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U. S. Gasoline Is Still a Great Bargain (Really!)



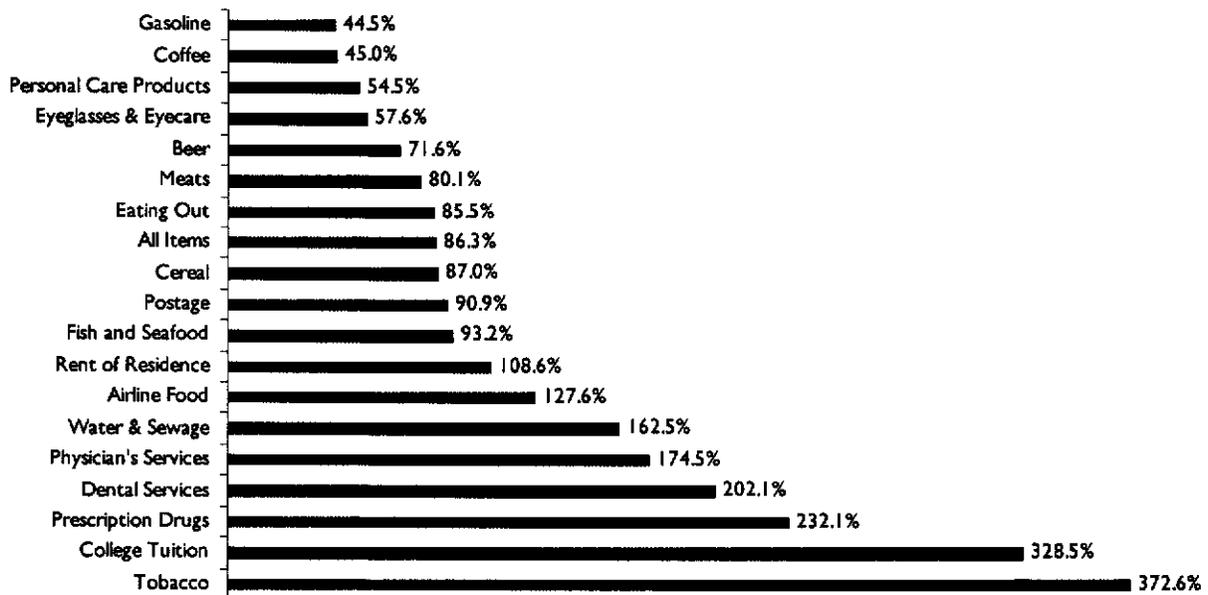
"Three hundred dollars' of regular."

Perhaps because gasoline prices are displayed in foot high numerals on every street corner in America, increases in gasoline prices provoke more consumer "sticker shock" rage than any other commodity. By way of comparison: the Atkin's diet craze has led to sharply higher prices for protein foodstuffs. Where are the newscasts depicting irate consumer protests against alleged price gouging by bacon and egg producers?

With the average price of gasoline exceeding \$2.00 per gallon across the U.S., John S. Herold, Inc. has examined the price of gasoline in the context of other consumer expenditures, the seventh time we've conducted such a study in the last 15 years. And for the seventh time, we've come to the same conclusion:

Gasoline is still a great bargain, relative to other purchases in a typical consumer market basket

Changes in the Price of Gasoline and Other Consumer Items Between 1982-84 and 2003



Source: American Petroleum Institute

While the costs of crude oil and gasoline have soared over the past year, both of these commodities are relatively inexpensive in historical terms. In fact, if the prices of gasoline and crude oil had kept pace with the general rate of inflation since the early 1980s, the price of these commodities would have been close to \$4/gal and \$90/bbl. Since the early 1980's, the rate of nominal escalation in gasoline prices was about 1/2 the rate of inflation in postal rates, only 1/3 that of airline fares and about 1/8 the rate of college tuition increases.

While gasoline out-of-pocket expenses are the most visible operating cost component of running an automobile, fuel expenditures pale in comparison to the enormous run up in maintenance and insurance costs over the past six years. As the table below indicates, the cost of gasoline/oil has increased about 9% to slightly more than 7 cents per mile driven, compared with a 46% increase in maintenance expenditures to 4 cents per mile driven, a 29% increase in tire costs to roughly 2 cents per mile driven and a 30% increase in aggregate insurance costs to \$1,102/year. Insurance costs have soared in recent years to now account for the largest share of total driving costs; at nearly 9 cents per

Test this one out

Ask a friend or neighbor: What does gasoline cost relative to the total expense of owning your automobile?

