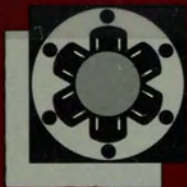


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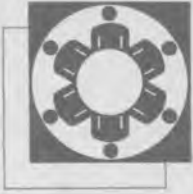
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Families With High Housing Expenditures: A Comparison of Homeowners and Renters

By Mary Ann Noecker Guadagno
Consumer Economist
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Families with high housing expenditures may be experiencing, or heading toward, financial difficulty. This descriptive study examines select demographic characteristics, housing characteristics, and expenditures of homeowners and renters with high housing expenses. Data from the 1989 Consumer Expenditure Survey show that about 8 percent of nonpoor homeowners and 21 percent of nonpoor renters have average housing expenditures exceeding 28 percent of their monthly before-tax family income. Those most likely to overspend for housing include low- and lower middle-income families, renters, single persons without children, female single-parent homeowners, minorities, and those who are retired and unemployed. Homeowners with high housing expenses spend 41 percent of their before-tax income on monthly shelter payments and spend nearly 3 times as much for shelter as all homeowners. Corresponding renters spend 40 percent of their before-tax income on rent and spend 42 percent more on shelter than all renters. Compared with homeowners in the population, those with high housing expenses tend to live in more expensive, mortgaged, larger (seven rooms), multiunit structures in the urban West. Compared with all renters, those with high housing expenses pay an average of \$164 more each month for the same number of rooms (four) and are more likely to live in multiunit apartments in the urban West or Northeast. When housing expenses are high, families may spend less on transportation and retirement-related expenses.

Although most American families own their own home, the home ownership rate declined during the last decade, from 65.6 percent in 1980 to 63.9 percent in 1989 (4,11).¹ Recent estimates by the Bureau of the Census suggest that 57 percent of all families, including current homeowners, could not afford to buy a median-priced home in 1988, in the region where they

lived (6). In that same year, a study of regional housing affordability by Barner, Laquatra, and Ponessa (3) showed that housing costs were considerably higher in the Northeast than in the rest of the country. Not being able to afford monthly mortgage payments, not having enough cash for the down-payment or closing costs, and having too much debt are associated with the affordability decline.

¹In 1989, 59.8 million households were homeowners, 31.9 million households rented, and 1.6 million households had no-cash rent arrangements (15).

Of families who owned homes in 1989, 6 million were house-poor, that is, housing costs² exceeded 28 percent of monthly family income, a benchmark of financial burden according to mortgage lenders (8). Homeowners in the Northeast and West, recent home buyers, and low-income homeowners were most likely to be house-poor.

Because of declining home ownership rates, affordability issues, and the importance of housing in family budgets, families and housing professionals alike are concerned about the high costs of housing (13).

Housing Expense Guidelines

How much should families spend for housing? The banking and housing industries provide individuals and families with guidelines for determining how much they can afford for housing. Banks have traditionally suggested that homeowners borrow no more than 2-1/2 times the family income for a home mortgage. For example, a family with total annual before-tax income of \$50,000 should plan to allocate no more than \$125,000 towards a home mortgage. Renters should typically plan to spend about 1-week's take-home pay each month for rent (2).

The National Association of Realtors publishes two housing affordability indexes showing the median income American families need to qualify for a mortgage on a median-priced existing single-family home or a first-time buyer starter home (9). For example, in July 1991, an affordability index of 111.6

meant that a family with a median income of \$36,295 should have about 111.6 percent of the income to qualify for a conventional loan covering 80 percent³ of the median-priced existing single-family home—\$101,900 (9).

The Federal National Mortgage Association (FNMA) states that monthly housing payments (principal and interest, taxes, insurance, and associated costs) for a conventional loan cannot exceed 28 percent of gross monthly family income, and total family debt cannot exceed 36 percent of that amount (6).

How much are families spending for housing? Housing expenditure estimates vary depending on the data source and methods used in calculations. Median monthly 1987 residential housing costs were \$375 for all homeowners and \$399 for all renters (12). Recent 1989 home buyers, however, reported making average monthly mortgage payments of \$1,054 on a median-priced home at \$129,800 (12). Mean and median housing cost estimates are not directly comparable but indicate what the average family spends and what families at the 50th percentile of the family distribution are spending for housing.

A study of single (never-married) male homeowners and renters living alone reported average 1987 housing costs of \$5,153 a year (shelter, utilities, fuels, public services, home furnishings, equipment, and household operations) or about \$429 a month (5).

This article examines what families spent for housing in 1989 and addresses two major questions: (1) What are the demographic characteristics, housing characteristics, and expenditures of homeowners and renters? and

(2) are families with high housing expenses different from those with average housing expenses relative to select demographic and housing characteristics and expenditure variables?

It was hypothesized that families with high housing expenditures are families experiencing, or heading toward, financial difficulty. Results may be used by families, financial planners, credit counselors, mortgage lenders, attorneys, realtors, and professionals interested in diagnosing or advising families with high housing obligations.

Data and Sample

Data for this study are from the Interview component of the 1989 Consumer Expenditure Survey (CE), conducted by the Bureau of the Census for the Bureau of Labor Statistics (14). The CE collects data on household expenditures, income, and major socioeconomic and demographic characteristics. A national sample of consumer units⁴ is interviewed once each quarter for five consecutive quarters; the first interview is used for bounding purposes. Using a rotating sample design, about one-fifth of the sample is replaced each quarter. The 1989 CE contains information from about 20,000 quarterly interviews. Income data are annual, and expenditure data are multiplied by four to provide estimates of annual expenditures. Data are weighted to represent the U.S. non-institutionalized population.

²Housing costs included mortgage principal, interest, taxes, insurance, and owner association fees.

³Assumes a downpayment of 20 percent.

⁴A consumer unit consists of either: (1) all members of a particular household who are related by blood, marriage, adoption, or other legal arrangement; (2) two or more people living together who pool their incomes to make joint expenditure decisions; or (3) a person living alone or sharing a household with others or living as a roomer in a private home or lodging house or in permanent living quarters in a hotel or motel, but who is financially independent. To be considered financially independent, at least two of the three major expense categories (housing, food, and other living expenses) have to be provided by the respondent.

This study estimates that about 8 percent of homeowners and 21 percent of renters have high housing expenditures.

Families with income below the 1989 poverty thresholds (8) were excluded from analysis to eliminate potential distortion in results due to the extreme plight of poverty-level households. According to a 1990 report of the Joint Center for Housing Studies at Harvard University, 68 percent of poverty-level renters paid over 50 percent of their 1987 income for housing (1). Thus, for the remainder of this article, homeowners and renters refer only to those who were **not** poor.

Guidelines set by the FNMA were used to identify families in this study with high housing expenses. Homeowners with high housing costs were defined as those with monthly mortgage interest, taxes, insurance, and owner association fees exceeding 28 percent of monthly before-tax family income. Mortgage payments to principal, although desired, could not be included in housing expense estimates since they were not available in the CE survey. A study using data from the 1989 National Housing Survey showed that longtime homeowners pay more towards mortgage principal than recent home buyers (8). Therefore, the number of homeowners with high housing expenses—particularly longtime homeowners—is likely to be underestimated. Renters with high housing costs were defined as those with monthly housing cost exceeding 28 percent of before-tax income. Housing costs of renters included rent and tenant insurance.

The final weighted sample, reflecting the U.S. population of nonpoor⁵ homeowners and renters in 1989, included about 65.1 million consumer units—44.8 million homeowners and

20.3 million renters (unweighted $n = 13,963$ —9,613 homeowners and 4,350 renters). All were complete income reporters.⁶

Eight percent of all nonpoor homeowners and 21 percent of all nonpoor renters had high housing expenses in 1989. In all, about 8 million families—3.7 million homeowners and 4.3 million renters—were found to have high housing expenses (unweighted $n = 1,781$; 863 homeowners and 918 renters).

Analysis

Means and frequency distributions were used to: (a) describe and analyze the demographic and housing characteristics of nonpoor homeowners and renters with high housing expenditures, and (b) compare them with those of the population. Variables used in analysis were: family size; number of children under 18 years; number of earners; reference person's age, education, occupation, and race; market value of home; housing tenure; number of rooms, bedrooms, and bathrooms; housing structure; region; before-tax, after-tax, and per capita income; total annual and per capita expenditures; and number of automobiles. Annual family expenditures were examined for housing, transportation, food, clothing, personal insurance, pensions and Social Security, health care, entertainment, and other miscellaneous expenditures.

⁵Nonpoor families are defined as those with total 1989 before-tax family income above 125 percent of the 1989 poverty thresholds (10).

⁶Complete income reporters are respondents who provide values for major sources of income such as wages and salaries, self-employment income, or Social Security income. They may not have provided a full accounting of income from minor sources (14).

Characteristics of Families With High Housing Expenses

Homeowners. Table 1 shows that about 8 percent of all homeowners had high housing expenses in 1989. Homeowners with high housing costs were most likely to be married or single without children (58 percent and 24 percent). Families were small (2.6 members on average), with one child under age 18 and one earner. The majority of reference persons⁷ were white (82 percent), middle age (50 years on average), with a high school education or more (81 percent). Most families with high housing expenses were employed or self-employed (63 percent and 8 percent), although over one-quarter were retired or not working (29 percent).

Compared with all homeowners, those with high housing expenses were about the same age and had about the same family size, number of children under age 18, and number of earners. They were slightly more likely than homeowners in the population to be childless singles or female single parents, Asian or Hispanic, and retired, not working, or self-employed.

Table 2, p. 6, shows that homeowners with high housing expenses typically owned a seven-room (three bedrooms, two bathrooms) single-family home with a market value of \$143,030. Most (82 percent) families with high housing expenses had a mortgage. Mortgage interest, taxes, insurance, and related expenses averaged \$13,508 annually or \$1,126 per month. Over one-third of homeowners with high housing outlays lived in the urban West.

⁷Reference person is the first family member mentioned by the survey respondent when asked to "start with the name of the person or one of the persons who owns or rents the home." The relationship of all other consumer unit members is determined by this person. The reference person may be the respondent.

Table 1. Demographic characteristics of nonpoor families with high housing expenses,¹ 1989

Characteristics	High housing expense owners	All owners	High housing expense renters	All renters
Number of families (weighted, in thousands)	3,737	44,757	4,290	20,321
Average family characteristics				
Family size	2.6	2.8	1.8	2.1
Children under 18	0.7	0.7	0.4	0.5
Earners	1.3	1.6	1.0	1.4
Age of reference person	49.5	50.8	47.0	39.2
Before-tax income	\$33,053	\$41,733	\$16,777	\$26,543
Total expenditures	\$42,418	\$32,769	\$21,208	\$23,158
	<u>Percent</u>		<u>Percent</u>	
Family type				
Married without children	25.2	29.9	13.5	14.7
Married with children	32.6	38.0	11.2	19.5
Single male parent	.4	.7	1.7	1.1
Single female parent	3.2	1.9	4.4	4.8
Single male	9.0	6.7	25.4	23.9
Single female	15.1	9.4	27.8	19.4
Other families	14.5	13.4	16.0	16.6
Reference person				
Race				
Non-Hispanic (nH) White	81.7	89.0	75.1	76.2
nH Black	4.7	5.8	12.8	12.7
nH Asian, AmerIndian, other	5.5	2.0	3.7	2.9
Hispanic	8.1	3.2	8.4	8.2
Education				
Elementary or less	9.1	8.7	11.3	7.6
Some high school	9.4	10.2	12.4	10.9
High school graduate	22.2	30.4	29.1	30.2
Some college	24.6	22.7	27.8	28.2
College graduate	15.3	13.4	10.3	13.6
Graduate school	19.4	14.6	9.1	9.5
Occupation				
Employed ²	62.9	68.8	66.5	81.7
Self-employed	8.3	7.7	3.7	3.4
Not working	5.7	4.4	9.1	5.9
Retired	23.1	19.1	20.7	9.0

¹The measure of high housing expenditures used was shelter expense (mortgage interest, taxes, insurance, and owner association fees for homeowners; rent and tenant insurance for renters) exceeding 28 percent of annual before-tax family income. Estimates understate mortgage expense because CE does not include payments to principal.

²Employed includes: manager, professional; technical, sales, administrative support; service; farming, forestry, fishing; production, craft, repair; operator, fabricator, laborer; and Armed Forces.

Compared with all homeowners, those with high housing expenses were ... slightly more likely ... to be childless singles or female single parents, Asian or Hispanic, and retired, not working, or self-employed.

Table 2. Housing characteristics of nonpoor families with high housing expenses,¹ 1989

Characteristics	High housing expense owners	All owners	High housing expense renters	All renters
Average housing characteristics				
Market value of home	\$143,030	\$98,318	NA ²	NA
Percent homeowner	100	100	NA	NA
With mortgage	82.1	66.3	NA	NA
Without mortgage	17.9	33.7	NA	NA
Percent renter	NA	NA	100	100
Shelter expenditures	\$13,508	\$4,692	\$6,697	\$4,725
Number of rooms	6.5	6.4	4.2	4.4
Bedrooms	3.1	3.0	1.9	2.0
Bathrooms	2.1	1.9	1.3	1.3
	<u>Percent</u>		<u>Percent</u>	
Housing structure				
Detached	79.5	84.7	22.2	27.0
Multiunit	16.2	9.0	75.4	68.9
Mobile home or trailer	3.9	6.0	.7	2.3
Other	.4	.3	1.7	1.8
Region				
Urban				
Northeast	18.9	18.0	28.5	20.7
Midwest	16.4	22.3	14.3	20.2
South	20.5	26.5	20.2	27.5
West	34.3	18.2	33.1	24.5
Rural	9.9	15.0	3.9	7.1

¹The measure of high housing expenditures used was shelter expense (mortgage interest, taxes, insurance, and owner association fees for homeowners; rent and tenant insurance for renters) exceeding 28 percent of annual before-tax family income. Estimates understate mortgage expense because CE does not include payments to principal.

