CALIFORNIA STATE UNIVERSITY, BAKERSFIELD SCHOOL OF BUSINESS AND PUBLIC ADMINISTRATION

KERN Economic Journal



Volume 8 Issue 1

2006 First Quarter

Award of Merit from the California Association for Local Economic Development



www.csub.edu/kej/

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.

We wish to gratefully acknowledge the Journal sponsors:



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.

Editorial Board:

Brent Dezember, President, StructureCast Mark Evans, Professor of Economics and Associate Dean, School of Business and Public Administration, CSUB Abbas Grammy, Professor of Economics, CSUB Jose Guerrero, Attorney, Klein, Denatale, Goldner, Cooper, Rosenlieb & Kimball, LLP Henry Lowenstein, Professor of Management and Dean, School of Business and Public Administration, CSUB Michael Olague, Vice President, Rabobank Michael Stepanovich, Director, Public Relations, CSUB

Publisher and Managing Editor:	Abbas Grammy, CSUB (661/654-2466)
Design & Production:	Sylvia O'Brien, O'Brien Images (661/664-4591)
Content Editor:	Emerson Case, CSUB

INSIDE THIS ISSUE:

Cover Page	
Photo: 2005 CSUB Jazz Festival, CSUB Amphitheater P	hotographed by: Mick O'Brien
Economy at a Glance!	2
<i>The CEO Profile</i> Mr. Patrick Collins, Kern Economic Development Corporation	
Opinion Surveys Kern County Business Outlook Survey Bakersfield Consumer Sentiment Survey	
<i>Feature Story</i> The Future of Kern County's Economy	
Business Education Knowledge Economy Management Lessons	
Tracking Kern's Economy Economy Labor Market Housing Market Stock Market. Commodity Prices	
Econ Brief! University Helping the Community Steep Drop in California's ARMs Use Rising Gasoline Prices	
Book Review A Thousand Barrels a Second	

California State University, Bakersfield

The 25th Annual *Enterprise College: Economics for Future Leaders*

- A summer economics course for high school students
- Earn college credit in The Economic Way of Thinking
- *Receive high school credit for the senior year economics course*

June 19- July 7, 2006

For a program brochure contact: agrammy@csub.edu

ECONOMY AT A GLANCE!

ABBAS P. GRAMMY PROFESSOR OF ECONOMICS, CSUB

In the first quarter of 2006, the United States economy grew at an annual rate of 4.8 percent, the strongest in two and one-half years. This rate was more than twice the 1.7 percent rate of the previous quarter. Factors contributing to this rapid growth were strong consumer spending, rising business investment, and a slower inflation rate.

The Gross Domestic Product increased \$133.1 billion; the rate of unemployment fell to 4.7 from 4.9 percent; and production of manufacturing products expanded 5.4 percent per year. While consumers continued to acquire more debt, the cost of living increased at a slower rate of 2.2 percent. In the meantime, the cost of production declined at a sharp rate of 5.9 percent and the cost of employment climbed at a slower pace of 2.4 percent. The Index of Leading Economic Indicators gained 1.6 percentage points, suggesting continued growth in the near future.

In California, the rate of unemployment declined sharply from 5.2 to 4.9 percent. The state's farm economy added 14,230 jobs and non-farm industries created 100,870 positions.

Kern's economy continued to improve. The economy expanded at an annual rate of 2.4 percent, adding \$90 million of personal income, and personal income per worker increased \$480. Local households conveyed greater confidence in their financial conditions as the Bakersfield Consumer Confidence Index increased 2 percentage points to arrive at 121. In the meantime, the Kern County Business Outlook Index edged 3 percentage points lower to reach 137. This change in the index value indicated that managers were slightly less optimistic about local business conditions.

The county's employment picture became somewhat dimmed. The rate of unemployment rose 1.5 percent to reach 8.8 percent. The rate of unemployment averaged 6.2 percent in Bakersfield, 5.0 percent in Ridgecrest, and 6.9 percent in California City, all below the county average. The county's labor force was reduced by 6,000 members; total employment declined by 10,300; and total unemployment increased by 4,300. While agriculture cut 10,645 paid positions, the informal market - including self-employed labor and those working outside the county – lost 3,650 jobs. In contrast, nonfarm industries added 3,985 jobs. Government agencies added 1,735 full-time equivalent jobs and the private-sector added 2,250 positions.

Kern County's housing market slowed considerably. The number of residential units sold in the county dropped from 1,482 to 1,233 and the median sales price increased only 0.5 percent to reach \$269,700. The median housing price appreciated only 1.3 percent in Bakersfield, 0.9 percent in California City, and 0.4 percent in Ridgecrest. In contrast, Frazier Park, Lake Isabella, Shafter, and Wasco recorded double-digit price appreciation rates. With rising mortgage interest rates, the monthly number of permits issued for the construction of new privately-owned dwelling units decreased from 567 to 526. The housing affordability indicator remained unchanged at 7.3. Failure to make mortgage loan payments led 406 homeowners to file notices of loan default.

Commodity prices had a general falling trend. While the price of San Joaquin crude oil rose \$1.30 per barrel, the average price of regular gasoline in the Bakersfield metropolitan area dropped 4 cents per gallon, and the unit price of California's Class III milk edged \$1.62 lower. The price that farmers received for their outputs remained unchanged, whereas the price that farmers paid for their inputs rose 2 percentage points. As a result, the disparity between output prices farmers received and input prices farmers paid continued to widen.

The composite price index of the top five *market-movers* in Kern County rose 20 percentage points in the first quarter of 2006 and 35.4 percentage points since the first quarter of 2005. These publicly traded companies were Berry Petroleum (BRY), San Joaquin Bank (SJQN), Granite Construction (GVA), Occidental Petroleum Corporation (OXY), and Tejon Ranch Company (TRC).

THE CEO PROFILE!

Introduction

P atrick J. Collins is President and Chief Executive Officer for Kern Economic Development Corporation.

Patrick Collins has a Bachelor of Science Degree in Marketing from Oregon State University. His prior business experience began with CB Richard Ellis in 1980 in sales and marketing activities with a focus in office building leasing, followed by major landlord and institutional representation, then acquisition and disposition of investment properties. He became Managing Officer of CB Richard Ellis, Bakersfield Office, in 1995, and was named Managing Director in April of 1998, for the newly created Southern California region. In his management role he led the Bakersfield Team to record activities and achievements. He has led and participated in many teams for strategically executing plans and achieving goals for a wide variety of clients. Consistently a top producer in his market, he also achieved national recognition by achieving The Colbert Coldwell Circle, top producers nationwide.

Patrick Collins has served on many boards including The Golden Empire Gleaners, St. Francis Foundation, Rotary Club and Bakersfield Gunners Soccer Club. He is currently serving as a Board Member of Bakersfield Chamber of Commerce, Mid State Development Corporation, Workforce Investment Board and serves as Chairman of the California Central Valley Economic Development Corporation.

For fun, he has jumped out of airplanes (with a parachute), attended Russell School for Race Car Driving, run a half marathon, bungee-jumped, ridden in a 50 mile bike ride in Baja California and windsurfed in waters from Hawaii, to Mexico to the Caribbean. More frequent activities include tennis, golf, rollerblading and most recently taking up snowboarding, an acquired taste from his teenage kids Sean and Kelsey. He is married to Terri (a nouveau snowboarder as well) who is a consistent top producer at Coldwell Banker.



