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Population Estimates and Projections

Estimates of the Number of Households for States: 1976 and 1977

ESTIMATES OF THE NUMBER OF HOUSEHOLDS FOR STATES: 1976 AND 1977

This report presents revised estimates of the total number of households and of husband-wife households (households maintained by a married couple) for States, for July 1, 1976, and provisional estimates for July 1, 1977. The 1977 figures are designated as provisional since they are based on 1977 provisional estimates of the population for States.

The number of households varies among the States approximately in the same way as the population of the States; for example, California, the most populous State, led all States in 1977 in the total number of households with an estimated 8.1 million, followed by New York with 6.4 million. Alaska had the smallest estimated number of households (118,000).

California had the largest numerical household increase between 1970 and 1977 (1.5 million). However, Alaska had the largest rate of household increase during this period (49.3 percent) and, therefore, had the largest average annual rate of change (5.5 percent).

METHOD OF ESTIMATION

The method of preparing the July 1976 and 1977 estimates of households for States shown in this report was generally as follows: Percentages of persons who were maintaining households ("householder proportions") and other relevant percentages were calculated from the 1970 census, by age, for each State. These percentages were applied to State population estimates for 1976 and 1977, by age, to obtain preliminary estimates of the number of households for each State within each age group. These preliminary 1976 and 1977 estimates were then adjusted proportionately to the number of households in the United States on July 1, 1976

and 1977 (estimated from Current Population Survey figures) to yield the final 1976 and 1977 estimates for the States.

The final data were adjusted to agree with the State population estimates and the independent United States estimates of the population by family status using the method of iterative sequential raking.

The specific steps involved are shown below:

1. Data for both sexes combined, by state, by age (under 14 years, 14 to 19 years, 20 to 24 years, 25 to 44 years, 45 to 64 years, and 65 years and over) for the following categories were obtained from the 1970 census:

- (t) Total persons in age group
- (a) Husbands in husband-wife families
- (b) Family householders with no spouse present
- (c) Primary individuals
- (d) Other household members
- (e) Persons not in households

2. The following householder proportions and other proportions were calculated by State, by age, from these data:

(a),	(b),	(c),	(d),	(e)
(t),	(t),	(t),	(t),	(t)

3. Previously available State population estimates for 1976 and 1977 by age (as above) were then recorded.

4. Preliminary estimates of the 1976 and 1977 population in each class, (a) to (e), by age, by State, were calculated (step 2 x step 3). (After the first cycle, proportions for step 2 were replaced with those proportions developed in step 9.)

5. The preliminary estimates (step 4) were summed over all States to United States totals, for each age and for each class, (a) to (e).

6. Estimates for the United States for 1976 and 1977, by age, for each class, (a) to (e), were recorded. These estimates were basically the statistics obtained from the Current Population Survey for March 1976 and March 1977 (with an allowance added to include resident Armed Forces in military barracks and the institutional population), converted to represent July data by a proportional adjustment on the basis of the change in the resident population between March 1976 and July 1976 and between March 1977 and July 1977.

7. Adjustment factors by age, for each class, (a) to (e), were calculated (step 6 ÷ step 5).

8. The adjustment factors derived in step 7 were applied to the preliminary estimates of the 1976 and 1977 population in each class, (a) to (e), by age, by State (step 7 x step 4) to produce a revised set of estimates by State for each class, (a) to (e), and by summation for (t).

9. A new set of householder proportions and other relevant proportions (as in step 2) were calculated for each State, by age, from the revised estimates developed in step 8. These proportions were applied to the State population estimates recorded in step 3.

10. Steps 4 through 9 were carried through a number of cycles to produce the final State estimates for 1976 and 1977.

The data for 1970 used in the preparation of this report are from the **Census of Population: 1970, Vol. 1, Characteristics of the Population**, Parts 2 through 52, tables 138, 152, and 153. The 1976 and 1977 estimates of the population of States will be consistent with the forthcoming **Current Population Report**, Series P-25, "Estimates of the Population of States, by Age: 1976 and 1977." The 1976 and 1977

estimates of the number of households for the United States for March 1976 and 1977 are given in **Current Population Reports**, Series P-20, Nos. 311 and 313.

