

# The Cost and Demographics of Vehicle Acquisition

LAURA PASZKIEWICZ

**T**ransportation costs make up a large part of a consumer's budget. Consumer Expenditure (CE) Survey data for 2000 indicate that 88 percent of all consumer units<sup>1</sup> either owned or leased a vehicle,<sup>2</sup> and expenditures for leasing and purchasing (the latter defined as a net outlay) vehicles made up almost 10 percent of the average consumer unit's total expenditures.

In April 1991, the CE Survey began to ask for detailed information on the leasing of vehicles. Since that time, the incidence of leasing a vehicle increased steadily before tapering off in recent years. With the introduction of the more detailed data, it is possible to investigate the factors that contribute to a consumer's decision to lease a vehicle, as opposed to purchasing it. The main factor contributing to this decision is the varying cost of each option. Using recent CE Survey data, this article examines the initial and monthly costs involved in leasing a vehicle, purchasing a new vehicle, and purchasing a used vehicle. The article presents details on the demographic breakdown of consumers who lease, buy new, or buy used vehicles.

<sup>1</sup> See the glossary at the end of this anthology for the definition of *consumer unit*.

<sup>2</sup> In the published CE data, vehicles are defined as cars, trucks (including minivans, vans, sports utility vehicles (SUVs), and jeeps), and other vehicles (motorcycles and aircrafts). Henceforth, the term vehicle will encompass only cars and trucks.

## Methodology

The sample used for this article includes all Interview survey participants from 1999 or 2000 who reported a new lease<sup>3</sup> or purchase of a vehicle in the year in which the interview took place. (In other words, the sample consists of all participants in the 2000 Survey who leased or purchased a vehicle in 2000, as well as all participants in the 1999 Survey who leased or purchased a vehicle in 1999.) Respondents who reported using the vehicle for business, or, alternatively, receiving complete or partial payment for the vehicle by an employer are excluded from the sample.

Costs involved in leasing versus buying are investigated. Average down-payments and monthly payments are compared, as are the average durations over which payments are made. The investigation further includes analyses of leasing and buying by the following demographic characteristics: Age, race, gender, income quintile, geographical region, and type of area (urban vs. rural).

## Background

The increase in the frequency of leasing vehicles in recent years has been captured in a new section of the CE Survey added in April 1991. Leases

<sup>3</sup> The time at which a lease is started is determined by the year in which the first payment was made on the lease.

Laura Paszkiewicz is an economist in the Branch of Information Analysis, Division of Consumer Expenditure Surveys, Bureau of Labor Statistics.

made up 2.7 percent of all new acquisitions of vehicles<sup>4</sup> in 1991. By 1997, leasing had reached 10.0 percent of all recent car acquisitions. (See chart 1, top panel.) After 1997, the incidence of leasing began to decline, falling to 7.2 percent of vehicle acquisitions in 2000. With the increasing popularity of leasing during 1991–97, new-vehicle purchases decreased as an overall percentage of vehicle acquisitions, dropping from 27 percent in 1991 to 21 percent in 1997. After 1997, the incidence of new-vehicle purchases began to rise, reaching 25.6 percent of vehicles acquired in 2000. Used-vehicle purchases made up 70.4 percent of all acquisitions of vehicles in 1991. From 1991 to 1996, the percentage rose to 72.7 percent, after which it began to fall. In 2000, used-vehicle purchases made up 67.2 percent of all vehicle acquisitions.

In 1999 and 2000, the total percentage of consumer units acquiring a vehicle was just under 4 percent of the entire population. Of those who reported a recent acquisition, 66 percent bought a used vehicle, 26 percent bought a new one, and the remaining 8 percent leased a vehicle. (See table 1.)

### Costs

One of the factors involved in choosing a method of acquisition is cost. Among the costs incurred in acquiring a vehicle are downpayments and monthly payments for leasing and purchasing.

Overall, 81 percent of new-vehicle purchasers financed their purchases, compared with 56 percent of used-vehicle purchasers. The CE Survey asks questions regarding the amount of downpayments and monthly payments for purchased vehicles of those respondents in the sample who financed the vehicle and have monthly payments remaining. Of those purchasers who financed, 87 percent of new-vehicle purchasers and 79 percent of used-vehicle purchasers had payments remaining.

<sup>4</sup> New acquisitions of vehicles include purchases of new vehicles, purchases of used vehicles, and leases of vehicles.

