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**Population and Per Capita Income Estimates,**  
**1969-1975**

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U.S. Dept. of Commerce  
Bureau of the Census

ICPSR 7577

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*INTER-UNIVERSITY CONSORTIUM FOR  
POLITICAL AND SOCIAL RESEARCH*

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POPULATION AND PER CAPITA  
INCOME ESTIMATES, 1969-1975

(ICPSR 7577)

Principal  
Investigator

United States  
Bureau of the  
Census

First ICPSR Edition, 1978



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P.O. Box 1248  
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#### ACKNOWLEDGMENT OF ASSISTANCE

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## STUDY DESCRIPTION

This dataset contains current population estimates and per capita money income for counties and minor civil divisions in each state for selected years from 1969 to 1975. These estimates were developed to provide updates of the data elements in Federal revenue sharing allocations under the State and local Fiscal Assistance Act of 1972. Estimates recorded in the dataset are for July 1 of the respective years, while per capita income refers to the entire year. The 1970 population and 1969 per capita income were obtained from the 1970 Census of Population. The units recorded in the dataset include counties; incorporated places; certain towns in New England, New York, and Wisconsin; and townships in other states. Certain midwestern states may have active minor civil divisions in some counties, but not in others.

The data were obtained in computer-readable form from the Population Division of the U.S. Bureau of the Census. The methodology used to derive the estimates contained in this dataset is described in detail in Current Population Reports, "Population Estimates and Projections" (U.S. Bureau of the Census, Series P-25, April 1977); a copy of that report is attached as Appendix B.

## PROCESSING INFORMATION

The organization of this dataset was kept as close to the original as possible. The data were padded or recoded with zeroes whenever blanks or special characters occurred and extraneous fields were deleted. The file contains 40,097 records; the records are in sort order by state, county, MCD and place codes.

All geographic codes for units contained in this dataset could not be documented in this codebook. Appendix A contains both the Federal Information Processing Standards (FIPS), state codes, and the governmental unit state code (used by the Governments Division, Bureau of the Census, as well as by the Office of Revenue Sharing). The remainder of the FIPS codes (Variables 2,3 and 4) are documented in Final Data Elements Entitlement Periods 1, 2 and 3 (Office of Revenue Sharing, Department of the Treasury, 1973), or can be obtained from the Governments Division, Bureau of the Census.



<u>Variable</u>	<u>Description</u>
1	<p>State Code (FIPS)</p> <p>See Appendix A</p>
2	<p>County Code (FIPS)</p> <p>Each county within a state is given a unique three-digit code as an identifier. When used in conjunction with the state code, each county in the United States can be uniquely identified.</p> <p>Whenever a "place" is split between two or more counties, multiple records are represented in the data. The portion of the "place" within each county is included along with a total for the "place," which is indicated by a value of 999 in the county code field.</p>
3	<p>Minor Civil Division Code (FIPS)</p> <p>Each minor civil division, a component part of a county, is given a unique three-digit code as an identifier.</p>
4	<p>Place Code (FIPS)</p> <p>Each "place," an incorporated municipality of 2500 persons or more, is given a unique four-digit code within each state.</p>
5	<p>State Code (Governmental Unit State Code)</p> <p>See Appendix A</p>
6	<p>Governmental Unit Type</p> <p>0. State Record  1. County Record  2. Place Record  3. MCD Record</p>

<u>Variable</u>	<u>Description</u>
7	County Code (Governmental Unit County Code)  Each county within a state is given a unique three-digit code as an identifier. The sole exception lies with minor civil divisions which are split between two or more counties. In such a case, this field is used to record the principal county of the MCD and Var. 9 contains the county code for the reported portion of the MCD.
8	Governmental Unit Number  Each governmental unit within a county is given a unique three-digit code. Several records may comprise a single governmental unit.
9	County Code-Split Counties (Governmental Unit Code)  Each county which contains a split MCD has the county code recorded here. In all other cases, the field contains zeroes.
10	Unit Code (MCD/Places)
11	Governmental Unit Name  Thirty characters are used to record the name of the unit of record.
12	Population, 1970
13	July 1, 1973 Population Estimate (Revised) <sup>1</sup>
14	July 1, 1975 Population Estimate
15	1969 Per Capita Money Income Estimate
16	1972 Per Capita Money Income Estimate (Revised) <sup>1</sup>
17	1974 Per Capita Money Income Estimate

