

Dissecting Gasoline Prices: Understanding Pain at the Pump

Written by Jay Hakes, Tim Kailing, Gal Luft
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Against the backdrop of recalcitrant high prices for gasoline in the United States and an Alfred E. Newman “What, me worry?” laggard public response to the ebb and flow of gasoline prices over the last 40 years, we have turned to three particularly well suited and adept contributors to the Journal to help us refine, explain and expand our understanding this phenomenon. The humorous malapropism of Yogi Berra, a former NY Yankee baseball manager, cuts to the chase if one applies his slogan observation, “It is déjà vu all over again.” Jay Hakes, former Administrator of the US Energy Information Administration, Tim Kailing a quantitative analyst with at Elliptical Research, and Gal Luft, Co-Director of the Institute for the Analysis of Global Security - which publishes the Journal of Energy Security - share their responses to the common question “What is driving stubbornly high US gas prices and what, if anything can we do about them?”

Jay Hakes, former Administrator, US Energy Information Administration:

In 1998 and early 1999, many American motorists reveled in gasoline priced below 90 cents a gallon and crude oil as low as \$10 a barrel. Despite a steady trend upward in oil imports, the country’s dominant transportation fuel seemed to have disappeared as a major national concern. Complacency about the risks of oil dependence became so prevalent in the 1990s that a Democratic president and a Republican congress joined in a bipartisan agreement to sell oil from the nation’s Strategic Oil Reserve as a tactic for balancing the federal budget, to cut the monitoring of oil markets at the Energy Information Administration, and to ban the Department of Transportation from even studying improvements in auto fuel efficiency standards. What has happened between then and now to bring the price of gasoline to levels approaching \$4 a gallon and crude to over \$100 a barrel? Why are we now no longer complacent about, as President George W. Bush called it, “our addiction to oil”? As usual, there is no simple answer, but there are answers.

For starters, the extremely low prices near the end of the twentieth century provoked a revitalization of the Organization of Petroleum Exporting Countries (OPEC). OPEC lost much of its clout in the world oil market in the 1980s, and members like Venezuela were during much of the 1990s encouraging private investments that would lead to higher production and a busting of the OPEC production quotas. But an OPEC meeting in March of 1999, called to deal with low prices and prodded by Venezuela’s new leader Hugo Chavez, reaffirmed its commitment to resist major investments in exploration and development and to retard production in the countries with the greatest oil reserves in order to allow the cartel to reap higher prices per barrel. Adopted initially as a defensive move, OPEC’s new discipline in limiting supplies proved to be even more successful in pushing prices to previously unthinkable levels than originally intended.

As an additional impact on the world oil market, the dawn of the twenty-first century brought a substantial expansion of the automobile culture beyond the limited number of countries that had dominated world oil demand in the past. An important tipping point occurred with the entrance of China into the World Trade Organization in 2001. As a price of membership, China was forced open its market to competition from foreign automobiles. Appealing new imports forced Chinese manufacturers to lower their prices and made new, less costly vehicle options available to an emerging population of Chinese drivers. Around the world, economic expansion has been following the Chinese model and allowing previously impoverished people to make the move from walking to bicycles to motor scooters to cars. All of this is taking place in countries with large populations, which sharply increases the global demand for private automobiles and for

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the oil needed to propel them.

To add to the tightness of the world market, the reliability of oil supplies from exporting nations, never a sure bet, became even more questionable. The liberation of Kuwait in 1991 demonstrated the ability of the United States to execute a clear mission in the Persian Gulf and protect strategic oil supplies. By contrast, the invasion of Iraq in 2003 did not follow the American script. Planners of the war foresaw an increased exploitation of Iraq's great oil potential that could transform the world market. Yet it was not until 2011 that Iraq returned to the level of production when Saddam Hussein was overthrown. In addition, trouble spots around the globe like Libya, Nigeria and Southern Sudan periodically suffer interruptions in supplies due to political turmoil. At present, major world importers are trying to block Iran's oil from reaching the world market to force compliance with international norms on nuclear proliferation, and markets must account for the fear that Iran might retaliate against other oil suppliers in the region. Uncertainties about unstable oil-producing regions – whether real or imagined – extract a premium on oil prices.

The increased “commoditization” of oil in global trading venues also affects drivers at the pump. When traders borrow money to purchase oil as an investment rather than actually use it, the likelihood of wild swings in prices increases (the volatility effect). Though official investigations over the years have failed to find much evidence of market manipulation, the treatment of oil as an investment most likely does push prices higher, particularly when interest rates are low. New technologies in oil and gas extraction are currently helping to keep very high oil prices from going even higher. Advanced seismology is pointing to extremely prolific wells off the shores of several continents, and hydraulic fracturing combined with horizontal drilling is making it economical to produce oil from voluminous shale formations on shore. Even the boom in natural gas yields liquids that add to the transportation fuel supply. Hydro fracking technology will in the coming years likely become a growing world-wide phenomenon.

There are also positive trends in the demand for oil products in many countries around the world. Europe has created incentives for more efficient diesel cars. The United States is putting in place aggressive mandates for auto fuel efficiency and displacing more oil with biofuels. China's leaders clearly realize they cannot allow the use of inefficient private automobiles to grow unfettered. Current energy policies will not lead to a decline in global oil demand, but they will provide some constraints on growth.

These positive trends are helpful, but unlikely to reverse the momentum toward higher energy costs. Prices will swing up and down, but the world will be a different place as it moves from 6 billion people in the year 2000 to 8 billion in 2025 and as the dream of a private automobile spreads to countries all over the world, beyond the select few developed nations that used to dominate world oil demand.

