The Effects of Higher Gasoline Prices on U.S. Light Vehicle Sales, Prices, and Variable Profit by Segment and Manufacturer Group, 2001 and 2004[1]

Abstract

The rising gasoline prices of the past few years were not associated with shifts from vehicles with lower MPG to vehicles with higher MPG. This has been seen as evidence that gasoline prices have little impact on the purchase choices of new-vehicle buyers. However, this paper presents new evidence that the shifts toward vehicles with higher MPG that the rising price of gasoline would have caused were not observed because they were offset by price cuts that were disproportionately applied to vehicles with lower MPG.

May 23, 2005

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[1] The research reported in this paper was part of a larger study of the effects of gasoline prices on the vehicle market conducted with the Natural Resources Defense Council, the Michigan Manufacturing Technology Center, and the Planning Edge.

Introduction

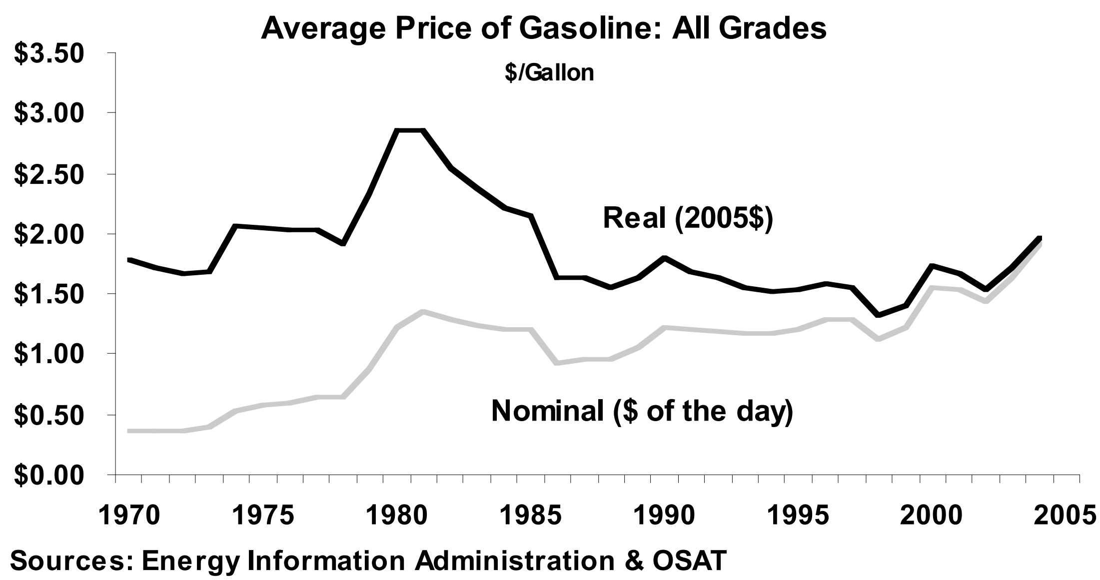
This paper examines the effects on the U.S. automotive industry of two trends that have coincided since 2001, a rising real price of gasoline and growth in direct-to-consumer incentives. The rise in the real price of gasoline has been modest in historical terms, and sales of low-mileage sport utility vehicles and pickups have been stable, leading many observers to conclude that consumer demand has not been responsive to the rise in gasoline prices.

However, this conclusion ignores both the substantial increase by manufacturers in direct-to-consumer incentives since 2001 and the differential increase in incentives by segment. This paper presents evidence that the incentives offset a shift to vehicles with higher fuel economy that would have resulted from the higher gasoline prices.

A nested multinomial logistic regression model of vehicle choice is used to decompose the change in segment sales into gasoline price effects, incentive effects, and other effects. The estimates of the elasticity of vehicle sales (by segment) to gasoline prices derived in this study can be used to predict the impact of sustained or higher gasoline prices in the future.