Downpayments are a good indicator of upfront costs for acquiring a vehicle—costs that could dictate whether to lease a vehicle, buy a used vehicle, or buy a new vehicle. Lessees paid \$868,<sup>5</sup> on average, as a downpayment, about 76 percent of the amount that a used-vehicle purchaser paid as a downpayment (\$1,147) and only 30 percent of the amount that a new-vehicle purchaser put for a downpayment (\$2,914). (See table 2.) The maximum downpayment was \$8,500 for lessees, \$37,000 for new-vehicle purchasers, and \$19,000 for used-vehicle purchasers. These data suggest that the initial costs for leasing an automobile are lower than the costs for purchasing either a new or used vehicle. The difference in downpayments can be partially explained by the main difference between leases and purchases: with leases, the downpayment is for a service; with purchases, the downpayment is for an asset.

Monthly costs also could be a factor in deciding whether to lease, buy new, or buy used. The average monthly payment was \$353 for lessees, \$399 for new-vehicle purchasers, and \$273 for used-vehicle purchasers. Thus, although lessees have a lower monthly payment than do new-vehicle purchasers, they still have a higher monthly payment than do used-vehicle purchasers.

The amount of time it takes to pay off a loan or to complete a lease also could have an effect both on a person's decision to lease, buy new, or buy used and on the total cost of the vehicle. On average, new-vehicle buyers made 54 monthly payments, used-vehicle buyers 43, and lessees 39. The most common term for leasing was 3 years, and 50 percent of lessees chose that term. For new-vehicle purchasers, the most common term for financing was 5 years, and 55 percent of new-car purchasers chose that term. For used-vehicle purchasers, a number of terms were common, but the top two were 5-year terms

<sup>5</sup> In computing these averages, those who recently acquired a vehicle and reported no downpayment were counted as having zero dollars for a downpayment.

(chosen by 27 percent) and 4-year terms (selected by 24 percent).

### Demographic analysis

The demographic analysis in this section examines the entire sample of those acquiring a vehicle in 1999 or 2000, including consumers who financed their vehicles and those who did not. (See table 1.)

*Income.* Consumers who purchased used vehicles had the least income, on average. The average annual income (based on complete income reporters<sup>6</sup>) of someone who bought a used vehicle was \$48,004, compared with \$72,992 for lessees and \$69,875 for new-vehicle purchasers. Overall, nearly 30 percent of those who recently acquired a vehicle were in the highest income quintile; the 30-percent figure was more than that for the first and second income quintiles combined.<sup>7</sup> The percentage of used-vehicle purchases decreases and the percentages of both new-vehicle purchases and leasings of vehicles increases as one proceeds from a lower income quintile to a higher income quintile.

Among the consumer units that bought or leased a vehicle, those in the lowest income quintile were the most likely to buy a used car (80.9 percent). In comparison, only 54.1 percent of auto purchasers in the fifth quintile bought used vehicles. Almost 36 percent of those leasing or buying in the highest income quintile bought a new car; the figure was 10 percentage points higher than that of the fourth income quintile and more than 20 percentage points higher than that of the lowest income quintile.

*Age.*<sup>8</sup> Twenty-eight percent of those acquiring vehicles in 1999 and 2000

<sup>6</sup> See "Glossary" in Appendix A at the end of this anthology for the definition of *complete income reporter*.

<sup>7</sup> See "Glossary" in Appendix A at the end of this anthology for the definition of *quintiles of income before taxes*.

<sup>8</sup> Both the age and race variables refer to the age or race of the reference person—the person first mentioned when the respondent is asked, "Start with the name of the person or one of the persons who owns or rents the home."

were in the 35-to 44-year-old age bracket, although that age group made up just 22 percent of the population. Both the 25- to 34-year-old age group and the 45- to 54-year-old age group also made up large portions of those acquiring vehicles. Each of the two groups accounted for more than 20 percent of all acquisitions, yet made up less than 20 percent of the population. The oldest group (75 and older) acquired the fewest vehicles, with only 2.6 percent of acquisitions, much less than their 9.6-percent share of the population.

The average age was 44 for consumers leasing vehicles, 47 for consumers buying new vehicles, and 42 for consumers buying used vehicles. As these data imply, the probability of choosing a used car over a new car decreases with age. The incidence of leasing ranges from 7.9 percent to 8.6 percent for those 25 to 64, peaking in the age range from 55 to 64. Consumers under the age of 25 or over the age of 75 who acquired a vehicle were the least likely to lease, with 5.4 percent and 4.9 percent, respectively, doing so.

