Vehicle ownership, purchases, and leasing: consumer survey data

Two consumer-based surveys yield strikingly similar pictures of vehicle ownership, acquisitions, and growth in leasing, despite some methodological differences

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Motor vehicles play a central role in the modern American lifestyle. The vast majority of workers travel to work by private vehicle. Motor vehicles are one of the most widely owned assets, with more than 85 percent of U.S. households owning one or more vehicles in 1992. Costs related to vehicles—vehicle purchases, operating expenses and repairs, and insurance—account for a sizable part of the typical household's budget. Loans related to vehicle purchases are one of the most common forms of household borrowing, and monthly payments are important in expenditure patterns. For all these reasons, developments related to vehicle holding are important for analyzing living standards by households.

Several interesting trends related to motor vehicles have developed over the past decade. Climbing sticker prices for new vehicles and quality improvements have encouraged households to keep vehicles for longer periods. The incidence of auto leasing has grown substantially, with leases now estimated to represent as much as 1 in 3 new car acquisitions by consumers. There also have been significant changes in vehicle financing, including the growth of specialized auto lenders and greater competition for customers based on loan terms offered.

While there are several sources of information on motor vehicles, few provide much detail on vehicles owned by households. The Federal Reserve Board's Survey of Consumer Finances (SCF) and the Bureau of Labor Statistics Consumer Expenditure Interview Survey (CE survey) collect detailed information on motor vehicles held by households, including the timing and financial terms of acquisitions and disposals of vehicles. This article explains the basic features of the data on motor vehicles in both surveys. The first section compares the data for 1992, the latest year for which final figures are available for both surveys. We find that, despite some methodological differences between the two surveys, they yield strikingly similar pictures of vehicle holding by households. The second section of the article compares the survey data with figures on vehicle stocks obtained from other sources, primarily data on registrations. Although the comparisons are not straightforward, the data from both surveys are quite consistent with estimates of vehicle stocks. This confirms the value of using data from consumer-based surveys to analyze consumer vehicle holdings. Finally, we present evidence on the growth of auto leasing in recent years—to our knowledge, this is the first analysis of this phenomenon using representative survey data. We conclude that more research is needed to determine the motivation for leasing vehicles because we find that the data do not support the commonly held notion that liquidity constraints (insufficient access to cash or loans) are a factor in the lease-versus-buy decision.

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Survey comparisons

While the SCF and CE surveys are both based on representative samples, there are some notable differences in their designs. The Federal Reserve

Board's Survey of Consumer Finances is conducted every 3 years, interviewing about 4,000 households. Roughly three-quarters of the households come from an area-probability sample, while the remainder come from a high wealth oversample. The Consumer Expenditure Interview Survey, sponsored by the Bureau of Labor Statistics, is conducted quarterly by the Census Bureau, and interviews roughly 5,000 households. Each household is interviewed five times on a quarterly basis. The survey uses a rotating sample in which 20 percent of those households are replaced every quarter. The differences in design give the two surveys different strengths for analyzing vehicle holdings. On one hand, the SCF oversample of higher wealth households makes it well suited for analyzing narrowly held assets, which turns out to be an important factor in auto leasing. (See section on "auto leasing.") On the other hand, the quarterly frequency of the CE survey permits analysis of changes in vehicle stocks over the business cycle.

To compare vehicle data from the two surveys, we use the 1992 SCF data, mostly collected during the third quarter of 1992, and the CE survey data from the same period. "Vehicles" are defined as cars, jeeps, vans, minivans, pickups, trucks, and sport utility vehicles, currently in running condition.[1] The data are weighted, using the population weights provided in each survey.

As shown in table 1, the SCF and the CE surveys provide very similar pictures of vehicle ownership by households. According to the SCF, 86.2 percent of households owned vehicles, compared with 85.0 percent in the CE survey.[2] In both surveys, ownership tends to rise with household income and financial assets. Ownership increases with age until it peaks for households headed by persons in the 45- to 54-year age bracket, and then declines thereafter.

