Table 4. Vehicle Demand Model Parameter Estimates*

Average utility: elements of $\alpha'z_j$	Coefficient (Standard Error)	
Constant	-7.0318 (1.4884)	-6.8520 (1.5274)
Manufacturer's suggested retail price *(in thousands of 2000 dollars)*	-0.0733 (0.0192)	-0.1063 (0.0635)
Expected retained value after 2 years *(in thousands of 2000 dollars)*	---	0.0550 (0.1011)
Horsepower divided by weight *(in tons)*	0.0328 (0.0117)	0.0312 (0.0120)
Automatic transmission dummy *(1 if automatic transmission is standard equipment; 0 otherwise)*	0.6523 (0.2807)	0.6787 (0.2853)
Wheelbase *(inches)*	0.0516 (0.0127)	0.0509 (0.0128)
Length minus wheelbase *(inches)*	0.0278 (0.0069)	0.0279 (0.0069)
Fuel consumption *(in gallons per mile, times 10^4 for scaling)*	-0.0032 (0.0023)	-0.0032 (0.0023)
Luxury or sports car dummy *(1 if vehicle is a luxury or sports car, 0 otherwise)*	-0.0686 (0.2711)	-0.0558 (0.2726)
SUV or station wagon dummy *(1 if vehicle is a SUV or wagon, 0 otherwise)*	0.7535 (0.4253)	0.7231 (0.4298)
Minivan and full-sized van dummy *(1 if vehicle is a minivan or full-sized van, 0 otherwise)*	-1.1230 (0.3748)	-1.1288 (0.3757)
Pickup truck dummy *(1 if the vehicle is a pickup truck, 0 otherwise)*	0.0747 (0.4745)	0.0661 (0.4756)
Chrysler manufacturer dummy	0.0228 (0.2794)	0.0654 (0.2906)
Ford manufacturer dummy	0.1941 (0.2808)	0.2696 (0.3060)
General Motors manufacturer dummy	0.3169 (0.2292)	0.3715 (0.2507)
European manufacturer dummy	2.4643 (0.3424)	2.4008 (0.3624)
Korean manufacturer dummy	0.7340 (0.3910)	0.8017 (0.4111)

Utility that varies over consumers related to observed characteristics: elements of $\beta'x_{nj}$	Coefficient (Standard Error)
Manufacturers' suggested retail price divided by respondent's income	-1.6025 (0.4260)
Vehicle reliability based on the *Consumer Reports'* repair index for women aged 30 or over *(0 otherwise)* [a]	0.3949 (0.0588)

Luxury or sports car dummy for lessors *(1 if the vehicle is a luxury or sports car and the respondent leased , 0 otherwise)*	0.6778 (0.4803)
Minivan and full-sized van dummy for households with an adolescent *(1 if the vehicle is a van and the respondent's household has children aged 7 to 16, 0 otherwise)*	3.2337 (0.5018)
SUV or station wagon dummy for households with an adolescent *(1 if vehicle is a SUV or Wagon and the respondent's household includes a child aged 7 to 16, 0 otherwise)*	2.0420 (0.4765)
ln(1+Number of dealerships within 50 Miles of the center of a respondent's zip code) [b]	1.4307 (0.2714)
Number of previous consecutive GM purchases	0.3724 (0.1471)
Number of previous consecutive GM purchases for respondents who live in a rural location [c]	0.3304 (0.2221)
Number of previous consecutive Ford purchases	1.1822 (0.1498)
Number of previous consecutive Chrysler purchases	0.9652 (0.2010)
Number of previous consecutive Japanese manufacturer purchases	0.7560 (0.2255)
Number of previous consecutive European manufacturer purchases	1.7252 (0.4657)

Utility that varies over consumers unrelated to observed characteristics (error components): elements of $\mu'_n w_{nj} + \lambda \eta_{ns}$	**Coefficient (Standard Error)**
Manufacturer's suggested retail price divided by respondent's income times a random standard normal	0.8602 (0.4143)
Horsepower times a random standard normal *(divided by 10^4 for scaling)*	45.06 (72.34)
Fuel consumption *(gallons of gasoline per mile, times 10^4 for scaling)* times a random standard normal	-0.0102 (0.0020)
Light truck, van, or pickup dummy *(1 if vehicle is a light truck, van, or pickup truck; 0 otherwise)* times a random standard normal	6.8505 (2.5572)
Manufacturer loyalty: conditional standard normal as described in text.	0.3453 (0.1712)

*Estimated coefficients for vehicle make and model dummies not shown.
 Number of observations: 458
 Log likelihood at convergence for choice model: -1994.93
 R^2 for regression model: 0.394 without retained value, 0.395 with retained value.

Notes:
a.   The *Consumer Reports'* repair index is a measure of reliability that uses integer values from 1 to 5. A measure of 1 indicates the vehicle has a "much below average" repair record, 3 is "average," while 5 represents "much better than average" reliability.
b.   A dealership is defined as a retail location capable of selling a vehicle produced by a given division. The dealership variable is equal to 0,1,2, or 3 (with 3 representing areas with 3 or more dealerships within a fifty-mile radius of the center of the respondent's zip code). This variable is defined for divisions (not manufacturers), because a Chevrolet dealership might sell Chevrolet vehicles without selling Saturn vehicles (GM manufactures both Chevrolet and Saturn).
c.   A respondent is classified as living in a rural location if he or she does not live in a Metropolitan Statistical Area or lives in a Metropolitan Statistical Area with less than 1 million people.