EVALUATION OF THE METHOD

The accuracy of the estimates depends upon the accuracy of the data on which they are based (that is, the 1970 census data for States, the postcensal national household estimates, and the postcensal State population estimates) and on the validity of the assumptions inherent in the method by which these data were combined to produce the estimates. The assumptions are (1) that the interstate differences in householder proportions persisted over the 1970-to-1977 period; and (2) that changes in householder proportions for States occurred uniformly between 1970 and 1977, that is, changes in the householder proportions, by age, were the same for each State as for the United States.

A study was made of the success with which the number of households for States in 1970, as given by the census, could be estimated from the 1970 census population for States and the 1960 census householder proportions for States, using a method corresponding basically to the method described above. Note that postcensal population estimates were not used in this test, as was done in the current calculations. The 1960 householder proportions were applied to the 1970 census State population figures to obtain preliminary estimates of the number of households for States within each age group. These preliminary 1970 estimates were then adjusted proportionately so that they added to the total number of households for the United States (by age of householder) as given in the 1970 census. The final data were adjusted to agree with the State population figures and the population by family status for the United States using the method of iterative sequential raking.

The adjusted 1970 estimates were then compared with the 1970 census figures on households for States. The results of this study are shown in table A. The differences between the

Table A. Percent Deviation of 1970 Postcensal Estimates of Households from 1970 Census Counts of Households for States

Percent deviation of estimate from census figure ¹	Total households	Husband-wife households
Total, 50 States and the District of Columbia.....	51	51
0 to 1.9.....	37	43
2.0 to 3.9.....	13	5
4.0 to 5.9.....	1	2
6.0 to 7.9.....	-	1
8.0 and over.....	-	-
Mean deviation.....	1.5	1.0

- Represents zero.

¹Without regard to sign.

adjusted 1970 estimates and the 1970 census figures were less than 4 percent in all but a few States. The average (mean) deviation disregarding sign was 1.5 percent over all States. These results suggest that, for most States, the assumptions inherent in the estimating method held reasonably true for the 1960-to-1970 period.

A direct check for the current time period was made by comparing the distribution of households by regions shown in the present "nonsurvey" estimates with figures based on the Current Population Survey. A distribution of households by regions was computed from Current Population Survey data for 1976 and 1977. This percentage distribution was then applied to the estimated total number of households for July 1, 1976 and 1977, and the resulting Current Population Survey estimates of households for regions were compared with the corresponding figures obtained from the nonsurvey household estimates for States. The results of this comparison are shown in table B. The distribution of households

by regions is quite similar in the nonsurvey estimates and the Current Population Survey data. The comparison in table B is affected by errors in the nonsurvey population estimates for regions, the assumptions concerning changes in householder proportions, and sampling, response, and coverage errors in the Current Population Survey.

THE SURVEY OF INCOME AND EDUCATION (SIE)

Data on the number of households, by type, and the average number of persons per household for each State for May 1976, generated from the SIE were shown in Series P-25, No. 710.

Table C shows the results of a comparison between the number of total households and husband-wife households by State for 1976 as derived from the nonsurvey estimates procedures and as generated from the SIE.

Table B. Distribution of Households by Regions in the Nonsurvey Estimates and in the Current Population Survey: 1976 and 1977

(Numbers in thousands)

Regions	1977		1976		Deviation of nonsurvey estimates from CPS			
	Nonsurvey estimates (provisional)	CPS ¹	Nonsurvey estimates	CPS ¹	1977		1976	
					Number	Per-cent	Number	Per-cent
United States....	74,601	74,601	73,297	73,297	-	-	-	-
Northeast.....	17,126	16,959	16,991	16,524	167	1.0	467	2.8
North Central.....	19,778	19,750	19,516	19,370	28	0.1	146	0.8
South.....	23,662	23,816	23,157	23,545	-154	-0.6	-388	-1.6
West.....	14,035	14,077	13,633	13,858	-42	-0.3	-225	-1.6

- Represents zero.

¹See the section "Evaluation of the Method."