In both surveys, the average number of vehicles per household was around 1.8 in 1992. The average number of vehicles owned rises steadily with the household's income and financial assets, and first rises then falls with the age of the household's head. The average age of vehicles owned by households was around 8.0 years in both surveys.[3] Average ages of vehicles tend to be higher among households with relatively low incomes and also among those with relatively low financial assets.

Both surveys ask whether each vehicle was new or used when it was first acquired. As presented in table 2, the SCF shows that 43.6 percent of all vehicles owned by households were new when first acquired. The figure from the CE survey is very similar, at 42.6 percent. Of the vehicles that were bought used, the average age at acquisition was 6.5 years in the SCF, and 6.6 years in the CE survey. In both surveys, roughly one-third of all households had only vehicles that were new when first acquired; 44 percent to 45 percent had only vehicles that were used when first acquired; and the remainder had a mixture of the two. Not surprisingly, the share buying only new vehicles rises with income and financial as-

Table 1. Vehicle ownership by selected household characteristics from the Survey of Consumer Finances and the Consumer Expenditure Interview Survey, 1992

Household characteristic	Percent of households owning a vehicle		Average number of vehicles		Average age of vehicles (years)	
	Survey of Consumer Finances	Consumer Expenditure Interview Survey	Survey of Consumer Finances	Consumer Expenditure Interview Survey	Survey of Consumer Finances	Consumer Expenditure Interview Survey
All households	86.2	85.0	1.8	1.7	7.9	8.0
By household income (1992 dollars):						
Below $10,000	55.8	67.3	1.3	1.5	11.4	8.8
$10,000–$25,000	88.0	85.4	1.5	1.5	9.1	9.1
$25,000–$50,000	93.6	95.9	1.8	1.8	7.5	7.9
$50,000–$100,000	96.7	96.6	2.1	2.1	6.7	6.4
$100,000 or more	96.6	93.1	2.1	2.1	5.9	7.0
By age of household head:						
Under 35 years	84.8	82.5	1.7	1.6	7.8	7.9
35–44 years	88.7	88.2	1.8	1.9	7.8	7.8
45–54 years	92.5	91.2	2.0	2.0	7.5	7.5
55–64 years	86.9	87.5	1.9	1.9	7.7	8.2
65–74 years	86.2	87.1	1.6	1.6	8.1	8.6
75 and older	72.4	69.8	1.3	1.4	9.9	9.3
By financial assets (1992 dollars):						
Below $500	71.8	72.1	1.6	1.6	9.9	9.9
$500–$2,500	91.2	90.8	1.7	1.7	8.0	8.1
$2,500–$10,000	92.6	94.0	1.9	1.9	7.4	7.1
$10,000 or more	93.5	92.8	1.9	1.9	6.5	7.5

Table 2. Acquisition of new versus used vehicles by selected household characteristics from the Survey of Consumer Finances and the Consumer Expenditure Interview Survey, 1992

