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Application: As Gasoline Prices Soar, Americans Resist Major Cuts in
Consumption

There has been a large increase in gasoline price since early 2005. Part of this increase was due to the hurricanes (Katrina, Emma, ect.), but part of it is also due to the large increase in global oil demand. Thus, economists had argued that the fastest and most efficient way to moderate the U.S demand is “to hit Americans with significantly higher gasoline price.” Higher gasoline price do have some effect, but the demand is still increasing at a decreasing rate. The result had lead to the belief of the gasoline price is not rising high enough. Experts argued that the gasoline prices have to rise at five times the rate of real income in order to keep the demand flat. This is due to the belief that when Americans have higher income, they tend to use it to buy bigger cars or luxury cars, thus drives up the gasoline demand.

Aside from the increase in real income, we should also consider other factors that might have led to the increase in gas consumptions. First off, it has only been a year since the gasoline prices increased. Since this is still the short-term, a lot of people’s demand for gas hasn’t changed. In the short-run, the price elasticity of gas could still be inelastic, but this will change in the long run [see graph]. If the gas price still increasing in the next two to three years, people will start moving closer to work or buying cars that could run on low or no gasoline at all. The second reason would be due to the longer life expectancy for human. It is now estimated that the average men and women could live up

to 77.5 years (Childtrendsatabank.org). This has led to the increase number of people driving cars.

In conclusion, we shouldn't increase the gas price at five times the rate of real income because that will drives up inflation dramatically. Companies that have to use energy source such as United Parcel Service, Brick Co., chemical and plastics-makers companies will have to pass on the energy cost to consumers if they could not find ways to offset the energy costs. We can't expect a micro change to make a macro effect right away. People will decrease their gas consumption eventually, but it's still going to take some time so see the difference.

Sources

“Life Expectancy.” Child Trends Databank. 4 May 2006.

<[http://www.childtrendsatabank.org/pdf/78_PDF.pdf#search='American%20life%20expectancy'](http://www.childtrendsatabank.org/pdf/78_PDF.pdf#search='American%20life%20expectancy'>)>.

As Gasoline Prices Soar, Americans Resist Major Cuts in Consumption

By JEFFREY BALL
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With gasoline prices in the U.S. approaching an average \$3 a gallon, Americans are moaning about the rising cost, but so far they are resisting big changes in their gas-guzzling ways.

A 25% jump in prices at the pump since December has set off a firestorm in Washington. Politicians are threatening auto makers with tougher federal fuel-economy standards and oil companies with higher taxes on record profits, while warning against price gouging. Auto and oil executives are predicting that a long-term shift toward greater fuel efficiency is under way. But none of these influences is likely to have much effect on gasoline prices or oil consumption in the near term. ([See related article.](#)¹)

Unlike the energy crises of the 1970s, which resulted from reduced supplies of Mideast oil, today's crunch is due largely to a swift rise in global oil demand. The surest way out of the problem, most experts agree, would be to curb consumption of vehicle fuel, particularly in the U.S. For years, economists have argued that the most effective way to moderate U.S. demand would be to hit Americans with significantly higher gasoline taxes. Today's high prices amount to a market test of that theory.

The early results: High prices do have some effect, but prices would have to be higher than they are today -- and would have to stay high for a long time -- to meaningfully curb gasoline consumption by the nation's massive fleet of cars and trucks, which accounts for about 10% of global oil use.

At the margins, there are some signs that high gasoline prices may be starting to alter consumer behavior. Traditionally, gasoline use in the U.S. rises about 1.5% each year. But in three of the six months from September -- immediately following the Gulf Coast hurricanes -- through February, gasoline consumption fell compared with a year earlier, according to data from the U.S. Energy Information Administration. In the three months in which it grew, it never rose by more than 0.4%. Yet in March, as gasoline prices soared, demand appeared to return to more-robust levels, growing by 1%, according to preliminary data.

"There's definitely a noticeable decrease in the growth of demand," says Tancred Lidderdale, senior economist at the Energy Information Administration. "The problem is demand is still growing."

Though the recent run-up in gasoline prices has been steep, it hasn't been debilitating for most Americans. The price of a gallon of regular gas averaged \$2.74 in April, according

to the Energy Information Administration. Adjusted for inflation, that was still 14% below the peak in March 1981, when, in today's dollars, gasoline averaged \$3.18.

Moreover, Americans are better-positioned to handle a run-up in fuel prices than they were a quarter-century ago. Gasoline now accounts for only 3% of total personal-consumption spending, down from 5% in 1981, according to the U.S. Bureau of Economic Analysis. That gives many consumers less reason to contemplate cutbacks when prices rise.

In Plano, Texas, a suburb north of Dallas, Alfred Goh, a 42-year-old commercial-real-estate broker, yesterday paid \$63.86, or \$3.06 a gallon, to fill up his sport-utility vehicle, a white 2004 Lexus GX 470. The vehicle averages 16 miles per gallon, according to federal figures, and Mr. Goh, who drives extensively for work, reckons he fills it up two or three times a week.

Mr. Goh says he has no plans to change his driving habits or his vehicle. "I won't limit driving because of gas prices, because it's a necessity," he says. As for his vehicle, "I think this is a safe car," he says, and "it's safety first." His only concession to rising gasoline prices is that he now uses midgrade gasoline instead of premium, a move that saves him about 10 cents a gallon.