- A) 50%,
- B) 35%,
- C) 25%, or
- D) Less than 15%

Correct Answer (last year anyway): D

mile, insurance costs exceeded gasoline expenditures last year. Only financing expenses have become less burdensome to the consumer over the recent past. Actually, gasoline costs in real terms as a percentage of all automobile operating expenses have trended downward -- albeit irregularly -- over the past 24 years since the peak in 1981.

Driving Costs

	1997	2000	2003
Operating Costs Per Mile	Avg. *	Avg. *	Avg. *
Gasoline and Oil	\$0.066	\$0.069	\$0.072
Maintenance	\$0.028	\$0.036	\$0.041
Tires	\$0.014	\$0.017	\$0.018
Operating Cost Per Mile	\$0.108	\$0.122	\$0.131
Ownership Costs Per Year			
Comprehensive Insurance (\$250 deductible)	\$120	\$163	\$203
Collision Insurance (\$500 deductible)	\$326	\$326	\$401
Bodily Injury and Property Damage (\$100,000, \$300,000, \$50,000)	\$401	\$481	\$498
License, Registration, Taxes	\$216	\$223	\$205
Depreciation (15,000 miles/yr)	\$3,272	\$3,492	\$3,738
Finance Charge (20% down; loan @ 9%/4 yrs)	\$768	\$849	\$744
Ownership Cost Per Year	\$5,103	\$5,534	\$5,789
Ownership Cost Per Day	\$13.98	\$15.16	\$15.86
Total Driving Cost Per Mile @ 15,000/yr			
operating costs per year	\$1,620	\$1,830	\$1,965
ownership cost per year **	\$5,103	\$5,533	\$5,789
Total Driving Cost Per Year	\$6,723	\$7,363	\$7,754
Total Driving Cost Per Mile	\$0.448	\$0.491	\$0.517
Gasoline Cost In \$ Per Year	\$990	\$1,035	\$1,080
Gasoline Cost As % Of Total Driving Costs	14.73%	14.05%	13.93%

* Avg. Costs for Chevrolet Cavalier LS, Ford Taurus SEL Deluxe, and Mercury Grand Marquis LS (2003 Models)

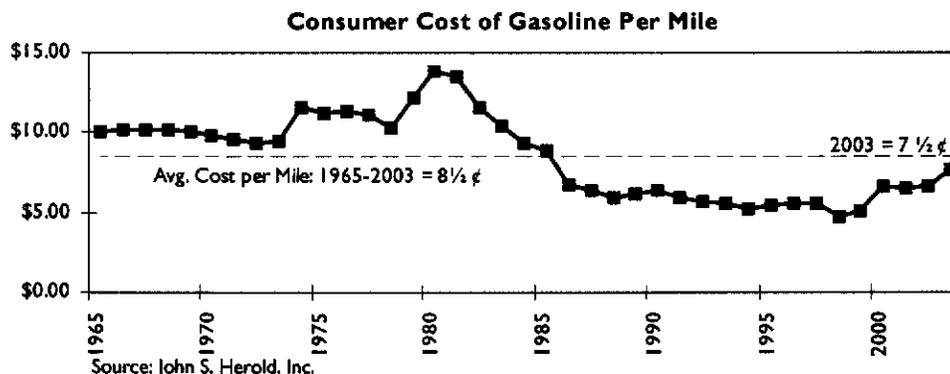
** Ownership costs based on 4-yr/60,000-mile retention cycle

Operating Costs: gasoline and maintenance expenditures are operating costs related to the number of miles driven

Ownership Costs: taxes, depreciation, finance charges, registration, insurance, license fees