Interview:

What is the mission of Kern EDC?

Kern Economic Development Corporation is the lead agency in Kern County for job creation and economic development activities. The mission of Kern EDC is to stimulate a diversified and strong economic climate in Kern County, through recruitment of new business opportunities and assistance in the retention and expansion of existing businesses.

How does Kern EDC go about achieving its mission?

We execute our mission through the recruitment of new business, and providing a variety of assistance to existing business to help them grow and be successful.

What are the main sources of funding for Kern EDC operation?

The Kern EDC was established eighteen years ago as a private, non-profit company 501(c)-6. It is a private-public partnership that is funded and supported by Kern County, many cities and educational agencies, and over 180 private companies. In addition, we do seek out other funding sources, such as grants, to help support new initiatives and special projects.

We are just wrapping up a major capital campaign to enhance our revenue, and the community, from campus to city to boardroom, has stepped up in a major way to support economic development.

What are some of the success stories of Kern EDC?

Our successes include many business relocations to Kern County. They also include a long list of partners and teammates working together to make deals happen. A few of the high profile transactions included assistance in the siting of the 1.7 million square foot IKEA and Target logistics facilities; the \$100 million dollar expansion of Dreyer's Ice Cream; and several other manufacturing and logistics related businesses.

CEO Profile (Continued from page 3)

We have also worked successfully with a varied array of small business from aerospace to agriculture by providing specific resources in the information, workforce, and financing arena. Beyond the business growth, we have also been successful in educating our community about our economy through our Economic Summit. In partnership with CSUB and the Bakersfield Chamber of Commerce, the event showcases many of our business leaders, along with the "State of the Economy" information.

What are some of the on-going projects of Kern EDC?

Other projects and activities are always in play, based on our core mission of finding ways to support and grow business. We are coordinating a workforce network with businesses and all of our education and training entities, to enable business to more easily access the potential workforce. The Kern EDC is partnering on a new initiative with the workforce investment board to better coordinate our supportive activities. We've begun work on a renewable energy cluster to expand both the use and development of renewable technologies from solar to ethanol. We are working closely with Bakersfield College to develop business input in creating curriculum in the food processing and logistics industries.

These are just a few examples as we continue to search out the best practices in the industry for providing support and being a leader in the development of Kern County's economy.

Econ Brief!

University Helping the Community

Henry Lowenstein

Dean, School of Business and Public Administration, CSUB

The School of Business and Public Administration houses the Volunteers in Tax Assistance (VITA) program. I am pleased to announce that Professor Jim Patten and his team of student and faculty volunteers, working with Jim St. Amour of the Internal Revenue Service, set a new record again this 2006 tax season in our VITA program.

The VITA is a joint venture between non-profit organizations, the IRS, and the California Franchise Tax Board. The program is staffed by 28 accounting students who volunteer their time over 10 weekends during the tax season. Tax returns are completed in the VITA lab, which has the capacity to electronically file tax returns. The electronic-filing of tax returns significantly reduces paperwork and expedites refunds to the taxpayers.

This year, the VITA team completed 789 tax returns compared with 743 last year. Two of the key numbers from the program are the *Earned Income Credit* and the *Total Refunds Generated*. The first number helps low-income taxpayers and the second puts money back into the taxpayer pockets and our area economy.

Earned Income Credits	\$306,816
Total Tax Refunds	\$866,342

Using the multiplier effect of taxpayer spending, the VITA helps add over \$3.4 million to the local economy. Other key statistics of the VITA are:

	2006 Total	Increase from 2005
Adjusted Gross Income	\$19,064,584	5.0%
Earned Income Credits	\$306,816	4.0%
Tax Refunds	\$866,342	4.0%
Taxable Income	\$9,698,324	2.0%
Tax Liability	\$1,135,832	2.0%

The VITA serves primarily low-income taxpayers whose refunds are spent immediately in the economy. The average income level of taxpayers serviced by VITA is shown below:

Single	\$15,824	Married, separate	\$18,910
Married, joint	\$41,961	Head of Household	\$22,928

The contribution of VITA in assisting low-income taxpayers was recognized by Congressman Bill Thomas in a letter to Professor Patten. Likewise, I want to congratulate Jim Patten, our student volunteers, Jim St. Amour, and members of the accounting faculty who helped the VITA for their important community service.

KERN COUNTY BUSINESS OUTLOOK SURVEY

ABBAS P. GRAMMY PROFESSOR OF ECONOMICS, CSUB

ern County's businesses are still confident about local economic conditions. Nevertheless, their optimism has slightly weakened relative to the previous quarter. The Business Outlook Index decreased from 140 in the fourth quarter of 2005 to 137 in the first quarter of 2006. Compared to one year ago, business managers were more optimistic as the index value edged 9 percentage points higher.

The Kern County *Business Outlook Index* is constructed from responses of managers in a randomized telephone survey. The intent of the survey is to provide privateand public-sector managers with primary data that would help them make more informed decisions. The purpose of the survey is also to identify factors that have helped brighten or darken the local business outlook. Valuable insight may be gained by comparing the index with the recent employment and financial trends of individual organizations.

In addition to the overall index, we calculated two subindex values. The *Index of Current Conditions* remained unchanged at 135. The *Index of Future Conditions* lost 5 percentage points, falling from 145 to 140. Results from these sub-index values suggest that although survey participants are equally confident about current conditions, they feel less optimistic about the near future.



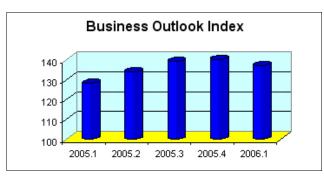
Employment Outlook – Sixty-three percent of interviewees reported that the number of jobs in their companies stayed constant, but 32 percent said more jobs were available in their companies this quarter. Looking ahead, 73 percent perceived that the number of jobs would stay constant, whereas 20 percent expected their companies to hire more workers next quarter.

Financial Outlook – Thirty-three percent of survey respondents reported that financial conditions (sales and profits) of their companies were constant this quarter, whereas 60 percent indicated increased profits and sales. Looking ahead, 21 percent expected financial conditions of their companies to remain constant, but 71 percent anticipated increased sales and profits next quarter.

Industry Outlook – Forty-five percent perceived that employment and general business conditions of their industries remained the same as the previous quarter, but 41 felt improvements. Looking ahead, 47 percent anticipated that employment and general business conditions of their industries would be unchanged next quarter, but 48 percent expected progress.

Economic Outlook – When asked about Kern County's economy, 50 percent of interviewees perceived no im-

(Continued on page 6)



	Current Quarter	Previous Quarter	Four Quarters Ago
Index of Business Outlook	137	140	128
Index of Current Business Condition	135	135	133
Index of Future Business Condition	140	145	123

Business Outlook (Continued from page 5)

provement this quarter, but 40 percent felt conditions improved. Forty-seven percent felt that economic conditions would be unchanged next quarter and 47 percent anticipated that the economy will get better.

