower interest rates on loans, higher dividends on savings, and comprehensive and innovative service. KSFCU achieved economic vitality by focusing on its mission: [building a lifetime partnership with members through exceptional service and quality financial products.](#)

As a large and growing financial institution, KSFCU makes significant contributions to the local economy. It provides direct benefit in a number ways: payment of wages and salaries, purchase of supplies and services, and expenditure on construction and equipment. In 2002 alone, KSFCU spent nearly \$81.5 million directly in Kern County, which consisted of \$12.2 million in wages and salaries, \$58.6 in supplies and services, and \$10.7 million in construction and equipment. The supplies and services spending included \$25.4 million in dividend transfers. In addition, KSFCU made 11,620 new loans totaling \$403.8 million. These loans were made to purchase homes, automobiles, and household appliances for Kern County residents from Kern County businesses.

KSFCU has achieved significant growth in all areas of business. In 2002, its total assets have increased from \$925.8 million to over \$1 billion. It increased employment from 325 to 400 and membership from 119,800 to 130,400. Currently, KSFCU has total loans outstanding in the amount of \$825.1 million of which 70 percent or \$574.5 million are in consumer loans. Nearly 88 percent of these loans are automobile loans. For over a decade, KSFCU has been the leading lender of automobile loans in Kern County, surpassing such traditional national lenders as GMAC, Ford Motor Credit, and Bank of America.

Home loans continue to increase in part due to low mortgage rates that encourage residential investment and mortgage loan refinancing. KSFCU has been very active in the mortgage

lending business. Over \$130 million in new real estate loans were booked during 2002. At the year-end, there were \$298.8 million in real estate loans serviced by its Home Loan Center. Interestingly, refinancing has amounted to 88 percent of all new mortgage loans. While refinancing, borrowers usually take out additional cash as a part of the loan to make additional purchases or pay-off debts.

The offering of competitive deposit products is the key to being a successful financial institution. The latest California Market Share Analysis published by Sheshunoff Information Services notes that Bank of America holds the largest market share of deposits in the county with 18.4 percent or \$925.9 million. KSFCU is ranked second at 15.5 percent or \$780.8 million. The noteworthy aspect of these relative market shares is that Bank of America deposits also include corporate and public fund deposits, whereas KSFCU deposits consist solely of consumer funds.

It can safely be said that 2002 has been an exciting year for KSFCU and Kern County! The credit union has opened two new branches and created 75 direct jobs in the local economy. There are now 10 branches and over 50 ATM locations to serve residents of the county. The new Delano branch expanded from a limited service express facility to a full service branch. The new 5,500 square foot facility not only increased the level of member service, greater convenience and efficiency, but also represents KSFCU's increasing role in northern Kern County. With seventy percent of the population in Delano being Hispanic, all employees at the branch are bilingual. The new branch has additional staff, two walk up ATMs which will allow members to conduct various transactions 24 hours a day, 7 days a week. This new branch provides service to an "underserved" community, expanding our membership base and helping us provide service to all consumers who fall within the field of membership. KSFCU also added a full service ATM at Tehachapi in June 2002. This ATM machine will allow Tehachapi residents to make deposits, withdrawals, transfers, inquires, and loan payments. Future plans are to eventually expand to an express branch within the next three years.

Although KSFCU has grown to over 130,000 members, primary attention is focused on maintaining strong member service. There is a credit union motto, "**Not for Profit, but for Service.**" Service is what sets credit unions apart from other structures of financial institutions. Today financial services, rates, and banking convenience provided by financial institutions are increasingly similar to each other. There is virtually no discernable product differentiation a credit union can look to that will *create and retain* members, except for "service." KSFCU thrives on providing the **highest quality service** in the marketplace and improving the financial well being of its members. KSFCU deems "service" as the most cost-effective method of differentiating credit unions from banks. KSFCU has a comprehensive training program that every employee must complete. This training program instills a member-centered mindset that empowers the staff to become motivated and dedicated to meeting the financial needs of its members.

ECONOMIC IMPACTS OF JOB LOSS IN TULARE COUNTY



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Last year, Paul Saldana, President of the Tulare County Economic Development Corporation (TEDC), asked for an analysis of the impacts of jobs lost in Tulare County. Although losing companies and jobs is a common occurrence in most areas in today's economy, 2001 was a significant year for Tulare County. While there may have been more, TEDC identified 18 companies that moved, downsized, or went out of business in that year, accounting for 992 lost jobs. Mr. Saldana wanted to quantify the impacts of the loss of these jobs as a measure of the offset against the future TEDC program to create jobs and reduce unemployment for the area.