Gasoline Prices

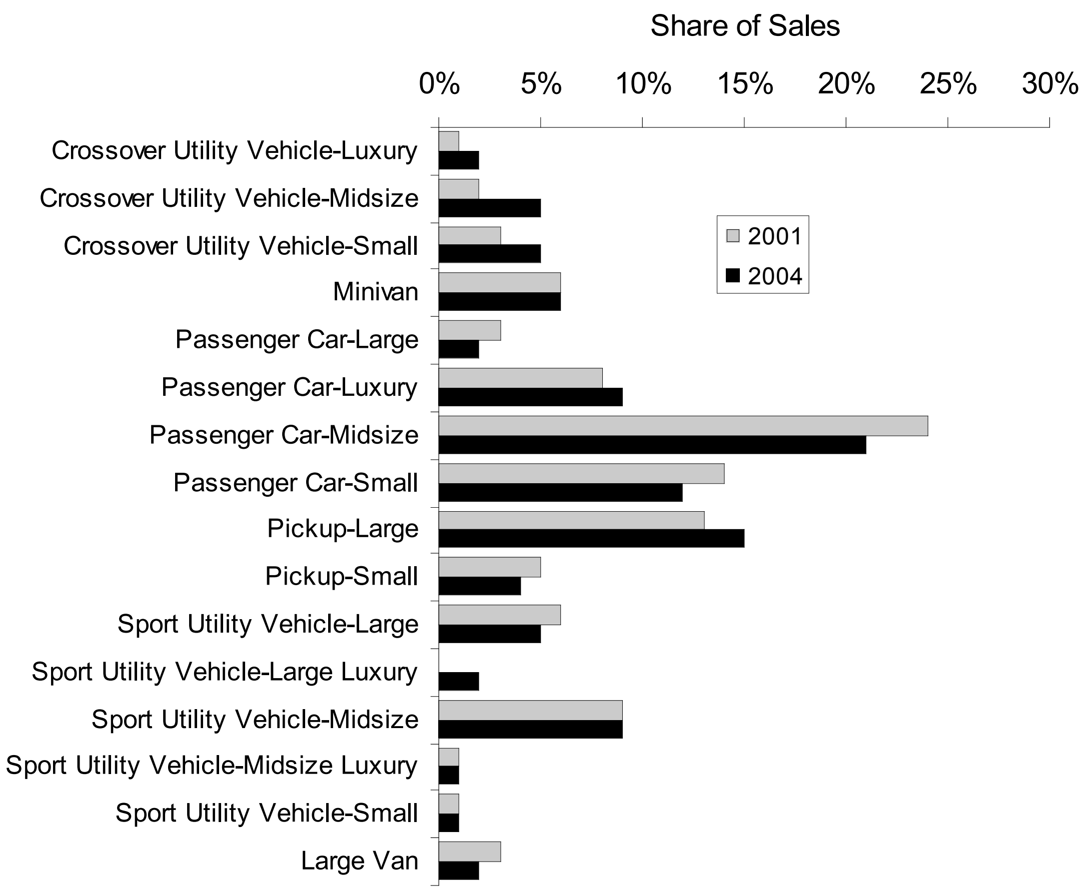
The figure below shows annual average nominal and real prices of gasoline since 1970. In 2001 the real price of gasoline was $1.66 per gallon. By 2004 the price of a gallon of gasoline had risen to $1.96. The lowest price in the past five years (2000-2004) was $1.54 per gallon in 2002.



In historical terms the 2004 price of $1.96 was low. It was 31% below the peak real price of $2.86 per gallon in 1981, and it was two cents below the average real price from 1929 to 2004. However, it would be reasonable to predict that an 18% to 27% increase in the price of gasoline would affect new-vehicle-buying decisions on the margin. The present value of the fuel costs of operating a vehicle over its life represent about 15% of the total present value of acquisition and operation costs, so an 18% to 27% increase in the price of gasoline is equivalent to a 3% to 4% increase in the price of the vehicle. The price of gasoline increased 18% from 2001 to 2004 and 27% from 2002 to 2004, so it would be reasonable to have predicted an effect on vehicle sales and segment mix. However, the surprising reality was that there was not much of an effect.

Light Vehicle Sales by Type and Segment

The figure below shows share of sales by light vehicle segments in 2001 and 2004. Sport utility vehicles (SUVs) and pickups had lower fuel economy than crossover utility vehicles (CUVs), minivans, and passenger cars (PC), but between 2001 and 2004 SUVs lost less than one-half a point of share and pickups held their share. Large pickups and large and large luxury SUVs, which have the lowest MPG, actually gained share.