*Gender.* In order to examine the statistics on vehicle acquisitions by gender, the sample was divided into subsets that include only single-member consumer units. The CE Interview survey collects expenditure data for all members within the consumer unit combined, not for each member separately. By using single consumer units instead, a differentiation can be made between the expenditures of men and those of women.

Men acquired a slightly larger percentage of vehicles than their share of the single population in 1999–2000. The figures were 58 percent and 54 percent, respectively.

Results of this portion of the study suggest that men and women acquire vehicles differently. A total of 9.6 percent of single men in the sample leased vehicles, 20.6 percent bought new vehicles, and 69.9 percent purchased used vehicles. By contrast, 11.5 percent of single women leased vehicles, 36.9 percent bought new vehicles, and 51.5

percent bought used vehicles.

Even though single women acquired a smaller percentage of vehicles than their share of the population, they purchased a greater percentage of new vehicles and leased a greater percentage of vehicles than their population share. In particular, women made up 46 percent of the singles population, yet purchased 56.9 percent of all new vehicles, and leased 46.9 percent of all leased vehicles, among singles.

*Region.* Acquisitions of vehicles vary by region. With 31 percent and 16 percent, respectively, of total acquisitions, consumer units in the South and the Northeast acquired smaller percentages of vehicles than their population shares in 1999–2000: 35 percent and 19 percent of the total U.S. population. By contrast, with 27 percent and 25 percent, respectively, of vehicle acquisitions, consumer units in the Midwest and the West acquired higher percentages of vehicles than their population shares of 24 percent and 22 percent of the total U.S. population.

Consumers acquiring vehicles in the Northeast were more likely to lease than were those in the West, at 12.6 percent, in contrast to 4.8 percent. Consumer units in the West were more likely to buy a used vehicle, with 66 percent of those acquiring vehicles doing so, compared with 58 percent of those in the Northeast. The Northeast and the West both had about 30 percent of their vehicle-acquiring population reporting a purchase of a new vehicle. The Midwest and the South varied only slightly in the three kinds of acquisitions: in the Midwest, 9 percent of those who acquired vehicles leased them, 23 percent bought them new, and 69 percent purchased them used; in the South, 8 percent leased their vehicles, 25 percent purchased them new, and 67 percent bought them used.

*Type of area (urban vs. rural).* Consumers in urban and rural areas each acquired roughly the same percentage of vehicles as their population share. The methods of acquisition that con-

sumers in the two areas chose, however, were considerably different.

Consumer units in urban areas were more likely to lease or buy a new vehicle than were those in rural areas. Among consumer units acquiring vehicles, 3.3 percent of those living in rural areas leased their vehicles, whereas 8.5 percent of those living in urban areas did so. Almost 27 percent of consumer units in urban areas bought new vehicles, compared with 22.6 percent of those in rural areas. Someone living in a rural area was more likely to buy a used car (71.4 percent) than was someone in an urban area (64.8 percent).

*Race.*<sup>9</sup> The CE Survey has four race categories: White; black; Asian or Pacific Islander; and American Indian, Aleut, or Eskimo.

Persons of Asian or Pacific Islander heritage accounted for just 3.1 percent of the population acquiring vehicles and were the most differentiated in terms of the three ways of acquiring them, compared with the other races. A little more than half of their population acquiring vehicles bought a used vehicle, 42 percent purchased a new vehicle, and the remaining 7 percent leased a vehicle. Among the remaining racial groups, the most similar in terms of vehicle acquisition method was the white population, which accounted for most (88 percent) of the population acquiring vehicles: among whites, 65.5 percent bought used vehicles, 26.5 percent purchased new ones, and 8 percent leased vehicles.

The black population and the American Indian, Aleut, and Eskimo population were most different from the group of Asian and Pacific Islander descent in their distribution over the three kinds of arrangements for acquiring a vehicle. The two populations were similar to each other in having the lowest percentage of leases and new-vehicle purchases and the highest percentage of

<sup>9</sup> Both the age and race variables refer to the age or race of the reference person, the person who was first mentioned when the respondent is asked, "Start with the name of the person or one of the persons who owns or rents the home."

used-vehicle purchases. Among black consumer units acquiring vehicles, 5.3 percent leased, 19.6 percent purchased a new vehicle, and 75.2 percent bought a used vehicle. Among American Indians, Aleuts, and Eskimos, 4.2 percent leased a vehicle, 16.5 percent purchased a new vehicle, and 79.4 percent purchased a used one.