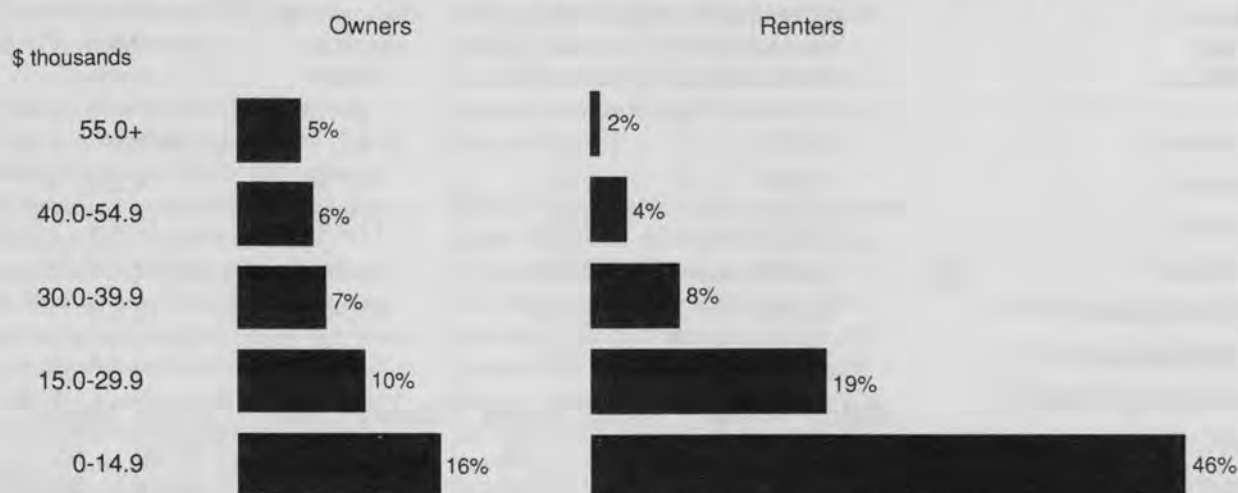
²NA = Not applicable.

Compared with homeowners in general, those with high housing expenses tended to live in more expensive, mortgaged homes in the urban West. Homeowners with high housing expenses owned homes with higher market values and paid nearly three times more than the average homeowner for mortgage interest, taxes, insurance, and owner association fees. Relative to the type of housing structure purchased by all homeowners, those with high housing expenditures were

nearly twice as likely to live in multi-unit structures such as town houses, duplexes, or condominiums. This may reflect higher homeowner association fees or lower average household incomes.

Renters. About 21 percent of all renters had high housing expenses in 1989 (table 1). Renter families with high housing expenses were small (1.8 members on average), with one earner, and not likely to have children under age 18. Reference persons tended to

Percentage of families with high housing expenses within five income groups, 1989



Note: Families with income below the 1989 poverty income thresholds are excluded.

be middle age (47 years old), single without children (53 percent), high school graduates or more (76 percent). About two-thirds of this group worked, 9 percent were unemployed, and 21 percent were retired.

Compared with renters in the general population, renters with high housing expenses had slightly smaller families; about the same number of earners and children under age 18; and reference persons who were older, more likely to be single without children, less likely to be employed, and more likely to be retired or not working than all renters. There was no discernible difference in the racial composition of renters with and without high housing expenses.

Renters with high housing expenses typically rented a four-room apartment with two bedrooms and one bathroom (table 2). Rent and tenant insurance averaged \$6,697 per year or \$558 per month—about 42 percent more (\$1,972 per year or \$164 per month) than the

average renter paid. Most renters with high housing expenses lived in multi-unit structures, in the urban West or Northeast.

Income and Expenditures

Income. Nonpoor homeowners and renters with high housing expenses allocated 41 and 40 percent, respectively, of average before-tax family income for monthly shelter payments, compared with shelter-to-income ratios of 11 and 18 percent by the average nonpoor American homeowner or renter.

A greater percentage of homeowners and renters with annual before-tax family income under \$30,000 had high housing expenses than those with income over \$30,000 (see figure). About 16 percent of all homeowners with annual family income under \$15,000 and 10 percent of all homeowners with income between \$15,000 and \$30,000 had high housing expenditures in 1989, compared with 46 and 19 percent of all renters in comparable

income categories.⁸ As would be expected, when income increased the percentage of families with high housing expenditures generally decreased.

Table 3, p. 8, shows that families with high housing expenses had lower before-tax income, on average, than the general population. Homeowners with high housing expenses had income (\$33,053) averaging 21 percent less than all homeowners; corresponding renters' income (\$16,777) was 37 percent lower than all renters. After-tax income relationships supported this trend.

Per capita income comparisons were slightly more favorable than those for before- or after-tax income results. Before-tax per capita income estimates for homeowners and renters with high housing expenses were \$15,011 and \$11,208, 15 and 29 percent lower than those for all homeowners and renters.

⁸Estimates do not include families with income below the 1989 poverty income thresholds.

Table 3. Mean income and expenditures of nonpoor families with high housing expenses,¹ 1989

Income and expenditures	High housing expense owners		All owners		High housing expense renters		All renters	
	Dollars	Percent ²	Dollars	Percent ²	Dollars	Percent ²	Dollars	Percent ²
Before-tax income	\$33,053		\$41,733		\$16,777		\$26,543	
After-tax income	29,908		37,621		15,730		24,258	
Per capita income	15,011		17,600		11,208		15,694	
Total expenditures	42,418		32,769		21,208		23,158	
Per capita expenditures	19,518		13,714		13,795		13,503	
Number of automobiles	1.4		1.6		0.9		1.1	
Housing	\$18,750	48	\$9,834	30	\$9,054	47	\$7,370	35
Shelter	13,508	35	4,692	14	6,697	36	4,725	24
Utilities	2,407	7	2,262	9	1,264	7	1,338	7
Repairs	953	3	922	1	191	1	216	0
Household operations	605	1	634	2	248	1	322	1
Home furnishings	1,277	3	1,323	4	654	2	767	3
Transportation	6,721	12	6,592	16	3,366	11	4,897	16
Food at home	3,494	10	3,509	13	2,483	13	2,549	13
Food away from home	1,605	4	1,518	5	923	4	1,111	5
Clothing	1,740	4	1,631	5	980	4	1,280	6
Personal insurance ³	584	1	506	2	161	1	197	1
Pensions, Social Security	2,809	6	3,410	10	1,125	5	2,083	9
Health care	1,921	5	1,742	7	965	5	888	4
Entertainment	2,218	4	1,813	5	766	3	1,088	4
Other ⁴	2,576	6	2,215	7	1,386	7	1,694	7

¹The measure of high housing expenditures used was shelter expense (mortgage interest, taxes, insurance, and owner association fees for homeowners; rent and tenant insurance for renters) exceeding 28 percent of annual before-tax family income. Estimates understate mortgage expense because CE does not include payments to principal.

²Percentage of total expenditures. Calculated on a family-by-family basis.

³Personal insurance includes life and endowment insurance, and annuities.

⁴Other includes expenditures for tobacco, alcoholic beverages, personal care, cash contributions, education, reading, and miscellaneous.

Expenditures. Homeowners with high housing costs had 29 percent higher expenditures overall than those in the general population—\$42,418 compared with \$32,769. In contrast, renters with high housing expenses had total expenditures that were 8 percent less than those of all renters—\$21,208 compared with \$23,158.

On a per capita basis, homeowners with high housing costs spent 42 percent more than all homeowners, whereas corresponding renters spent only 2 percent more than the general population.

Results raise some interesting questions. Are homeowners with high housing expenses prone to overspend? Are they victims of the hidden costs of

home ownership? Are homeowners or renters with high housing expenses victims of the housing market?

Not surprisingly, total annual expenditures exceeded after-tax income by a large margin for homeowners and renters with high housing expenses (42 percent and 35 percent). Families with high

housing expenditures had total yearly deficits (expenditures in excess of after-tax income) of \$12,510 and \$5,478, respectively.

How are families with high housing costs and large income deficits managing to stay financially solvent? They may be potentially high-income families, such as professionals or entrepreneurs, anticipating substantial income increases. Some families may be losing income temporarily due to an unexpected event such as a job layoff or illness. Families with variable income from commissions, farming, or self-employment may be having a bad year. They may be borrowing against, or cashing in, investments and savings, or extending themselves on credit as a temporary solution to an income loss (7). Still other families may be deficit spending because of poor planning or mismanagement of personal finances. The reason for excessive spending on housing, the duration of deficit spending, and the ability to cope with financial hardship will largely determine whether the family can remain financially solvent.

In the general population, average annual expenditures were less than available after-tax family income by 13 percent for homeowners and 5 percent for renters. This group appears to be saving whereas the high housing expense group appears to be borrowing or spending out of savings.

Housing. Homeowners with high housing expenses spent nearly twice as much on total housing costs (shelter, utilities, repairs, household operations and furnishings) as those in the population—\$18,750 compared with \$9,834 (table 3). Housing expenses consumed the largest share of total expenditures—48 percent for homeowners with high

housing expenses, compared with 31 percent in the population. Housing costs were comprised primarily of shelter and utility expenses—85 percent of total housing expense in families with high housing expenses and 71 percent for all homeowners.

Renters with high housing expenditures spent 23 percent more for housing than all renters—\$9,054 compared with \$7,370. Housing expenses required 46 percent of the total annual expenses for renters with high housing costs and 35 percent of total annual expenditures for all renters. Shelter and utilities accounted for 88 percent of the housing expenses for renters with high housing costs and 82 percent of housing costs for all renters.

Transportation. The average family owned one car. Budget shares for transportation were lower for owners and renters with high housing expenses (12 percent and 11 percent) than for families in comparable populations (16 percent each). Homeowners with high housing expenses spent about the same on transportation as the population, whereas renters with high housing expenses spent slightly less for transportation than all renters. Families with high housing costs may be cutting back on transportation expenses by not owning a second car, using more public transportation, carpooling or walking more, purchasing or maintaining lower priced cars, or keeping cars longer than usual. Factors such as location of home (closer to work, for example) and work status may also affect transportation costs.

Food. Homeowners with high housing expenses do not appear to be cutting back on food expenses. On a dollar-for-dollar basis, food expenditures were not discernibly different for owners and renters, with and without high housing expenses.

Compared with renters in the general population, renters with high housing expenses ... were older, more likely to be single ... retired or not working.

Clothing. Clothing budget shares of 4 or 5 percent were fairly stable across all four homeowner and renter groups. Homeowners and renters with high housing expenses tended to spend 4 percent on clothing in 1989—1 percent less than homeowners and renters in the population.

Personal insurance. Personal insurance (life insurance, endowment insurance, and annuities) budget shares of 1 or 2 percent also appeared to be stable across homeowner and renter groups. Homeowners and renters with high housing costs, as well as renters in the population, spent 1 percent, on average, for personal insurance in 1989, whereas homeowners in the population spent 2 percent on personal insurance.

Pensions and Social Security. Homeowners and renters with high housing expenses had lower pension and Social Security expenditure shares than comparable families in the population (6 and 5 percent, compared with 10 and 9 percent). Government retirement, railroad retirement, self-employment retirement plans, and Social Security expenses were included in this expense category. In dollars, high-housing-cost homeowners and renters spent considerably less on pensions and Social Security than the population—18 and 46 percent less, respectively.

Families with high housing expenditures may spend less for retirement-related expenses because they are already retired. Also, since homeowners and renters with high housing costs have lower average incomes than the population and because retirement benefits are frequently based on earnings, their pension and Social Security expenses may justifiably be lower.

Health care. Health care budget shares of 4 to 7 percent were fairly close for all four groups. Families with high housing expenses spent slightly more in dollars

than homeowners and renters in the population.

Entertainment. Entertainment budget shares were generally stable across homeowner and renter families, with and without high housing expenses. Homeowners and renters with high housing expenditures had entertainment budget shares of 4 and 3 percent, compared with 5 and 4 percent by homeowners and renters in the population.

Other. Expenditures for other goods and services included tobacco, alcoholic beverages, personal care, cash contributions, education, reading, and miscellaneous goods and services. At 6 or 7 percent, these expenditures appeared stable across the four family groups.

Summary and Implications

This study estimates that about 8 percent of homeowners and 21 percent of renters have high housing expenditures. These families may currently have trouble meeting financial obligations, or they may experience financial difficulty sometime in the future. It appears that when housing expenses are high, families try to reduce spending slightly in each expenditure category. Results tentatively suggest that cutbacks on transportation or retirement-related expenses are most pronounced. Families may also try to decrease savings or increase debt to make ends meet.

Results help identify the types of families most likely to have higher housing expenses than they can safely afford. Families most likely to have high housing costs include lower middle- to middle-income families, renters, childless singles, female single-parent homeowners, Asian and Hispanic homeowners, and renters who are retired or not working.

Although the demographic characteristics of homeowners with high housing expenses were not discernibly different from the population, there were proportionately more singles, single-female parents, and minorities in this group. Homeowners with high housing expenses had considerably different housing characteristics, lower incomes, and higher overall expenditures than the average homeowner. Additional research would be helpful to better understand the socioeconomic and psychological dimensions underlying why some homeowners financially overextend themselves for housing while others do not.

Renters with high housing costs included proportionately more retirees, unemployed persons, and single females. Their income and expenditures were lower than the general population of renters. With lower incomes and no home equity, they appear to be even more economically vulnerable than their homeowner counterparts.