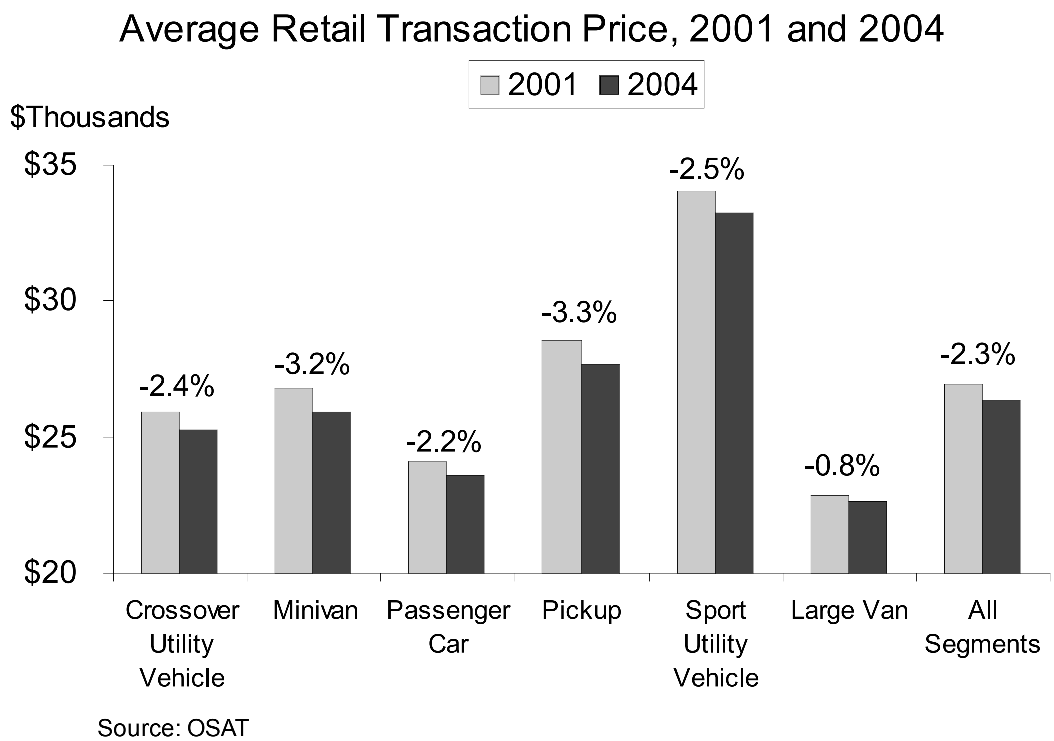


Sources: EPA, Vehicle Manufacturers, & OSAT

Thus the increase in the price of gasoline since 2001 does not appear to have been associated with a shift toward segments with higher fuel economy. To form a more complete picture of the 2001 to 2004 experience, however, one needs to know what happened to prices of vehicles during the period of rising gasoline prices, since reducing the price of the vehicle can offset the increase in operating cost caused by the higher gasoline price. OSAT used the limited publicly available data and expert judgment to estimate light vehicle retail transaction prices, direct-to-consumer incentives, and variable profit by segment and manufacturer group in 2001-2004.

Prices and Variable Profit

Vehicle manufacturers release their total sales by model to the public monthly, but not their retail sales (sales to individual consumers) or retail transaction prices (what buyers are paying at the dealerships net of all discounts in cash, reduced-rate financing, or other forms). Estimates of retail transaction prices and customer incentives are made by various organizations, including Edmunds.com, J.D. Power and Associates, and CNW Marketing Research. These organizations regularly publish some of their information at various levels of detail. OSAT estimated retail transaction prices and customer incentives by triangulating the publicly available data, matching the detail available to the level used by OSAT, and interpolating to fill gaps. The figure below shows OSAT's estimates of retail transaction prices in 2001 and 2004 for six aggregate segments. The labels above the bars show the percent drop from 2001 to 2004.



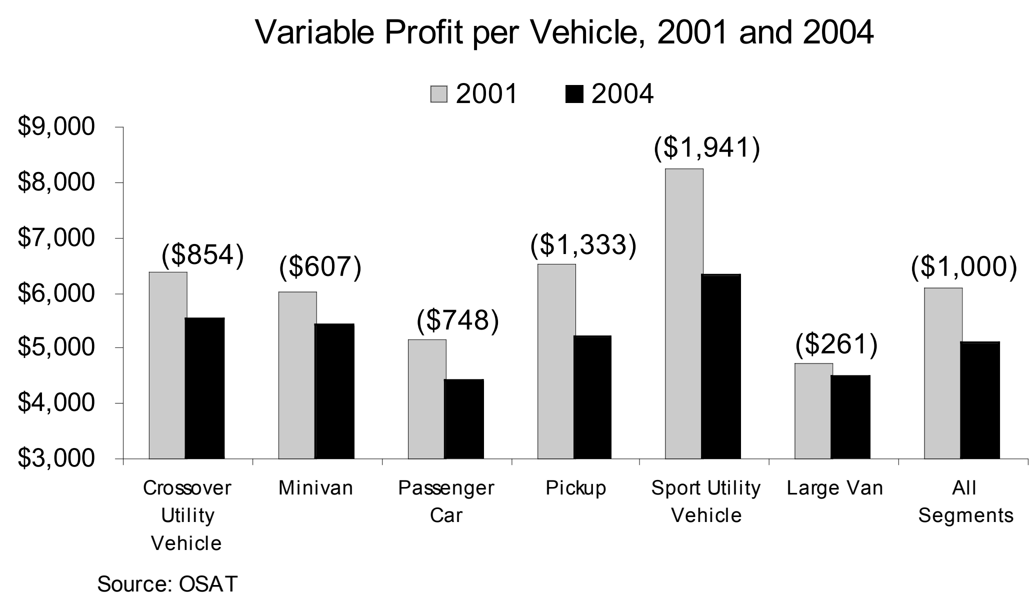
SUVs and pickups had the highest prices, and passenger cars and large vans had the lowest prices in 2001. The average retail transaction price for each of the aggregate segments fell between 2001 and 2004. Pickups and minivans had the greatest percentage decline in retail price and large vans the smallest percentage decline in retail price. The other segments experienced percentage price reductions that were clustered around the overall average.

The segment transaction price changes between 2001 and 2004 have more than one potential source. Direct-to-consumer incentives grew dramatically in this period and clearly played a role in reducing transaction prices. The mix of models within segments also changed as some models were discontinued, other models were introduced, and consumers switched between models. Equipment and features offered by manufacturers and chosen by consumers also change transaction prices.

To isolate the effects of increasing incentives from the other confounding effects OSAT focused on estimates of manufacturer revenue and variable profit in 2001 and 2004. Using 2001 as a suitable baseline for "normal" variable profit, OSAT estimated variable profit by segment and manufacturer group in 2001 using a simple framework. The framework made the following assumptions.

- Manufacturer revenue averaged 97% of the transaction price.
- Manufacturer revenue varied by manufacturer, segment, and transaction price.
- Variable profit averaged 25% of manufacturer revenue across all segments and manufacturers.
- Variable profit (as a percentage of manufacturer revenue) did not substantially differ by manufacturer.
- The variable profit rate was positively related to transaction price.