A linear input/output model was constructed to show the economic impacts of the identified jobs lost. The loss of income for the area is calculated by multiplying the numbers of lost jobs by their respective pay rates. To get an average pay rate, each of the eighteen companies was matched to its NAICS code with its associated employee average pay-rate from the 2000 County Business Patterns. These were weighted by the numbers of employees and increased from 2000 to 2001 by a ten-year trend inflation factor of 2.7 percent, which yielded an average of \$32,294 as shown in Table 1. Thus, the loss of

these 992 direct jobs with the above average pay rate resulted in a loss of over \$32 million in direct employee income.

For the most part, these 992 lost jobs were "primary" or direct in that they produced a product that is sold outside of the county in return for monies that are returned and accumulated in the county, thereby increasing the wealth of the community. Likewise these primary employees generated "secondary" or indirect employment in service, retail trade, construction, and government that led to a balance in the local economy. The loss of these primary jobs then resulted in an excess of secondary jobs that were also lost. The Regional Input-output Modeling System (RIMS) multipliers quantify this primary-to-secondary employment connection. Again in Table 1, the California RIMS multipliers were associated by industry and weighted by the number of jobs lost to get an average that was then reduced by 35 percent to account for supplier deficits at the local level. In this case, each primary job lost caused a concomitant loss of 1.1 secondary jobs. Thus, the loss of 992 primary jobs caused an additional loss of 1,077 secondary jobs as the local economy adjusted. The secondary jobs were assigned

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TABLE 1						
JOB LOSS CALCULATION OF MULTIPLIERS & AVERAGE PAY						
CALIFORNIA						
COMPANY NAME	LOST JOBS	INDUSTRY DESCRIPTION	RIMS MULTIPLIER	NAICS CODE	CBP00 AVG PAY	
1	May Flower	40	TRANS SRVC	1.5119	484	\$37,103
2	Standard Register Co.	221	MFG ASSY	2.9065	333	\$32,194
3	Visalia Citrus Packing Gr.	64	FOOD PROC	3.8996	311	\$37,291
4	Sierra Power Corporation	10	UTILITY	5.1316	22	\$60,599
5	PSI-Tronix Technologies	33	INSTR TECH	2.472	31-33	\$30,692
6	Lumber Jack	27	RETAIL	1.6199	44-45	\$19,087
7	Quality Stores Inc. - FISCO	12	RETAIL	1.6199	44-46	\$19,087
8	Butler Manufacturing	38	MANUFACT	2.9065	333	\$32,194
9	Mid-State Laboratory	8	HEALTH SRVC	1.8638	62	\$26,425
10	Stanley Fastening Systems	21	MANUFACT	2.9065	333	\$32,194
11	C & S Distributing Co.	43	WHLS DISTR	2.0908	42	\$30,259
12	House 2 Home	95	CONSTRUCT	3.2799	23	\$29,088
13	Alta District Hospital	150	HEALTH SRVC	1.8638	62	\$26,425
14	Nationwide Insurance	9	INSURANCE	1.8705	52	\$34,399
15	Gang-Nail Truss	31	CONSTRUCT	3.2799	23	\$29,088
16	Pandol Bros.	58	WHSL DISTR	2.0908	42	\$30,259
17	Rayo Packing	72	FOOD PROC	3.8996	311	\$37,291
18	Cigna	60	INSURANCE	1.8705	52	34399
TULARE COUNTY JOB LOSS TOTAL	992	TOTAL	2648.6928	TOTAL		31,203,163
LOST JOBS WEIGHTED AVERAGE RIMS P > T MULTIPLIERS			2.6701	AVERAGE 2000 PAY WTD AVG =		31,455
ADJUSTED FROM P > T TO P > S (-1) =			1.6701	2000-TO-2001 INFLATION ADJ =		2.67%
ADJUSTED FOR SUPPLIER DEFICITS =			-35%	2001 JOBS LOST PAYRATE =		\$32,294
WEIGHTED AVERAGE RIMS MULTIPLIER FOR JOBS LOST =			1.0855	AVERAGE 2001 PAY COUNTYWIDE =		\$23,946
SOURCE: TULARE EDC (FOR 2001) (David H Rieger: DRIEGER@RMRESOURCE.COM)						

the average worker pay in the county of \$23,946. This yielded an additional loss of about \$25.8 million in indirect income. Combining both the primary and secondary effects yields a total impact of 2,069 jobs lost at an average pay of \$27,949. This represents an increase in unemployment of 1.2 percent when compared to the workforce, and a reduction of \$57.8 million in income.

By using the spending pattern percentages from the BLS Consumer Expenditure Survey, the contraction impacts can be quantified for both the primary and secondary jobs lost on each of the various sectors of the local economy. This is shown in Table 2. Contraction in numbers of businesses (101), bank deposits (\$34.3 million), commercial space (703 thousand square feet), commercial investment utilization (\$26.7 million), and local government revenues (\$11.4 million) is calculated in a similar fashion using the decrement in employment relative to their totals for the area.