Results of this study suggest that high expenditure homeowners differ from high expenditure renters on select demographic, housing, and expenditure characteristics. Homeowners with high housing expenditures may be a diverse group, in and of themselves. Additional research is needed to determine the percentage of families with temporary housing cost problems (for example, young professionals anticipating significant income increases) and to compare their characteristics with those who may actually be experiencing, or heading toward, bankruptcy.

Financial planners and counselors, mortgage lenders, housing educators, and legislators may use findings to develop policies and programs to help families avoid financial trouble associated with the high cost of housing.

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Payments of Child Support and Alimony

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This study examines payments of child support and alimony using the 1988–89 Consumer Expenditure Surveys. Data were analyzed by selected socioeconomic characteristics. Child support payments were highest among single males, whites, and consumer units with no children present. These payments were also higher in households with an older and more educated reference person and higher household incomes. Depending on consumer unit characteristics, child support expenses ranged from 7 to 20 percent of before-tax household income. Alimony payments were made more often by married-couple units, whites, households with no children present, older and more educated reference persons, or higher income households. These findings are compared with those of a Census Bureau study on receipt of child support and alimony.

Many researchers have examined child support and alimony as income sources for families (1,5,6,7,8,12,13). Child support and alimony as household payments or expenditures have received less attention (2,3,11). Frequency of payments has been the focus of this latter research. A study by the Interagency Low Income Opportunity Advisory Board (4) concluded that "... not enough is known about absent parents (primarily fathers)—their incomes, family circumstances, their geographic proximity to their children, (and) their ability to pay child support ..." (p. 119). To help fill this gap, this study examines (1) characteristics of households making child support payments and their average annual payments, and (2) characteristics of households making alimony payments.

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Data

Data are from the Interview component of the 1988–89 Consumer Expenditure Surveys (CE), conducted by the Bureau of the Census for the Bureau of Labor Statistics (BLS) (10). The CE is an ongoing survey that collects data on household expenditures, income, and major socioeconomic and demographic characteristics. A national sample of consumer units² (the terms "households"

²A consumer unit consists of either: (1) all members of a particular housing unit who are related by blood, marriage, adoption, or other legal arrangements; (2) two or more people living together who pool their incomes to make joint expenditure decisions; or (3) a person living alone or sharing a household with others or living as a roomer in a private home or lodging house in permanent living quarters in a hotel or motel, but who is financially independent. To be considered financially independent, at least two of the three major expense categories (housing, food, and other living expenses) have to be provided by the respondent.

and "families" will also be used to denote consumer units in this article) is interviewed once each quarter for five consecutive quarters; the first interview is collected only for bounding purposes. Using a rotating sample design, about one-fifth of the sample is replaced each quarter.

The 1988–89 CE contains information from about 40,000 quarterly interviews representing an average 82.2 million households each year. Income data are annual and expenditure data are for a quarter. Expenditures may be annualized by multiplying by four according to BLS methodology. For this study, only consumer units who were complete income reporters³ and had positive expenditures on child support and/or alimony were selected. The sample consisted of 1,164 households that reported child support payments and 188 that reported alimony payments. In households with two or more members, the CE did not identify which member was responsible for child support or alimony payments. Also, recipients were not identified.

About one-quarter of those that made alimony payments also made child support payments. Therefore, comparisons of the two groups should be made with caution because they are not mutually exclusive. Average annual alimony payments were not determined because of the small sample size.

Data were weighted to represent the U.S. noninstitutionalized population. The weighted sample represents an estimated 2.91 million households making child support payments (3.5 percent of all families) and 440,000 making alimony payments (0.5 percent of all families) each year during the 1988–89 period.

It should be noted that the households in this study are those that actually made child support and alimony payments in 1988–89—not those required to do so. A substantial proportion of males who were required to make child support payments in 1989 never made them; others paid an amount less than that due (see box 1, p. 16).

Part 1 – Consumer Units Making Child Support Payments

Characteristics

Of consumer units who reported making child support payments, 51 percent were married-couple households, 30 percent were single males, and 19 percent were classified as "other" households (table 1, p. 14). "Other" consumer units comprised a wide assortment of living arrangements. They were often males living with others such as parents or nonrelatives, but a small percentage (1 percent) were single females. The majority of consumer units were white (89 percent). Most did not have children under age 18 living in the home (60 percent).

The average age of the reference person⁴ was 39; 13 percent were below age 30 and 23 percent were age 45 or over. The highest educational level attained by 35 percent of reference persons was completion of high school; 17 percent had less than a high school diploma and 19 percent had a college degree or more. Before-tax income for families making child support payments averaged \$37,474; 26 percent had before-tax income below \$20,000 and 24 percent had an income of \$50,000 or over.

⁴A reference person is identified by the respondents when asked "to start with the name of the person or one of the persons who owns or rents the home."

Payments

Annual child support payments averaged \$3,339 for all consumer units making such payments (table 1), accounting for 9 percent of their before-tax household income. Single males had higher child support expenses than "other" consumer units and married couples (\$4,031 vs. \$3,533 and \$2,857). Single males also allocated the greatest share of income to child support (14 percent), compared with other consumer unit types. The higher payments by single males may reflect support for more children or indicate that they have fewer financial responsibilities and are better able to pay their child support obligations. Also, people paying child support in "other" consumer units and married-couple households may have lower child support payments if these payments had been set years ago and not indexed to inflation.

Although "other" consumer units and married-couple households made lower child support payments than did single males, they had higher average incomes. The income of these households, however, comprises that of all members. Child support is typically based on the income of the parent without primary physical care of the child. It may be that the individual income of this parent in "other" consumer units and married-couple households is below that of single males.

White consumer units made higher child support payments than non-white units (\$3,463 vs. \$2,362) and allocated a larger share of their income to these payments (9 percent vs. 7 percent). They also had a higher average income than non-white units. Households without children under age 18 present in the home allocated more to child support and a larger percentage of their income (\$3,621 and 10 percent) than those with children present (\$2,912 and 7 percent).

³Complete income reporters are those who provided values for major sources of income such as wages and salaries, self-employment income, and Social Security income. However, even complete income reporters may not have provided a full accounting of all income from all sources.

Table 1. Annual child support payments and characteristics of consumer units¹ making them, 1988–89

Characteristic	Percent	Payment	
		Amount	Percent of income
Overall	100	\$3,339	9
Type of consumer unit			
Married couple	51	2,857	7
Single male	30	4,031	14
Other	19	3,533	10
Race			
White	89	3,463	9
Non-white	11	2,362	7
Presence of children under age 18			
Children present	40	2,912	7
No children present	60	3,621	10
Age of reference person			
29 or under	13	2,532	10
30 - 34	22	3,372	10
35 - 39	24	3,262	9
40 - 44	18	3,428	7
45 or over	23	3,801	9
Highest education obtained by reference person			
Less than high school	17	2,488	10
High school	35	2,756	9
Some college	29	3,532	9
College or more	19	4,860	9
Before-tax income			
Below \$20,000	26	2,529	20
\$20,000 - \$29,999	18	2,683	11
\$30,000 - \$39,999	20	3,148	9
\$40,000 - \$49,999	12	3,209	7
\$50,000 or more	24	4,918	7

¹An estimated 2.91 million consumer units made child support payments each year during the 1988–89 period.

Those without children present, however, had a lower average income than households with children. Those without children in the home may be more likely to pay their child support since they may have fewer competing demands for their financial resources.

Child support payments generally increased with the age and education of the reference person. By age, families with a reference person under age 30 reported the lowest annual child support payments (\$2,532) and those with a reference person age 45 or over reported the highest (\$3,801). Households with a reference person under age 30 had the lowest average income, whereas those with a reference person age 45 or over had the second highest income of the five groups. The share of before-tax income allocated to child support payments ranged between 7 and 10 percent for households by age groups of reference persons.

By education, families with a reference person whose highest level of education was elementary or some high school made the lowest child support payments (\$2,488), and those with a reference person with a college degree or more made the highest (\$4,860). Because household income rose as educational level of the reference person increased, child support payments accounted for 9 or 10 percent of household income regardless of that educational level.

Consumer units with before-tax income below \$20,000 had the lowest child support payments (\$2,529), and those with an income of \$50,000 or more had the highest (\$4,918). For families with before-tax income below \$20,000, child support payments accounted for 20 percent of income; for those with an income of \$50,000 or more, these payments accounted for 7 percent of income.

Part 2 – Consumer Units Making Alimony Payments

Characteristics

Of consumer units with alimony payments, 40 percent were married-couple households, 38 percent were single males, and 22 percent were “other” consumer units (table 2). As with child support, many of these “other” households were males living with others. Most payers of alimony were white (94 percent). Most (86 percent) did not have children under age 18 living in the home, which likely reflects the age of the reference persons. Average age of reference persons in households making alimony payments was 48; only 3 percent were under age 30, whereas 56 percent were 45 or over.

Reference persons in families making alimony payments had a high educational level. Forty-seven percent had a college degree or more; only 8 percent had less than a high school diploma. This high educational level is reflected in the before-tax income of these households. Forty-six percent had a household income of \$50,000 or more, compared with only 15 percent that had an income below \$20,000.

Comparison With Census Study

This study examined child support and alimony as a household payment or expenditure. A Census Bureau study (see boxes, pp. 16-17) examined child support and alimony received by women. How do the findings of this study, based on Consumer Expenditure Survey data, compare with those of the Census Bureau study, which used data from the Current Population Survey?

Table 2. Characteristics of consumer units¹ making alimony payments, 1988–89

Characteristic	Percent
Type of consumer unit	
Married couple	40
Single male	38
Other	22
Race	
White	94
Non-white	6
Presence of children under age 18	
Children present	14
No children present	86
Age of reference person	
Under 29	3
30 - 34	11
35 - 39	9
40 - 44	21
45 or over	56
Highest education obtained by reference person	
Less than high school	8
High school	22
Some college	23
College or more	47
Before-tax income	
Below \$20,000	15
\$20,000 - \$29,999	10
\$30,000 - \$39,999	21
\$40,000 - \$49,999	8
\$50,000 or more	46

¹An estimated 440,000 consumer units made alimony payments each year during the 1988–89 period.

Reference persons in families making alimony payments had a high educational level. Forty-seven percent had a college degree or more.

Box 1—Census Study on Child Support Receipts

According to a Census Bureau study, an estimated 4.95 million women with children under age 21 were due child support payments in 1989 as reported in spring 1990 (6). Of these women, 51 percent received the full amount awarded, 24 percent less than this amount, and the remainder did not receive any payment.

Of women (15 years and older) receiving child support (either the full amount or a partial amount), the majority were divorced or separated (55 percent); 33 percent were presently married and 12 percent were never married. Eighty-five percent were white. Almost half (48 percent) were age 30 to 39; 27 percent were age 40 or over. For about half (51 percent), a high school diploma was the highest educational level obtained; 13 percent did not have a high school diploma. Fifty-six percent had one child present from an absent father and 33 percent had two children present.

Average annual child support received by women was \$2,995. This accounted for 18 percent of their before-tax household income (income reported by all household members). By marital status groups, average child support received by divorced women was the highest (\$3,322) and payments received by never-married women were the lowest (\$1,888). These payments accounted for the same percentage of household income for the two groups (20 percent).

Annual child support payments received by white women were higher than those received by black women (\$3,132 vs. \$2,263) and accounted for a larger share of household income (19 percent vs. 16 percent). Older and more educated women received larger child support payments than did younger and less educated women. By women's age, child support receipts ranged between 18 and 20 percent of household income. By women's educational level, child support declined

as a percentage of household income as educational level rose.

Child support receipts increased in dollar amount and as a percentage of household income with the number of

children present from an absent father until a household had three children.

Women with four or more children from an absent father received lower child support payments than those with two children (\$3,226 vs. \$3,527).

Annual child support receipts of women receiving such payments,¹ by selected characteristics, 1989

Characteristic	Percent	Child support	
		Amount	Percent of income
Overall	100	\$2,995	18
Current marital status ²			
Married ³	33	2,931	20
Divorced	44	3,322	17
Separated	11	3,060	20
Never married	12	1,888	20
Race			
White	85	3,132	19
Black	15	2,263	16
Age			
29 or younger	25	1,981	20
30 - 39	48	3,032	18
40 or over	27	3,903	19
Highest education obtained			
Less than high school	13	1,754	21
High school: 4 years	51	2,698	20
College: 1 to 3 years	23	3,338	18
4 years or more	13	4,850	16
Number of children present from an absent father			
One	56	2,425	15
Two	33	3,527	20
Three	9	4,509	30
Four or more	2	3,226	26

¹An estimated 3.73 million women received child support payments in 1989; an estimated 1.23 million women due payments this year did not receive them.

²Excludes a small number of currently widowed women whose previous marriage ended in divorce.

³Remarried women whose previous marriage ended in divorce.

Source: Lester, G.H., 1991, *Child Support and Alimony: 1989, Current Populations Reports, Consumer Income, Series P-60, No. 173, U.S. Department of Commerce, Bureau of the Census.*

The Census study found that about 3.73 million women received some child support in 1989. This study, however, found that 2.91 million consumer units made child support payments in the 1988–89 period. Because this study focused only on complete income reporters, the population size was reduced by about 14 percent. Also, some men may be paying child support to more than one former wife.

Average annual child support received by women amounted to \$2,995 in 1989 according to the Census study. This study found that average child support paid out was \$3,339 in 1988–89, a difference of 11 percent. A similar finding was made by Fletcher (3) who hypothesized that the difference may reflect informal expenditures on a child, in addition to court-ordered child support, by the parent with whom the child does not reside. Also, men may be paying child support to more than one former wife.

Findings of the two studies are consistent with regard to race. This study found that non-whites paid less than whites, and the Census study found that blacks received less than whites. Findings are also consistent with the Census study with regard to age and education. This study found that age and educational level of reference persons in households with child support payments were positively related to such payments, and the Census study found that women's age and educational level were positively related to child support receipts.