The figure below shows OSAT's estimates of variable profit per vehicle by aggregate segment 2001 and 2004. The labels above the columns in the figure are the dollar decrease in variable profit from 2001 and 2004 by aggregate segment.



The growth in incentives reduced variable profit per vehicle by $1,000 on average. Variable profit fell the most in SUVs (down $1,941) and pickups (down $1,333).

Validating Variable Profit Estimates

The process of estimating variable profit was iterative. The first set of estimates was shared with industry analysts who gave their opinions as to whether the estimates were credible and roughly accurate. Based on their feedback, the estimates were revised and shared with them again. In all, there were about three rounds in the process.

The estimates were improved by the feedback received from the industry analysts, but any inaccuracies or inconsistencies in the estimates are the sole responsibility of OSAT. The final decisions about the numerical estimates to use in the report were made by OSAT acting alone. The industry analysts listed below reviewed and commented on our estimates. The listing an analyst is not and should not be construed as an endorsement by the analyst of any of the following: the accuracy of the estimates, the conclusions about the profit position of any company derived from the estimates contained in this report, the overall conclusions of the report, or the policy recommendations of the report. OSAT appreciates their assistance.

- Michael Bruynesteyn, Prudential Equity Group LLC
- Stephen Girsky, Morgan Stanley
- Maryann Keller, Maryann Keller & Associates

Fuel Economy and Operating Cost

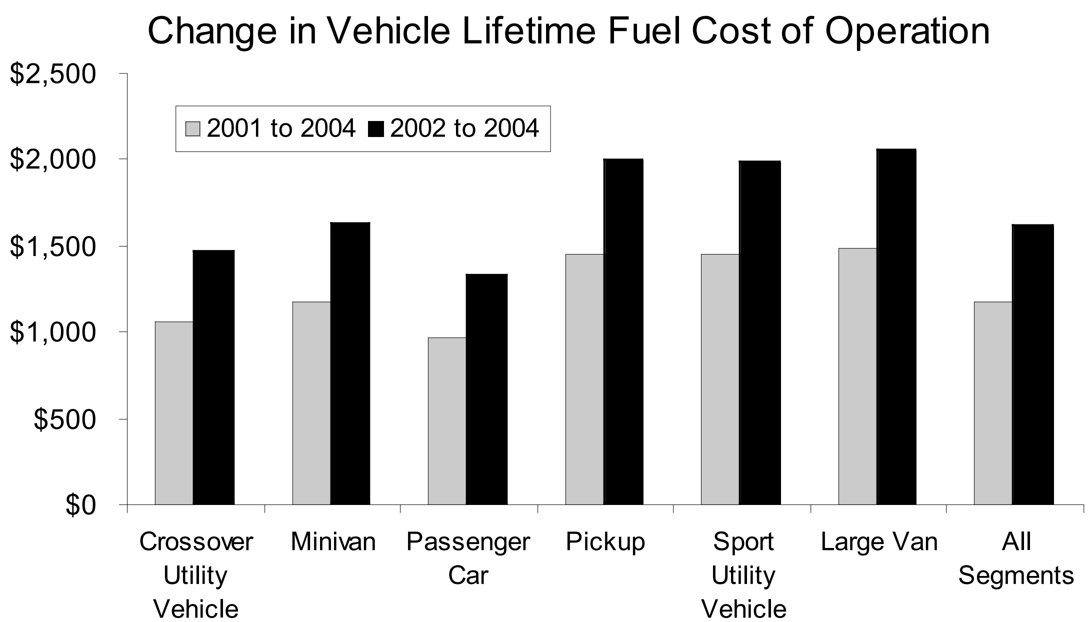
The EPA reports fuel economy for new vehicles annually (model year) for hundreds of vehicle configurations. EPA defines configurations by make, model, engine, transmission, the relevant emissions rules the vehicles are sold under, and the region where the vehicles can be sold. Aggregating the configuration-level data to the segment and manufacturer group is complicated by the fact that the publicly available EPA data do not include sales by configuration.[2] To estimate MPG at the segment and manufacturer group level OSAT first estimated MPG by model using the EPA data, and applying judgment about where in the range to place the average. Aggregating from these estimates to the level of segment and manufacturer group was a straightforward application of the following equation for each segment-manufacturer group.

$$MPG = \frac{\sum_i Sales_i}{\sum_i (Sales_i / MPG_i)}$$

MPG is the harmonic mean for the segment-manufacturer group, $Sales_i$ and MPG_i are the sales and MPG of the i^{th} model in the segment-manufacturer group, and the summations are done across all models in the segment-manufacturer group.

[2] Public EPA data do not include sales by configuration, but EPA obtains the information on sales by configuration from the manufacturers and appends it to the public data to produce the annual report, "Light-Duty Automotive Technology and Fuel Economy Trends: 1975 Through 2004" (EPA420-R-04-001, April 2004). Even the historical data from this report are not publicly available. The policy that keeps the data from the public prevents researchers from answering many important questions.