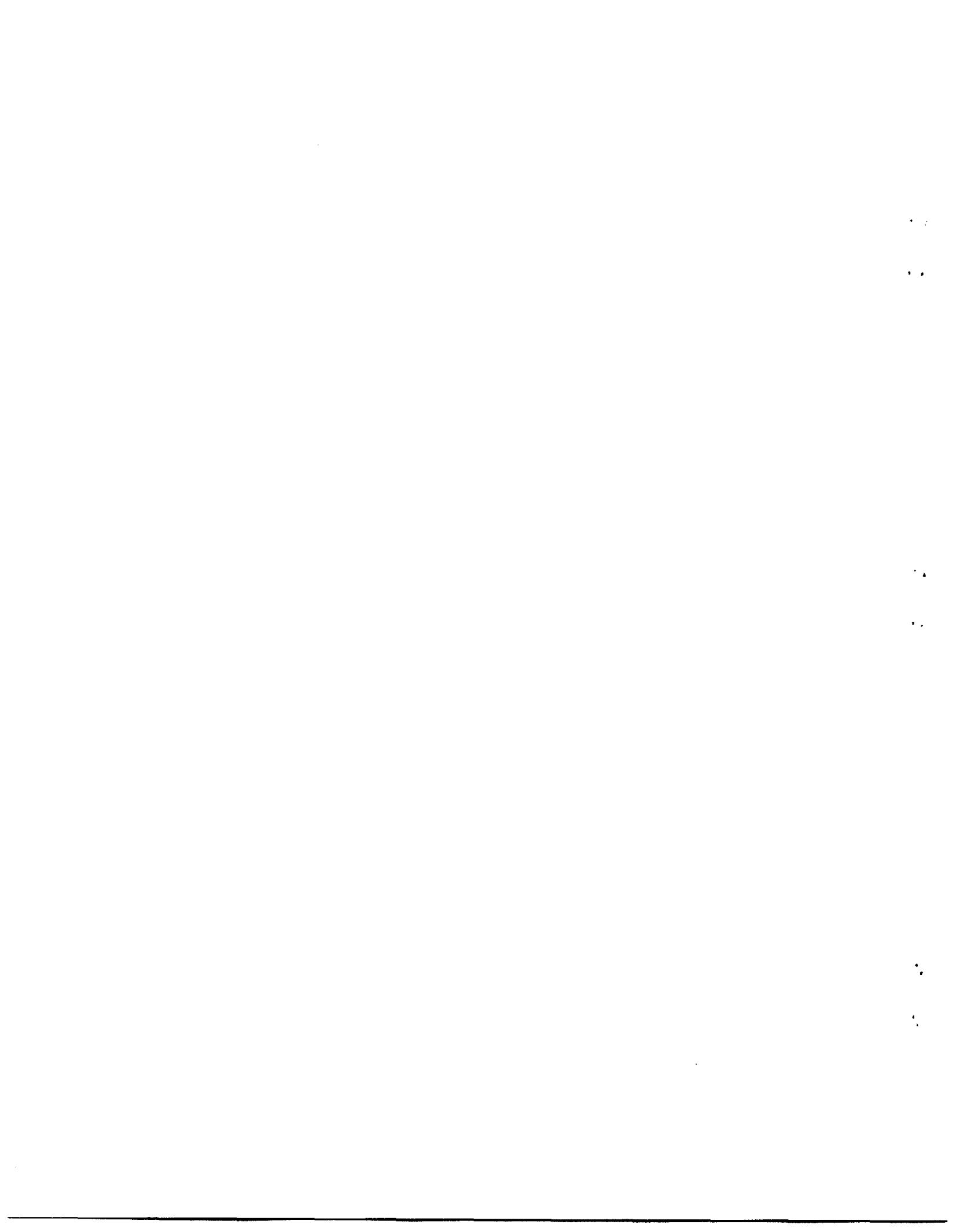
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<sup>1</sup>These estimates have been revised since the release of Current Population Reports, Series P-25, No. 546 through 595.