### **Conclusion**

The 1999–2000 CE Survey data on vehicle acquisition indicates that, overall, purchasing used vehicles is the most common method of acquiring a vehicle. This is because it is typically less expensive to purchase a used vehicle than it is to buy a new vehicle or lease a vehicle. By contrast, cost is not

the predominant factor in choosing to purchase a new vehicle over leasing one. Even though leasing a vehicle is financially less of a burden compared with purchasing a new vehicle, the next most common method of acquiring a vehicle is purchasing new vehicles. Leasing remains the least common method.

The 1999–2000 data also suggest that the choice of a vehicle acquisition method varies by age, race, gender, income level, region, and degree of urbanization. The largest differences occur with respect to income levels, gender, and race.

In addition to demographic differences and various expenses involved in the decision to lease a vehicle, pur-

chase a new vehicle, or purchase a used vehicle, several other factors enter into the decision as well. The availability of leases or new vehicles in different regions may affect the frequency with which one can obtain a lease or find a suitable vehicle to purchase. Further, the desirability of owning an asset may spur an individual to purchase rather than lease. If, instead, the vehicle's intended use is most important to a person, then leasing might be preferred. Finally, the types of vehicles available under a lease may impel a consumer to lease rather than buy: if a consumer can drive a luxury car by leasing it for the same cost as purchasing a standard car, he or she may prefer to lease. ■

**Table 1. Percent of consumer units reporting vehicle acquisitions, by type of acquisition, selected consumer unit characteristics, 1999–2000**

	Among groups		Within groups		
	Percent of general population	Percent of all acquisitions	Leased	Bought new	Bought used
All .....	100.0	100.0	7.73	26.15	66.12
Income: <sup>1</sup>					
Quintile 1 .....	20.0	9.3	4.7	14.4	80.9
Quintile 2 .....	20.0	15.3	4.0	19.9	76.0
Quintile 3 .....	20.0	20.4	5.5	20.0	74.5
Quintile 4 .....	20.0	26.0	7.2	26.2	66.6
Quintile 5 .....	20.0	29.0	10.2	35.8	54.1
Region:					
Northeast .....	19.3	17.2	12.3	29.0	58.7
Midwest .....	23.6	26.8	8.1	21.9	70.0
West .....	34.9	34.2	4.7	28.5	66.8
South .....	22.2	21.8	8.5	25.5	66.1
Degree of urbanization:					
Urban .....	87.6	85.6	8.5	26.8	64.8
Rural .....	12.4	14.5	3.3	22.6	74.1
Race:					
White .....	83.8	87.4	8.0	26.5	65.5
Black .....	12.1	8.9	5.3	19.6	75.2
American Indian, Aleut, Eskimo .....	1.0	1.1	4.2	16.4	79.4
Asian or Pacific Islander .....	3.1	2.7	7.4	42.3	50.3
Age:					
Under 25 .....	7.5	7.2	5.4	16.9	77.7
25–34 .....	17.6	21.5	7.9	22.5	69.6
35–44 .....	22.3	27.5	8.1	22.4	69.4
45–54 .....	19.6	23.4	8.2	26.1	65.7
55–64 .....	12.7	11.4	8.6	37.1	54.3
65–74 .....	10.7	6.4	5.8	39.1	55.1
75 and older .....	9.6	2.6	4.9	41.6	53.5
Gender:					
Male .....	54.3	57.7	9.6	20.6	69.9
Female .....	45.7	42.4	11.5	36.9	51.5

<sup>1</sup> Percentage represents the percent of complete reporters.

**Table 2. Costs and term of vehicle acquisitions, by type of acquisition, 1999–2000**

	Average monthly payment	Average downpayment	Average length of term (months)
Leased .....	\$353	\$ 868	39
Bought new <sup>1</sup> .....	\$399	\$2,914	54
Bought used .....	\$273	\$1,147	43

<sup>1</sup> The bought new and bought used categories represent vehicles that were financed and still had payments remaining.

**Chart 1. Trends in vehicle acquisition methods, 1991-2000**