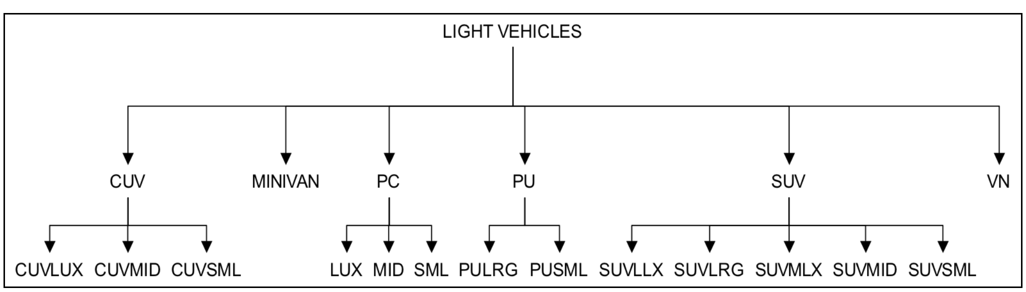
The figure below shows the change in the present value[3] of fuel cost of driving 15,000 miles per year for 2001 to 2004 and 2002 to 2004.



Source: OSAT

Nested Multinomial Logistic Regression Model

The price of gasoline rose by 18% from 2001 to 2004 and by 27% from 2002 to 2004, increasing the cost of operating vehicles, especially SUVs and pickups. Over the same period manufacturers increased direct-to-consumer incentives substantially, especially for SUVs and pickups. To disentangle and quantify these two effects, simulations were run with a nested multinomial logistic regression model OSAT developed for a study jointly conducted with the Natural Resources Defense Council, the Michigan Manufacturing Technology Center, and the Planning Edge.



The consumer's choice of an individual vehicle model is a discrete, multi-step process. The figure shows the consumer's decision as a Decision Tree. In the first step the

[3] PV parameters: 17.2%, 14 years to match Congressional Budget Office, "The Economic Costs of Fuel Economy Standards Versus a Gasoline Tax," Dec. 2003.

consumer chooses which of the broad types of vehicles he/she wants: crossover utility vehicle (CUV), minivan (MINIVAN), passenger car (PC), pickup (PU), sport utility vehicle (SUV), and large van (VN).

The second step is the choice of a vehicle segment within the vehicle type. This choice is conditional on the type of vehicle chosen in first step. A consumer who chose the crossover vehicle type would then choose among luxury (CUVLUX), midsize (CUVMID), and small (CUVSML), and similarly for the other types and segments.

In the third step the consumer chooses among the individual models within the segment.

The structure of the nested multinomial model describes the highly complex discrete choice process with a minimum of parameter assumptions. This is in contrast to an unconstrained elasticity model in which the number of parameters that need to be estimated is very large. In 2004 there were 287 individual models for the consumer to choose from. The unconstrained elasticity matrix for this choice would have $(287)^2 = 82{,}369$ own- and cross-price-elasticities to estimate.

In the research and policy literature on vehicle choice the unweildy unconstrained elasticity matrix is reduced by imposing restrictions. A recent CBO study[4] collapsed the full make-model choice set to 60 (6 makes and 10 segments). In the midsize car segment, for example, the study collapsed models from Chrvrolet, Oldsmobile, Pontiac, Buick, and Saturn into a single aggreagte, "GM Midsize Car." Even with this level of aggregation, the model required $(60)^2 = 3{,}600$ own- and cross-price-elasticity estimates.

Another example of the use of an elasticity model was the study by Kleit[5] Kleit uses a model with 11 vehicle segments and 4 aggregate makes (GM, Ford, Chrysler, and other), implying $(44)^2 = 1{,}936$ own- and cross-price-elasticities.

The possibility of replicating the models used by the CBO and Kleit was explored for this study, but turned out to be infeasible. Both studies rely on estimates of own- and cross-price-elasticities derived from models developed by economists at GM that are not publicly available. Kleit reported 121 aggregate elasticities at the segment level, and the CBO did not report any estimates of elasticities at all.

In addition to being incapable of being exactly replicated, the Kleit and CBO models also do not follow the conventional econometric approach to discrete choice. McFadden's multinomial logistic regression model[6] is the most widely used discrete choice model due

[4] "The Economic Costs of Fuel Economy Standards Versus a Gasoline Tax," Dec. 2003.
[5] Andrew N. Kleit, "Impacts of Long-Range Increases in the Corporate Average Fuel Economy (CAFE) Standard," Economic Inquiry 42:2 (April 2004) 279-294. (Originally distributed as a working paper by the AEI-Brookings Joint Center for Regulatory Studies in October 2002).
[6] McFadden, D., "Conditional Logit Analysis of Qualitative Choice Behavior. In Zaremmbka, P. (ed.), *Frontiers in Econometrics*, Academic Press, New York, 1973.

to its simple structure and ease of estimation. However, the multinomial logistic regression model imposes the restriction that the distribution of the random error terms is independent and identical over alternatives. This restriction leads to the "independence of irrelevant alternatives" property that makes the cross-elasticities between all pairs of alternatives identical to each other. This representation of choice behavior produces biased estimates and inaccurate predictions in cases that violate these strict conditions. The most widely known model that relaxes this restriction is the nested logistic regression model[7].

The model used in this study to estimate the impact of changes in fuel prices and vehicle prices is a nested multinomial logitistic regression model. The number of elasticities that need to be estimated is 20 (the number of vehicle types plus segments plus 1). The model was calibrated to 2002-2003 data following the procedure described in a recent study by Greene, Duleep, and McManus[8].