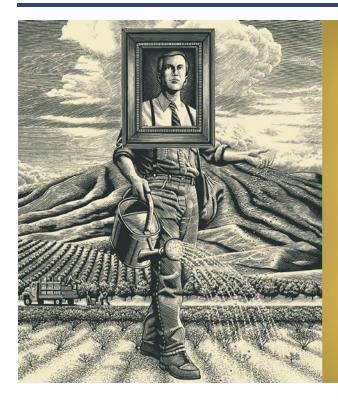
Factors Affecting Business Outlook – We asked business managers to identify factors that have affected employment and financial conditions of their companies. They felt the following factors brightened the local business outlook:

- Population and economic growth
- Continued residential and commercial construction

- Greater tourism and business traveling
- Increased government outlays

However, survey respondents expressed the belief that several factors darkened the local business outlook:

- Higher prices for oil and gasoline
- New government regulations
- Higher insurance premiums for workmen's compensation
- Rising mortgage interest rates



Nurturing business relationships...that's what we do.

For more than 50 years, the law firm of Klein, DeNatale, Goldner, Cooper, Rosenlieb & Kimball, LLP has been serving clients in the San Joaquin Valley. We've become the premier business and transactional law firm by sowing the seeds of success—every day.

We've sown devotion and honesty...we've reaped trust. We've sown experience and knowledge, we've reaped respect.

SOWING AND REAPING

From sophisticated business transactions to complex litigation to emerging issues in agriculture and the environment, from regulatory and tax counsel to mergers, acquisitions and property rights—we provide comprehensive legal services to a broad range of clients.

Whether you're a multi-national corporation, a small business owner, or an individual in need of clear, competent, and innovative answers, put the law firm of Klein, DeNatale, Goldner to work for you.



4550 California Avenue, 2nd Floor, Bakersfield, CA 93309 • (661) 395-1000 www.kleiniaw.com

Do you listen to Valley Public Radio? Your clients do.

Programming is our cornerstone. Associate your business with quality.

All Things Considered Morning Edition NPR News The Thomas Jefferson Hour The Infinite Mind Clearly Classical



To discuss on-air, print, and event visibility opportunities, contact Corporate Marketing at 800.275.0764.

BAKERSFIELD CONSUMER SENTIMENT SURVEY

ANDREW KARNOWSKI Applied Economics Student, CSUB

The *Bakersfield Index of Consumer Sentiment* increased 2 percentage points to 121 in the first quarter of 2006 from 119 in the fourth quarter of 2005. The index increased in two consecutive quarters after a sharp decline in the third quarter of 2005. While the current index value is 25 percentage points less than the unusually high mark of one year ago, it remains 8 percentage points higher than its historical average.

Kern County's increased optimism matches the national trend. The University of Michigan's Consumer Sentiment Index depicts a strong increase in consumer optimism following a lull in 2005.4. The Michigan index grew 7.8 percent during the first quarter, rising from 82.4 to 88.9, but continues to lurk 6 percent below average. While the two indices cannot be directly compared, they both illustrate an inspiring increase in consumer attitude. On the heels of 2005, a year of turbulent economic and political conditions, Kern consumers are better off than the whole of national consumers, and are optimistic of the economic conditions to come in 2006.

The *Bakersfield Index of Consumer Sentiment* is constructed from the responses of households in a randomized telephone survey. The intent of the survey is to assist business leaders in making decisions regarding local and national economic trends. Valuable insight may be gained by comparing the index with the recent sales trends of individual businesses. The index also enables investors to measure the potential for economic growth in Kern County.

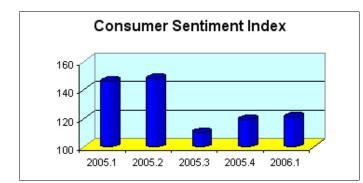
The index is disaggregated into two sub-indexes. To measure recent trends in consumption and sentiment, researchers investigate the level of discretionary expendi-



ture by households, their financial status relative to one year ago, and their perceived changes in the financial conditions of Kern County residents. During the first quarter of 2006, this sub-index climbed to 120, up from the previous measure of 118, and only four points below last year's value. The *Index of Current Conditions* appears to be somewhat stable. Fifty-five percent of residents reported being financially better off now compared to one year ago, while only 17 percent said they were worse off.

To assess economic expectations of the future, households are asked to predict their family's financial situation one year from now, and if they believe now is a safe time to use savings or incur debt for the purchase of expensive items. Residents are also asked to reflect upon the sentiment of their acquaintances regarding the next year. The *Index of Expectations* rose slightly from 120 in the fourth quarter of 2005 to 122 in the first quarter of 2006. This increase in the index value may be attributed to the substantial swell of respondents that believe now is a safe time to purchase costly items. Twenty-six percent responded positively to this question, compared to only 18 percent in the previous quarter. This information is an indicator of improved optimism.

Overall, Kern County's economic picture is encouraging. Households generally feel positive about their current financial conditions and that of their acquaintances. The majority of consumers are optimistic in their expectations of 2006, but many remain adverse to the use of savings and debt for consumption at this time.



	Current Quarter	Previous Quarter	4 Quarters Ago
Index of Consumer Sentiment	121	119	146
Index of Current Conditions	120	118	124
Index of Expectations	122	120	167

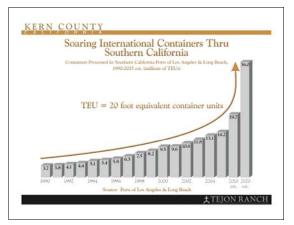
THE FUTURE OF KERN COUNTY'S ECONOMY

BARRY HIBBARD

VICE PRESIDENT, COMMERCIAL & INDUSTRIAL MARKETING TEJON RANCH COMPANY

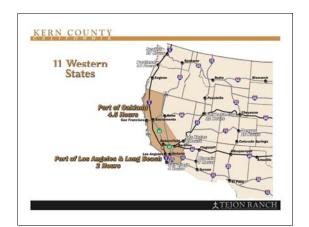
s Kern County begins to stabilize, and we look back at rapid housing growth and appreciation that have occurred over the last 36 months, we need to assess what is next. The unemployment figures for Kern County have dropped dramatically in the last 18 months from 11.5 % to 7.5 %, but the new job growth, primarily in construction and service industry, is not sustainable. Kern County obviously needs to diversify its employment base to support the unprecedented population growth that has occurred. The questions are: what industries will find Kern County attractive? What are our competitive advantages over other areas in California? What macroeconomic factors or trends do we need to anticipate and how do we prepare ourselves to capture core jobs that will propel our local economy? Many would speculate that Kern County needs more manufacturing jobs, but what does a manufacturing job really look like in California? What, if anything, is the State of California doing to solve our various infrastructure problems?

A macroeconomic factor directly impacting Kern County is the Port of Los Angeles/Long Beach. Forty-five percent of all imported goods that are consumed in the United States pass through this global gateway as Americans support this economic expansion with record consumer spending. Because ocean container shipping remains the most cost-effective method to move the mountain of goods from where it is manufactured to where it is consumed, the Port of Los Angeles/Long Beach is the fifth largest port in the world, currently at 14.2 million TEUs (Twenty Foot Container Equivalent Unit), with projections of 36 million TEUs by 2020 (see Image 1).



Based on the globalization of trade and the massive influx of container volume into the California ports, logistics and supply-chain companies will be a large part of California's future and specifically Kern County based on our central location only two hours from the Port of Los Angeles/Long Beach and four hours from the Port of Oakland. This is the ideal location to utilize both port complexes and optimize outbound transportation movements from one centrally located distribution center (see Image 2).