Table C. Percent Deviation of 1976 Nonsurvey Estimates from 1976 Estimates Based on the SIE

Percent deviation of nonsurvey estimate from survey estimate ¹	Total households	Husband-wife households
Total, 50 States and the District of Columbia....	51	51
0 to 1.9.....	35	35
2.0 to 3.9.....	13	13
4.0 to 5.9.....	1	2
6.0 to 7.9.....	1	-
8.0 and over.....	1	1
Mean deviation.....	1.8	1.7

- Represents zero.

¹Without regard to sign.

The differences, for both total households and husband-wife households, between the two sets of estimates were less than 4 percent in all but a few States. It must be stated that the comparison in table C is affected by errors in the independent population estimates for States, the assumptions concerning changes in householder proportions, and sampling, response, and coverage errors in the SIE.

RELATED REPORTS

Statistics on households in 1976 and 1977 for the United States based on current surveys are presented in **Current Population Reports**, Series P-20, Nos. 311 and 313. Additional statistics on households are shown in various **Current Housing Reports** based on the Annual Housing Survey. Population estimates for States for 1976 and 1977 will be presented in a forthcoming **Current Population Report**, Series P-25.

DEFINITIONS AND EXPLANATIONS

Household. A household consists of all the persons who occupy a housing unit. A house, an apartment or other group of rooms, or a single room, is regarded as a housing unit

when it is occupied or intended for occupancy as separate living quarters; that is, when the occupants do not live and eat with any other persons in the structure and there is either (1) direct access from the outside or through a common hall or (2) a kitchen or cooking equipment for the exclusive use of the occupants.

A household includes the related family members and all the unrelated persons, if any, such as lodgers, foster children, wards, or employees who share the housing unit. A person living alone in a housing unit, or a group of unrelated persons sharing a housing unit as partners, is also counted as a household. The count of households excludes group quarters, such as rooming houses, military barracks, and institutions.

A "husband-wife" household is a household which is maintained by a married couple.

ROUNDING OF ESTIMATES

Estimates presented in the tables of this report have been rounded to the nearest thousand without being adjusted to group totals which are independently rounded. Percentages are based on unrounded numbers.

Table 1. ESTIMATES OF THE NUMBER OF HOUSEHOLDS IN THE UNITED STATES, BY STATES,
JULY 1, 1976 AND 1977, WITH COMPARABLE FIGURES FOR APRIL 1, 1970 AND 1960