Household characteristic	Vehicles bought new as percent of all vehicles owned by group		Average age of groups' used vehicles at time of acquisition		Percent of households—					
					Buying only new vehicles		Buying only used vehicles		Buying new and used vehicles	
	Survey of Consumer Finances	Consumer Expenditure Interview Survey	Survey of Consumer Finances	Consumer Expenditure Interview Survey	Survey of Consumer Finances	Consumer Expenditure Interview Survey	Survey of Consumer Finances	Consumer Expenditure Interview Survey	Survey of Consumer Finances	Consumer Expenditure Interview Survey
All households	43.6	42.6	6.5	6.6	34.8	32.6	44.0	45.1	21.2	22.3
By household income (1992 dollars):										
Below $10,000	25.7	38.8	7.8	6.8	23.5	30.4	70.9	53.6	5.6	16.1
$10,000–$25,000	28.6	32.4	6.9	7.2	27.7	27.1	61.7	58.7	10.6	14.2
$25,000–$50,000	45.6	42.1	6.3	6.6	38.3	34.7	37.0	41.8	24.7	23.5
$50,000–$100,000	52.9	53.6	5.7	5.2	38.0	37.3	25.9	24.3	36.1	38.4
$100,000 or more	66.0	64.1	5.1	7.7	54.1	49.7	18.1	17.9	27.8	32.4
By age of household head:										
Under 35 years	37.9	33.7	7.3	7.7	29.8	26.4	50.7	57.0	19.6	16.5
35–44 years	42.7	40.5	7.0	6.6	31.7	27.9	43.2	44.2	25.1	27.9
45–54 years	41.9	42.6	6.0	5.8	29.3	28.1	43.9	42.1	26.8	29.8
55–64 years	46.7	46.0	6.1	6.1	38.3	34.7	40.8	40.2	21.0	25.1
65–74 years	50.9	52.1	5.6	6.3	45.1	45.1	38.1	36.7	16.8	18.2
75 and older	54.3	60.6	4.6	5.0	50.3	54.5	39.1	33.9	10.3	11.6
By financial assets (1992 dollars):										
Below $500	22.7	20.1	7.9	8.0	19.0	14.6	70.6	72.5	10.4	13.0
$500–$2,500	41.9	37.3	6.3	6.4	35.0	27.6	44.4	49.1	20.6	23.3
$2,500–$10,000	47.0	47.5	5.7	5.6	36.7	37.8	35.8	34.2	27.6	27.9
$10,000 or more	60.7	60.4	5.2	6.4	49.8	48.0	23.0	24.4	27.2	27.5

sets; it also rises with age. However, even among households in the highest income and asset brackets, used vehicles are not uncommon. For example, 45 percent to 50 percent of households with incomes of $100,000 or more had at least one vehicle that was used when first acquired.[4]

Comparisons with other sources

To assess the reliability of the survey data, it is useful to compare their vehicle stock figures with the figures from other sources. The two most widely used series on vehicle stocks are essentially population counts obtained from registrations data. The Federal Highway Administration (FHA) releases data on the total number of cars and trucks registered over the course of the year. R.L. Polk & Co. releases data on the number of cars and trucks in operation as of July 1.[5] Neither series is directly comparable to the SCF or CE survey data, because the registration-based counts include both household and business vehicles. In contrast, the U.S. Department of Commerce's Bureau of Economic Analysis (BEA) constructs an estimate of the stock of cars held by households for personal use, based on the Polk data and other sources. However, the BEA figure does not include trucks, leased vehicles, or cars used by households for both personal and business purposes, and as such, captures only part of the vehicle stock held by households.

Table 3 shows the estimates of the total stock of vehicles from the registrations-based data, along with the estimates of the stock of vehicles held by households from the SCF and the CE surveys. The FHA, Polk, and BEA data are taken from periods as similar as possible to those of the SCF and CE surveys. According to FHA data, 187.0 million private vehicles were registered over 1992. The Polk data show 181.5 vehicles in operation as of the middle of that year. As discussed in Alan Greenspan and Darrel Cohen's detailed analysis of data on vehicle stocks, the Polk figure overstates the vehicle stock due to exclusion of scrappage over the course of the year.[6] Accounting for this problem results in an estimate of 172.8 million for the total vehicle stock in 1991.[7]

According to the CE survey, households held 156.4 million vehicles not exclusively used for business in the third quarter of 1992. The SCF shows households holding 153.5 million such vehicles in roughly the same period. The estimates from these consumer surveys are close to those of other periodic surveys that can be used to estimate vehicle holdings by households. Notably, the estimate from the American Housing Survey of the U.S. Bureau of the Census is 160.8 million for 1991, while the estimate from the U.S. Energy Information Administration's Household Vehicles Energy Consumption is 151.2 million.[8]