With a single warehouse, companies can serve both Southern and Northern California and the 11 Western States, increasing efficiency while realizing significant savings with respect to transportation, wages, real estate costs and fees. Ninety-six percent of California's consumers are located within a one day truck turn of Kern County, a distinct competitive advantage over other areas of the State when you consider the new driver hours of service. Under new federal regulations, a driver must drive no more than 11 hours in any fourteen hour period, and is required to take a break of 10 consecutive hours. From Kern County, a driver can pick up his load at the warehouse at 6 a.m., drive to either Southern or Northern California to deliver the load, and return home for dinner with the family, instead of on the road or at a truck stop waiting out the mandatory ten hour break. A driver who can see his family every night is a driver who is less likely to move on to another job, reducing turnover and increasing productivity in one swoop.



(Continued on page 9)



Future (Continued from page 8)

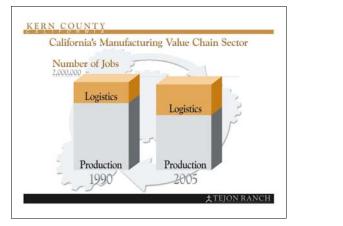
Wal-Mart is a prime example. Wal-Mart has been a successful supply chain company disguised as a mass retailer for the last 25 years. They were one of the first companies to use their supply chain to create a competitive advantage that allowed them to differentiate and ultimately crush the competition. It's no wonder that after Wal-Mart opened a 1.2 million square foot facility in the Southern Central Valley other retailers followed suit.

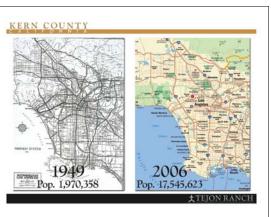
One of the key issues in the 2004 election was the loss of manufacturing jobs to the overseas market. But what are we really losing? The mind-numbing routine of assembly line work! Thick smoke chugging into the air! Wastewater runoff into the groundwater and rivers! We want those kinds of jobs to go elsewhere. These jobs are less physically demanding, less hazardous, and less polluting. From 1990 to 2005, while jobs in manufacturing have decreased by 19%, jobs in the logistics sector have grown by 19% (see Image 3).

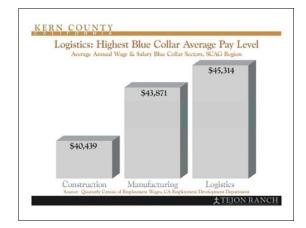
These logistics jobs, the "New Manufacturing," are the pathways to upward mobility for the marginally educated people in the labor force who have traditionally relied on "on the job" training to move up the job ladder. With an average annual wage and salary level at \$45,314 compared to \$43,871 in manufacturing, jobs in logistics are the new future for many in California (see Image 4). The strong pay scale is a direct result of the technology involved with today's logistics. PDA's, computer programs, RFID scanners, all part of "Just in Time" inventory control, have encouraged the higher pay scale. "Just in Time" is the inventory control that gets the item to the store just when you need to buy it. Not before. Not after. This reduces the amount stored in the warehouse, but timing is critical. The items must be ordered at precisely the right time, and thus the need for a reliance on technology. No more ordering a couch and waiting six to eight weeks for delivery. With Just in Time, you can order a couch and get it the same day.

The California government has recognized the unyielding move toward logistics with their push for a "Goods Movement Action Plan," the goals of which are to: generate jobs, increase mobility and relieve traffic congestion, improve air quality and protect public health, enhance public and port safety, and improve Californian's quality of life. Coupled with this Goods Movement Action Plan, is the Governor's Strategic Growth Plan.

Imagine trying to comply with today's accounting laws with a ledger book and a slide rule instead of a spreadsheet program, or watching The Big Game on a 12-inch black and white television while periodically adjusting (Continued on page 11)







BUSINESS EDUCATION:

KNOWLEDGE ECONOMY MANAGEMENT LESSONS

E. VINCENT CARTER ASSISTANT PROFESSOR OF MARKETING, CSUB

E conomics is often described as the art and science of allocating scarce resources. Although emerging knowledge economy dynamics bear this out, information resource scarcity is determined by alignment not availability. The knowledge economy is distinguished by the prominence of intelligence as a market asset and the resulting "information economics" that direct effective management. Recently, the Organization for Economic Cooperation and Development adopted a global valuebased definition of this new knowledge economy management:

"Knowledge management covers any intentional and systematic process or practice of creating, acquiring, capturing, sharing, or using productive knowledge, wherever it resides, to enhance learning and performance in organizations."

Many managers mistake digital access for knowledge value. But, collecting and analyzing large volumes of data is not a sign of effective management. Knowing how to retrieve the right data type, from the right demographic target, using the right diagnostic tool is the mark of the knowledge economy manager who effectively allocates *soft resources* to achieve information synergy. *Soft resource* economies of scope are as vital for knowledge productivity as *hard resources* are for industrial economies of scale.

Digital Markets and Information Retrieval Economies of Scope

Within an organizational context, managers must decide how to allocate the *soft resources* of human capital time and tasks in order to optimize the rules of information economics. It is precisely the abundance of information that masks the importance of managing soft resources more productively. In digital markets, the vast availability and meager cost of information access makes it all too tempting to go "information fishing." These types of managers cast wide data retrieval nets and rely on analytical software applications to parse out primary data catches. Ironically, this "volume-oriented" approach often leads to "information overload" and computer generated choices.



By contrast, planning employee time and tasks in a manner that focuses on precise data types, targets, and tools leads to more informed "value-oriented" management intelligence and decisions. Moreover, customized information retrieval reduces the personal data privacy risks associated with digital markets. *Soft resource* economies of scope yield pools of customers/constituents who are favorably predisposed towards providing particular types of data and cooperate with managers to find the most comfortable modes for sharing information (e.g., scanner, database, online, phone, in person, as well whether using survey, interview, focus group, simulation, etc.). Yet, because of low knowledge economy literacy, *soft resource* synergies are rarely realized.

Management Lessons for Knowledge Economy Literacy

Once the knowledge economy is viewed as a pivotal transformation from material value processing to information value processing, then managers will see digital markets as "intelligence factories" for producing information retrieval outputs using strategically allocated *soft resource* inputs. In the previous economic era, methods studies introduced by management pioneers like Frederick Taylor catalyzed productivity growth by harnessing economies of scale. Likewise, *soft resource* time and method "process management" creates productivity growth through information economies of scope.

As private- and public-sector managers make a move from basic digital market information access to information retrieval synergies associated with *soft resource* alignment, three lessons will guide knowledge economy intelligence strategy:

Approach Data like Digital Diamonds - Adopt a knowledge economy view of all *soft resource* information retrieval and data collection time/tasks as strategically valuable.

Build Digital Market Content into Intelligence Factories - Begin planning and coordinating information retrieval and processing activities in a similar manner as core operation "value chain" activities.

Create Compatible Alignments of Human Capital

Soft Resources - Consciously manage organizational intelligence by allocating human capital time/tasks to align the collected data type with conducive demographic targets and compatible diagnostic tools.

Future (Continued from page 9)

the horizontal hold instead of on a big 42 inch screen with surround sound. Yet, we expect commerce of today to move on roads designed in 1956 for the population of 1976. In the 1960s, California had one of the most efficient highway systems in the country. Now, we are plagued with gridlock, highways that dead end into shopping centers, and freeways that were designed to connect, but don't. The comprehensive Strategic Growth Plan is the first installment of a 20-year investment designed to improve California's infrastructure, modernize it, and help people and goods get to where they need to go efficiently and with less negative environmental impact It also includes funds to build new schools, modernize older schools, add funds to the UC and CSU systems, and improve the statewide water supply. All elements are part of the infrastructure of California (see Image 5).