The essence of the model is captured by the vehicle ranking equation:

$$u_{ij} = b(A_i + \sum_{l=1}^{K} w_l x_{il} + e_{ij}).$$

Here u_{ij} is the ranking score for the ith vehicle for the jth individual, w_{ij} the weight of the l^{th} attribute, x_{il} *, and* e_{ij} *the* j^{th} individual's random component for the ith make and model. By convention, the weight for vehicle price is 1, so that the units of $w_l x_{il}$ are dollars. Greene, Duleep, and McManus (2004) included several variables in their analysis, and the present study uses only two: vehicle price and fuel cost per mile. Transaction price in 2004 is the price paid by the buyer net of cash and other incentives. Fuel cost per mile is measured as the price of gasoline ($1.96 in 2004) divided by the segment MPG.

In the equation, the term b is referred to as the "price slope" and is derived from the price elasticity. The "fuel cost per mile slope" in the equation is b•w, where b is the "price slope" and w the weight of fuel cost per mile in the equation. Assuming that consumers rank vehicles strictly according to the sum of the out-of-pocket transaction price and the present value of the anticipated fuel cost, w equals the present discounted value of the anticipated total lifetime vehicle miles. OSAT used the CBO's assumptions for vehicle life (14 years), discount rate (12%), and the decay in miles driven as vehicles age (5.2%).

Many have suggested that consumers react differently to a $1 (present value) changes in out-of-pocket cash than they do to a $1 (present value) change in fuel cost. To allow for this, the assumption that consumers rank vehicles strictly according to the sum of the out-of-pocket transaction price and the present value of the anticipated fuel cost was relaxed.

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[7] Williams, H.C.W. L. "On the Formulation of Travel Demand Models and Economic Evaluation Measures of User Benefit," *Environment and Planning*, 9A, No.3, pp.285-344, 1977.
[8] Greene, D.L., Duleep, K.G.; McManus, W.S.; "Future Potential of Hybrid and Diesel Powertrains in the U.S. Light-Duty Vehicle Market," 2004

The 3-year calibrated model resulted in fitted values of w that were within 5% of what they would be under the strict assumption. The difference in impact on choice of cash and fuel cost was trivial.

The table below gives the price, fuel economy, assumed price elasticity, price slope, and fuel cost per mile slope for the vehicle types and segments in the decision tree.

Type	*Segment*	*Transaction Price 2004*	*Price Elasticity*	*Choices*	*Average Share*	*Price Slope*	*MPG*	*Fuel Cost per Mile Slope*
		$26,335	(1.00)	6	16.7%	(0.00005)	20.0	(3.54)
CUV		$25,262	(2.00)	3	33.3%	(0.00012)	21.6	(9.27)
CUV	CUVLUX	$35,619	(3.00)	7	14.3%	(0.00010)	20.0	(7.88)
CUV	CUVMID	$25,966	(3.00)	12	8.3%	(0.00013)	20.6	(9.82)
CUV	CUVSML	$20,414	(3.00)	11	9.1%	(0.00016)	23.6	(12.45)
MINIVAN	MINIVAN	$25,942	(2.00)	18	5.6%	(0.00008)	20.1	(6.34)
PC		$23,569	(2.00)	3	33.3%	(0.00013)	24.7	(10.00)
PC	LUX	$39,146	(3.00)	71	1.4%	(0.00008)	21.6	(6.34)
PC	MID	$21,964	(3.00)	54	1.9%	(0.00014)	24.0	(10.82)
PC	SML	$15,668	(3.00)	30	3.3%	(0.00020)	29.3	(15.19)
PU		$27,657	(2.00)	2	50.0%	(0.00014)	15.8	(11.03)
PU	PULRG	$29,436	(3.00)	8	12.5%	(0.00012)	15.1	(8.90)
PU	PUSML	$20,964	(3.00)	10	10.0%	(0.00016)	19.0	(12.02)
SUV		$33,231	(2.00)	5	20.0%	(0.00008)	16.5	(5.87)
SUV	SUVLLX	$49,215	(3.00)	12	8.3%	(0.00007)	14.8	(5.34)
SUV	SUVLRG	$36,721	(3.00)	9	11.1%	(0.00009)	15.1	(7.18)
SUV	SUVMID	$28,348	(3.00)	18	5.6%	(0.00011)	17.6	(8.67)
SUV	SUVMLX	$43,750	(3.00)	12	8.3%	(0.00007)	16.4	(6.00)
SUV	SUVSML	$22,095	(3.00)	5	20.0%	(0.00017)	18.4	(12.86)
VN	VANLRG	$22,660	(2.00)	10	10.0%	(0.00010)	16.5	(7.37)