## APPENDIX A

State Codes

<u>State</u>	<u>FIPS Code</u>	<u>Government Unit Code</u>	<u>State</u>	<u>FIPS Code</u>	<u>Government Unit Code</u>
Alabama	01	01	Missouri	29	26
Alaska	02	02	Montana	30	27
Arizona	04	03	Nebraska	31	28
Arkansas	05	04	Nevada	32	29
California	06	05	New Hampshire	33	30
Colorado	08	06	New Jersey	34	31
Connecticut	09	07	New Mexico	35	32
Delaware	10	08	New York	36	33
District of Columbia	11	09	North Carolina	37	34
Florida	12	10	North Dakota	38	35
Georgia	13	11	Ohio	39	36
Hawaii	15	12	Oklahoma	40	37
Idaho	16	13	Oregon	41	38
Illinois	17	14	Pennsylvania	42	39
Indiana	18	15	Rhode Island	44	40
Iowa	19	16	South Carolina	45	41
Kansas	20	17	South Dakota	46	42
Kentucky	21	18	Tennessee	47	43
Louisiana	22	19	Texas	48	44
Maine	23	20	Utah	49	45
Maryland	24	21	Vermont	50	46
Massachusetts	25	22	Virginia	51	47
Michigan	26	23	Washington	53	48
Minnesota	27	24	West Virginia	54	49
Mississippi	28	25	Wisconsin	55	50
			Wyoming	56	51





U.S. Department of Commerce  
BUREAU OF THE CENSUS

various numbers,  
April - May 1977

# Population Estimates and Projections

## 1973 (Revised) and 1975 Population Estimates and 1972 (Revised) and 1974 Per Capita Income Estimates for Counties

This report is one of a series containing current estimates of the population and per capita money income for selected areas in each State. The population estimates relate to July 1, 1973 and July 1, 1975, and the estimates of per capita income cover calendar years 1972 and 1974. Current estimates of population below the county level and per capita money income for all general purpose governments were prompted by the enactment of the State and Local Fiscal Assistance Act of 1972. The figures are now used by a wide variety of Federal, State, and local governmental agencies for program planning and administrative purposes.

Areas included in this series of reports are all counties (or county equivalents such as census divisions in Alaska, parishes in Louisiana, and independent cities in Maryland, Missouri, Nevada, and Virginia) and incorporated places in the State, plus active minor civil divisions (MCD's), commonly towns in New England, New York, and Wisconsin, or townships in other parts of the United States.<sup>1</sup> These State reports appear in **Current Population Reports**, Series P-25, in alphabetical sequence as report number 649 (Alabama) through number 698 (Wyoming). A list indicating the report number for

each State is appended. No separate report is to be issued for the District of Columbia. However, the estimates for the District of Columbia, together with a summary table for all States, will be presented in a report detailing the methods used to estimate income and population, and will contain further evaluation of the estimates. This report will appear in **Current Population Reports**, Series P-25, No. 699.

The detailed table for each State shows July 1, 1975 and revised July 1, 1973 estimates of the population of each area, together with April 1, 1970 census population and numerical and percentage change between 1970 and 1975. The 1970 population and related per capita income figures reflect annexations since 1970 and include corrections to the 1970 census counts. In addition, the table presents per capita income estimates for calendar years 1974 and 1972 (revised), plus calendar year 1969 per capita money income derived from data collected in the 1970 census.

The estimates are presented in the table in county order, with all incorporated places in the county listed in alphabetical order, followed by any functioning minor civil divisions also listed in alphabetical order. Minor civil divisions are always identified in the listing by the term "township," "town," or other MCD category. When incorporated places fall in more than one county, each county piece is marked "part," and totals for these places are presented at the end of the table.

<sup>1</sup> In certain midwestern States (Illinois, Kansas, Minnesota, Missouri, Nebraska, and the Dakotas) some counties have active minor civil divisions while others do not.

## POPULATION ESTIMATES METHODOLOGY

To estimate the population of each subcounty area, a component procedure (the Administrative Records method) was used, with each of the components of population change (births, deaths, net migration, and special populations) estimated separately. The estimates were derived in two stages, moving from 1970 as a base year to develop estimates for 1973, and in turn, moving from 1973 as the base year to derive estimates for 1975.