Clearly, California needs visionaries who can see beyond the next year, the next five years, the next ten. We need people who see the macroeconomic trends toward out-sourcing manufacturing and in-sourcing supply chain logistics: people who see the need for an educated workforce to fuel the New Manufacturing; people who are proactive in planning for the future, and not just reactive to the past. You have to ask yourself, are you that person? Are you going to leave California stuck in gridlock, or are you going to lead her into the future?

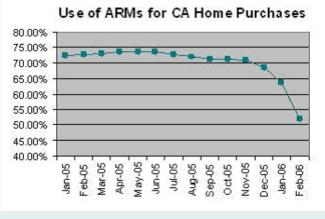
Econ Brief!

Steep Drop in California's ARMs Use

In California, the median sales price of housing has increased sharply in each of the previous six years. The median housing price more than doubled from \$241,400 in 2000 to \$524,000 in 2005. Such unprecedented price hikes have made housing increasingly unaffordable for low- and middle-income households and first-time homebuyers. To help qualify homebuyers, lenders have introduced a variety of adjustable rate mortgage loans (ARMs) such as No/Low Down Payment Loans and Interest First Loans.

The usage of ARMs, which is an indication that buyers are stretching their finances, peaked at 74% in May 2005. However, it has declined sharply in the past three months from 69% in December to 64% in January and 52% in February. These declines indicate that both buyers and lenders have become more cautious in the usage of ARMs as California's red hot housing market is slowing down and the mortgage interest rate is rising. Homeowners who are unable to make monthly mortgage payments would have to file notices of loan default. If housing prices find a tendency to decline, then some lenders would find their collaterals worth less than loan values, hence losing money in foreclosure.

Source: <u>www.dqnews.com</u>



TRACKING KERN'S ECONOMY

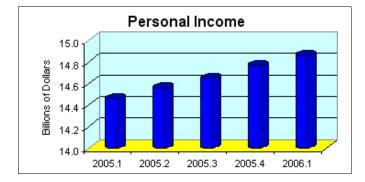
FIRST QUARTER OF 2006

ABBAS P. GRAMMY

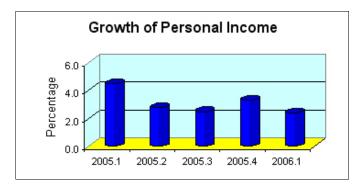
PROFESSOR OF ECONOMICS, CSUB

Economy

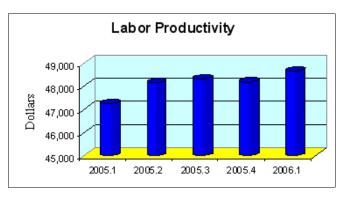
Personal Income - Kern County's personal income (in constant 1996 dollars) increased from \$14.77 billion in the fourth quarter of 2005 to \$14.86 billion in the first quarter of 2006. The county's economy expanded \$90 million. Kern County has added \$400 million of personal income since the first quarter of last year.



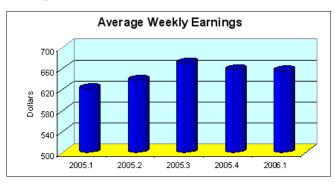
Growth – In the first quarter of 2006, personal income grew at an annual rate of 2.4 percent, which was 0.9 percent slower than that of the previous quarter. Compared with the first quarter of last year, economic growth slowed 2.1 percent.



Personal Income Per Worker - Labor productivity is measured by personal income per worker. In the first quarter of 2006, Kern County's economy expanded 2.4 percent, but its labor force shrunk 1.8 percent. As a result, personal income per worker increased at an annual rate of 4.2 percent from \$48,180 to \$48,660. Labor productivity has increased \$1,410 since the first quarter of last year.



Manufacturing Wages - In the first quarter of 2006, weekly wages paid to local manufacturing workers decreased from \$658.24 to \$656.41. However, local manufacturing workers earned \$34.11 more per week than four quarters ago.

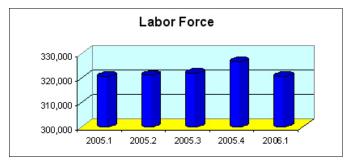


Labor Market

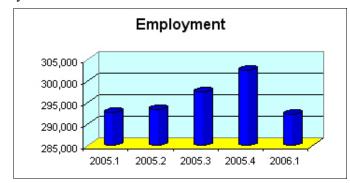
To analyze labor market conditions in Kern County, a timeseries dataset was established (January 2000 -March 2006). Monthly employment data were adjusted in three ways: (1) to calculate informal employment (i.e., the difference between total employment and industry employment), accounting for members of the labor force who are selfemployed or work outside their county of residence; (2) to adjust the dataset for the effects of seasonal variations; and (3) to take three-month averages for the analysis of quarterly changes. Changes in the local labor market are shown below:

Labor	Total	Total	Farm	Nonfarm	Private-	Public-
Force	Employ-	Unemploy-	Employ-	Employ-	sector	sector
	ment	ment	ment	ment	Employ-	Employ-
					ment	ment
-6,000	-10,300	4,300	-10,645	3,985	1,735	2,250

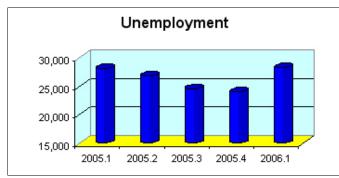
Labor Force - The civilian labor force decreased by 6,000 workers from 326,680 in the fourth quarter of 2005 to 320,680 in the first quarter of 2006. Over the previous four quarters, the labor force has declined by 90 workers.



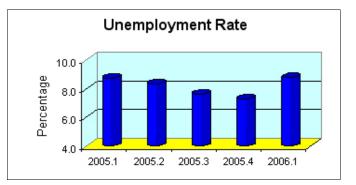
Employment - Total employment decreased by 10,300 from 302,600 in the fourth quarter of 2005 to 292,300 in the first quarter of 2006. Likewise, 320 less workers were employed this quarter relative to the first quarter of last year.



Unemployment - In the meantime, 4,300 more workers were jobless as unemployment increased from 24,000 in the fourth quarter of 2005 to 28,300 in the first quarter 2006. Nevertheless, 220 more workers were employed for pay relative to the first quarter of last year.



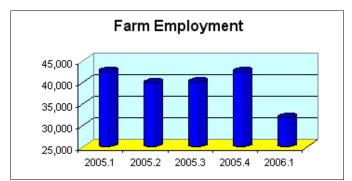
Unemployment Rate -The rate of unemployment rose 1.5 percent to 8.8 percent in the first quarter of 2006 from 7.3 percent in the fourth quarter of 2005. Compared to the first quarter of last year, the county's unemployment rate was unchanged.



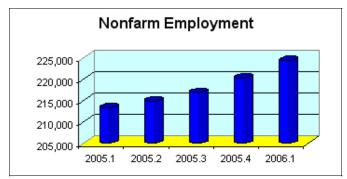
The rate of unemployment varied considerably across the county. It ranged from 3.6 percent in Kernville to 24.5 percent in Arvin. The rate of unemployment was below the county's average of 8.8 percent in Kernville, Lebec, Ridgecrest, Tehachapi, Inyokern, Bakersfield, California City, Rosamond, Edwards AFB, North Edwards, Frazier Park, and Taft. In contrast, the rate of unemployment was above the county average in China Lake, Oildale, Lake Isabella. Buttonwillow, Mojave, Shafter, Lamont, Weedpatch, Wasco, Lost Hills, McFarland, Delano, and Arvin.