Changes in housing and population behave in a different way. Housing is linked to population and changes in affordability. When a higher-than-average paid worker loses his job, he must find another or migrate from the area to a community where employment may be obtained in order to maintain an accustomed lifestyle for his family. While net in-migration is calculated historically to be 23 percent for companies recruited to Tulare County, domestic out-migration under circumstances of these jobs lost would be much higher. Given the unemployment rate of 15.4 percent in the county in 2001, replacement

employment at par for the lost-job employee would have a low probability. Thus, a 50 percent out-migration factor was used for these employees and their families. Using the appropriate ratios of employees to population, 2,634 people are estimated to have moved from the area. This resulted in 843 houses of various types that were not built, sold, were discounted, or left on the market for an extended time due to this job contraction. The value of this housing is estimated to be \$86.5 million.

It should be noted that this analysis is for one year and that the employee expenditure losses would continue year-to-year into the future depending upon the permanency of the job loss. Will these jobs be replaced? If not, the impacts of this analysis may be compounded in the future, and a downward spiral in the local economy could result as out-migration of population and skilled workers could continue and the community could become a less desirable place to live.

In conclusion, the loss of 992 primary jobs when combined with the indirect losses had an important negative impact on Tulare's economy in terms of employment levels, incomes, bank deposits, housing, commercial investment, and the purchases of a full range of goods and services. A community seeking to improve its quality of life relies heavily upon its ability to attract and retain well-paying, primary jobs in excess of those jobs lost. It is the role of the TEDC to address these issues with positive forward programs on behalf of the community. The relative success of the TEDC in this effort depends on the community leadership's ability to support and become involved with the TEDC in formulating and implementing positive economic development programs.

	BASE YEAR	PRIMARY	Multiplier	SECONDARY	TOTAL
JOBS LOSS	2001	-992	1.086	-1,077	-2,069
INCOME AVERAGE EMPLOYEE		\$32,294		\$23,946	\$27,949
UNEMPLOYMENT IMPACT	15.4%	0.4%		0.4%	14.7%
POPULATION	370,655				368,021
Decrement (If Jobs Not Replaced)		-1,263		-1,371	-2,634
BUSINESSES LOST		-18		-83	-101
BANK DEPOSITS		-\$16,400,000		-\$17,800,000	-\$34,300,000
Net Income Decrement	1.10%	-180,000		-200,000	-380,000
HOUSING UNITS NON-UTILIZED		-404		-439	-843
Residential Real Estate Investment Lost		-\$41,500,000		-\$45,000,000	-\$86,500,000
COMMERCIAL SPACE NON-UTILIZED	340 = Ft/Employee	-337,280		-366,129	-703,409
Commercial Investment Unused	\$38 = \$/Ft	-\$12,816,640		-\$13,912,906	-\$26,729,546
EMPLOYEE INCOME LOST FROM JOBS	100.0%	-\$32,035,000		-\$25,787,000	-\$57,822,000
EMPLOYEE EXPENDITURES	81.4%	-\$26,077,000		-\$20,991,000	-\$47,068,000
Auto Payments		-2,729,000		-2,196,000	-4,925,000
Clothing & Apparel Stores		-1,438,000		-1,157,000	-2,595,000
Educational Institutions		-456,000		-367,000	-824,000
Electric & Gas Utilities		-862,000		-694,000	-1,557,000
Entertainment & Recreation Facilities		-1,405,000		-1,131,000	-2,536,000
Furniture & Appliance Stores		-1,185,000		-954,000	-2,139,000
Grocery Stores		-2,263,000		-1,822,000	-4,084,000
Health Care Providers		-814,000		-655,000	-1,470,000
Home Mortgage Holders (Interest only)		-1,918,000		-1,544,000	-3,462,000
Insurance Agents (Home, Auto, Health, Life)		-1,939,000		-1,561,000	-3,501,000
Professionals (Attys, Accts: Non-Commercial)		-104,000		-84,000	-188,000
Rental Housing		-1,479,000		-1,191,000	-2,670,000
Restaurants		-1,636,000		-1,317,000	-2,953,000
Telephone/Communication Providers		-639,000		-514,000	-1,153,000
Water Utility		-215,000		-173,000	-389,000
Misc Retail, Product & Service Providers		-6,995,000		-5,631,000	-12,622,000
LOCAL GOVERNMENT REVENUES LOST		-\$5,461,000		-\$5,928,000	-\$11,388,000
(SOURCE: David H Rieger: DRIEGER@RMRESOURCE.COM)					