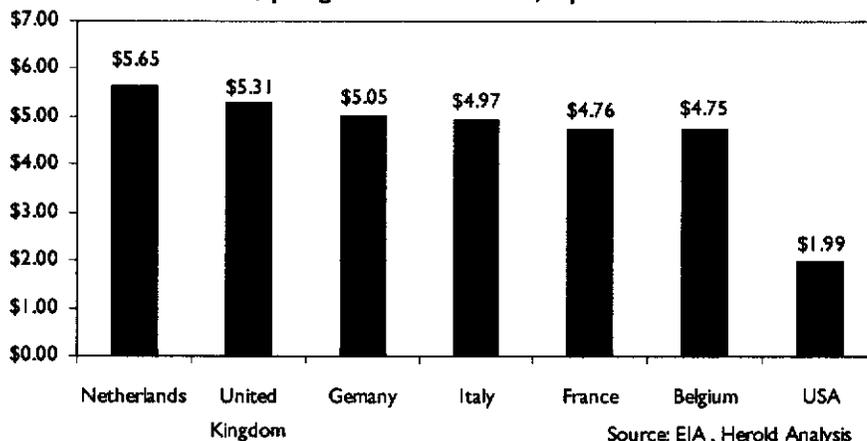
These are costs that are incurred regardless of how often the vehicle is driven

Source: AAA, John S. Herold, Inc.



Even with the recent run up, domestic gasoline still costs less than half the amount it does in most European countries. Why? Taxes. European countries have adopted political policies to discourage oil consumption and promote conservation.

European versus U.S. Retail Gasoline Prices
US\$ per gallon of Premium, April 2004

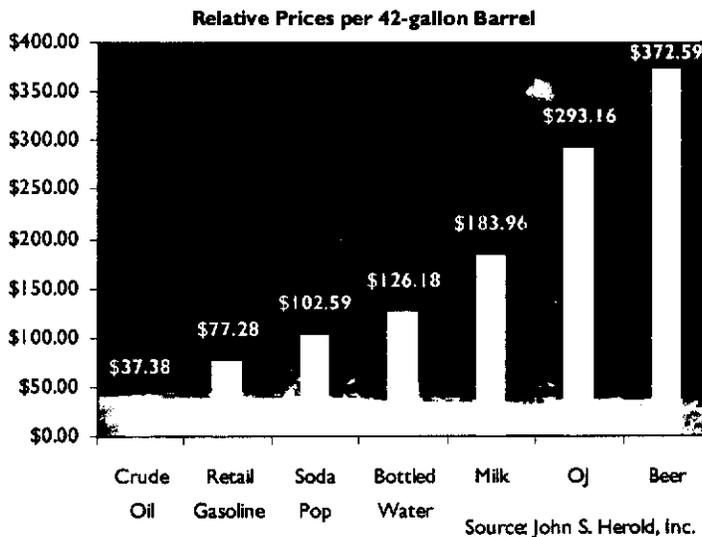


How? With taxes equivalent to more than \$2.50 per gallon. (That's more than 100% of the total cost of today's "outrageous" \$2/gallon U.S. retail price.) Note that our great ally in the United Kingdom has decided to highly tax petrol, although the U.K. is self sufficient in both oil production and natural gas production.

Herold's research continues to support the conclusion that U.S. consumers continue to benefit from -- even at \$2 per gallon - tremendous value in purchasing gasoline compared with other consumer products found in the average shopping cart.

Even at today's two bucks a gallon, the cost of domestic gasoline is 20-50% cheaper on a per-barrel basis than many household products. One could easily spend \$300 filling up their tanks with items like beer or wine.

This year we decided to substitute Poland Spring for Evian water in our analysis. Domestically produced Poland Spring is marketed at \$1.19 per 1.5 liter bottle; equivalent to \$126 per barrel or



approximately \$3 per gallon. Evian water has fallen sharply in consumer interest but still fetches – among the Francophiles – an amazing \$1.99 per liter or \$211.01 per barrel. Bottled water is getting cheaper due to intense competition.

But let's talk about milk, a.k.a. "Moo Juice" – the kids' version of gasoline. We found milk priced at \$2.19 a half-gallon, or about \$184 per barrel. This seems like a good deal – reasonably priced, helps your bones, helps your kids grow stronger and provides energy to fuel their activities. But gasoline is still a much greater bargain.