Unemployment Rate of Cities			
Location	Unemployment Rate (%)	Location	Unemploy- ment Rate (%)
Kernville	3.6	China Lake	8.9
Lebec	3.9	Oildale	9.3
Ridgecrest	5.0	Lake Isabella	10.7
Tehachapi	5.9	Buttonwillow	10.9
Inyokern	5.9	Mojave	11.1
Bakersfield	6.2	Shafter	16.0
California City	6.9	Lamont	16.2
Rosamond	7.2	Weedpatch	16.5
Edwards AFB	7.2	Wasco	16.7
North Edwards	7.4	Lost Hills	17.4
Frazier Park	7.7	McFarland	19.0
Taft	8.6	Delano	23.7
		Arvin	24.5
Note: City-level data are not adjusted for seasonality.			

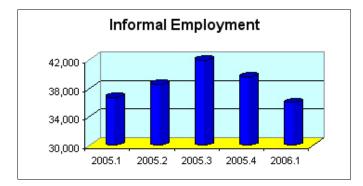
Farm Employment - In the first quarter of 2006, farm employment decreased by 10,645 paid positions from 42,545 to 31,900. Since the first quarter of last year, the county has lost 10,700 farm jobs.



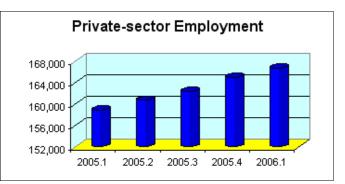
Nonfarm Employment - In the first quarter of 2006, the number of nonfarm workers climbed from 220,415 to 224,400 for a gain of 3,985 jobs. The nonfarm sector has added 11,145 new jobs since the first quarter of last year.



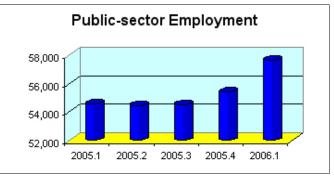
Informal Employment - Informal employment is the difference between total employment and industry employment. It accounts for self-employed workers and those who work outside their county of residence. In the first quarter of 2006, the number of workers engaged in this market declined by 3,650 from 39,650 to 36,000. The informal labor market has lost 755 jobs since the first quarter of last year.



Private-sector Employment - Nonfarm employment is comprised of private-sector employment and publicsector employment. In the first quarter of 2006, privatesector employment increased by 1,735 from 164,995 to 166,730. The private sector has added 7,875 jobs since the first quarter of last year.



Public-sector Employment - The public sector consists of federal, state, and local government agencies. The local government labor market includes county and city agencies and public education. In the first quarter of 2006, the public sector added 2,250 jobs as employment increased from 55,415 to 57,665. Since the first quarter of last year, the public sector has added 3,100 jobs.



Housing Market

Housing Price - In the first quarter of 2006, Kern County's housing market slowed considerably. The number of residential units sold in the county dropped from 1,482 to 1,233 and the median sales price increased only \$1,400 (or 0.5 percent) from \$268,300 to \$269,700. However, the county's median housing price was \$74,470 or 38.1 percent higher than that of one year ago.



In Bakersfield, the number of residential units sold dropped from 1,118 to 937 and the median housing price rose \$3,670 (or 1.3 percent) from \$285,300 to \$289,000. Since the fourth quarter of last year, the city's median price has appreciated \$64,400 or 31.6 percent.



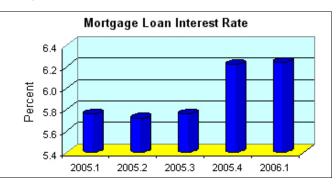
Housing price appreciation rates varied in cities across the county. Frazier Park, Lake Isabella, Shafter, and Wasco recorded double-digit appreciation rates. In the meantime, Arvin, McFarland, and Rosamond gained modest price increases. In contrast, housing prices actually declined in Delano, Lamont, Mojave, Taft, and Tehachapi.

Housing Price by City				
City	Units Sold	Median Price (\$)	Price Change since Previous Quarter (\$)	Price Change since Previous Quarter (%)
Arvin	16	202,083	13,166	7.0
California City	34	199,750	1,917	0.9
Delano	27	200,000	-4,833	-2.3
Frazier Park	11	371,750	69,417	24.7
Lake Isabella	5	215,000	45,250	31.8
Lamont	12	180,000	-18,167	-9.7
McFarland	8	135,000	10,167	7.2
Mojave	9	160,000	-3,333	-2.2
Ridgecrest	42	200,000	750	0.4
Rosamond	40	285,000	10,333	3.9
Shafter	33	177,500	30,000	18.1
Taft	43	129,000	-4,334	-3.3
Tehachapi	51	284,500	-2,416	-0.8
Wasco	22	239,500	30,583	18.4

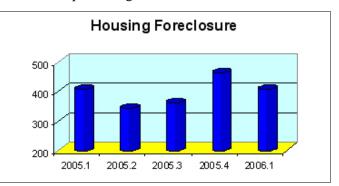
Building Permits – The monthly average number of building permits issued for the construction of new privately-owned dwelling units decreased by 40 from 567 in the fourth quarter of 2005 to 526 in the first quarter of 2006. Compared with to the first quarter of last year, 37 less building permits were issued.



Mortgage Interest Rate – Mortgage loan interest rates remained low. The interest rate of thirty-year conventional mortgage loans jumped 0.02 percent from 6.22 percent in the fourth quarter of 2005 to 6.24 percent in the first quarter of 2006. However, the mortgage loan interest rate has risen 0.48 percent since the first quarter of last year.

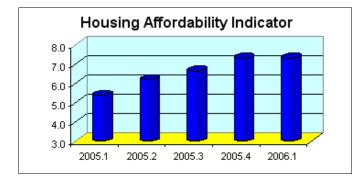


Housing Foreclosure Activity – Foreclosure activity in Kern County edged lower in the first quarter of 2006, the result of lower appreciation rates. Lending institutions sent 406 default notices to local homeowners during this quarter. The number of default notices was down by 55 from the revised 461 of the previous quarter, and was the same as four quarters ago.



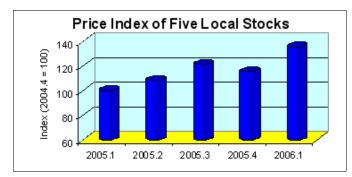
(Continued on page 16)

Housing Affordability – Housing affordability is measured as the median housing price divided by the median household income. In the first quarter of 2006, the housing affordability indicator remained unchanged at 7.3. If we were to keep the housing affordability indicator at its ten-year average of 3.2, an average-income household would need an annual earning of \$85,300 to afford buying a median-priced home. Over the previous four quarters, housing has increasingly become less affordable as the indicator climbed from 5.4 to 7.3.