Regarding alimony, the Census study found that 920,000 women were due alimony payments in 1989. No information on the number who actually received such payments was given, although a 1985 Census study found that 73 percent of women due alimony that year received full or partial payment (9). This study found that 440,000 consumer units reported making

Box 2—Census Study on Alimony Awards

According to a Census Bureau study (6), an estimated 3.19 million women had been awarded alimony as reported in spring 1990. Of these, 29 percent were supposed to receive payments in 1989. Of those ever awarded payments, most (60 percent) were presently separated or divorced; 40 percent were married. Most were white (90 percent). Seventy-five percent were age 40 or over. Almost two-thirds (64 percent) of the women ever receiving alimony had not attended college; 15 percent had a college degree or more. About three-quarters had no children (from the absent father paying alimony) residing in the home. The study did not contain data on amount of alimony payments.

Characteristics of women awarded alimony payments, 1989

	Percent
Current marital status ¹	
Divorced	49
Married ²	40
Separated	11
Race	
White	90
Non-white	10
Age	
18 - 29	6
30 - 39	19
40 or over	75
Highest education obtained	
Less than 12 years	20
High school: 4 years	44
College: 1 to 3 years	21
4 years or more	15
Number of children present from an absent father	
None	74
One or more	26

¹Excludes a small number of current widowed women whose previous marriage ended in divorce.

²Remarried women whose previous marriage ended in divorce.

Source: Lester, G.H., 1991, *Child Support and Alimony: 1989, Current Population Reports, Consumer Income, Series P-60, No. 173, U.S. Department of Commerce, Bureau of the Census.*

alimony payments in the 1988–89 period. Again, focusing on complete income reporters reduced the population size by about 14 percent. However, it appears that a larger number of women were due alimony payments

than consumer units making such payments in the 1988–89 period. Some men may be paying alimony to more than one woman. Further research is needed to investigate this in more detail.

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Trends in Transportation

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Using data from various government and industry sources, recent changes in transportation patterns by U.S. consumers are reported. According to the U.S. Department of Transportation, Americans are traveling more than ever. Most travel is done in private vehicles, and 80 percent of all vehicle trips in 1990 were by automobile. The number of drivers per household in 1990 averaged 1.7, whereas the number of vehicles owned was 1.8. Consumers allocate about 18 percent of their total expenditures for transportation. Since 1980, the annual cost of gasoline and oil, as a percentage of variable costs related to owning and operating an automobile, has declined from 77 percent to 68 percent. According to the U.S. Department of Energy, there is a strong negative relationship between the price of gasoline and consumer demand. Highway safety facts are reported, including fatality characteristics and laws requiring the use of child restraints and safety belts. Other information provided includes technologies developed for "smart" highways and the 6-Year Intermodal Surface Transportation Efficiency Act of 1991.

In 1990, 86 percent of person trips and 88 percent of person miles traveled were in private vehicles.

Americans are traveling more than ever. From 1969 to 1990, the U.S. resident non-institutionalized population grew by 23 percent. During this same period, the number of *person trips*¹ grew by 74 percent and *person miles of travel*,² by 65 percent (5).

Traveling in private vehicles is the preferred mode of travel. In 1990, 86 percent of person trips and 88 percent of person miles traveled were in private vehicles (table 1, p. 20).

¹A person trip is a trip by one or more persons in any mode of transportation. Each person makes one person trip; four persons traveling together in one auto make four person trips.

²Each time one person travels 1 mile, one person mile of travel results. Four persons traveling 5 miles in one vehicle account for 20 person miles of travel.

Airplanes and Amtrak accounted for less than 1 percent of person trips and 8 percent of person miles traveled in 1990 (5). Total number of passengers³ boarding domestic aircraft⁴ during 1990 was 423.7 million, up almost 2 percent from 1989. There were 340.2 billion passenger miles (one passenger transported 1 mile) during 1990, up 3 percent over 1989. Average length of a passenger trip in scheduled service was 803 miles. Average number of passengers carried per aircraft was 92, down from 95 in 1989. On scheduled flights, air carriers flew at an average 60 percent of capacity, down 2 percent from 1989. Remaining seats could have been used by passengers not considered to be revenue-producing (see footnote 3) (16).

³Includes only revenue passengers; that is, those paying the applicable tariff. People who are not charged full fare—such as airline employees, ministers, infants, the elderly, and the handicapped—are excluded.

⁴Includes those that operate within and between the 50 States, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands; plus the United States and Canada or Mexico.

Table 1. Mode of travel, 1990

Mode	Person trips	Person miles traveled
		Percent
Privately owned vehicle	86.2	88.1
Airplane, Amtrak	.3	7.5
Bus, rail	2.5	2.3
Walking, school bus, bike, taxi	11.0	2.1

Source: Liss, S., 1991, *1990 Nationwide Personal Transportation Study, Early Results*, U.S. Department of Transportation, Federal Highway Administration.

Some 14 air carriers with annual operating revenues exceeding \$1 billion operated during 1990. Among these major air carriers, passenger revenues were up 9 percent, compared with 1989, but total operating expenses were up 16 percent. Thus, earnings were negative for the year, compared with net income of \$276.5 million in 1989 (17).

Public transportation via bus (includes public transit, intercity, shuttle buses—if available to general public; excludes school buses) and rail (includes subway, elevated rail, commuter train, street car, or trolley car) accounts for only a small proportion—2 percent of person trips and 2 percent of person miles. It is estimated that between 40 and 45 percent of motor bus travel is intercity (5). Of all passenger *trips* made in 1989 on public transit conveyances, 63 percent were by motor bus; only 50 percent of the passenger *miles* traveled via public transit were by motor bus (2).

Remaining travel (11 percent of person trips and 2 percent of person miles) was done by other means (walking, school bus, bicycle, taxi). Walking, biking, and riding the school bus have declined as a share of person trips over time, corresponding to a decline in proportion of the population under age 16—or greater use of private vehicles (5).

Vehicle-Miles Traveled and Vehicle Trips

From 1983 to 1990, annual *vehicle miles of travel* increased by 41 percent while the number of *vehicle trips* increased by 25 percent. During this period, there was an 11-percent increase in the number of drivers, a 28-percent increase in average annual miles per driver (including a 50-percent increase by women), and a 15-percent increase in the number of vehicles owned or available to households (5).

On a per household basis, average daily vehicle miles of travel increased from 32 miles in 1983 to 41 miles in 1990. Some of the increase in vehicle miles traveled can be attributed to an increased average work trip, from 8.6 miles in 1983 to 10.9 miles in 1990. One-third of all vehicle miles traveled were related to work. People were moving farther out to the distant suburbs, in large part because housing was more affordable (5).

In 1990, 80 percent of all vehicle trips were by automobile, down from 84 percent in 1983. Miles traveled by automobile were down similarly, from 82 percent in 1983 to 77 percent in 1990. As a result, trips by trucks and vans increased as did miles traveled by trucks and vans during the period (5).

Household vehicle ownership increased from 1.2 vehicles per household in 1969 to 1.8 in 1990. There were 1.7 drivers per household in 1990 (5). Since 1972, the number of registered vehicles in the United States has exceeded the number of licensed drivers (14). Of the U.S. population 16 years old and older, 85 percent were licensed to drive in 1989; over 90 percent of the population between ages 21 and 55 were licensed to drive. Of all licensed drivers, 56 percent were between ages 20 and 44 (table 2). However, between 1979 and 1989, the number of licensed drivers 70 years old and older increased by 56 percent. A majority of all drivers, 52 percent, were male (13).

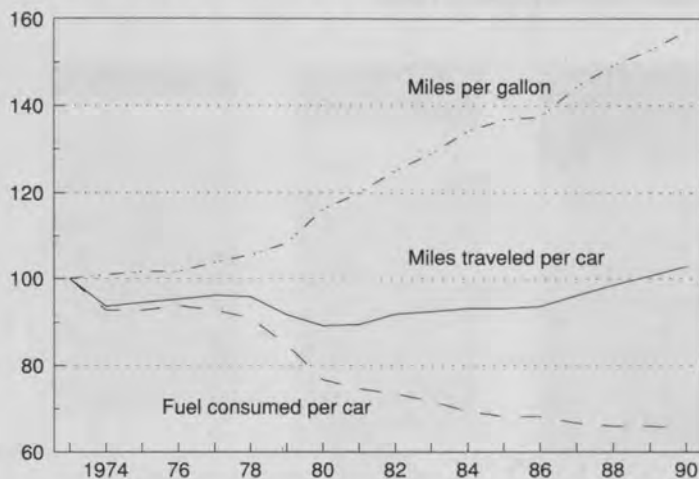
According to the U.S. Department of Transportation (DOT), the average number of vehicle-miles traveled annually *per passenger automobile* has increased only slightly since 1947. From 1972 to 1980, a downward trend could be observed (figure 1), but from 1981 to 1988, average miles traveled per car rose by 10 percent (11).

Table 2. Distribution of licensed drivers, by age, 1989

Age	Percent of total drivers	Drivers as a percent of age group's population
Total	100.0	85.0
<20	5.9	54.3
20 - 24	10.2	89.6
25 - 29	12.5	94.3
30 - 34	12.4	92.4
35 - 39	11.2	94.4
40 - 44	9.7	95.4
45 - 49	7.6	93.1
50 - 54	6.2	90.2
55 - 59	5.7	88.7
60 - 64	5.6	85.8
65 - 69	5.0	81.3
>69	8.0	63.9

Source: U.S. Department of Transportation, Federal Highway Administration, 1990, *Highway Statistics 1989*.

Figure 1. Passenger car efficiency (1973 = 100)



Source: U.S. Department of Energy, Energy Information Administration, 1992, *Monthly Energy Review*, January issue.

Fuel Economy

In contrast, the annual average number of gallons of fuel consumed per car has been falling since 1972, while the average miles traveled per gallon of fuel has risen. After supply disruptions and escalating prices in the 1970's, consumers demanded fuel efficiency. The Federal Government established the Corporate Average Fuel Economy (CAFE) standards to promote conservation, reduce pollution, and minimize dependence on foreign oil (see box). In 1974, the speed limit on all interstate highways was reduced to 55 miles per hour (mph) by the Federal Government to further increase fuel economy. In 1987, States were allowed to set speed limits as high

as 65 mph on rural segments of interstate highways (11). The interstate system accounts for about 1 percent of the Nation's total route mileage but carries 22 percent of the travel (13).

Overall, efforts to increase automobile fuel economy have been successful, as can be seen by the following data for 1988 as compared with 1978 (11):

- Number of motor vehicles registered in the United States—up 21 percent
- Number of vehicle-miles traveled—up 3 percent
- Per day demand for motor gasoline—down 1 percent

Under CAFE, a fuel economy standard of 18 miles per gallon (mpg) was established for the automakers' new fleet of cars in 1978 and 27.5 mpg in 1985. Between 1978 and 1987, average mpg per passenger car (all U.S. manufacturers) increased 37 percent. Reasons for this increase included a more aerodynamic design, increased use of lighter materials (high grade steel, aluminum, and plastics reinforced with fiber glass and graphite), redesigned four- and six-cylinder engines that were more efficient than the old eight-cylinder engines, front-wheel drive, five-speed manual and four-speed automatic transmissions, and computer-controlled fuel injection systems. Other technological developments that will improve fuel efficiency, soon to be incorporated in automobile design, are a new computer system that regulates and continually adjusts valve timing and lift and three- and five-cylinder engines to replace some four- and six-cylinder engines (11).

Household vehicle ownership increased from 1.2 vehicles per household in 1969 to 1.8 in 1990.

Expenditures and Prices

According to data from the 1990 Consumer Expenditure Survey, consumer units were spending 18 percent of their total expenditures for transportation expenses (figure 2) (12). Gasoline and oil accounted for 4 percent of total expenditures and vehicle purchases, 8 percent.

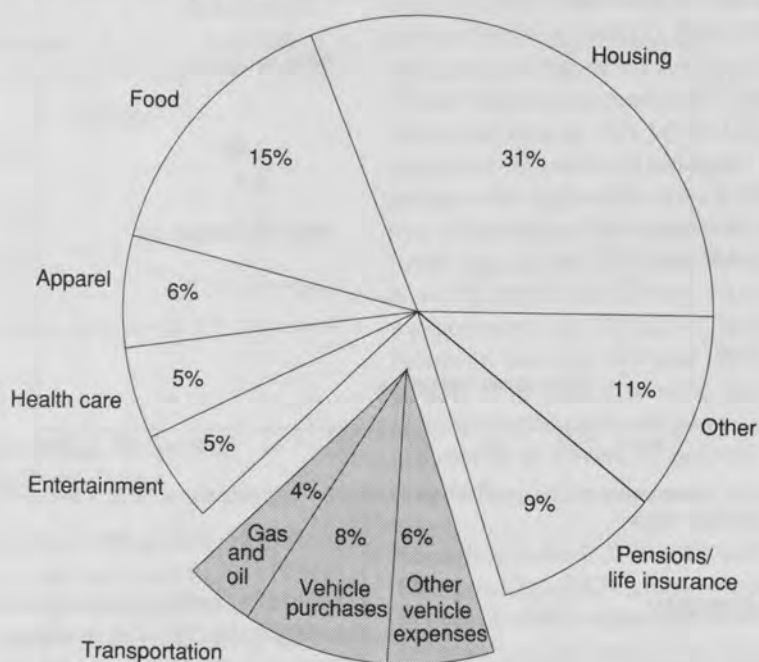
Prices for transportation, as measured by the Consumer Price Index (CPI), rose 21 percent during the period 1986–91. This increase was slightly less than the 24-percent increase for all items (figure 3). Prices for new vehicles rose less since 1986 (14 percent) than did those for motor fuel (29 percent) and automobile maintenance and repair (23 percent).