2004 JSH Shopping Basket				
Product	Price	Size	Vol. (Oz.)	\$/Bbl
Crude Oil (WTI Spot)*	\$37.38	1 Bbl	5376	\$37.38
Reg. Unl. Gasoline (Wholesale Pre-tax)**	\$1.36	1 Gal	128	\$57.12
Reg. Unl. Gasoline (Retail After/Tax)**	\$1.84	1 Gal	128	\$77.28
Coca Cola	\$1.29	2 Litre	67.6	\$102.59
Poland Spring	\$1.19	1.5 Litre	50.7	\$126.18
Stop & Shop Milk	\$2.19	.5 Gal	64	\$183.96
Evian Bottled Water	\$1.99	1.5L	50.7	\$211.01
Tropicana Orange Juice	\$3.49	.5 Gal	64	\$293.16
Budweiser	\$4.99	6 Pk/12 Oz.	72	\$372.59
Bertolli Olive Oil	\$6.49	1.5 Litre	50.7	\$688.17
Pinot Grigio	\$12.99	1.5 Litre	50.7	\$1,377.40
Camp Real Maple Syrup	\$6.99	12.5 Oz.	12.5	\$3,006.26
Jack Daniels Black Label	\$20.99	25.3 Oz.	25.3	\$4,460.17
Chanel No.5 Parfum	\$250.00	1 Oz	1	\$1,344,000.00

* Spot Price at 5/1/04

** Based on "AAA" U.S. avg. retail \$1.84/gal. @ 5/1/04

Source: John S. Herold, Inc.

So If Gasoline Really Is A Bargain, Why Does Paying at the Pump Hurt So Much?

Gasoline is easy to hate: North American consumers of energy (we include our northern Canadian and southern Mexican neighbors in this pickle) are addicted to cheap and easily available fuel and can't do without it. To use a formal economic term, the price elasticity of demand (the change in demand for a product due to a price delta) for gasoline in the short-run is virtually nil. In other words, we can't change our gasoline consumption habits in the short term because it suddenly becomes relatively expensive.

People must still drive to work, pick up their kids, and go shopping whether gas is \$1/gal or \$2/gal or – heaven forbid -- \$5/gallon as it is in Europe today. And outside of the major industrialized cities in the eastern U.S., there are virtually no substitutes to vehicular gasoline-fueled options (mass transit) available.

Let's face it; gasoline is a necessity for everyday life. We didn't get around to calculating alternatives like ownership cost for a horse and buggy, but contemplating going boarding rates at Fairfield County equestrian facilities, maintaining a horse is certainly a luxury item!

Changing Consumer Habits Should Provide Relief

Over the long term, consumers can, and will, change their gasoline consuming habits. Back in the late 1980s the introduction of mandatory fuel efficacy standards helped to brake domestic gasoline consumption markedly. Econometric analyses confirm that the price elasticity of demand for gasoline is much higher in the long run (although still low compared to most items) as consumers do make adjustments such as buying more fuel-efficient cars and moving closer to places of employment.

Consumer Cost Of Gasoline Per Mile

	Year	Cost Per Mile (Cents)	Retail Gas (Cents Per Gal.)	MPG*
	1940	12.44	190.20	15.29
	1945	10.95	164.70	15.04
	1950	10.74	160.50	14.95
	1955	10.79	156.80	14.53
	1960	10.65	152.10	14.28
	1965	10.02	143.00	14.27
	1966	10.15	143.20	14.11
	1967	10.21	143.70	14.07
	1968	10.10	140.10	13.87
	1969	10.08	137.30	13.62
Arab Oil Embargo spurs gasoline price spike.	1970	9.84	133.00	13.52
	1971	9.61	130.10	13.54
	1972	9.32	125.00	13.40
	1973	9.50	126.40	13.30
OPEC price hikes begin.	1974	11.63	156.00	13.42
	1975	11.27	152.40	13.52
	1976	11.35	153.50	13.53
	1977	11.10	153.20	13.80
Oil glut takes hold. Demand falls as a result of conservation, other competitive fuels and recession.	1978	10.30	144.60	14.04
	1979	12.19	175.70	14.41
	1980	13.66	214.20	16.46
	1981	13.50	215.20	15.94
	1982	11.53	192.00	16.65
	1983	10.38	177.80	17.14
	1984	9.35	166.80	17.83
Gasoline prices begin a downtrend that continues today.	1985	8.89	160.70	18.20
	1986	6.72	122.80	18.27
	1987	6.34	121.80	19.20
	1988	5.93	117.70	19.87
	1989	6.09	123.60	20.31
Persian Gulf Crisis	1990	6.40	134.60	21.08
	1991	5.85	126.90	21.69
	1992	5.66	122.60	21.68
	1993	5.58	117.40	21.04
	1994	5.15	114.50	22.24
	1995	5.42	114.30	21.10
Asian Economic Crisis	1996	5.57	118.70	21.30
	1997	5.56	116.30	20.92
	1998	4.77	97.70	20.50
Oil Price Meltdown form lower global energy demand, higher supply due to inefficient reinvestment of capital.	1999	5.09	105.00	20.60
	2000	6.64	136.00	20.60
	2001	6.47	132.10	20.40
	2002	6.57	134.08	20.40
	2003	7.65	155.91	20.37
	Avg.	8.80	143.64	17.12