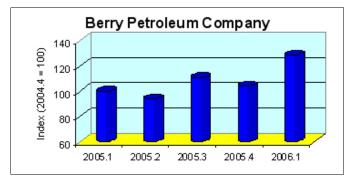


Stock Market

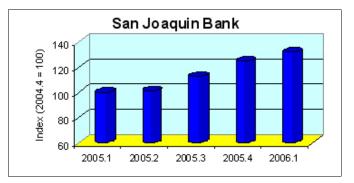
In the first quarter of 2006, the composite price index of five local *market-movers* inclined 20 percentage points from 115.4 to 135.4. The index has climbed 35.4 percentage points since the first quarter of last year. These top five local *market-movers* are Berry Petroleum, San Joaquin Bank, Granite Construction, Occidental Petroleum Corporation, and Tejon Ranch Company.



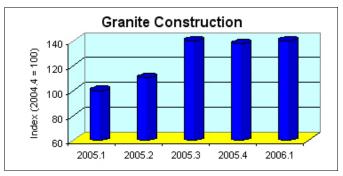
Berry Petroleum (BRY) recorded a 24.6 percentagepoint gain as its share value increased from \$58.04 in the fourth quarter of 2005 to \$71.82 in the first quarter of 2006. BRY has gained 28.6 percent in value since the first quarter of last year.



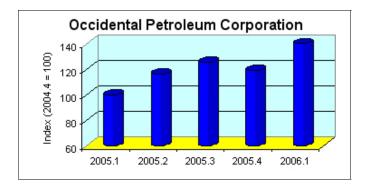
San Joaquin Bank (SJQN) gained \$1.95 per share as its price climbed from \$33.30 in the fourth quarter of 2005 to \$35.25 in the first quarter of 2006. Since the first quarter of 2005, SJQN has gone up \$8.52 or 32 percent.



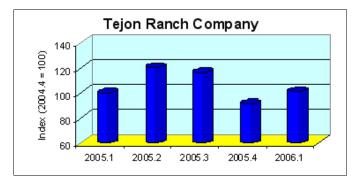
Granite Construction Inc. (GVA) recorded a large gain of \$9.46 or 36.5 percent in the first quarter of 2006 as its stock price soared from \$35.71 to \$45.17 per share. GVA has climbed \$19.24 or 74.2 percent since the first quarter of 2005.



Occidental Petroleum Corporation (OXY) gained \$14.62 or 22.9 percent as its stock price rose from \$79.35 in the fourth quarter of 2005 to \$93.97 in the first quarter of 2006. Since the first quarter of last year, OXY's price has jumped \$27.36 or 41.1 percent.

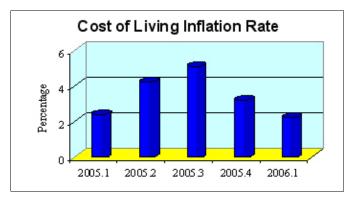


Tejon Ranch Company (TRC) gained \$4.34 or 9.5 percent as its stock value climbed from \$41.89 in the fourth quarter of 2005 to \$46.23 in the first quarter of 2006. Since the first quarter of 2005, TRC has gained \$0.53 or 1.2 percent per share.

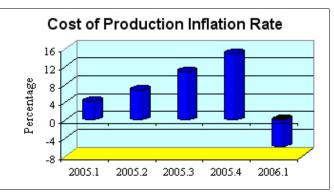


Commodity Prices

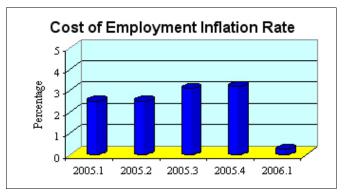
Cost of Living - In the first quarter of 2006, the Consumer Price Index (CPI) for all urban areas (1982-84 = 100) climbed from 198.1 to 199.3. In annual rates, the cost of living inflation rate slowed from 3.2 to 2.2 percent. Relative to one year ago, the CPI inflation rate was 0.2 percent lower.



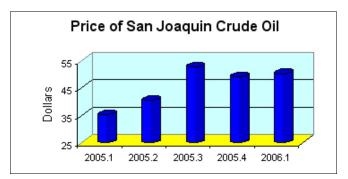
Cost of Production – In the first quarter of 2006, the Producer Price Index (PPI) for all commodities (1996 =100) declined from 164.2 to 162.8. This decline translated into a deflation rate of 5.9 percent. Relative to one year ago, the PPI inflation rate was 10 percent lower.



Cost of Employment - The Cost of Employment Index (CEI) for all workers in the private industry (1989 =100) jumped from 181.2 in the fourth quarter of 2005 to 182.3 in the first quarter of 2006. As a result, the annual CEI inflation rate decelerated from 3.2 to 0.3 percent this quarter. Relative to the fourth quarter of last year, the CEI inflation rate was 2.2 percent lower.

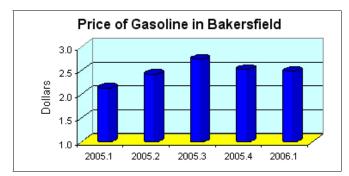


Price of Oil - The average price of San Joaquin Valley heavy crude climbed \$1.30 per barrel from \$48.91 in the fourth quarter of 2005 to \$50.21 in the first quarter of 2006. The price of crude oil has edged \$15.08 per barrel higher since the first quarter of last year.



⁽Continued on page 18)

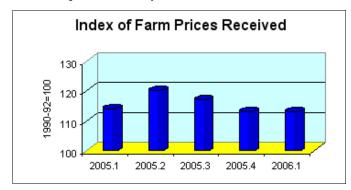
Price of Gasoline - In the Bakersfield metropolitan area, the average retail price of regular gasoline per gallon dropped 4 cents from \$2.52 in the fourth quarter of 2005 to \$2.48 in the first quarter of 2006. However, the price was 35 cents higher relative to the first quarter of last year.



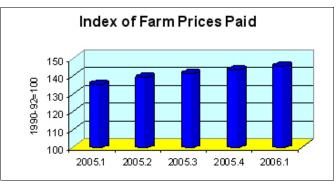
Price of Milk - The average price of Class III (instant nonfat dry) milk has had a declining trend. It fell \$1.62 from \$13.85 in the fourth quarter of 2005 to \$12.23 in the first quarter of 2006. The milk price was \$2.08 lower relative to the first quarter of last year.



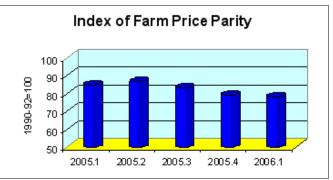
Farm Prices - In the first quarter of 2006, the national Index of Prices Received by Farmers for all farm products (1990-92 = 100) remained unchanged at 113. The index value was one percentage point lower relative to the first quarter of last year.



In contrast, the national Index of Prices Paid by Farmers for commodities, services, interest, taxes, wages, and rents jumped 2 percentage points from 143 in the fourth quarter of 2005 to 145 in the first quarter of 2006. Relative to four quarters ago, this Index has gained 10 percentage points.



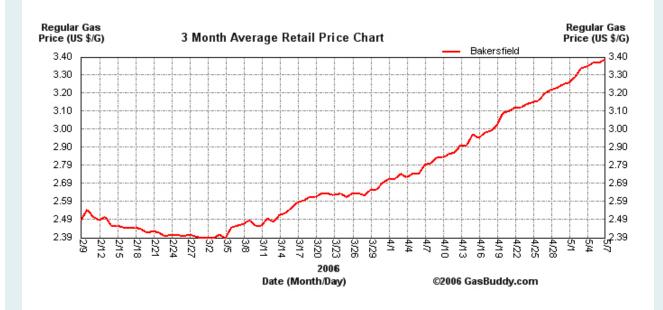
Here, we measure the Index of Price Parity as the ratio of the Index of Prices Received to the Index of Prices Paid. Values of this index less than 100 illustrate the imbalance between prices farmers pay for their inputs and prices farmers receive for their outputs. In the first quarter of 2006, the Index of Price Parity lost 1 percentage point from 79 to 78. Since four quarters ago, the disparity between output prices farmers received and input prices farmers paid widened as the index value edged 6 percentage points lower.