**Migration.** Individual Federal income tax returns were used to measure migration by matching individual returns for successive periods. The places of residence on tax returns filed in the base year and in the estimate year were noted for matched returns to determine in-migrants, out-migrants, and nonmigrants for each area. A net migration rate was derived, based on the difference between the in-migration and out-migration of taxpayers and dependents, and was applied to a base population to yield an estimate of net migration for all persons in the area.

**Natural increase.** Reported resident birth and death statistics were used, wherever available, to estimate natural increase. These data were collected from State health departments and supplemented, where necessary, by data prepared and published by the U.S. Department of Health, Education, and Welfare, National Center for Health Statistics. For subcounty areas where reported birth and death statistics were not available from either source, estimates were developed by applying national fertility and mortality rates to the 1970 census counts for the cohort of the female population 18 to 34 years old and to the total population 65 years old and over, respectively, in these areas. These estimates were subsequently controlled to agree with birth and death statistics for larger areas where reported data were available.

**Adjustment for special populations.** In addition to the above components of population change, estimates of special populations were also taken into account. Special populations include immigrants from abroad, members of the Armed Forces living in barracks, residents of institutions (prisons and long-term health care facilities), and college students enrolled in full-time programs. These populations were treated separately because changes in these types of population groups are not reflected in the components of population change developed by standard measures, and the information is generally available for use as an independent series.

In generating estimates for counties by this procedure, the method was modified slightly to make the county estimates specific to the resident population under 65 years of age. The resident population 65 years old and over in counties was estimated separately by adding the change in Medicare enrollees between April 1, 1970 and July 1 of the estimate year to the April 1, 1970 population 65 years old and over in the county as enumerated in the 1970 census. These estimates of the population 65 years old and over were then added to estimates of the population under 65 years old to yield estimates of the total resident population in each county.

**Annexations and new incorporations.** The 1970 census counts shown in this report reflect all population "corrections" made to the figures after the initial tabulations. In addition, adjustments for large annexations through December 31, 1975, are reflected in the estimates.<sup>2</sup> For new incorporations occurring after 1970, the 1970 population within the boundaries of the new areas are shown in the detailed table. This geographic updating is accomplished largely as a result of an annual boundary and annexation survey conducted by the Bureau of the Census.

**Other adjustments.** For areas where special censuses were conducted after July 1, 1972, such special censuses were taken into account in developing the estimates.<sup>3</sup> In several States, the subcounty estimates developed by the Administrative Records method were averaged with estimates for corresponding geographic areas which were prepared by

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<sup>2</sup>In general, an annexation was included if the 1970 census count for the annexing area was 5,000 or more and the 1970 census count for the annexed area or areas exceeded 5 percent of the 1970 count for the annexing area. Adjustments were also made for a limited number of "unusual" annexations where the annexations for an area did not meet the minimum requirements but were accepted by the Office of Revenue Sharing for inclusion in the population base.

<sup>3</sup>Only special censuses conducted by the Bureau of the Census or by the California, Florida, Oregon, or Washington State agencies participating in the Federal-State Cooperative Program for Local Population Estimates were used for this purpose. In addition, in a relatively small number of cases where special censuses were conducted by localities, where the procedures and definitions were essentially the same as those used by the Bureau of the Census, the results of these special censuses were also taken into account in preparing the estimates.

State agencies participating in the Federal-State Cooperative Program for Local Population Estimates (FSCP). These States include California, Florida, Oregon, Washington, and Wisconsin.

The estimates for the subareas in each county were adjusted to independent county estimates. For 1973, the county estimates are revisions to those prepared by the Bureau of the Census alone or by the Bureau of the Census in conjunction with participating State agencies as a part of the Federal-State Cooperative Program. These estimates are revisions of those published in **Current Population Reports**, Series P-25, No. 620. For 1975, an intermediate set of county estimates was prepared, since all of the data necessary to develop final estimates under the FSCP program were not available. Specifically, only data for two of the methods relied upon in the FSCP estimates (i.e., Component Method II and the Administrative Records method) were available. The 1975 estimates result from adding the average 1974-1975 population change indicated by the two methods to the 1974 county population figures contained in **Current Population Reports**, Series P-25 and P-26.