Thus, the SCF and the CE survey estimates are quite similar to each other and to estimates from other consumer surveys,

although they are 17 million to 20 million vehicles below the carefully constructed estimates of Greenspan and Cohen. While we expect the SCF and CE figures to be lower because they cover household vehicles only, it is difficult to verify that business vehicles fully account for the difference. Neither the FHA nor Polk survey distinguishes between household and business vehicles in estimating vehicle stocks.[9] However, the BEA series on cars (not vehicles, as defined earlier) owned by households provides some basis for comparison with the survey data.[10] For 1992, the BEA estimates that households owned 111.8 million cars not used for business purposes. The comparable figure from the 1992 SCF is very close, at 106.3 million (not shown in the table). The figure for the CE survey is somewhat higher at 122.2 million, probably due to the inclusion of cars with some business use. Thus, to the extent that we can make valid comparisons across data sources, the estimates from the consumer surveys appear to be quite consistent with other information on vehicle holdings by household.

The growth of auto leasing

While the growth of auto leasing in recent years is well documented, there has been little systematic investigation of the prevalence of leasing by consumers. A private consulting firm, CNW Marketing/Research, estimates the total number of vehicles leased by consumers, based on a sample of insurance records.[11] Because CNW does not release the details of its methodology, the representativeness of its sample is not clear. Moreover, the CNW data contain only limited information on the characteristics of households, and so do not provide much insight into the reasons why households lease. This makes it difficult to assess the implications of the growth of leasing for new car production and sales.

In contrast, the SCF and CE surveys have well documented representative samples, and both contain detailed information on household characteristics. However, there are two problems with the survey data on leasing. First, leasing is still relatively uncommon, so the survey samples contain a relatively small number of households that are leasing a vehicle.[12] And second, the 1992 SCF asked respondents to report vehicles leased for personal use, excluding leased vehicles used for business purposes. The exclusion of business-related leasing may lead to some underestimation of the prevalence of leasing by households in this survey, especially if leasing is favored by self-employed individuals. In contrast, the CE survey asks about leased vehicles that have *any* personal use. The response to this question yields a count of leased vehicles used for both personal and business purposes.

The survey data confirm that leased vehicles were a sizable percentage of new vehicles acquired by households in the early 1990s. According to the SCF, leased vehicles accounted for 21.5 percent of vehicles less than 2 years old in 1992.[13] CNW estimates that, in recent years, one-fifth to one-third of new vehicles acquired by consumers were leased, rather than bought. There are two reasons why the SCF figures lie in the lower end of the range, compared with the CNW data. First, the SCF employs a different definition of "consumer lease." Whereas the 1992 SCF includes vehicles leased for personal use only, CNW also includes business vehicles

Table 3. Comparison of industry-level and survey data on aggregate vehicle holdings, 1992

Data source	Coverage	Period	Millions of vehicles
Federal Highway Administration	Registrations of privately owned vehicles (household and commercial)	Year ending December 1992	187.0
R.L. Polk & Co.	Vehicles in operation	July 1992	181.5
Greenspan and Cohen	Vehicles in operation	1991	172.8
Consumer Expenditure Survey	Vehicles held by households not exclusively used for business purposes	1992, third quarter	156.4
Survey of Consumer Finances	Vehicles held by households not used for business purposes	1992, mostly third quarter	153.5
American Housing Survey (in Greenspan and Cohen)	Vehicles in operation held by households	1991	160.8
Household Vehicles Energy Consumption	Vehicles held by households	1991	151.2
Bureau of Economic Analysis	Car stocks held by households for personal use	1992	111.8

SOURCES: American Automobile Manufacturers' Association, *Motor Vehicle Facts and Figures,* 1994; Alan Greenspan and Darrel Cohen, "Motor Vehicle Stocks, Scrappage, and Sales," 1996; authors' calculations from the BLS Consumer Expenditure Interview Survey and Survey of Consumer Finances; U.S. Department of Commerce, *Statistical Abstract of the United States*, 1994; and Bureau of Economic Analysis.