* Source: EIA, EPA, Herold Analysis

The table on page 6 puts into historical context the cost of gasoline, the efficiency of the domestic car fleet and world events that affected each. The efficiency of the domestic car fleet was in decline from the 1940's until the 1973 Arab oil embargo and the subsequent OPEC oil price hike that led to gasoline shortages in the late 1970's. Those events shook American consumers and led to a 50% increase in fuel efficiency from 14.4 MPG in 1979 to over 22 MPG in 1992. That same leap in fuel efficiency tempered the upward pressure on petroleum demand and prices. Meanwhile, brutally competitive markets in the downstream sector promulgated consolidation, a renewed offensive in fierce marketing practices to combat the new "Hypermarket" challenge. Consumers of cheap petrol all benefited as the downstream sector embarked on a vicious and competitive "fight to the death" that crushed retail "at the pump" marketing margins while providing motorists with cheap supplies of gasoline.

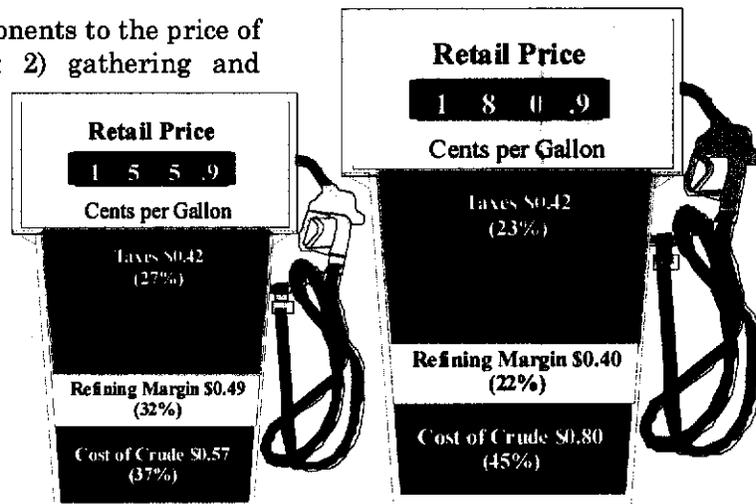
Ironically, it is the past twenty years of very cheap gasoline prices that has promoted lax driving habits and contributed to the rising cost of gasoline today. Over the past decade, consumers have been able to indulge in ever larger, more comfortable and less fuel-efficient cars, given the inexpensive price of gasoline we have enjoyed. Having long been addicted to incredibly cheap and abundant gasoline, Americans have witnessed the fuel efficiency of U.S. cars decline some 10% in recent years to 20.4 MPG for the auto fleet. The culprit: rising demand for SUVs and luxury cars.

But Habits May Be Changing Again Toward Conservation

The most recent domestic automobile sales data indicate that larger less fuel-efficient cars and SUVs are seeing waning demand and drastic price reductions on unsold vehicles. Autodata, an automotive research provider reported that during April 2004 that prices of "large" SUVs fell 1.5% compared with a 2.4% increase for compact cars. It also noted that in April sales of Ford Expeditions fell nearly 34%, while Chevrolet Suburban and Hummer H2 sales dropped 21% each. Edmonds.com, another automotive research company, reports that incentives currently offered on "large" SUV's are the highest among all vehicle classes. In fact, a recent purchase of a Hummer H2 by a Herold employee yielded a 10% price break compared to paying sticker price a year ago, and included attractive 2.9% financing and an above average trade-in value. Anecdotally, we note that recent radio ads for Memorial Day sales at SUV dealers promise large discounts and 0% financing.