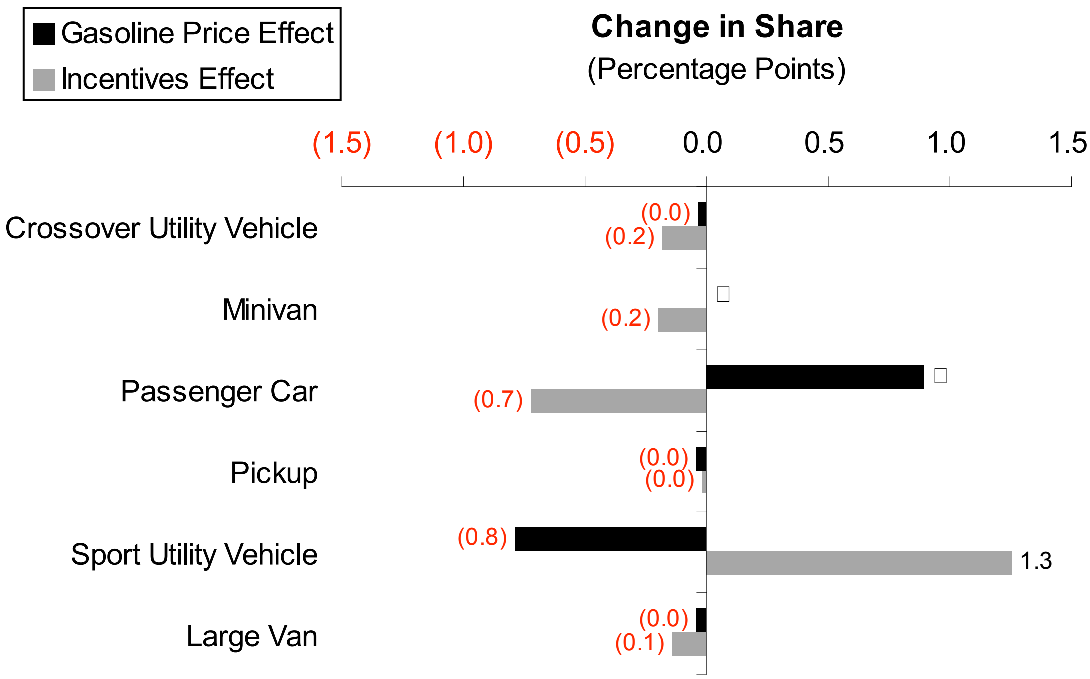
Estimates of the Effects of Fuel Price, Vehicle Price, and Other Factors

The calibrated multinomial logistic regression model was used in two simulations for this paper. The first simulation estimated what vehicle-model-level sales would have been in 2002 if the price of gasoline had been $1.96 per gallon (the 2004 value) and if vehicle prices were unchanged at their 2002 values. The second simulation estimated what sales would have been in 2002 if the price of gasoline had been $1.96 per gallon and if vehicle prices had been lowered by the growth in direct-to-consumer incentives from 2002 to 2004.

The change is sales from their 2002 actual values to what they would have been had the price of gasoline been $1.96 per gallon measures the impact of fuel prices. The change in sales from what they would have been with the 2002 vehicle prices and gasoline at $1.96

per gallon to what they would have been with the 2004 incentives and gasoline at $1.96 measures the offsetting impact of increased direct-to-consumer incentives. The difference between what sales would have been with the 2004 incentives and gasoline at $1.96 and actual sales in 2004 measures other impacts.

The figure below shows the simulated gasoline price effects and incentive effects by aggregate segment. The 18% increase in the price of gasoline, had it occurred in 2002, would have reduced SUV share by 0.8 percentage points and increased passenger car share by 0.9 percentage points. Increases in direct-to-consumer incentives would have, had they occurred in 2002, offset this shift and would have added 1.3 percentage points of share to SUVs while taking 0.7 percentage points from passenger cars and additional share from CUVs, minivans, and large vans.



Source: OSAT

Summary

This paper presented evidence that U.S. light vehicle sales would have responded to the increase in gasoline prices that occurred over the past few years, but that the shift in demand from segments with lower MPG to segments with higher MPG was offset by direct-to-consumer incentives from the vehicle manufacturers that were skewed toward segments with lower MPG. Gasoline was 18% more expensive in 2004 than it was in 2001. This was the equivalent of a 3% increase in the price of the average vehicle and larger increases for vehicles with lower MPG. It would be reasonable to expect changes of this magnitude to have an impact on sales.

The fact that sales of low MPG segments did not fall between 2001 and 2004 led the investigation in another direction. Direct-to-consumer incentives increased substantially since September 2001, beginning with a major zero-interest loan campaign that was launched by General Motors within two weeks of the September 11, 2001 attacks on the U.S. By the end of 2004, the average incentive had risen by $1,000 (4% of vehicle price) and by nearly $2,000 for SUVs (6% of vehicle price). These incentives essentially offset the shifts that higher gasoline prices would have caused.

The gasoline price and incentive effects did not occur in a vacuum. In the period from 2001 to 2003 the offsetting shifts described in this paper were small compared to two broader market shifts, driven largely by new products. Extended cab pickups and sport utility pickups that combined features of SUVs and pickup trucks grew by almost a percentage point of market share at the expense of SUVs. New CUV models added almost 4 points of share to that aggregate segment at the expense of passenger cars.

Higher gasoline prices increase the demand for vehicles with higher MPG relative to the demand for vehicles with lower MPG. Vehicle manufacturers who assign a higher probability to sustained or rising gasoline prices than they do to a return to lower prices should seek ways to increase the MPG of their products. Suppliers with technologies or products that can improve fuel economy should be able to gain sales and profits as concern about higher gasoline prices continues to influence consumers.