Table 4. Vehicle leasing for personal use, Survey of Consumer Finances and Consumer Expenditure Interview Survey, 1992

Household characteristic	Percent of households leasing a vehicle		Among households with a leased vehicle			
			Average number of leased vehicles		Average age of leased vehicles (years)	
	Survey of Consumer Finances	Consumer Expenditure Interview Survey	Survey of Consumer Finances	Consumer Expenditure Interview Survey	Survey of Consumer Finances	Consumer Expenditure Interview Survey
All households	3.0	1.9	1.1	1.1	1.6	1.5
By household income (1992 dollars):						
Below $10,000	[1]	.8	[1]	1.1	[1]	1.2
$10,000–$25,000	.9	.8	1.2	1.2	2.3	.8
$25,000–$50,000	3.8	1.5	1.1	1.0	1.7	2.2
$50,000–$100,000	4.3	3.9	1.1	1.1	1.4	1.4
$100,000 or more	9.8	12.0	1.2	1.2	1.3	1.8
By age of household head:						
Under 35 years	3.2	1.5	1.0	1.1	1.8	1.8
35–44 years	4.2	2.9	1.1	1.0	1.4	1.3
45–54 years	3.8	2.6	1.3	1.2	2.0	2.1
55–64 years	3.1	2.4	1.1	1.1	1.0	1.0
65–74 years	1.0	[1]	1.0	[1]	[1]	[1]
75 years and older	.1	[1]	1.0	[1]	1.4	[1]
By financial assets (1992 dollars):						
Below $500	1.0	[1]	1.0	[1]	2.6	[1]
$500–$2,500	2.8	2.6	1.2	1.1	1.9	1.7
$2,500–$10,000	3.7	2.7	1.0	1.1	1.4	1.6
$10,000 or more	5.1	2.7	1.1	1.1	1.3	2.0

[1] Fewer than five observations.

that might sometimes be used for personal reasons.[14] And second, the sample of insurance records used by CNW may be unrepresentative in some way that overstates the prevalence of leasing. For example, leasing rates may be relatively high among vehicles insured through large insurance companies in major cities. Without additional information on CNW's methodology, it is difficult to determine the potential for bias of this type.

According to the SCF data, 3.0 percent of households held a leased vehicle in 1992 (table 4). While one might expect this figure to be higher in the CE survey, given its inclusion of business-related leases, the survey shows a smaller share of households leasing vehicles, at 1.9 percent. The discrepancy is likely attributable to the differences in the designs of the two surveys. Relatively wealthy households tend to have higher nonresponse rates than the population as a whole, but because the SCF oversamples such households, the survey yields higher estimates of ownership rates for all types of assets, including leased vehicles, disproportionately held by this group.[15]

According to both surveys, leased vehicles are most common among households with relatively high levels of income (table 4). In the 1992 SCF, almost 10 percent of households with incomes over $100,000 leased a vehicle, compared with 12.0 percent in the CE survey. The SCF probably estimates the prevalence of leasing more accurately, because it is less likely to underrepresent the relatively "well off."

The survey data on auto leasing provide some insight into the types of households that are most likely to lease. As mentioned, both surveys show the highest leasing rates among households with annual incomes exceeding $100,000. Leasing was also more common among households headed by persons in the 35- to 54-year age brackets. According to the SCF, leasing was more common among households with relatively high levels of financial assets, though there were no appreciable differences related to asset holdings in the CE survey.[16]

The CE data can also be used to document the growth of leasing since 1992 (table 5). The proportion of all households that had a leased vehicle rose from 2.0 percent in 1992 to 2.6 percent in 1994.[17] Leasing grew most rapidly among households with incomes exceeding $100,000, with the share of such households that had a leased a vehicle rising from 11.4 percent in 1992 to 19.2 percent in 1994. The leasing rate also increased among households in the 35- to 54-age brackets, and among those with relatively high levels of financial assets.