Since 1980, the annual cost of gasoline and oil, as a percentage of variable costs related to owning and operating an automobile, has declined from 77 percent to 68 percent (table 3, p. 24) (1,8). In contrast, maintenance costs have increased from 15 to 23 percent of variable costs, reflecting a trend toward older cars. The average age of cars in use in the United States was 5.6 years in 1970, 6.6 in 1980, and 7.6 in 1990 (8). The distribution of passenger car age is shown in figure 4.

Fixed costs of owning and operating an automobile more than doubled between 1980 and 1991. As a percentage of fixed costs, depreciation takes the largest bite—60 percent. Both insurance and finance charges account for a decreasing share of fixed costs. Interest rates charged by commercial banks for new car financing have fluctuated between 10 and 12 percent during 6 of the last 8 years (figure 5).

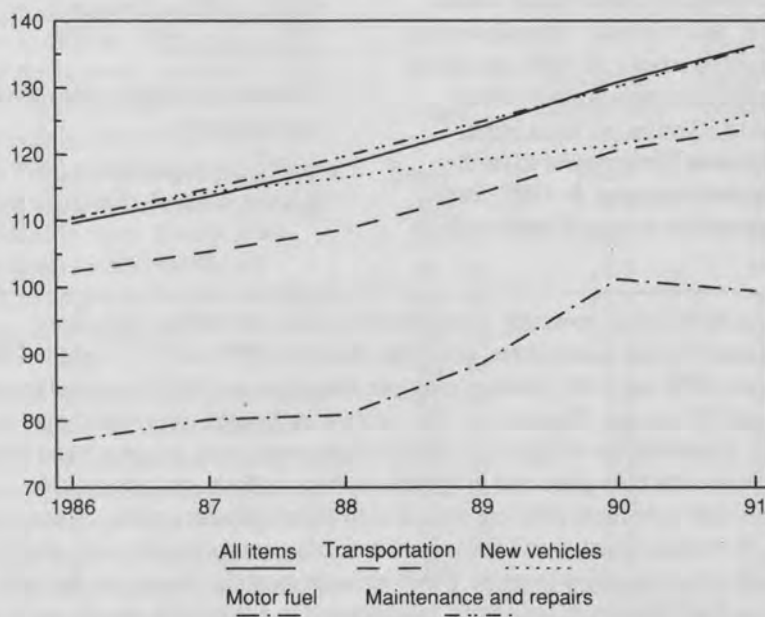
There is a strong negative relationship between the price of gasoline and consumer demand. As gasoline prices went down between 1974 and 1978, demand increased and 13.4 percent more

Figure 2. Annual expenditures of all consumer units, Consumer Expenditure Survey (CE), 1990



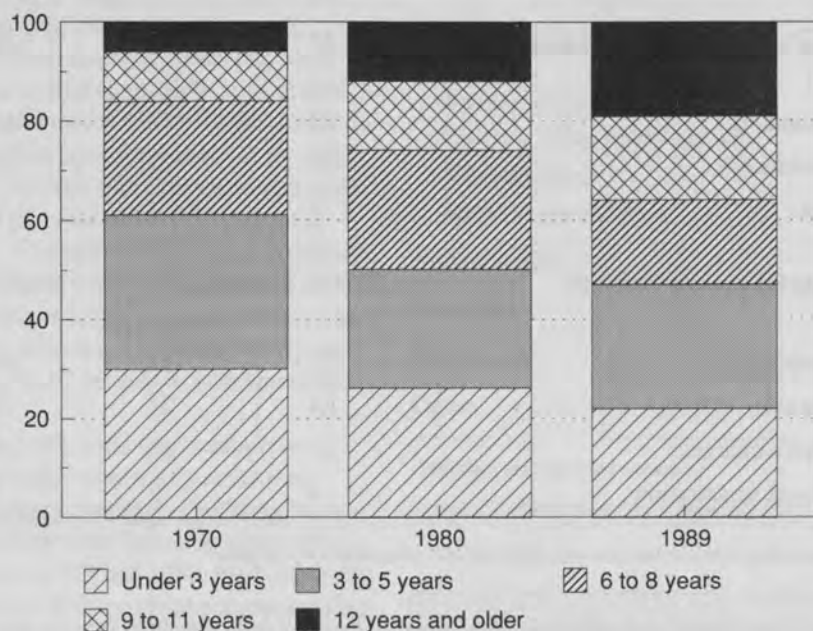
Source: U.S. Department of Labor, Bureau of Labor Statistics, 1991, *Consumer expenditures in 1990*, News, USDL No. 91-607.

Figure 3. Consumer Price Index for transportation, all urban consumers (1982-84 = 100)



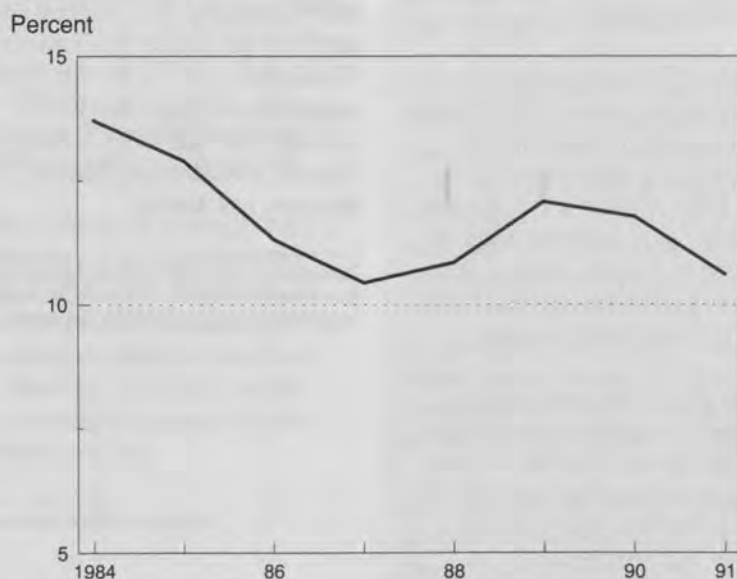
Source: U.S. Department of Labor, Bureau of Labor Statistics, *CPI Detailed Report*.

Figure 4. Distribution of passenger car age



Source: Calculated from Statistical Abstract of the United States, 1991.

Figure 5. Interest rates for new car financing



1991 data are for November.

Source: Board of Governors of the Federal Reserve System, *Federal Reserve Bulletin* (table 1.56).

gasoline was consumed. Between 1978 and 1981, prices rose and gasoline consumption decreased by 11.1 percent. The oil industry was deregulated in 1981, and prices dropped 47 percent by 1988. During this period, demand for gasoline increased by 11 percent (11).

Highways and Mass Transit

Transportation accounts for about two-thirds of U.S. petroleum use and of that, over 70 percent is used in highway travel. Highway travel is expected to continue rising unless energy costs are increased substantially—through additional taxes (10) or foreign restrictions on supply.

Excise taxes on gasoline, gasohol, diesel and special motor fuels, tires, trucks and trailers, Federal use tax, and fines and penalties support the Highway Trust Fund (11,14). Currently, the Federal gasoline excise tax is 14.1 cents per gallon, having increased by 5 cents per gallon on December 1, 1990. Half of this increase, however, is designated for budget deficit reduction. One penny of it supports mass transit, leaving 1.5 cents for the Highway Trust Fund. The States' gasoline taxes range from 7.5 cents in Georgia to 21.0 cents in Tennessee (11). Highway and mass transit trust fund balances (\$11 billion and \$8.5 billion, respectively, in 1991) cannot be spent without being authorized and budgeted (10).

During the 1980's, most Federal spending on highways (about 75 percent) was allocated for new construction and capital replacement (full or near full replacement of a bridge, major bridge rehabilitation, or highway reconstruction). About 20 percent

... about one-third of the Nation's noninterstate roads are deteriorated or are deteriorating. Also, almost half of all bridges are structurally deficient or functionally obsolete.

Table 3. Annual cost of owning and operating an automobile¹

Cost	1980	1985	1991
Total variable costs (cents per mile)	7.62	8.04	9.80
		<u>Percent</u>	
Gas and oil	77	77	68
Maintenance	15	15	23
Tires	8	8	9
Total fixed costs (dollars)	\$2,033	\$2,441	\$4,217
		<u>Percent</u>	
Depreciation	51	51	60
Insurance	24	21	17
Finance charges	21	23	19
License, registration	4	5	4

¹Based on an intermediate-size car, driven 60,000 miles over a 4-year period.

Source: Calculated from U.S. Department of Commerce, Bureau of the Census, 1991, *Statistical Abstract of the United States, 1991*; and American Automobile Association, *Your Driving Costs, 1991 Edition*.

was on maintenance (restoration, rehabilitation, and resurfacing) to prolong life and to avoid total capital replacement. Remaining funds were directed toward nonconstruction efforts, such as safety (10).

The Office of Technology Assessment, U.S. Congress, considered rehabilitation and maintenance problems the top priority for new highway funding. It has been estimated that about one-third of the Nation's noninterstate roads are deteriorated or are deteriorating. Also, almost half of all bridges are structurally deficient or functionally obsolete.

American drivers face other hidden costs—time, fuel lost, and air pollution—because of highway congestion. Total annual cost to the public has been estimated at \$30 billion. The problem is nationwide and getting worse. The

Texas Transportation Institute has developed a Roadway Congestion Index that ranks cities by their congestion level. In 1989, worst congestion occurred in Los Angeles, San Francisco, and Washington, D.C. Highest congestion cost⁵ per vehicle was measured in Washington, D.C., at \$1,040. Several cities reduced congestion levels between 1987 and 1989, including Phoenix, Philadelphia, Detroit, Houston, and Atlanta.

⁵Congestion cost is the estimated annual cost of travel delay and excess fuel consumed paid by residents of large, congested urban areas.

Highway Safety

Fatalities. Motor vehicle crashes are the leading cause of death among Americans under 35 years old. More crashes occur in urban than rural areas, but more motor vehicle deaths occur on rural than on urban roads (4). In 1990, the death rate was highest among males 16 to 24 years old and 80 years and older. Over half (54 percent) of deaths involved occupants of passenger cars; 19 percent involved pickups, vans,⁶ and utility vehicles; 15 percent were pedestrians; and 7 percent were motorcyclists.

Since 1980, vehicular deaths have trended downward except for those involving occupants of pickups, vans, and utility vehicles (table 4) (4). Also, between 1975 and 1988, the fatality rate (number of automobile occupants killed per 100,000 automobiles registered) decreased from about 28 to about 21 (18); the occupant death rate was higher (30 deaths per 100,000 registered vehicles 1 to 3 years old in 1990) in small pickup trucks and small utility vehicles than in other types of passenger vehicles (4). Improvements in automobile and roadway design, the reduction in the proportion of young drivers on the road (due to changing age distribution of the population), increased use of safety belts, and a focus on the issue of drunk driving all contributed to this decrease (18).

Sixty-seven percent of passenger vehicle (cars, pickups, vans, utility vehicles) fatalities in 1990 were drivers. More than half (55 percent) of passenger vehicle occupant deaths occurred on Friday, Saturday, or Sunday, and 54 percent occurred in crashes between 6 p.m. and 6 a.m. (4).

⁶Minivans were classified as cars.

Table 4. Motor vehicle deaths, 1980 and 1990

Victim	1980	1990
Occupants		
Passenger cars ¹	27,390	24,243
Pickups, vans, utility vehicles	7,578	8,452
Tractor trailers	884	506
Other heavy trucks	354	180
Motorcyclists	4,961	3,120
Bicyclists	965	850
Pedestrians	8,070	6,468
Other	889	710

¹Minivans are classified as cars.

Source: Insurance Institute for Highway Safety, 1991, *Facts, 1991 Edition*.

In 1990, the death rate in the smallest passenger cars (wheelbase less than 95 inches) was more than 4 times that in the largest cars (wheelbase greater than 114 inches) (4). Efforts to increase fuel economy standards have renewed the debate concerning the relationship between auto size and safety.

Although downsizing could refer to reductions in length and width as well as weight, fuel efficiency is most closely related to weight, according to a study conducted by the General Accounting Office (18). Crashworthiness is more directly related to exterior size—wheelbase and crush space—and safety features than it is to weight.

Heavier cars are more “aggressive”; that is, they hit a fixed object or another vehicle with more force than would a lighter one. Median weight of passenger cars in the United States decreased by about 28 percent (1,100 pounds) between 1975 and 1988. During this period, the range of automobile weights decreased significantly: the difference in weights of cars in the 95th and 5th percentiles was over 3,000 pounds in 1975 and under 2,000 pounds in 1988. Thus, the “aggressivity” factor has declined since 1975.

A comparison of 1- and 2-year-old cars on the road in 1976–78 and 1986–88 shows that 66 percent of all cars weighed 3,000 pounds or less in 1986–88, compared with only 28 percent in 1976–78. For cars weighing 3,000 pounds or less, the fatality rate decreased from about 35 to about 24.

The General Accounting Office study concluded that automobile downsizing has two offsetting effects: crashworthiness is reduced, but so is “aggressivity.” An increase in the proportion of lighter cars would lead to a decrease in occupant fatalities in two-car accidents; in collisions involving automobiles with trucks and heavier vehicles, however, occupant fatalities would increase. Between 1976–78 and 1986–88, the death rate for two-car collisions declined 22 percent, whereas the death rate for all other multivehicle accidents increased about 11 percent.

Child Restraints. All States and the District of Columbia have laws requiring children to be restrained when traveling in passenger vehicles. Restraints may be infant carriers, special safety seats, or regular adult safety belts. In 16 States, laws cover only vehicles registered in the State. In other States, laws apply only to residents of the State or to parents and guardians (4).