Future Gasoline Costs Will Depend Upon Cost of Oil as Well as Demand

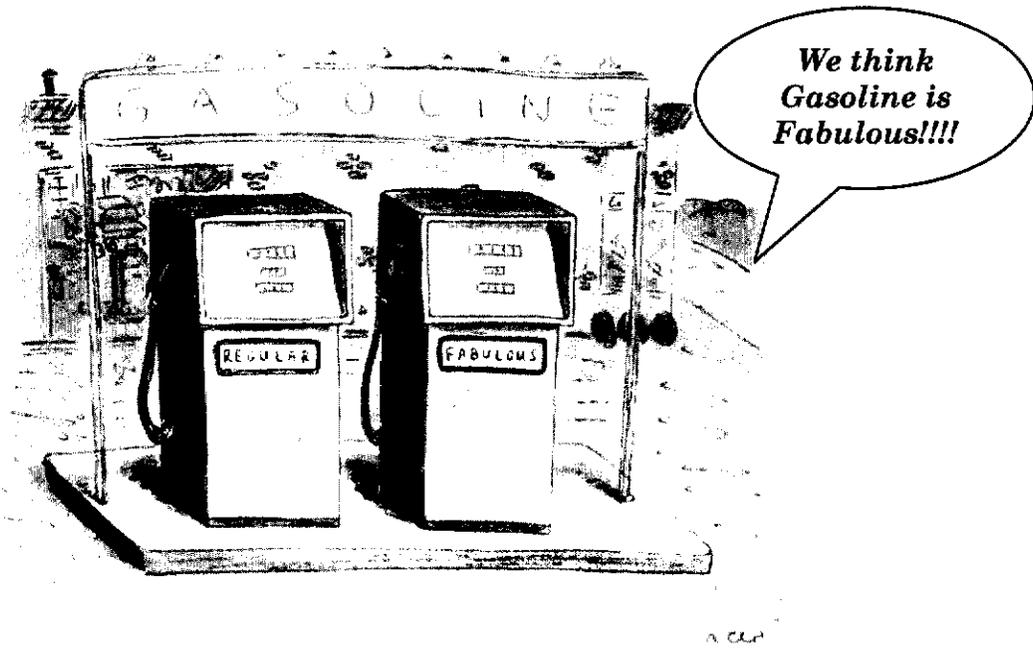
Downstream 101: There are five components to the price of gasoline: 1) the base of crude oil; 2) gathering and transportation; 3) refining and processing 4) marketing; and 5) federal, state and local taxes. The graphic on the right depicts the amount per gallon and the proportional cost of each of these components. Virtually all of the retail increases in gasoline consumer costs over the past three years can be traced to escalation in the refiner cost of crude oil. While the cost of gasoline rose \$.25/ gallon, the



May 2001

April 2004 Source: John S. Herold, Inc.

cost of crude rose \$.23 /gallon, taxes were unchanged while refining and marketing combined earned \$.02/gallon more. With oil prices currently at roughly \$40/bbl., \$2.00 gasoline prices now reflect an added \$.20/gallon in crude oil cost. (The math is easy: with \$42 per barrel crude oil prices at the wellhead, the raw material now represents \$1.00 per gallon.)



If crude costs continue to rise, gasoline prices will increase to a more painful point. Until then, try to smile when you're at the pump—you're still getting a bargain.

- Previous Herold "Oil is Cheap" articles available on our website:
- January 6, 1997 - *Oil is Still Cheap!!*
 - April 16, 1998 - *Oil Is Unbelievably Cheap!!*
 - February 1, 2001 - *At Nearly \$30.00/BBL Oil Is Cheap! And We Stand By That*
 - February 12, 2002 - *It Was Pretty Cheap Then, but Oil is Even Cheaper Now at \$18.00/bbl!*