



JOINT ECONOMIC COMMITTEE

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OIL PRICES AND THE ECONOMY – BEFORE AND AFTER KATRINA & RITA

This brief addresses why the economy is more resilient to higher energy prices today than in the past and will survey the expected economic effects of hurricanes Katrina and Rita.

EFFECT ON PRODUCERS

Because the economy is now less energy intensive and more energy efficient, output and employment are less sensitive to higher oil prices. One reason for this trend is the growth of the service sector over the last thirty years, which has left a smaller percentage of overall output and employment devoted to the relatively more energy intensive manufacturing industries. Largely due to this transformation, the economy produces more output for each unit of energy input. Heavy industry firms were also motivated to become more energy efficient as energy prices increased in the late 1970s. Because of these structural changes, there is a bigger production bang for every energy input buck.

EFFECT ON CONSUMERS

Before Katrina and Rita, inflation-adjusted oil and gas prices were well below their historic 1981 highs, but they were rising relatively rapidly and giving consumers significant discomfort. Since 1986, gasoline purchases have averaged 2.5% of total personal consumption expenditures (PCE). In 2005, consumers have seen gasoline purchases consume a greater and greater portion of their budgets. After Katrina, the national average gasoline price immediately rose about 46 cents a gallon. Some consumers paid almost twice what they paid the year before. In the third quarter, gasoline purchases accounted for 3.5% of PCE.

In 1981, gasoline purchases accounted for 5% of PCE. The smaller share of gasoline purchases in PCE today may account for consumer spending holding up well even as gasoline prices were quickly rising. While

gasoline prices have returned to pre-Katrina levels, significantly higher heating oil and natural gas prices will confront consumers in the coming months. Demand for energy products tends to be insensitive to price. As a result, consumers may adjust their budgets by cutting back on buying other goods and services. If consumers dramatically cut back on other purchases, there will be a dampening effect on economic growth.

EFFECT ON INFLATION

In the past, higher oil prices could spread from the increase in the cost of fuels into increases in the prices of many other goods and services by means of wage and salary cost of living adjustments (COLA). But COLAs are not as common as they were 25 years ago. Only 15% of labor contracts expiring in 2005 have COLA provisions.

Higher energy input prices can also reduce the profitability of firms, all other things equal, but a rise in labor productivity can offset the profit pressure for firms to reduce output and employment. Since 2000, labor productivity has increased at twice the average rate from 1973 to 1995. This may mean that firms will not reduce output, employment or real wages in response to higher input prices.

OIL PRICES: HOW HIGH FOR HOW LONG?

Before the hurricanes, high oil prices were driven by global demand. In the 1970s and 1980s the surges in oil prices were caused by a supply shock – a sudden restriction in world production. Before Katrina, the high price of oil resulted from the growth of global demand for oil outstripping short-run production capacity. Worldwide, there is plenty of oil in the ground, but, relative to demand, current crude production infrastructure – the oil wells

and pipelines – cannot produce adequate supply.

China and India's increasing demand for oil, combined with insufficient investment in world production capacity, resulted in global oil consumers competing with each other for a fixed-level of supply. Moreover, because there is little spare production capacity, relatively small supply disruptions, like hurricane damage to oil rigs in the Gulf of Mexico, can cause pronounced price spikes. Until investment in oil field development yields an increase in productive capacity, it is unlikely that there will be a significant decline from the pre-Katrina level of about \$60 per barrel.

After the hurricanes, the source of oil and gasoline price increases changed. Katrina and Rita reduced oil production capacity in the Gulf and damaged the oil refining capacity of the Gulf States. The sudden reduction of oil production had crude oil consumers clamoring for supply and spot oil prices rose to more than \$70 a barrel. In an effort to calm energy markets, the Bush Administration and several European countries have made some oil available for refiners to purchase from their emergency stocks. These actions contributed to easing pressure on spot crude oil prices.

The post-hurricane experience for the price gasoline and other fuels may not follow that of crude. Any restriction in the supply chain for petroleum products – from oil rig damage to a shortage of delivery tankers – will result in higher prices at the pump. Even if the world price of crude falls dramatically and the U.S. has the port capacity to absorb additional imported oil, the damage to refining capacity in the Gulf States may curtail the supply of refined products to such a degree that all fuel prices may not quickly recover to pre-Katrina levels.

The short-term forecast for fuel prices is still clouded with uncertainty, but a couple of lessons may be drawn from other past disruptions in the fuel supply chain. One, prices increased quickly after the supply disruption but decreased more slowly after capacity was restored. Two, the

market impact was felt well beyond the immediate location of the disruption. Because the affected refineries supply the entire U.S. (except the West Coast), gasoline prices will rise nationally. Three, gasoline demand is relatively insensitive to price in the short run. According to one study, a 10% increase in the price of gasoline results in a 2.3% decrease in demand. Recent data seem to show that consumers continue to be relatively insensitive to price. Comparing the six weeks ending October 7 in 2004 with the same period in 2005, the average weekly measure for gasoline demand published by the Energy Information Administration fell 2.8%, whereas the average weekly price increased 41.6%.

MACROECONOMIC EFFECTS

Hurricanes Katrina and Rita will have economic effects beyond those directly associated with energy. The Congressional Budget Office reported that the destruction and dislocation of businesses in the Gulf States due to Katrina alone would significantly reduce regional production. CBO estimates that payroll employment could fall by as many as 400,000 jobs through the end of the year. The loss of output, combined with the potential for a slowdown in consumer spending due to higher energy costs, could dampen economic growth in the second half of the year by about 0.5%.

CONCLUSION

The economy uses less energy per unit of output today than it did 30 years ago. Several trends in today's economy – the increase in labor productivity, for example – have weakened the influence that higher oil prices might have to lower GDP growth, lower employment or stoke inflation. Before Katrina, the high cost of oil had a surprisingly modest effect on the overall health of the economy. After the negative economic impact of Katrina dissipates, the healthy pace of the economic expansion is expected to resume. If investment remains strong, the prospects for maintaining above-average GDP growth for 2005 and 2006 remain positive.