Safety Belts. As of June 1991, 39 States and the District of Columbia have passed laws mandating the use of seatbelts. Most of those States (34) require front-seat occupants of all passenger vehicles to wear safety belts; only 6 States also require passengers in rear seats to be belted. In 9 States, police may issue tickets solely for not wearing seatbelts; in 30 States and the District of Columbia, motorists must have committed a moving violation before they may be cited for not wearing seatbelts (4).

Recent Legislation

The 1990 Clean Air Act mandated reductions in car- and truck-generated pollutants. Technologies funded by the Federal Highway Administration and the Strategic Highway Research Program are expected to alleviate congestion and highway delays. For example, automatic vehicle identification will speed toll collection (see box, p. 27). Other research is being conducted on high-speed rail and magnetic levitation systems for intercity travel. However, Federal support for transit research and development dropped from \$52 million to \$2 million annually between 1980 and 1991. The Urban Mass Transportation Administration (DOT) has developed a Transit Planning and Research Program that includes Federal, State, and local components (10).

The 6-Year Intermodal Surface Transportation Efficiency Act of 1991 (Public Law 102-240)—a \$151 billion bill approved by Congress on November 27, 1991, and signed by President Bush on December 18, 1991—is expected to generate much-needed economic activity. Almost \$20 billion is slated for highway and bridge construction and repair each year, an annual increase of \$5.3 billion over the previous Federal allocation.

Also expected to benefit are manufacturers of automobile air bags. One provision of the law requires the installation of air bags for the driver **and** the front seat passenger in all passenger vehicles, including trucks, sold in the United States by 1999.

Other provisions of the law would promote the development of “smart” highway systems, designed to use electronics to ease traffic congestion by controlling road access (see box) or rerouting vehicles to less congested highways via electronic maps. Private investors could provide the communications network along a road that would inform drivers about traffic conditions and available mass transit. Mass transit was proposed to be funded at an average annual level of \$5.25 billion, and will account for 21 percent of total appropriations authorized by this bill, compared with 18 percent under the previous law (9).

Federal Rules and Regulations Affecting Transportation

The Omnibus Budget Reconciliation Act of 1990 (Public Law 101-508) doubled the Gas Guzzler Tax applicable to sales of automobiles by a manufacturer after December 31, 1990. Throughout 1991, up to December 27, the amount stated on the label was doubled, thereby avoiding the need to replace labels. Effective December 27, 1991, the statement required by the Environmental Protection Agency on motor vehicle fuel economy labels (called the Gas Guzzler Tax statement) must reflect this increase.

The Internal Revenue Service collects the tax, which is assessed on the sale of each passenger automobile with a fuel economy of less than 22.5 mpg. The tax increases as mpg decreases (3).

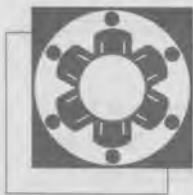
The Federal Motor Vehicle Safety Standard for controls and displays has long required the identification of certain controls and displays to be perceptually upright to the driver so they may be quickly and correctly identified and selected with minimal diversion of the driver’s attention from the driving task. Because some manufacturers have placed cruise controls on steering wheels, the National Highway Traffic Safety Administration (NHTSA) considered whether there was a safety need to prohibit such placement. NHTSA concluded that, effective November 15, 1991, identification of cruise controls need be perceptually upright only when the steering wheel is centered (15).

On December 5, 1991, AT&T and Vapor Canada, Inc., of Montreal announced a new "smart card" that can enable drivers to pay their tolls electronically and almost instantly. The card is inserted in a device mounted on the car's dashboard that can read the information stored on the card. Data are transmitted via radio frequency to a roadside data collector. After the correct toll is computed, the transaction is recorded on the card. The toll can be billed to a credit card or deducted from a cash account. The card (about the size of a credit card) contains a single micro-processor and can store four single-spaced pages of data. Information such as a user's medications, allergies, medical insurance, and automobile insurance could be listed. A password is provided to each user, so data are secure. Highway, bridge, and tunnel authorities have indicated a high degree of interest, especially for heavily traveled roads where benefits would be maximized (7).

In April 1992, Lockheed Corporation and AT&T announced a new telecommunications system that will speed collection of tolls, fuel taxes, and other fees. This Intelligent Highway Vehicle System is designed to boost truckers' productivity and cut air pollution (6).

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Child-Care Arrangements and Costs

Changing employment and demographic patterns of women have made child care an important public policy issue in the United States. Between 1970 and 1990, the percentage of mothers in the labor force with children under age 6 has doubled (from 29 percent to 58 percent).

Also, the composition of families has changed significantly. Among families with children, those headed by women increased from 11 percent in 1970 to 16 percent in 1988. Two reasons for this increase are a rise in the percentage of divorced women age 18 and older who had not remarried (4 percent in 1970; 9 percent in 1988) and an increase in frequency of births to unwed mothers (11 percent of total births in 1970; 25 percent in 1987).

These social changes have led to an expanded role for the government in subsidizing child care. In 1988, the Federal Government spent an estimated \$7 billion on child-care assistance programs. The 1990 Child-Care and Development Block Grant has expanded the role of both State and Federal Governments in the provision of child care.

This report focuses on factors that determine the type of child-care arrangements and expenditures by different population groups. The data are from the 1988 National Longitudinal Survey of Youth (Youth Survey) and the 1983 National Longitudinal Survey of Young Women (Young Women Survey). The Youth Survey consisted of mothers ages 23 to 31 in 1988 (younger mothers), whereas mothers in the Young Women Survey were 29 to 39 years old in 1983 (older mothers).

Usually, children are cared for in one of three types of arrangements: by relatives, by other persons, or in child-care centers. The most common form of child care is provided by relatives: 41 percent of children with a working mother received such care. Almost one-fourth of the mothers relied on persons other than relatives for child care (see table). This type of arrangement includes care in the home as well as in other private homes. Child-care centers (day-care center or nursery school) were used by 18 percent of younger mothers in 1988 and 11 percent of older mothers in 1983.

The type of child-care arrangement was greatly influenced by the age of the youngest child. Child-care centers were used more often for 2- to 4-year-old children than for infants by both younger and older mothers. Other persons, however, were more likely to provide care for infants than for children 2 to 4 years old. This difference in type of care may be related to parental preference and to the fact that many child-care centers do not accept children under age 3, or accept them only at a higher fee.

Older mothers were more likely to have people other than relatives care for their infants (58 percent compared with 33 percent for younger mothers), whereas younger mothers were more likely to use child-care centers for their infants (15 percent compared with 4 percent for older mothers).

Older mothers may have older children able to care for siblings age 5 and older (reported by 11 percent compared with 2 percent for younger mothers). Also, since children of older mothers are older and may be in school, they are more likely than children of younger mothers to care for themselves (32 percent compared with 5 percent).

Child-care arrangement for youngest children of women in the 1988 and 1983 National Longitudinal Surveys, by age of child

Caregiver	Younger mothers (ages 23–31) ¹				Older mothers (ages 29–39) ²			
	All children	Age of children (years)			All children	Age of children (years)		
		< 2	2, 3, 4	5 +		< 2	2, 3, 4	5 +
		Percent				Percent		
Father	11.3	12.8	12.2	9.4	14.1	15.6	16.1	13.5
Siblings	1.1	0	.6	2.3	8.8	.8	2.7	10.8
Other relative	28.8	30.0	26.1	30.3	18.0	29.7	15.9	15.9
Other person	22.3	32.8	24.5	13.0	24.0	58.2	43.7	17.2
Child-care center	18.1	15.1	27.6	10.7	10.6	3.7	22.6	7.7
Mother cares for child at work	3.0	3.2	3.5	2.4	4.2	8.6	8.3	3.0
Child cares for self	1.9	0	0	5.2	24.6	0	.1	32.3
Other	13.5	6.0	5.6	26.5	12.1	0	2.0	15.3

¹Data are from the 1988 National Longitudinal Survey of Youth; percentages may not add to 100 percent due to rounding.

²Data are from the 1983 National Longitudinal Survey of Young Women. In the survey, respondents were allowed to choose more than one type of arrangement. Thus, percentages total more than 100 percent.

Source: Veum, J.R. and Gleason, P.M., 1991, *Child care: Arrangements and costs*, *Monthly Labor Review* 114(10):10-17.

A higher percentage of older married mothers (18 percent) received child-care help from the child's father than did younger married mothers (15 percent). Among single mothers, however, the younger mothers depended on the child's father to provide care more than did older mothers. Children of younger single mothers are most often cared for by relatives (38 percent) or child-care centers (20 percent). In contrast, older single mothers tended to rely more on relatives (25 percent) or let the children care for themselves (35 percent).

Family income is also a factor in determining the type of child care. Mothers in families with income over \$50,000 (in 1988 dollars) were less likely than those in lower income families to have their children cared for by relatives. Older mothers were more likely to use child-care centers as family income increased. Among those families using child-care centers, high-income families tended to use private child-care centers,

whereas low-income families were more likely to use public centers.

Average weekly expenditures on child care were about \$44 for older mothers and \$62 for younger mothers (in 1988 dollars). However, younger mothers used child-care services an average of 39 hours a week, compared with 25 for older mothers, so hourly expenditures were larger for older mothers. Older mothers generally have higher incomes than younger mothers, and they often have more children for whom to pay the costs of child care—which may result in higher expenditures than those incurred by younger mothers.

Single mothers spent less than married mothers on child care. This difference in expenditures may be attributed to the type of arrangement used. Single mothers relied more on relatives, who generally provide a relatively inexpensive form of child care. For both married and single mothers, it appears that those with net family incomes of \$50,000 or more used child care for

more hours than did mothers with lower family incomes. There appears to be a direct relationship between the income level of a family and their child-care expenditures for both younger and older mothers.

The suggestion is often made that inadequate child-care provisions may hinder the careers of women with children. Evidence for older mothers suggests that those in high-income families are more likely to take time off from work to handle child-care problems. These women are often married and (with their husband's income) can better afford time off from work. Findings from the Youth Survey imply that mothers in low-income families are more likely to have gaps in employment because they cannot find adequate child-care arrangements.

Source: Veum, J.R. and Gleason, P.M., 1991, *Child care: arrangements and costs*, *Monthly Labor Review* 114(10):10-17.

Child-Care Problems: An Obstacle to Work

Currently, only one of three mothers stays at home and provides full-time care for her children. About half of all preschoolers spend at least part of the day in the care of adults other than their parents. This increase in working mothers has been accompanied by an increase in the number of day-care centers and other forms of nonparental care for children. Finding affordable, quality child care, however, can be a problem for many families. For poor mothers, lack of child care can be a serious obstacle to obtaining and holding a job, often compounding the economic effects of inadequate training, educational attainment, and work experience.

In 1990, Congress enacted legislation intended to make child care affordable for more parents. Poor single parents who are not employed may receive temporary child-care assistance during periods of subsidized job training and the transitional periods that follow. This legislation recognizes that the lack of affordable child care is a serious barrier to the labor force participation of many parents, especially those who are poor.

Most child-care research conducted in recent years has concentrated on the child-care needs of parents who are employed. Some analysts have suggested that parents who are not employed are unlikely to need child care. Others found that child-care costs had a substantial effect on labor force participation. Supplements to the Current Population Surveys of 1977 and 1982 asked non-employed mothers whether they would work "if satisfactory child care were available at reasonable cost." Such

Table 1. Mothers, 21 to 29 years old, who cited child-care problems, by selected characteristics, 1986

Selected characteristics	As a percent of all mothers not in the labor force
Total	23.5
Age (years)	
21 - 24	24.2
25 - 29	23.1
Race or Hispanic origin	
Non-Hispanic White	19.9
Non-Hispanic Black	29.0
Hispanic	40.6
Age of youngest child (years)	
Less than 1	17.4
1 - 2	28.2
3 - 5	25.8
6 or older	13.5
Total number of children	
One	20.3
Two	22.4
Three or more	31.8
Poverty status ¹	
At or below poverty line	34.0
Above poverty line	18.4
Marital status	
Single parent	30.3
Married, spouse present	20.2
Educational attainment ²	
No high school diploma	32.2
High school graduate	20.5

¹Data refer to people who provided complete information regarding family income.

²Data refer to people who provided complete information regarding educational attainment.

phrasing may encourage respondents to overestimate their readiness to seek employment. If mothers are asked an open-ended question as to why they are not looking for work, they are more likely to express their own reasons. This approach was used in this study.

This study focused on young mothers who were out of the labor force for at least part of 1986. The data are derived from the National Longitudinal Survey of Youth, an ongoing sample of people in the United States who represent the population of youth born between 1957

Table 2. Mothers, 21 to 29 years old, who cited child-care problems, by poverty status and number of children, 1986

Number of children	As a percent of mothers not in the labor force	
	At or below poverty line	Above poverty line
One	29.5	16.4
Two	35.2	17.8
Three or more	36.5	25.6

and 1964. When weighted, the population subgroup used in this report included about 8.2 million young mothers, ages 21 to 29.

In 1986, 43 percent of these young mothers were in the labor force continuously, and 30 percent were employed for part of the year. Of those who were not in the labor force continuously, 24 percent said the reason was because of child-care problems. Women with child-care problems were more likely than other women (66 percent compared with 42 percent) to be out of the labor force in 1986.

Child-care problems were more prevalent among women with three or more children and for those whose youngest children were between ages 1 and 5 (table 1). Minority mothers—particularly Hispanics—were more likely than other mothers to be out of the labor force because of child-care problems. Among mothers who lacked high school diplomas and were out of the labor force, one-third cited child-care problems.

The proportion of poor mothers citing child-care problems was almost twice as high as that of their nonpoor counterparts. This difference reflects the fact that poor mothers tended to have more children than other mothers. One-third of all poor mothers who were out of the

labor force had three or more children, compared with about one-sixth of their nonpoor counterparts. Even among women who had one or two children, poor mothers were much more likely to be out of the labor force because of child-care problems (table 2).