Region, division, and State	Total households								Husband-wife households, 1977 (provisional)	Husband-wife households, 1976
	July 1, 1977 (provisional)	July 1, 1976	April 1, 1970 (census)	April 1, 1960 (census)	Change 1970 to 1977		Average annual percent of change ¹			
					Number	Percent	1970 to 1977	1960 to 1970		
United States.....	74,601,000	73,297,000	63,449,747	53,021,061	11,151,000	+17.6	+2.2	+1.8	47,758,000	47,556,000
REGIONS:										
Northeast.....	17,126,000	16,991,000	15,482,778	13,521,070	1,643,000	+10.6	+1.4	+1.4	10,719,000	10,779,000
North Central.....	19,778,000	19,516,000	17,537,256	15,377,361	2,241,000	+12.8	+1.7	+1.3	13,021,000	13,003,000
South.....	23,662,000	23,157,000	19,258,163	15,503,321	4,404,000	+22.9	+2.8	+2.2	15,445,000	15,300,000
West.....	14,035,000	13,633,000	11,171,550	8,619,309	2,863,000	+25.6	+3.1	+2.6	8,573,000	8,474,000
NORTHEAST:										
New England.....	4,180,000	4,121,000	3,645,325	3,115,910	535,000	+14.7	+1.9	+1.6	2,678,000	2,673,000
Middle Atlantic.....	12,946,000	12,870,000	11,837,453	10,405,160	1,109,000	+9.4	+1.2	+1.3	8,041,000	8,106,000
NORTH CENTRAL:										
East North Central.....	13,896,000	13,709,000	12,382,927	10,709,659	1,513,000	+12.2	+1.6	+1.5	9,144,000	9,133,000
West North Central.....	5,882,000	5,807,000	5,154,329	4,667,702	728,000	+14.1	+1.8	+1.0	3,877,000	3,870,000
SOUTH:										
South Atlantic.....	11,768,000	11,517,000	9,438,213	7,267,832	2,330,000	+24.7	+3.0	+2.6	7,591,000	7,525,000
East South Central.....	4,581,000	4,496,000	3,867,689	3,307,354	713,000	+18.4	+2.3	+1.6	3,064,000	3,039,000
West South Central.....	7,313,000	7,144,000	5,952,261	4,928,135	1,361,000	+22.9	+2.8	+1.9	4,790,000	4,736,000
WEST:										
Mountain.....	3,375,000	3,272,000	2,518,324	1,975,581	857,000	+34.0	+4.0	+2.4	2,215,000	2,180,000
Pacific.....	10,660,000	10,361,000	8,653,226	6,643,728	2,007,000	+23.2	+2.9	+2.6	6,358,000	6,294,000
NEW ENGLAND:										
Maine.....	364,000	356,000	302,923	280,355	61,000	+20.2	+2.5	+0.8	243,000	240,000
New Hampshire.....	286,000	276,000	225,378	180,020	61,000	+26.9	+3.3	+2.2	193,000	188,000
Vermont.....	161,000	157,000	132,098	110,732	29,000	+21.9	+2.7	+1.8	107,000	105,000
Massachusetts.....	1,984,000	1,964,000	1,759,692	1,534,732	224,000	+12.7	+1.7	+1.4	1,227,000	1,231,000
Rhode Island.....	321,000	319,000	291,965	257,335	29,000	+9.9	+1.3	+1.3	204,000	206,000
Connecticut.....	1,064,000	1,049,000	933,269	752,736	131,000	+14.0	+1.8	+2.2	704,000	703,000
MIDDLE ATLANTIC:										
New York.....	6,389,000	6,368,000	5,913,861	5,248,261	475,000	+8.0	+1.1	+1.2	3,777,000	3,828,000
New Jersey.....	2,481,000	2,458,000	2,218,182	1,806,295	263,000	+11.8	+1.5	+2.1	1,637,000	1,642,000
Pennsylvania.....	4,076,000	4,044,000	3,705,410	3,350,604	371,000	+10.0	+1.3	+1.0	2,627,000	2,636,000
EAST NORTH CENTRAL:										
Ohio.....	3,633,000	3,594,000	3,289,432	2,852,321	344,000	+10.4	+1.4	+1.4	2,414,000	2,416,000
Indiana.....	1,808,000	1,787,000	1,609,494	1,387,910	199,000	+12.3	+1.6	+1.5	1,229,000	1,228,000
Illinois.....	3,867,000	3,814,000	3,502,138	3,084,738	365,000	+10.4	+1.4	+1.3	2,436,000	2,437,000
Michigan.....	3,029,000	2,985,000	2,653,059	2,238,650	376,000	+14.2	+1.8	+1.4	2,020,000	2,016,000
Wisconsin.....	1,559,000	1,529,000	1,328,804	1,146,040	230,000	+17.3	+2.2	+1.5	1,045,000	1,036,000
WEST NORTH CENTRAL:										
Minnesota.....	1,348,000	1,327,000	1,153,946	991,981	194,000	+16.8	+2.1	+1.5	890,000	886,000