According to the CE data shown in table 6, the terms of financing for purchased vehicles are substantially different from those for leased vehicles. Fewer leasing transactions

Table 5. Vehicle leasing for personal use, Consumer Expenditure Interview Survey, 1992–94

Household characteristic	Percent of households leasing a vehicle			Average number of leased vehicles			Average age of leased vehicles (years)		
	1992	1993	1994[p]	1992	1993	1994[p]	1992	1993	1994[p]
All households	2.0	2.1	2.6	1.1	1.2	1.3	1.6	1.6	1.8
By household income (1992 dollars):									
Below $10,000	1.0	1.1	1.7	1.1	1.2	1.2	1.4	1.4	1.6
$10,000–$25,000	1.0	.8	.7	1.1	1.2	1.4	1.2	1.6	2.1
$25,000–$50,000	1.6	1.8	1.5	1.0	1.2	1.2	1.8	1.7	2.1
$50,000–$100,000	4.1	4.5	6.2	1.1	1.2	1.3	1.7	1.8	1.8
$100,000 or more	11.4	13.4	19.2	1.2	1.3	1.3	2.0	1.4	1.5
By age of household head:									
Under 35 years	1.7	1.4	1.7	1.0	1.1	1.2	1.6	1.6	1.9
35–44 years	2.9	3.3	4.0	1.1	1.2	1.2	1.4	1.6	1.5
45–54 years	2.6	3.3	4.6	1.2	1.3	1.3	2.1	2.0	2.0
55–64 years	2.4	2.4	2.3	1.1	1.2	1.5	1.5	1.0	1.6
65–74 years	.7	.8	1.4	1.3	1.1	1.3	1.1	.8	2.1
75 years and older	.5	([1])	([1])	1.1	([1])	([1])	2.0	([1])	([1])
By financial assets (1992 dollars):									
Below $500	.4	.7	.8	1.0	1.1	1.1	1.4	1.5	1.7
$500–$2,500	2.8	1.6	2.8	1.0	1.2	1.6	1.8	1.8	1.6
$2,500–$10,000	3.2	4.8	5.2	1.1	1.2	1.3	1.7	1.9	2.4
$10,000 or more	2.5	2.4	4.9	1.1	1.1	1.1	1.3	1.4	1.6

[1] Fewer than five observations.

[p] = preliminary.

Table 6. Financing terms in leasing versus purchasing transactions

Term	Collection period				
	1992 first quarter	1992 second quarter	1993 first quarter	1993 second quarter	1994 first quarter
Transactions involving a down payment (in percent):					
Purchase	70.1	67.9	72.7	65.6	69.1
Lease	27.1	32.6	60.1	57.1	51.0
Average down payment (1992 dollars):					
Purchase	2,903	2,616	2,702	3,371	3,064
Lease	1,820	1,659	2,595	2,235	1,492
Transactions involving a trade-in (in percent):					
Purchase	52.2	59.8	58.8	58.4	50.4
Lease	37.9	25.0	33.8	38.8	44.0
Average trade-in amount (1992 dollars):					
Purchase	4,020	5,174	6,273	4,667	5,493
Lease	3,919	4,612	2,264	3,016	4,685

involve a down payment, and among transactions for which a down payment was made, the amounts for leased vehicles are lower than those for purchased vehicles. Similarly, fewer leasing transactions involve a trade-in. For example, in the first half of 1994, 44 percent of leasing transactions involved a trade-in, compared with 50 percent of vehicle purchases. Also, for transactions involving a trade-in, the value of the trade-in was lower for transactions involving leasing.

Because the initial payment for a leased vehicle tends to be lower than that for a purchased vehicle, it is sometimes suggested that some consumers might lease because they lack sufficient funds to purchase a vehicle in the traditional manner. While the decision to lease certainly warrants further study, the survey data show only that most households that do lease tend to have relatively high levels of income and assets. And while some households might lack the cash required to buy a relatively expensive vehicle, many would seem to be able to purchase a reasonably priced car at traditional lending terms.[18] Further analysis of the survey data is needed to provide additional insights into this decisionmaking process.