Appendix: The Estimates

Vehicle Type	Segment	Manufacturer Group	Sales 2001	2001 Variable Profit per Unit	Sales 2004	2004 Variable Profit per Unit	Change in Variable Profit (Billions)
Crossover Utility Vehicle	Luxury	Detroit	31,754	$7,800	90,058	$5,500	$0.2
Crossover Utility Vehicle	Luxury	Europe	30,678	$9,500	55,289	$9,400	$0.2
Crossover Utility Vehicle	Luxury	Japan	118,341	$9,600	166,036	$9,600	$0.5
Crossover Utility Vehicle	Midsize	Detroit	191,899	$5,900	399,018	$4,600	$0.7
Crossover Utility Vehicle	Midsize	Japan	86,699	$7,400	323,292	$7,200	$1.7
Crossover Utility Vehicle	Midsize	Other	46,248	$5,900	70,827	$4,200	$0.0
Crossover Utility Vehicle	Small	Detroit	144,717	$5,000	258,873	$2,800	$0.0
Crossover Utility Vehicle	Small	Japan	204,681	$5,500	326,535	$5,500	$0.7
Crossover Utility Vehicle	Small	Other	111,058	$5,300	195,048	$4,200	$0.2
Minivan	Minivan	Detroit	806,412	$5,800	621,903	$4,800	($1.7)
Minivan	Minivan	Japan	248,742	$7,000	359,787	$7,000	$0.8
Minivan	Minivan	Other	47,281	$4,800	86,009	$3,300	$0.1
Passenger Car	Large	Detroit	542,642	$5,900	345,474	$3,800	($1.9)
Passenger Car	Luxury	Detroit	416,546	$8,600	415,365	$8,100	($0.2)
Passenger Car	Luxury	Europe	590,410	$10,400	649,107	$10,300	$0.5
Passenger Car	Luxury	Japan	370,430	$8,200	384,585	$8,200	$0.1
Passenger Car	Luxury	Other	37,077	$5,100	4,397	$4,600	($0.2)
Passenger Car	Midsize	Detroit	2,171,642	$4,500	1,683,587	$2,600	($5.4)
Passenger Car	Midsize	Europe	279,424	$5,300	187,480	$5,100	($0.5)
Passenger Car	Midsize	Japan	1,133,694	$5,000	1,235,516	$4,700	$0.1
Passenger Car	Midsize	Other	454,422	$4,700	443,904	$3,300	($0.7)
Passenger Car	Small	Detroit	1,011,429	$3,000	720,045	$2,000	($1.6)
Passenger Car	Small	Europe	96,472	$4,700	66,826	$4,500	($0.2)
Passenger Car	Small	Japan	766,071	$3,500	814,146	$3,100	($0.2)
Passenger Car	Small	Other	506,205	$3,600	473,088	$2,800	($0.5)
Pickup	Large	Detroit	2,178,644	$7,200	2,298,972	$5,500	($3.0)
Pickup	Large	Japan	108,863	$6,800	196,332	$6,500	$0.5
Pickup	Small	Detroit	631,182	$4,900	429,569	$3,700	($1.5)
Pickup	Small	Japan	251,417	$4,900	223,635	$3,800	($0.4)
Pickup	Small	Other	26,246	$3,800	10,266	$3,400	($0.1)
Sport Utility Vehicle	Large Luxury	Detroit	63,797	$13,800	141,999	$11,300	$0.7
Sport Utility Vehicle	Large Luxury	Europe	0	$13,000	57,299	$13,000	$0.7
Sport Utility Vehicle	Large Luxury	Japan	16,946	$13,700	65,180	$13,700	$0.7
Sport Utility Vehicle	Large	Detroit	848,709	$9,500	775,198	$6,300	($3.2)
Sport Utility Vehicle	Large	Japan	117,590	$11,100	95,389	$10,900	($0.3)
Sport Utility Vehicle	Midsize	Detroit	1,194,413	$7,200	1,208,403	$4,100	($3.6)
Sport Utility Vehicle	Midsize	Europe	0	$10,900	27,706	$10,900	$0.3
Sport Utility Vehicle	Midsize	Japan	258,970	$7,400	219,021	$6,700	($0.4)
Sport Utility Vehicle	Midsize	Other	158,701	$6,000	102,367	$4,700	($0.5)
Sport Utility Vehicle	Midsize Luxury	Detroit	23,867	$8,300	1,973	$6,200	($0.2)
Sport Utility Vehicle	Midsize Luxury	Europe	114,155	$13,200	97,903	$13,200	($0.2)
Sport Utility Vehicle	Midsize Luxury	Japan	18,735	$11,000	30,974	$11,000	$0.1
Sport Utility Vehicle	Midsize Luxury	Other	30,653	$6,700	8,334	$4,200	($0.2)
Sport Utility Vehicle	Small	Detroit	121,198	$5,800	92,448	$4,600	($0.3)
Sport Utility Vehicle	Small	Other	76,362	$4,700	8,457	$4,700	($0.3)
Large Van	Large Van	Detroit	427,039	$4,700	377,370	$4,400	($0.3)
Large Van	Large Van	Europe	5,600	$6,900	10,441	$6,900	$0.0
All Segments			17,118,061	$6,077	16,855,431	$5,077	($18.5)