The cost of child care is probably a major reason why poor mothers were more likely than other mothers to be out of the labor force because of child-care problems. Paying for child care is not a realistic long-term option for most poor mothers. Among those mothers who paid for child care, were employed in 1986, and were never out of the labor force because of child-care problems, poor mothers paid 26 percent of their weekly family income for child-care expenditures, whereas their nonpoor counterparts paid, on average, 8 percent.

Poor mothers may be unable to pay for child care in order to look for work. They often have lower levels of education and marketable skills and so have fewer chances of getting jobs that pay enough to cover child-care payments. Poor mothers tend to be in a "catch-22" situation: without child care, they cannot look for work and without work, they cannot pay for child care.

Source: Cattan, P., 1991, Child-care problems: An obstacle to work, *Monthly Labor Review* 114(10):3-9.

Per Capita Food Spending in Urban Households

Between 1980 and 1988, inflation-adjusted (real) per capita spending for food at home declined by more than 6 percent. In contrast, real per capita away-from-home food spending increased by more than 10 percent. The net result was a small decrease in total per capita food spending during the period.

Changes in food spending between 1980 and 1988 varied by family size. After adjusting for inflation, total food spending grew by 11 percent for single people, while spending declined by 17 percent for households with six or more members. In 1988, per person weekly food expenditures ranged from \$36.73 for single people to \$15.83 for those in households with six or more members (see table). Household food spending increases with household size, but not proportionately because large households can take advantage of economies of size (buying in bulk), tend to have more children (who eat smaller portions), and tend to buy a different mix of food.

Food expenditures are affected by household income. Households in the lowest income quintile in 1988 spent \$19.50 per person per week, 62 percent as much as the \$31.50 spent by households in the highest income quintile.

Food spending also varied by race and age. In 1988, White households spent \$27.03 per person per week and Black households spent \$17.89, or two-thirds as much. Contributing factors were smaller family size and higher family income among Whites. Other groups—including American Indians, Eskimos, and Asians—spent 18 percent less than

Weekly per-person food expenditures

Item	1980	1988
All urban households	25.80	25.68
Number of household members		
One	33.22	36.73
Two	31.30	31.59
Three	24.92	25.48
Four	23.33	22.47
Five	21.70	19.23
Six or more	19.03	15.83
Single female parent with children	16.96	17.65
Income groups		
Poorest 20 percent	22.45	19.50
Second-poorest 20 percent	24.26	22.67
Middle 20 percent	24.71	25.19
Second-richest 20 percent	28.74	28.31
Richest 20 percent	30.66	31.50
Race		
White	26.99	27.03
Black	18.10	17.89
Other ¹	24.07	22.11
Age of household head (years)		
Under 25 (nonstudent)	23.63	21.99
25 to 34	25.22	23.82
35 to 44	24.11	24.62
45 to 54	26.61	28.06
55 to 64	29.30	28.98
Over 64	27.38	27.26
Region and city size MSA's² in the		
Northeast	27.28	28.04
Midwest	26.19	25.23
South	24.19	24.86
West	26.27	26.17
Other urban areas	24.60	23.10

¹Includes American Indians, Aleuts, Eskimos, Asians, and Pacific Islanders.

²Metropolitan Statistical Areas (MSA's) are, except in New England, a county or a group of contiguous counties that contain at least one city of 50,000 or more inhabitants. In New England, MSA's consist of towns or cities.

Source: Blaylock, J.R., Smallwood, D.M., and Blisard, N., 1991. *Per capita food spending, Food Review* 14(3):28-33, U.S. Department of Agriculture, Economic Research Service.

Whites but 24 percent more than Blacks. In terms of age, per capita spending for food tends to increase as the household head ages, until retirement age. This increase parallels the income increase associated with rising age.

In 1988, urban households in the Northeast and West spent more per person on food than households in the South or Midwest. Those in the Northeast spent the most (\$28.04) and those in the South, the least (\$24.86). These differences may be caused by regional variations in food prices, differences in household incomes, and purchases of a different mix of food.

Foods that showed the most rapid growth in real at-home spending between 1980 and 1988 were: cereals, up 24 percent; breads (other than white), up 45 percent; fresh milk (other than whole), up 53 percent; bananas and frozen prepared foods, both up 37 percent; carbonated drinks, up 30 percent; and potato chips, snacks, and nuts, up 36 percent. Foods with the biggest declines included white bread, beef and pork products, fresh whole milk, oranges, lettuce, and butter. At-home expenditures on alcoholic beverages also decreased significantly.

Source: Blaylock, J.R., Smallwood, D.M., and Blisard, N., 1991, Per capita food spending, *Food Review* 14(3):28-33, U.S. Department of Agriculture, Economic Research Service.

Food Spending

Food spending, as a percentage of income, rose slightly in 1990. Much of the growth in food spending occurred because people were eating outside the home more. Increasing numbers of households have more than one earner. These households generally have more income and less time than single-earner households and therefore eat out more often.

After adjusting for inflation, however, total overall food sales rose only 0.3 percent between 1989 and 1990. A 2.1-percent increase in real spending for food away from home was offset by a 1.1-percent decline in real spending for food at home.

Individuals and families provided \$444 billion of the \$546 billion (81 percent) spent on food in 1990. The Federal Government spent \$25 billion on food stamps, food donations, food supplies for the Armed Forces, and meals for prisoners in Federal institutions. State and local governments spent another \$5 billion, and businesses spent \$64 billion for meals on business trips and food furnished to employees in restaurants. The value of food produced at home totaled \$9 billion.

Between 1989 and 1990, American individuals and families increased their food spending by 6.2 percent. During the same period, incomes rose 5.9 percent, away-from-home food spending increased 7.8 percent, and at-home food spending rose 5.2 percent.

In 1965, 23 percent of personal food expenditures went for food away from home. By 1990, that figure increased to 39 percent. Over time, the share of disposable personal income (income after taxes) allocated to food spending has decreased from 15.3 percent in 1965 to 11.8 percent in 1990 (see table).

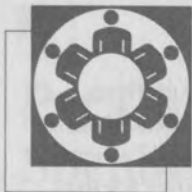
As household income increases, the amount spent for food also increases. However, the proportion of income spent on food is much higher in low-income households. Households in the lowest income quintile spent 42 percent of their before-tax income on food, compared with 9 percent for households in the highest income quintile.

Source: Manchester, A., 1991, Food spending, *Food Review* 14(3):24-27, U.S. Department of Agriculture, Economic Research Service.

Personal food expenditures as a percentage of disposable personal income

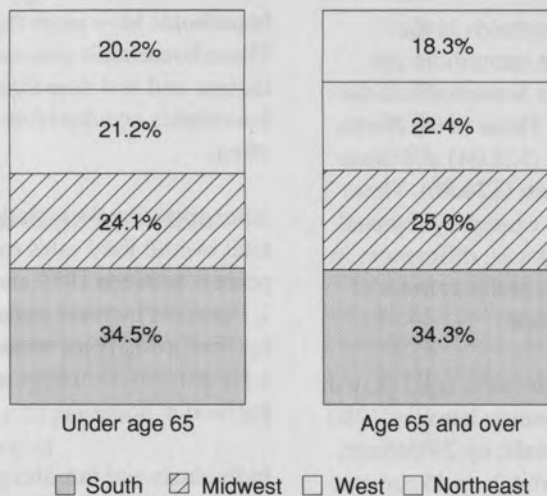
Component	1965	1975	1985	1990
<u>Billion dollars</u>				
Disposable personal income	486.8	1,142.8	2,838.7	3,946.1
<u>Percent</u>				
Food	15.3	14.1	12.6	11.8
At home	11.8	10.1	8.0	7.3
Away from home	3.5	4.0	4.5	4.6

Sources: Bureau of Economic Analysis, U.S. Department of Commerce and Economic Research Service, U.S. Department of Agriculture.

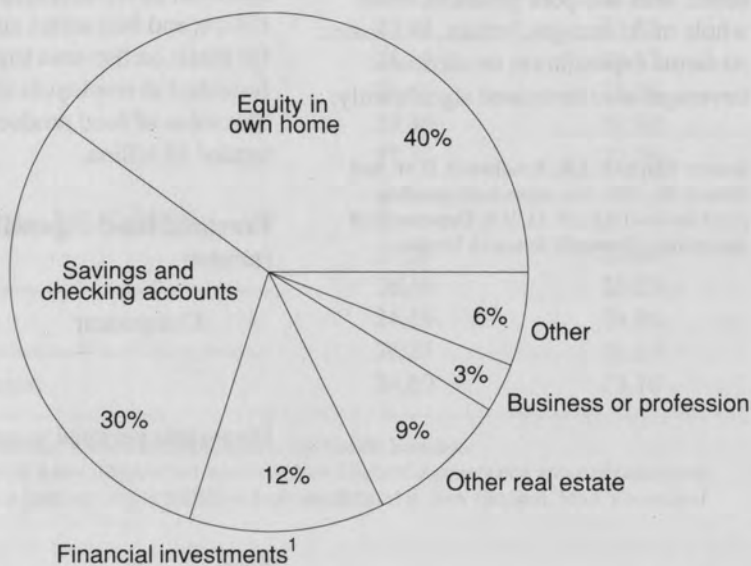


Charts From Federal Data Sources

Population by region and age, 1989



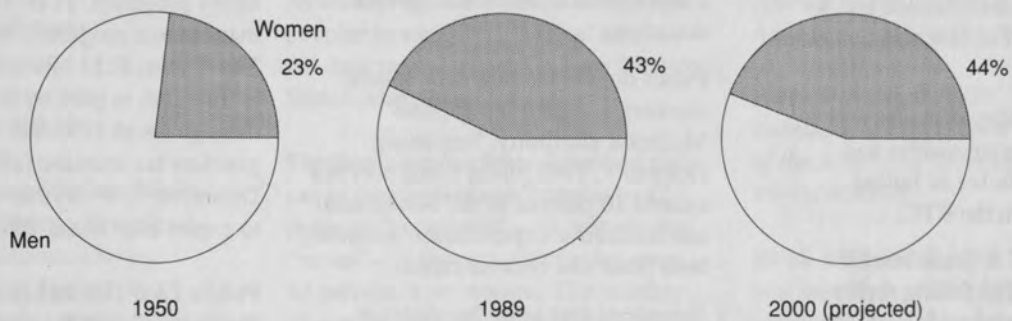
Distribution of net worth in households headed by a person age 65 and over, 1988



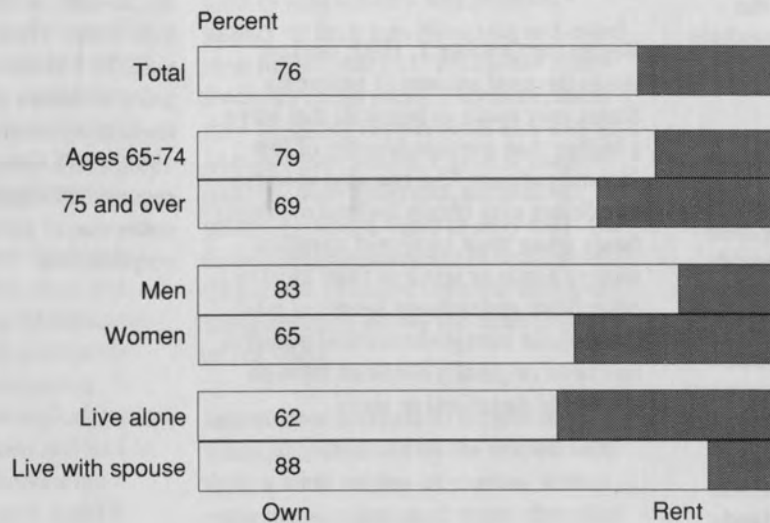
¹Includes stocks and mutual fund shares, U.S. savings bonds, IRA and KEOGH accounts.

Source: *Aging America: Trends and Projections, 1991 Edition*. Prepared by the U.S. Senate Special Committee on Aging, the American Association of Retired Persons, the Federal Council on the Aging, and the U.S. Administration on Aging.

Labor force participants, age 55 and over, by sex



Housing tenure in households headed by a person age 65 and over, 1989



Source: *Aging America: Trends and Projections, 1991 Edition*. Prepared by the U.S. Senate Special Committee on Aging, the American Association of Retired Persons, the Federal Council on the Aging, and the U.S. Administration on Aging.

Recent Legislation Affecting Families

Public Law 102-233 (enacted December 12, 1991)—authorizes up to \$25 billion in additional funding for the Resolution Trust Corporation (RTC) to provide for the resolution of failed savings and loan associations and for working capital. The law also contains provisions that:

- Promote the ability of banks and thrifts owned by minorities and women to buy failed or failing institutions from the RTC.
- Permit the RTC to lease branch offices of failed or failing thrifts in minority neighborhoods rent-free to banks or thrifts owned by minorities and women.
- Broaden an existing affordable housing program operated by the RTC to include single-family and multifamily housing held by thrifts that are open and operating under an RTC conservatorship.

The amount authorized is less than one-third of the \$80 billion that the administration said it needs to conclude the salvage operation.

Public Law 102-234 (enacted December 12, 1991)—the Medicaid contribution and tax law limits the way States may raise funds to pay for their share of the joint Federal-State health program for the poor. Currently the Federal Government pays about 55 percent of the program's total costs. Wealthier States contribute 50 percent, whereas poorer States put in as little as 20 percent of their costs. The law prohibits, beginning January 1, 1992, Federal matching payments for funds raised through donations from health-care providers, such as hospitals and nursing homes, with some exceptions:

- States with donation programs already in effect or that had formally planned and submitted documents to the Federal Government regarding such programs by September 30, 1991, could continue, for a time, to receive donations.
- Funds donated to maintain on-site workers to determine patients' Medicaid eligibility. Beginning October 1, 1992, these funds may not exceed 10 percent of the State's total administrative expenditures, including both State and Federal funds.
- Donations that have "no direct or indirect relationship" to Medicaid payments made to any specific provider.