Even Americans who want to slash their gasoline use will find it hard to do so in a society built on cheap energy, where far-flung suburbs and powerful cars are the rule. "If you've got to drive to work every day, you've got to drive to work every day," says John Felmy, chief economist of the American Petroleum Institute, the oil industry's Washington-based trade group.

The limits of mass transit add to the difficulty of cutting fuel consumption. Though nationwide figures aren't yet available, many systems around the country are reporting significant increases in passengers, says William Millar, president of the American Public Transportation Association. In Washington, where his group is based, the Metrorail transit system reports that three of the 14 busiest days in its history occurred the third week in April. The problem: Public transit isn't available in much of the U.S. and doesn't match the commutes of many Americans in places where it exists.

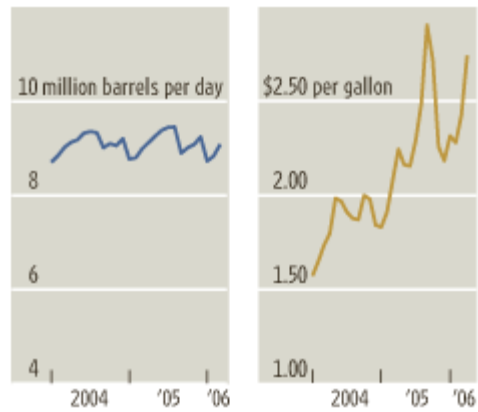
Research suggests it takes years for higher gas prices to meaningfully damp consumption. Opinions differ, but many experts say that, in the short term, the "price elasticity" of U.S. gasoline use is as low as 0.1. That means gas prices have to rise 10% to produce an initial 1% drop in demand.

Charles Komanoff, a New York energy analyst, believes the short-term elasticity is stronger than that, though it's still modest. "There is an impact" of higher prices on demand, he says.

Pumping Away

Monthly average gasoline supplied in the U.S.*

Monthly average retail price for regular gasoline in U.S.



*March 2006 figure is preliminary, based on weekly data
Source: U.S. Energy Information Administration

What influences gasoline use more quickly than gasoline prices, experts say, is a change in personal income. Among the first things Americans do as their paychecks get bigger is to buy zippier cars and drive their existing cars more. Incomes have been rising in the U.S., as they have throughout most of the industrialized world. The result: "It takes a very big price increase to have a big impact today," says Philip Verleger, a Colorado-based oil economist.

Mr. Verleger estimates that real, or inflation-adjusted, gasoline prices have to rise at roughly five times the rate of real income just to keep the nation's gasoline demand flat. Given that real income is rising at about 3% a year, real gasoline prices would have to surge 15% to prevent consumption from growing, according to his

analysis.

Broadly, the latest federal statistics appear to bear him out. In the first quarter, the real price of gasoline averaged about 17% more than a year earlier, and U.S. gasoline consumption was up just 0.3% -- fairly close to flat. Still, Mr. Verleger and federal energy officials caution that it's too early to discern any long-term trends from the data.

If gasoline prices stayed high for several years, researchers say, they would tend to meaningfully curb consumption. Over time, people would factor the higher prices into decisions that have big effects on their gasoline use. They might choose more-efficient models when it comes time to replace cars, as happened in the early 1980s. They might decide to switch jobs or move to shorten their commutes.

Some major industries say they believe that a long-term change in U.S. gas consumption is in the works. At the top of the list is the auto industry.

Sales of traditional sport-utility vehicles -- the ones built on the guts of pickup trucks, which tend to consume the most gasoline -- are falling fast. The decline began in 2003, when gasoline was cheap, but it has accelerated markedly since prices began rising in early 2005. Sales of truck-based SUVs, which fell 4% in 2003 and 3% in 2004, tumbled 13% in 2005 and 7% in the first quarter of this year.

The traditional-SUV market is "collapsing," says George Pipas, **Ford Motor Co.**'s U.S. sales-analysis manager.

When gas prices first began creeping higher, auto makers offered bigger sales incentives on SUVs, effectively giving buyers "a gas card in the glove box," Mr. Pipas says. But the continued rise in gasoline prices has largely inured buyers to such inducements.

"If you think that by putting an extra \$1,000 on an Expedition you can sell enough to make it worth your while, you're wrong," Mr. Pipas says, referring to one of Ford's large SUVs. "You're pushing on a string. At some point you say, 'Pull back. The market is what it is.'"

Yet plenty of Americans still are buying fuel-thirsty rides. Despite the weakness of the SUV segment overall, U.S. sales of the recently redesigned Chevrolet Tahoe SUV soared 37% in the first quarter. And luxury cars not known for their fuel economy also remain hot sellers. In the first quarter in the U.S., BMW sales rose 11%, Mercedes sales increased 17%, and Porsche sales surged 26%.

The oil industry also is betting that a change is under way. **Exxon Mobil** Corp. says it believes that, by 2030, hybrid gasoline-and-electric cars and light trucks will account for nearly 30% of new-vehicle sales in the U.S. and Canada. That surge is part of a broader shift toward fuel efficiency that Exxon thinks will cause fuel consumption by North American cars and light trucks to peak around 2020 -- and then start to fall.

"For that reason, we wouldn't build a grassroots refinery" in the U.S., Rex Tillerson, Exxon's chairman and chief executive, said in a recent interview. Exxon has continued to expand the capacity of its existing refineries. But building a new refinery from scratch, Exxon believes, would be bad for long-term business.

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