The county estimates, in turn, were adjusted to be consistent with independent State estimates published by the Bureau of the Census in **Current Population Reports**, Series P-25, Nos. 640 and 642, in which the Administrative Records-based estimates were averaged with the estimates prepared using Component Method II and the Regression method.<sup>4</sup>

#### PER CAPITA INCOME ESTIMATES METHODOLOGY

The 1974 and revised 1972 per capita income (PCI) figure is the estimated average amount per person of total money income received during calendar years 1974 and 1972 for all persons residing in a given political jurisdiction in April 1975 and April 1973, respectively. The 1974 and revised 1972 PCI estimates are based on the 1970 census and have been updated using rates of change developed from various administrative record sets and compilations, mainly from the Internal Revenue Service (IRS) and the Bureau of Economic Analysis (BEA).

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<sup>4</sup>For further discussion of the methodologies used in preparing State estimates, see **Current Population Reports**, Series P-25, No. 640.

The PCI estimates are based on a money income concept. Total money income is defined by the Bureau of the Census for statistical purposes as the sum of:

- Wage and salary income
- Net nonfarm self-employment income
- Net farm self-employment income
- Social Security and railroad retirement income
- Public assistance income
- All other income such as interest, dividends, veteran's payments, pensions, unemployment insurance, alimony, etc.

The total represents the amount of income received before deductions for personal income taxes, Social Security, bond purchases, union dues, Medicare deductions, etc.

**Procedures for State and county PCI estimates.** As noted above, the 1974 and revised 1972 State and county PCI estimates were based on the 1970 census.<sup>5</sup> The updates for these areas were developed by carrying forward the aggregate amount (i.e., the sum of all individual incomes in the State or county) independently for each type of income identified in the census to reflect differential changes in these income sources between 1969 and the estimate date. Data from the 1969, 1972, and 1974 Federal tax returns provided by the Internal Revenue Service were used to estimate the change in wage and salary income at the State and county level. All other types of income for these governmental units were updated using rates of change based on estimates of aggregate money income provided by the Bureau of Economic Analysis.

At the county level, several modifications of these procedures were used to better control the estimates of income change. For example, the IRS data for sub-State jurisdictions were subject to non-reporting of address information on the tax return and to misassignment of geographic location for reported addresses. To minimize the impact on the estimates from such potential sources of error, per capita wage and salary income for counties was updated intact as a per capita figure using the percentage change in wage and salary income per exemption reported on IRS returns. In addition, because of differences in the definition of income, data collection techniques, and estimation procedures, 1969 in-

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<sup>5</sup>Income data from the 1970 census reflect income received in calendar year 1969.

come estimates from the census and BEA were not strictly comparable. These differences were especially evident at the county level for nonfarm and farm self-employment income. BEA estimates for these types of income tend to have considerably more year-to-year variation than estimates derived from surveys and censuses. To minimize the effects of these differences, constraints were put on the rate of change in income from these sources in developing the 1972 and 1974 PCI updates.

As a final step to insure a uniform series of estimates at the State and county levels, the updated county per capita figures were converted to a total aggregate income and were adjusted to agree with the State aggregate level before a final per capita income was calculated.

**Procedures for subcounty per capita income estimates.** The 1974 and revised 1972 per capita income estimates for subcounty governmental units were developed using a methodology similar to that used to derive county-level figures. However, there are differences in the number of separate categories of income types used in the estimation procedure, and in the sources used to update the income components.

As in the case of the population estimates, a two-step procedure was relied upon to update the income figures from their 1969 level to refer to 1974. The 1972 estimates were prepared using the rate of change from 1969 to 1972. The 1974 estimates are based on the 1972 estimates, and were updated by an estimate of change from 1972 to 1974. Also, as in the case of the population figures, the subcounty income data were uniformly adjusted to reflect major annexation and boundary changes which occurred since 1970.

**1969 base estimates.** The 1970 census PCI figures for small areas are subject to sizable sampling variability, causing them to lack sufficient statistical reliability for use in the estimation process. For this report, the 1969 PCI shown for areas with a 1970 census sample population estimate of less than 1,000 is a weighted average of the original 1970 census sample value and a regression estimate. Research has indicated that this procedure results in a considerable improvement in accuracy compared to the procedure relied upon in earlier estimates, which was to use the county PCI amount for various small governmental units. The resulting 1969 estimate for each of these areas is a base estimate for preparing 1972 and 1974 estimates and does not represent a change in the 1970 census value for these areas.