Iowa.....	1,008,000	999,000	896,311	841,357	112,000	+12.5	+1.6	+0.6	681,000	681,000
Missouri.....	1,704,000	1,686,000	1,520,567	1,359,826	183,000	+12.1	+1.6	+1.1	1,091,000	1,093,000
North Dakota.....	215,000	211,000	181,613	173,362	33,000	+18.4	+2.3	+0.5	147,000	146,000
South Dakota.....	231,000	228,000	200,807	194,821	30,000	+15.0	+1.9	+0.3	155,000	155,000
Nebraska.....	546,000	540,000	473,721	433,448	72,000	+15.3	+2.0	+0.9	359,000	359,000
Kansas.....	830,000	816,000	727,364	672,907	103,000	+14.1	+1.8	+0.8	554,000	550,000
SOUTH ATLANTIC:										
Delaware.....	195,000	192,000	164,804	128,582	30,000	+18.3	+2.3	+2.5	128,000	128,000
Maryland.....	1,386,000	1,363,000	1,175,073	863,003	211,000	+18.0	+2.3	+3.1	902,000	900,000
District of Columbia.....	273,000	273,000	262,538	252,066	10,000	+4.0	+0.5	+0.4	98,000	101,000
Virginia.....	1,714,000	1,665,000	1,390,636	1,074,442	323,000	+23.3	+2.9	+2.6	1,131,000	1,115,000
West Virginia.....	636,000	623,000	547,214	521,142	89,000	+16.2	+2.1	+0.5	428,000	423,000
North Carolina.....	1,830,000	1,792,000	1,509,564	1,204,715	320,000	+21.2	+2.7	+2.3	1,239,000	1,226,000
South Carolina.....	915,000	896,000	734,373	603,551	181,000	+24.6	+3.0	+2.0	603,000	596,000
Georgia.....	1,659,000	1,621,000	1,369,225	1,070,287	290,000	+21.2	+2.6	+2.5	1,075,000	1,065,000
Florida.....	3,160,000	3,092,000	2,284,786	1,550,044	875,000	+38.3	+4.5	+3.9	1,987,000	1,971,000
EAST SOUTH CENTRAL:										
Kentucky.....	1,152,000	1,137,000	983,665	851,867	168,000	+17.1	+2.2	+1.4	784,000	782,000
Tennessee.....	1,457,000	1,424,000	1,213,187	1,003,301	244,000	+20.1	+2.5	+1.9	979,000	967,000
Alabama.....	1,219,000	1,196,000	1,034,113	884,116	185,000	+17.9	+2.3	+1.6	813,000	806,000
Mississippi.....	753,000	739,000	636,724	568,070	116,000	+18.3	+2.3	+1.1	488,000	484,000
WEST SOUTH CENTRAL:										
Arkansas.....	742,000	729,000	615,424	523,552	127,000	+20.6	+2.6	+1.6	497,000	493,000
Louisiana.....	1,255,000	1,229,000	1,052,038	892,344	203,000	+19.3	+2.4	+1.6	800,000	793,000
Oklahoma.....	1,013,000	994,000	850,803	734,593	162,000	+19.1	+2.4	+1.5	659,000	654,000
Texas.....	4,303,000	4,192,000	3,433,996	2,777,646	869,000	+25.3	+3.1	+2.1	2,834,000	2,796,000
MOUNTAIN:										
Montana.....	265,000	261,000	217,304	202,240	48,000	+21.9	+2.7	+0.7	172,000	172,000
Idaho.....	284,000	274,000	218,960	193,839	65,000	+29.7	+3.6	+1.2	198,000	193,000
Wyoming.....	139,000	133,000	104,600	99,187	34,000	+32.9	+3.9	+0.5	94,000	92,000
Colorado.....	917,000	892,000	690,928	529,424	226,000	+32.7	+3.9	+2.7	584,000	577,000
New Mexico.....	383,000	371,000	289,389	251,209	94,000	+32.3	+3.9	+1.4	252,000	248,000
Arizona.....	777,000	753,000	539,157	366,630	238,000	+44.1	+5.0	+3.9	509,000	501,000
Utah.....	381,000	370,000	297,934	241,532	83,000	+27.9	+3.4	+2.1	268,000	263,000
Nevada.....	229,000	218,000	160,052	91,520	69,000	+43.1	+4.9	+5.6	138,000	134,000
PACIFIC:										
Washington.....	1,324,000	1,293,000	1,105,587	894,168	218,000	+19.8	+2.5	+2.1	837,000	830,000
Oregon.....	868,000	843,000	691,631	558,222	176,000	+25.5	+3.1	+2.1	560,000	551,000
California.....	8,083,000	7,848,000	6,573,861	4,981,024	1,509,000	+23.0	+2.8	+2.8	4,705,000	4,658,000
Alaska.....	118,000	117,000	79,059	57,250	39,000	+49.3	+5.5	+3.2	81,000	82,000
Hawaii.....	267,000	260,000	203,088	153,064	64,000	+31.5	+3.8	+2.8	175,000	173,000

¹Computed by the formula for continuous compounding.