Econ Brief!

Soaring Gasoline Prices

Recently, gasoline prices have gone up sharply across the nation. In Bakersfield metropolitan area, the average retail price of regular gasoline has gone up \$1.15 cents (or 51 percent) from \$2.24 on January 1st to \$3.39 on May 8th. The largest price increase has occurred since March 1st when drivers had to pay 94 cents (or 41 percent) more for one gallon of regular gasoline.



In the absence of evidence supporting price gouging by oil companies, several reasons are given for the recent rise in gasoline prices:

- Soaring oil prices, partly due to anxiety about future supply from OPEC
- Greater scarcity and higher production cost of domestic light and heavy crude
- Reduced gasoline inventories
- Limited refining capacity
- Damages to oil drilling structures in the Gulf Coast
- Rising demand from American drivers and foreign consumers, especially India and China
- Added costs from producing lower-sulfur gasoline

In particular, the switching to lower-sulfur gasoline will phase out an older chemical additive that made gasoline cleaner, but has been found to cause cancer. Making lower-sulfur gas is expected to add 2 cents to pump prices, while it slashes harmful emissions by 90 to 95 percent.

Analysts expect gasoline prices continue to rise throughout spring and the busy summer driving season. In the absence of any unexpected events in the international oil market, high gasoline prices are likely to stay with us for a longer time.

Rising gasoline prices would have negative effects on economic growth since they push the overall inflation to higher rates. To control inflation, the Federal Reserve System may raise short-term interest rates. Higher interest rates will discourage consumer spending and business investment, thus slowing the pace of economic growth. The energy crises of the 1970s proved that a combination of high inflation and slow growth would create a policy dilemma. Actions to control inflation would hinder growth, whereas measures to accelerate growth are generally inflationary.

Sources: The U.S. Energy Information Administration and www.bakersfieldgasprices.com

BOOK REVIEW:

A THOUSAND BARRELS A SECOND BY PETER TERTZAKIAN NEW YORK: MCGRAW-HILL, 2006

DONAVAN ROPP DIRECTOR, BUSINESS RESEARCH AND EDUCATION CENTER, CSUB

This book is a must read. Peter Tertzakian, an economist and energy industry investment analyst, presents a poignant assessment of complex and contentious issues relating to the challenges of future global energy requirements. Though intended primarily for investors, the sobering facts addressed in this book focus on understanding the world's energy shortage and illustrate the potential bleak outlook for oil's future, enormously critical topics for businesses and people everywhere. The author provides an excellent primer on oil's history, uses, supply chains, and politics.

A primary perspective of this book is the insightful interpretation of historic energy events and associated features of energy evolution cycles, *breaking point*, *magic bullet*, and *rebalancing*. A *breaking point* is defined as an occurrence when the primary fuel or an associated supply chain becomes substantially disadvantaged through price, supply, availability, processing, etc. A *magic bullet* is a new invention, technology, substitute, or alternative item that saved-the-day and assures *rebalancing* of the old industry and/or the creation of a new successful approach. The transitioning to a *rebalancing* episode is a necessary evolutionary process that will eventually return a broken existing system or an evolving system into a balanced system.

Outcomes often lead to outstanding opportunities, alternatives, better solutions and innovations, and substitutions or new resources. There are a myriad of "energy evolution cycles" described by Tertzakian. One assessment involved dramatic changes of fuels for illumination from candles, to whale oil, to kerosene, to electric light bulbs. Another example evaluated change of fuels for trains, from wood, to coal, to diesel. Another supply chain went from water power, to coal-fired steam engines, to natural gas, to hydroelectric, to nuclear power. In most of these instances there were decisive and definitive breaking points, a period of chaos and a certain dismantling of the original fuel source. This was followed by the magic bullet that saved-the-day and created great opportunities. Finally, the rebalancing period ends with a sense of stability and success, especially for the innovators who saved-the-day.



Using the above model, the author addresses current issues and problems relating to the energy crisis as it exists today and possible applications for the future. First, he points to significant statistical results as to present supply chain demands, as follows: every single day (24/7) the requirement for energy is 86 million barrels of oil (1000 barrels per second), 240 billion cubic feet of natural gas, 14 million tons of coal, and 500,000 pounds of uranium. Annual oil discoveries are at 10 billion barrels per year where 30 years ago it was 60 billion barrels per year. 47% of oil is used for gasoline in U.S. total production. The oil dependency/consumption growth rate is about 4.4% a year in the U.S., and at similar respectable rates in China, India, and other growth oriented regions. The oil production capacity rate is at 97.5%, where the normal rate is usually at 74%. And the beat continues throughout the book with startling facts as to consumption issues.

The alarming conclusion by Tertzakian is that numerous trends indicate that the petroleum breaking point for light sweet crude is fast approaching, as witnessed by record pricing at the pump and per barrel value, creating enormous pressure in the market place, within the industry, and for political interests. There is absolutely no quick fix from a magic bullet for either substitutes or alternatives; therefore, completion of rebalancing is possibly decades in the future. The author claims that we are presently in the "complaining and paying-up" stage of rebalancing, and, as such, will need to progress to the "conserving and being more efficient" stage, then to the "adopting alternative energy resources" stage, and finally to the "making societal, business, and life style changes" stage. For details, this book is a must read.

Kern Economic Journal

SUBSCRIPTION/SPONSORSHIP FORM

NAME	
COMPANY	
ADDRESS	
CITY/STATE/ZIP	
TELEPHONE	_EMAIL

Subscription (four issues):

____\$60 for the print issue

_____\$80 for the electronic issue including the archives _____\$100 for both print issue and the electronic issue including the archives

Sponsorship:

Category	Amount of Contribution	Sponsorship Benefits
Gold	\$1,500	Listing of organization name and logo 20 print issues each quarter Online journal including the archives 2 tickets to Kern County Economic Summit
Silver	\$1,000	Listing of organization name and logo 10 print issues each quarter Online journal including the archives
Bronze	\$500	Listing of organization name and logo 5 print issues each quarter Online journal including the archives
Yes, my paym	ent forSubscriptionS	Sponsorship in the amount of \$ is enclosed.

Make check payable to CSUB Foundation and mail to:

Abbas P. Grammy School of Business and Public Administration California State University, Bakersfield 9001 Stockdale Highway Bakersfield, CA 93311-1022

(661) 654-2466 agrammy@csub.edu

Kern Economic Journal 4045 Abbas Grammy School of Business and Public Admin. California State University, Bakersfield 20 BDC 9001 Stockdale Highway Bakersfield, CA 93311-1022

Economic Consulting Knowledgeable, Experienced, Reliable

- Survey Research
- Market Feasibility Study
- Economic Impact Study
- Statistical Analysis & Forecasting
- - Cost-Benefit Study



Abbas P. Grammy, Ph.D. Professor of Economics, CSUB Phone: 661-654-2466 E-mail: agrammy@csub.edu