The law requires that in order to receive Federal matching payments, funds raised through taxes on health-care providers must result from taxes applied uniformly to all providers in a particular class, such as all physician services or all outpatient hospital services.

Beginning October 1, 1992, the law limits the total amount of payments States may make to hospitals that serve a higher than average number of low-income patients. The law also specifies that States may obtain Federal matching funds when their Medicaid agencies receive funds or services from local or other State government agencies, provided these intergovernmental transfers had been originally obtained through allowable donations or taxes.

Public Law 102-240 (enacted December 18, 1991)—the Intermodal Surface Transportation Efficiency Act of 1991 authorizes funds for the construction of highways and highway safety programs, \$119.5 billion, and mass transit programs, \$31.5 billion. The 6-year, \$151 billion appropriation is financed, in part, by extending through fiscal 1999 half of the nickel gasoline tax increase (effective December 1, 1990) that had been set to expire after fiscal 1995.

Public Law 102-244 (enacted February 7, 1992)—authorizes an extension of unemployment benefits for the long-term unemployed, the second extension in 3 months. The law would offer an additional 13 weeks of compensation for the unemployed who exhaust their 26 weeks of State benefits and the 13 to 20 weeks of extended Federal benefits enacted in 1991. Altogether, jobless workers could receive either 52 or 59 weeks of benefits, depending on the severity of the unemployment in their State. The cost of the new extension, \$2.7 billion, would be offset by using revenues generated through legislation enacted as of January 3, 1992, that exceeded pay-as-you-go requirements and by accelerating the collection of estimated taxes from large corporations.

Current Regional Research Project

W-153. Economic and Behavioral Factors Associated With Food Supplement Usage

Administrative adviser:

Dr. H.F. McHugh
Colorado State University
Fort Collins, CO 80523

Cooperating States (Universities):

University of California-Berkeley,
University of California-Davis,
University of Idaho, University of
Nevada, New Mexico State University,
Oregon State University, University of
Wyoming.

Project dates: October 1984 to
September 1990

Objectives: To identify attitudes and economic factors that result in the use of food supplements. To determine whether a relationship exists between health attitudes and intentions and actual vitamin/mineral supplementation behavior. To identify factors that result in the use of vitamin/mineral supplements under various economic determinants. To identify factors that result in cyclical use of vitamin/mineral supplements.

Approach: Adults, chosen randomly from telephone directories, were sent questionnaires requesting information on vitamin/mineral supplement practices, health beliefs, demographic characteristics, and physiological status. Half were addressed to men and half to women. Followup interviews were conducted by telephone at 9- and 18-month intervals to ascertain cyclic indicators and relevant longitudinal data. Multivariate statistical procedures were used to determine differences between users and nonusers with regard to attitudes, intentions, and demographic characteristics.

Progress: Mail questionnaires were returned by 1,730 respondents. After 9- and 18-month intervals, telephone interviews were completed. Data from the initial mail survey and the two phone surveys were coded and merged in order to study longitudinal trends. All data were analyzed at New Mexico State University.

Findings: Respondents described their use of supplements as "regular"—42 percent; "occasional"—35 percent; and "never"—18 percent. Of regular users, 63 percent were women. The number of regular users tended to increase with age. Use ranged from 1 supplement (33 percent of users) to 16 (0.1 percent) supplements daily. Multivitamins were taken most frequently; then vitamin C, calcium, vitamin E, and vitamin A. Many vitamin C and vitamin E users indicated dosages known to be excessive, suggesting a potential for toxicity.

Cost of supplements had minimal impact on their use. Nonusers self-rated their health status as "excellent" more frequently than users. Therefore, users may be taking supplements as a way to improve their health. Cyclical usage patterns were observed, suggesting perceived health benefits may vary. Of those using supplements at some point, 53 percent switched between user and nonuser status during the three phases of the study.

Information relevant to supplement usage was obtained by the respondents from a wide variety of sources, with mass media mentioned more often than nutritionists or dietitians. This finding has implications for nutrition education.

Publications:

Medeiros, D.M., et al. 1989. Vitamin and mineral supplementation practices of adults in seven western States. *Journal of the American Dietetic Association* 89(3):383-386.

Raab, C.A., et al. 1989. Targeting messages to supplement users. *Journal of the American Dietetic Association* 89(4):545-546.

Read, M.H., et al. 1989. Health beliefs and supplement use: Adults in seven western States. *Journal of the American Dietetic Association* 89(12):1812-1813.

Sheehan, E.T., et al. 1989. Vitamin and food supplement practices and nutrition beliefs of the elderly in seven western States. *Nutrition Research* 89(9):251-258.

Data Sources

National Personal Transportation Study (NPTS)

Sponsoring agency: U.S. Department of Transportation

Population covered: U.S. households and individuals in those households who are 5 years and older

Sample size: Variable—15,000 (1969); 18,000 (1977); 6,500 (1983); and 22,000 (1990) households

Geographic distribution: Nationwide

Years data collected: 1969, 1977, 1983, 1990

Method of data collection: Personal interviews until 1990 when telephone interviews were conducted.

Future surveys planned: About every 7 years

Major variables: Household characteristics; household vehicle ownership; drivers; average annual vehicle miles per driver; vehicle trip length; vehicle occupancy; private vehicle trips; purpose of trip; time and duration of trip; mode of transportation—private vehicle, public transit (bus, rail, train, streetcar, subway), airplane, taxi, bicycle, Amtrak, school bus, walking.

Source for further information and data: Published results from the 1990 survey and other reports are available from:
Office of Highway Information Management, HPM-40
Federal Highway Administration
400 Seventh Street, SW
Washington, DC 20590
(Phone: 202-366-0160;
Fax: 202-366-7742)

Data tapes are available from:
Center for Transportation Information, DTS-44
DOT/Volpe National Transportation Systems Center
Kendall Square
Cambridge, MA 02142
(Phone: 617-494-2450;
Fax: 617-494-3633)

Panel Study of Income Dynamics (PSID)

Sponsoring agency: U.S. Department of Health and Human Services and the National Science Foundation

Population covered: U.S. individuals and families with an over-sampling of low-income households plus, in 1990, an over-sampling of Latino (Mexican, Cuban, and Puerto Rican) households.

Sample size: In 1968, 4,800 households with about 18,000 individuals who were followed over time. In 1989, there were about 7,000 households and 38,500 individuals.

Geographic distribution: Coterminous United States

Years data collected: Annually since 1968

Method of data collection: Telephone interviews; personal interviews when the telephone cannot be used.

Future surveys planned: Annually

Major variables: Income sources and amounts; poverty status; public assistance in the form of food or housing; estimated Federal taxes; family structure and demographic measures; employment information; housework time; housing; geographic mobility; socioeconomic background; health, religion, military service; and county level data. Intermittent survey topics include child care, savings behavior (1984-89), wealth, and disabilities.

Source for further information and data: PSID data files and a User Guide are available from:
Inter-University Consortium for Political and Social Research (ICPSR)
P.O. Box 1248
Ann Arbor, MI 48106
(Phone: 313-763-5010)

PSID files are classified as main files, special public files, or special restricted files. Special public files include files on child-birth history, adoption history, marital history, relationships, and work history. One file of interest is the 1990 study on health and health care of the elderly.

Cost of Food at Home

Cost of food at home estimated for food plans at four cost levels, March 1992, U.S. average¹

Sex-age group	Cost for 1 week				Cost for 1 month			
	Thrifty plan	Low-cost plan	Moderate-cost plan	Liberal plan	Thrifty plan	Low-cost plan	Moderate-cost plan	Liberal plan
FAMILIES								
Family of 2: ²								
20 - 50 years	\$49.50	\$62.80	\$77.40	\$96.50	\$214.60	\$272.60	\$335.60	\$417.90
51 years and over	47.10	60.50	74.60	89.10	203.80	262.40	323.20	386.00
Family of 4:								
Couple, 20 - 50 years and children—								
1 - 2 and 3 - 5 years	72.20	90.50	110.50	135.90	312.70	392.30	478.90	588.90
6 - 8 and 9 - 11 years	82.70	106.20	132.70	160.00	358.50	460.80	575.10	693.20
INDIVIDUALS³								
Child:								
1 - 2 years	13.10	16.00	18.60	22.60	56.70	69.30	80.80	97.90
3 - 5 years	14.10	17.40	21.50	25.60	60.90	75.20	93.00	111.10
6 - 8 years	17.20	23.00	28.70	33.50	74.60	99.70	124.50	145.20
9 - 11 years	20.50	26.10	33.60	38.80	88.80	113.30	145.50	168.10
Male:								
12 - 14 years	21.30	29.60	36.90	43.30	92.30	128.30	159.90	187.60
15 - 19 years	22.00	30.60	38.00	44.00	95.30	132.50	164.60	190.60
20 - 50 years	23.60	30.40	37.90	45.90	102.40	131.90	164.20	199.00
51 years and over	21.50	28.90	35.60	42.60	93.00	125.40	154.10	184.70
Female:								
12 - 19 years	21.40	25.60	31.10	37.60	92.80	111.10	134.80	162.90
20 - 50 years	21.40	26.70	32.50	41.80	92.70	115.90	140.90	180.90
51 years and over	21.30	26.10	32.20	38.40	92.30	113.10	139.70	166.20

¹Assumes that food for all meals and snacks is purchased at the store and prepared at home. Estimates for the thrifty food plan were computed from quantities of foods published in *Family Economics Review* 1984(1). Estimates for the other plans were computed from quantities of foods published in *Family Economics Review* 1983(2). The costs of the food plans are estimated by updating prices paid by households surveyed in 1977-78 in USDA's Nationwide Food Consumption Survey. USDA updates these survey prices using information from the Bureau of Labor Statistics, *CPI Detailed Report*, table 4, to estimate the costs for the food plans.

²Ten percent added for family size adjustment. See footnote 3.

³The costs given are for individuals in 4-person families. For individuals in other size families, the following adjustments are suggested: 1-person—add 20 percent; 2-person—add 10 percent; 3-person—add 5 percent; 5- or 6-person—subtract 5 percent; 7- or more-person—subtract 10 percent.

* 5141

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Consumer Prices

Consumer Price Index for all urban consumers [1982-84 = 100]

Group	Unadjusted indexes			
	March 1992	February 1992	January 1992	March 1991
All items	139.3	138.6	138.1	135.0
Food	138.1	137.5	137.2	135.8
Food at home	137.5	136.6	136.4	136.0
Food away from home	140.1	139.9	139.7	136.5
Housing	136.6	136.1	135.7	132.6
Shelter	150.4	149.8	149.2	145.2
Renters' costs ¹	161.2	160.2	158.8	156.1
Homeowners' costs ¹	154.1	153.5	153.2	148.4
Household insurance ¹	141.0	140.8	140.5	137.3
Maintenance and repairs	128.4	128.3	128.0	124.2
Maintenance and repair services	132.0	132.0	131.9	129.0
Maintenance and repair commodities	123.5	123.5	122.8	117.7
Fuel and other utilities	115.8	115.9	116.2	114.1
Fuel oil and other household fuel commodities	90.5	91.5	92.0	99.3
Gas (piped) and electricity	111.5	112.0	112.8	110.8
Household furnishings and operation	117.7	117.3	116.7	115.7
Housefurnishings	109.4	108.7	107.8	107.5
Housekeeping supplies	128.6	129.3	129.5	128.1
Housekeeping services	130.3	130.0	129.6	127.0
Apparel and upkeep	133.4	130.2	127.9	128.8
Apparel commodities	131.2	127.7	125.3	126.7
Men's and boys' apparel	127.4	125.6	123.7	123.0
Women's and girls' apparel	133.6	128.2	125.0	129.5
Infants' and toddlers' apparel	127.1	126.3	126.6	128.7
Footwear	124.9	122.4	121.3	120.8
Apparel services	146.6	146.5	145.4	141.5
Transportation	124.4	124.1	124.5	122.3
Private transportation	122.2	122.0	122.5	119.9
New vehicles	129.1	128.9	128.7	126.1
Used cars	115.7	116.1	117.8	114.4
Motor fuel	93.4	92.9	94.5	94.6
Automobile maintenance and repair	140.3	139.7	139.0	134.1
Other private transportation	152.2	152.2	152.4	147.7
Other private transportation commodities	105.2	104.9	105.3	103.3
Other private transportation services	162.8	162.9	163.0	157.6
Public transportation	153.5	150.7	151.5	153.3
Medical care	187.3	186.2	184.3	173.7
Medical care commodities	186.7	185.1	183.0	173.2
Medical care services	187.4	186.4	184.6	173.8
Professional medical services	173.4	172.5	171.1	163.3
Entertainment	141.2	140.7	140.1	136.7
Entertainment commodities	130.7	130.2	130.0	127.7
Entertainment services	154.3	153.7	152.7	148.1
Other goods and services	179.8	179.4	178.6	167.9
Personal care	137.9	137.5	136.5	133.6
Toilet goods and personal care appliances	136.1	135.8	134.5	131.5
Personal care services	139.6	139.2	138.5	135.8
Personal and educational expenses	193.5	192.9	192.2	179.3
School books and supplies	188.6	188.7	187.1	177.5
Personal and educational services	194.0	193.4	192.8	179.7

¹Indexes on a December 1982 = 100 base.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Highlights

Families With High Housing Expenditures

Payments of Child Support and Alimony

Transportation Trends