For subcounty updating, 1969 total money income was divided into two components: (1) "taxable income" which is approximately comparable to that portion of income included in IRS adjusted gross income, and (2) "transfer income" which for the most part is not included in adjusted gross income. These 1969 subcounty estimates were adjusted to 1970 census totals for higher level government units. This was done using a two-way adjustment procedure controlling both to county totals and to several size class totals for the State.<sup>6</sup>

**1972 (revised) and 1974 PCI updates.** The taxable income portion of the 1969 money income was updated using the percent change in adjusted gross income (AGI) per exemption as computed from IRS tax return data. However, if the number of IRS tax returns for any area was very small, or if the ratio of exemptions to the population or the change in this ratio from 1969 to 1972 and 1972 to 1974 was not within an acceptable range, the IRS data for the subcounty area were not used in the update process. In such cases the percent change in AGI per exemption for the county was used. Similarly, if the IRS data for a particular subcounty area passed the above conditions, but the percent change in AGI per exemption was excessively large or small compared to that for the county, the change was constrained to a proportion of the county change.

The percentage change in per capita transfer income at the subcounty level was assumed to be the same as that implied by the BEA estimates at the county level.

The 1974 and 1972 estimates of taxable income and transfer income were adjusted separately using a two-way procedure similar to that used for the base estimates and were then combined to estimate total money income. The 1974 and 1972 PCI estimates were formed by dividing the total money income aggregates by the July 1975 and 1973 population estimates, respectively.

#### REVISION OF 1973 POPULATION AND 1972 PER CAPITA INCOME ESTIMATES

The July 1, 1973 population and calendar year 1972 per capita income estimates presented in this report supersede those estimates published earlier in

<sup>6</sup> Additional review and evaluation detail concerning the 1969 estimated income for places under 1,000 population is contained in **Current Population Reports, Series P-25, No. 699.**

**Current Population Reports**, Series P-25, Nos. 546 through 595. The July 1, 1973 population estimates shown in this report differ from those published previously for several reasons: (1) The procedure for correcting missing address information on the original tax forms was changed to more accurately reflect the population distribution of the various areas; (2) more accurate and up-to-date information on several components of population change (births, deaths, and special population groups) are now available; (3) the net migration component has been changed from a civilian population base to refer instead to the non-group quarters population (i.e., resident population excluding members of the Armed Forces living in barracks, inmates of long-term hospitals and prisons, and full-time students enrolled in college); and (4) additional special censuses are available for use that were conducted since the time of the last estimates.

Similarly for per capita income: (1) The 1969 income levels for small areas have been estimated rather than relying upon reported 1970 census figures, and (2) a revised procedure was used in controlling the 1972 estimates for internal agreement.

### LIMITATIONS OF THE ESTIMATES

**Population estimates.** Tests of the accuracy of the methods used to develop State and county population estimates appearing in **Current Population Reports**, Series P-25 and P-26 have been documented elsewhere. The results of evaluations against the 1970 census at the State level are reported in Series P-25, No. 520, while similar 1970 tests for counties are presented in Series P-26, No. 21. In summary, the State estimates averaging Component Method II and the Regression method yielded average differences of approximately 1.9 percent when compared to the 1970 census. Subsequent modifications of the two procedures that have been incorporated in preparing estimates for the 1970's would have reduced the average difference in 1970 to 1.2 percent. For counties, the 1970 evaluations indicated an average difference of approximately 4.5 percent for the combination of procedures used. It should be noted that all of the evaluations against the results of the 1970 census concern estimates extending over the entire 10-year period of 1960 to 1970.

Since 1970, however, the Administrative Records method has been introduced with partial weight in

the estimates for States and counties, and except for the few States in which local estimates are utilized, carries the full weight for estimates below the county level. The data series upon which the estimates procedure is based has been available as a comprehensive series for the entire United States only since 1967. Nonetheless, several studies have been undertaken evaluating the Administrative Records estimates from the State to the local level. At the State-wide level, little direct testing can be performed due to the lack of special censuses covering entire States. Some sense of the general reasonableness of the Administrative Records estimates may be obtained, however, by reviewing the degree of correspondence between the results of the method against those of the "standard" methods tested in 1970 and already in use to produce State estimates during the 1970's. It must be recognized that the differences between the two sets of estimates may not be interpreted as errors in either set of figures, but may only be used as a partial guide indicating the degree of consistency between the newer Administrative Records system and the established methods.