The United States will have to adapt to higher oil prices. The next generation of workers, for instance, may choose to avoid high commuting costs by giving up some square footage to live closer to their work places. Grandparents may Skype more and fly less to see grandchildren. But these market responses should not encourage policymakers to adopt a passive approach to oil markets. Over the long term, intelligent policies can alleviate the worst case scenarios on prices and address the very legitimate concerns about the impacts of tight oil markets on the economy, national security, and the environment.

Both U.S. balance of payments and national security benefit from encouraging an expansion of domestic oil production, ramping down of demand, and greater use of alternative fuels. U.S. policies in these areas may lead to the adoption of similar policies in other countries – who do

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not enjoy being preached at by the United States but do pay careful attention to what we do. Likewise, expanding the Strategic Petroleum Reserve (only when prices are relatively low) and adopting better policy guidance for its use would put the country in a stronger position during emergencies and encourage others to do likewise. Government and industry policies that lead to drilling safe wells protect the environment, but also help domestic production avoid breaks in expansion due to major accidents. Using fuel more efficiently helps reduce dependence on foreign oil and slows the accumulation of greenhouse gases. Though many aspects of a sensible energy policy are in place – particularly after the Energy Independence and Security Act of 2007, the big gorilla of policy questions remains whether the United States should or can pass a gasoline tax. Economists of both liberal and conservation persuasions have often advocated the gasoline tax as a rational way to deal with the “external costs” of oil (such as the health impacts of pollution and the costs of military forces protecting commerce in the Persian Gulf) that meshes well with market incentives. After the Arab oil embargo of 1973-1974, a leading champion within the government for gasoline taxes was William Simon – President Richard Nixon’s energy “czar,” later Secretary of the Treasury for Nixon and President Gerald Ford, a convert to the economic philosophies of Milton Friedman and F.A. Hayek, and a hero of the conservative movement. Simon believed such taxes could be an effective measure to reduce threats to the national economy and the national security and, at the same time, a way of avoiding more onerous interventions by the government. With different rationales, Presidents Dwight Eisenhower, Ronald Reagan, and George H.W. Bush all signed off on moderate increases in the gasoline tax to finance the national transportation infrastructure, including the building the interstate highway system.

Yet the type of gasoline tax favored by Simon was overwhelmingly defeated in the congress under both Ford and President Jimmy Carter. President Bill Clinton was able to get a very scaled-down version of his oddly named BTU tax in 1993 as part of a deficit reduction passage, but the political scars for the administration and legislators who supported it were deep. Gasoline taxes can be an efficient mechanism for reducing waste of energy and, potentially, shifting the tax burden away from employment. Yet for a long-time, the issue of such levies has been tabled due to fears of fierce political opposition. As a result, the existing taxes on gasoline to support highway construction have fallen when controlled for inflation. Legislators at the state and national level either accept the decline of the national transportation infrastructure, shift the burden from gasoline taxes to general revenues or add to the federal deficit.

The ferocity of the of the anti-tax attach machine can be seen in the harsh criticism of Stephen Chu, who before his nomination as President Barrack Obama’s Secretary of Energy expressed the view that the United States would have to tax gasoline at the levels of Europe. Rather than engage Chu over the wisdom of energy taxes, his critics imply he wants high energy prices, even when they are caused by rising global demand and a producers’ cartel. Taxes (where the money can be used in the United States for rebates, budget balancing, or infrastructure) is a different matter than a tight global energy balance (that leads to the outflow of U.S. dollars, some of which goes to countries with ties to terrorism). An effort to conflate the two does a disservice to an intelligent debate over U.S. energy policy.

It may be viewed as naïve to believe that a gasoline tax might be added to the arsenal of U.S. energy policies, especially in a time of high prices. But it would have been considered naïve in the late 1990s to believe that the country would now be enjoying its third straight years of rising domestic oil production and adopting policies that would lead to new cars averaging 55 miles per gallon in the year 2025. Whether or not we have the political will, we do have tools are our

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disposal that will allow us to maneuver successfully in a world with tighter oil supplies and higher oil prices. In a time of pain at the pump, the basic principles of a successful energy policy are simple and have not changed – reduce the waste of fuel and look for new sources.

Tim Kailing, quantitative analyst, Elliptical Research:

The dulcet sounds of populist sloganeering are in the air again. Political campaigns are ramping up and, with gasoline prices rising at the same time, we hear stirring speeches which claim that just a bit more drilling, just a bit less regulation, and we could immediately have gasoline back at \$2.50 per gallon. Interestingly, in futures markets—where real money is on the line and naïve credulity can drive you bankrupt in a heartbeat—this political grandstanding is being given the weight it deserves, which is to say, none at all. With less than ten percent of current world petroleum production, and less than two percent of petroleum reserves, the United States' domestic production has shockingly little impact on world oil markets.

The very advantages of oil as a transportation fuel—its energy density, stability, and mobility—mean that oil is a truly global commodity. Even if the United States makes substantial increases in the domestic production of oil, OPEC would still be in a position, with nearly 80% of world reserves, to turn down their spigots just marginally and thereby significantly restrict the world supply. But with the myopic focus on oil prices, the political debate has not put nearly enough emphasis on the most extraordinary story in the current energy landscape. In North America, in the fundamental terms of energy, oil has become a luxury product priced far higher than its energy content can justify. In contrast, domestically-produced natural gas is currently cheap and plentiful. This price divergence is especially ironic because natural gas—cleaner burning, with lower greenhouse gas emissions, and without the geopolitical vulnerabilities of oil—arguably deserves to be priced at a premium. Production techniques for tight gas have now advanced to such a degree that we have potentially entered a new era of bountiful domestic natural gas production. This gives the United States an unprecedented opportunity to significantly wean itself from petroleum. But this opportunity is, so far, being largely ignored.

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