TO SUMMARIZE, the SCF and CE surveys show strikingly similar patterns in vehicle ownership, including a higher average age of vehicles held by household, and a strong inverse relation-

ship between income levels and the likelihood of having used cars. The survey data also match well with aggregate data, confirming their value for the analysis of the determinants of motor vehicle demand. Finally, we provide some evidence on the growth of auto leasing, and show that it has tended to be concentrated among households with relatively high incomes. However, further study is needed to understand the lease-versus-buy decisions of households. □

Footnotes

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[1] While the surveys also collect data on other types of vehicles (such as recreational vehicles, motorcycles, and boats), our analysis is confined to standard passenger vehicles.

[2] The difference between the two surveys is not statistically significant.

[3] According to data from R.L. Polk & Co., the average age of passenger cars in use was 8.1 years in 1992. See, *Motor Vehicle Facts and Figures* (Detroit, MI, American Automobile Manufacturers Association, 1994), p. 36.

[4] Conceivably, some antique and other collectors' cars may be included in reported vehicle holdings if they are in active use. However, such cars are relatively uncommon.

[5] "Polk releases latest vehicle census," Press Release (R.L Polk & Co., Statistical Services Division, July 30, 1993).

[6] See Alan Greenspan and Darrel Cohen, "Motor Vehicle Stocks, Scrappage and Sales," Federal Reserve Board Finance and Economics Discussion Paper, No. 96–40 (October 1996).

[7] The problem arises because the Polk vehicle stocks include scrapped vehicles that were registered over the year (prior to scrappage), but that are not counted as "scrapped" until they fail to be re-registered in the following year.

[8] Greenspan and Cohen, "Motor Vehicle Stocks," discuss in detail the periodic surveys covering vehicle stocks. See also *Statistical Abstract of the United States* (U.S. Department of Commerce, 1994), pp. 637–38. The differences in estimates across consumer surveys likely reflect small differences in the types of motor vehicles recorded and sampling and nonsampling error.

[9] Figures on sales of new vehicles are regularly decomposed into purchases by consumers and businesses.

[10] The Bureau of Economic Analysis does not estimate the stock of trucks held by households.

[11] *Automotive News* publishes aggregate figures on new leases from R.L. Polk & Co. However, these figures cover leasing by both businesses and consumers.

[12] For example, among sample households in the 1992 SCF, there were 172 households leasing a vehicle, versus 101 households in the CE survey sample for the third quarter of 1992.

[13] In contrast, leased vehicles represented only 2.2 percent of the total *stock* of vehicles held by households in the 1992 SCF.

[14] Data from the 1995 SCF will shed light on the importance of this difference, because the 1995 survey included a question on leasing for business purposes.

[15] See Richard Curtin, F. Thomas Juster, and James Morgan, "Survey Estimates of Wealth: An Assessment of Quality," in Robert Lipsey and Helen Stone Tice, eds., *The Measurement of Saving, Investment and Wealth* (Chicago, University of Chicago Press for the National Bureau of Economic Research, 1989).

[16] "Financial assets" include checking, saving, money market, and call accounts. The CE survey asks only a few questions on asset holdings, so its data on wealth are not of the same quality as the data on expenditures.

[17] The figures in table 5 for 1992–93 are based on CE data for the year; thus, the 1992 figures differ somewhat from table 4, which uses data from the third quarter only. Figures for 1994 are based on CE survey data collected in the first half of 1994.

[18] Relatively expensive models tend to be overrepresented among leased vehicles. For example, in the 1992 SCF, the median blue book value of a leased vehicle less than 2 years old was $14,900, compared with $11,500 for a purchased vehicle of similar age. Blue book prices were obtained from *N.A.D.A. Official Used Car Guide* (McLean, VA, National Automotive Dealers Association).