Table A presents such a comparison for State estimates referring to July 1, 1975. A rather close agreement may be observed in the estimates for all States at only a 1.0 percent difference. Only two States exceeded a 3-percent difference, with both being smaller States (under one million population) and both having unique circumstances that affect population patterns (Alaska and the District of Columbia). The variation of the Administrative Records method from the average of the other methods does increase noticeably for smaller States in a regular pattern, but still reaches an average of only 1.5 percent for the smallest size category.

The findings indicate no directional bias in the Administrative Records method either for all States or by size. It should also be noted that the Administrative Records estimate falls in the middle of the three estimates for 18 States, in contrast with approximately 17 cases to be expected by chance.

A similar comparison may be made at the county level (table B). Although the differences between the Co-op estimates and the Administrative Records results are larger at the county level than for States, the variations are well within the range that would be expected for areas of this population size, and the county pattern matches closely the findings for States. The overall differences for all counties is 3.3 percent, and ranges from 1.8 percent for the larger counties to 11.7 for the 26 small counties under 1,000 population.

**Table A. Percent Difference Between Administrative Records Estimates and the Average of Component Method II and Regression Estimates for States: 1975**

(Base is the average of Method II and Regression estimates)

Item	All States	Population size in 1970		
		4 million and over	1.5 to 4 million	Less than 1.5 million
Average percent difference (disregarding sign).....	1.0	0.5	0.9	1.5
Number of States.....	51	16	18	17
With differences of:				
Less than 1 percent.....	32	14	12	6
1 to 2 percent.....	13	2	4	7
2 percent and over.....	6	-	2	4
Where Administrative Records was:				
Higher.....	24	7	9	8
Lower.....	27	9	9	9

- Represents zero.

**Table B. Percent Difference Between Administrative Records Estimates and the Provisional Co-op Estimates for Counties: 1975**

(Base is the provisional Co-op estimates for counties)

Item	All counties	Counties with 1,000 or more 1970 population					Counties with less than 1,000 1970 population
		Total	50,000 or more	25,000 to 50,000	10,000 to 25,000	1,000 to 10,000	
Average percent difference (disregarding sign).....	3.3	3.2	1.8	2.7	3.2	4.4	11.7
Number of counties or equivalents.....	3,143	3,117	679	567	1,017	854	26
With differences of:							
Less than 1 percent.....	736	733	215	159	228	131	3
1 to 3 percent.....	1,153	1,145	311	213	373	248	8
3 to 5 percent.....	647	645	109	123	212	201	2
5 to 10 percent.....	471	467	42	58	167	200	4
10 percent and over.....	136	127	2	14	37	74	9

Comparison of these results for States and counties in 1975 with a similar analysis based on 1973 estimates is helpful as an indication of consistency over time. Some deterioration in the match of results from a selection of estimating techniques should be anticipated as the length of the estimating period increases and as the methods respond in varying degrees to the dynamics of population shifts. At the State level, such divergence is found. The overall variation increased from 0.6 percent difference in 1973 to 1.0 percent in 1975, with the most dramatic jumps occurring in the small States. On examination of the independent estimates from each method, however, this may be attributed as much to an increased variability in the Method II and Regression method results as to a tendency for the Administrative Records estimates to wander.

At the county level, the findings over time are more mixed. The level of difference for all counties indicates little change since the 1973 estimates (3.1 percent difference in 1973 and 3.3 percent in 1975). There are noticeable reductions in the differences for the largest and smallest population size categories (from 2.3 percent in 1973 to 1.8 percent in 1975 for counties of 50,000 or more, and from 18.1 percent to 11.7 percent for counties under 1,000 population), but modest increases may be observed in the variations for the remaining categories. In general, there appears to be some decrease of correspondence in the State level figures that should be monitored in coming years, but little change has occurred in the county variations, with even some convergence of estimates for the larger and smaller counties.

Three tests of the Administrative Records population estimates against census counts have been undertaken. First, a limited evaluation involving 24 large areas (16 counties and 8 cities) was conducted on estimates for the 1968-1970 period.<sup>7</sup> Although the test shows the estimates to be quite accurate (1.8 percent difference), the areas may not be assumed to be representative of the 39,000 units of government covered by the Administrative Records estimating system, and the time segment evaluated refers only to a 2-year period.

A more representative group of special censuses in 86 areas selected particularly for evaluation purposes was conducted in 1973. The areas were randomly chosen nationwide to be typical of areas with populations below 20,000 persons.

Table C summarizes the average percent difference between the estimates from the Administrative Records method and counts from the 86 special censuses. Overall, the estimates differed from the special census counts by 5.9 percent, with the largest differences occurring in the smallest areas. Areas of between 1,000 and 20,000 population differed by 4.6 percent, while the average difference for the 27 areas below 1,000 population was 8.6 percent. There was a slight positive directional bias,

<sup>7</sup>Meyer Zitter and David L. Word, U.S. Bureau of the Census, "Use of Administrative Records for Small Area Population Estimates," unpublished paper prepared for presentation at the annual meeting of the Population Association of America, New Orleans, Louisiana, April 27, 1973.

**Table C. Percent Difference Between Administrative Records Estimates (Unrevised) and 86 Special Censuses: 1973**

(Base is special census)

Area	Average percent difference <sup>1</sup>	Number of areas with differences of:			
		Under 3 percent	3 to 5 percent	5 to 10 percent	10 percent and over
All areas (86) <sup>2</sup> .....	5.9	32	18	20	16
1,000 to 20,000 (59).....	4.6	26	13	14	6
Under 1,000 population (27).....	8.6	6	5	6	10

<sup>1</sup>Disregarding sign.

<sup>2</sup>All areas have population under 20,000 persons.

with about 60 percent of the estimates exceeding the census counts. Again the impact of population size on the expected level of accuracy may be noted. Even though all of the areas in this study are relatively small—less than 20,000 population—the larger ones demonstrate much lower variation from census figures than the smaller ones.

The third evaluation involving census comparisons is currently underway, and is based upon the approximately 2,000 special censuses that have been conducted since 1970 at the request of localities throughout the United States. Such areas constitute a fairly stringent test for any method in that they are generally very small areas, often are experiencing rapid population growth, and frequently are found to have had a vigorous program of annexation since the last census. This evaluation study has not been completed for use here but will be included in detail as a part of the comprehensive methodology description in **Current Population Reports, Series P-25, No. 699**.

As a final caution, it must be noted that for convenience in presentation, the estimates contained in table I are shown in unrounded form. It is not intended, however, that the figures be considered accurate to the last digit. The nature of estimates prompts the rounding of figures in related Bureau reports and must be kept in mind during the application of the estimates contained here.

**Per capita income estimates.** Similar types of analyses and evaluation are not available for the updated estimates of PCI. Income data and PCI for 1972 are available for the 86 areas in which special censuses were conducted for testing purposes. As noted, however, the areas in which the censuses were taken are relatively small. The PCI estimates are based upon data from the 1970 census, which are subject to sampling variability due to the size of

the areas. Consequently, PCI did not change enough in the 1970-72 period in most instances to move outside of the relatively large range of sampling variability associated with the 1970 census results on income for small areas. Thus, it is not possible to obtain a reliable reading or even rough approximations on the accuracy of the change in PCI using the 86 areas as standards. The estimates were made available to persons working with economic statistics in each State for review prior to publication. Comments from this "local" review helped identify problem areas and input data errors.

## RELATED REPORTS

The population and per capita income estimates shown in this series of reports supersede those found in **Current Population Reports, Series P-25, Nos. 546 through 595** for 1973. The population estimates contained here for States are consistent with Series P-25, No. 533 (1973) and No. 642 (1975). The county estimates for 1975 are superior to the provisional 1975 figures published earlier in Series P-25 and P-26 due to the addition of a second method, but will not be reported elsewhere in **Current Population Reports**. The county population estimates will be replaced by subsequent final 1975 figures to be developed through the Federal-State Cooperative Program for Local Population Estimates.