

# Population Estimates

Series P-25, No. 423  
May 28, 1969

## ESTIMATES OF THE POPULATION OF PUERTO RICO AND OTHER OUTLYING AREAS OF THE UNITED STATES: 1967 AND 1968

(The figures for 1967 supersede those given in report No. 392 of this series)

This report presents revised estimates of the total and civilian resident population of the Commonwealth of Puerto Rico and the other principal outlying areas of American sovereignty or jurisdiction for July 1, 1967, and provisional estimates of the same areas for July 1, 1968. The areas included, in addition to Puerto Rico, are American Samoa, Guam, the Virgin Islands of the United States, and the Trust Territory of the Pacific Islands. Current estimates for the Canal Zone have been omitted because of inadequate data upon which to base such estimates. (See the "Limitations" section of the text.) The report does not include figures for certain small areas of American sovereignty or jurisdiction, such as Midway, Wake, Canton, and Johnston islands, whose total population numbered only a few thousand in 1960. The report also does not deal with other Americans residing outside the United States, such as U.S. citizens residing in foreign countries and the crews of U.S. merchant vessels. This group totaled about 1-1/2 million according to the April 1960 Census count.

The estimates presented here were made for the most part by the "component" method. As such, they utilize data on the components of population change, births, deaths, and net migration, from 1960 to date supplied to the Census Bureau directly by the local area or via the Department of Interior, Office of Territories, or other government agencies.

### METHODOLOGY

The estimate of the civilian population of each area except Guam and the Trust Territory was prepared mainly by a variation of the component

method of making postcensal population estimates. For the period since 1960, this variation of the component method involves (1) estimating the civilian population on April 1, 1960, from the census figures for that date, and from figures on the Armed Forces stationed in the area, (2) adding to the civilian population on April 1, 1960, an estimate of births for the period between the census and the estimate date, (3) subtracting an estimate of deaths, (4) adding or subtracting an estimate of net migration, and (5) subtracting an estimate of the net loss of civilians to the Armed Forces. The estimate of the total population of each area was obtained by adding an estimate of the number of persons in the Armed Forces stationed there on the estimate date.

The estimate for American Samoa uses locally compiled immigration data for its migration component, and local births and death records to obtain an estimate of natural increase.

The migration component for Puerto Rico is derived from monthly passenger statistics collected by the local government. The migration estimate for Puerto Rico, however, is not the sum of the reported monthly figures for this period but the sum of centered 12-month moving averages of the monthly data. Short-term fluctuations in passenger data reflect the seasonal movement of transients (tourists and other visitors) rather than the movement of migrants to a new residence; the movement of transients will tend to cancel out over longer periods.

The estimates for the Virgin Islands are based on the average of the results of two estimating procedures--Component Method II and a composite

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, 10 cents.  
Annual subscription (Series P-20, P-23, P-25, P-27, P-28 summaries, P-60, and P-65, combined), \$8.50;  
foreign mailing, \$11.00.



U.S. DEPARTMENT OF COMMERCE Maurice H. Stans, Secretary

Rocco C. Siciliano, Under Secretary

William H. Chartener, Assistant Secretary for Economic Affairs

BUREAU OF THE CENSUS A. Ross Eckler, Director



method--supplemented with a specific allowance for alien contract laborers ("temporary" workers) living in the Islands.

Component Method II uses reported vital statistics to measure natural increase and school enrollment to measure net migration. This method is spelled out in detail in Report No. 339 of this Series. In the composite method<sup>1</sup>, independent estimates are prepared for the population in several age groups, using methods and basic data considered most appropriate for each age group. An estimate is then derived for the population as a whole by summing the independently-derived estimates for all age groups. The specific application used here is spelled out in Report No. 371 of Series P-25.

In recent years, many "alien contract laborers" (nonimmigrant aliens) have been brought into the Virgin Islands, mainly from the nearby British West Indies, under a special program to work where local labor is not available. The number of such persons living in the Virgin Islands now appears to have reached a level that appreciably affects the size, distribution, and composition of the population of the Virgin Islands. There is much uncertainty as to what extent, if any, this group is included in the data series used in the basic estimating procedures. Furthermore, the unusual character of the group suggests that, at best, it may be inadequately reflected in conventional estimating procedures. Consequently, a separate allowance for this component was added to the estimate resulting from the average of the two estimating procedures indicated above. The addition amounted to 3,000 for July 1, 1966, 4,000 for July 1, 1967, and 2,000 for July 1, 1968 (these amounts are noncumulative). The amount added was based on a "minimum" estimate of the number of such aliens in the population derived from figures on the number of aliens reporting under the Alien Address Reports program of the Immigration and Naturalization Service.

For Guam, the results of an annual compilation from "population-register" type records maintained by the municipal commissioners were used as the basis of the Bureau's estimate. The local figure is combined with information from various

<sup>1</sup>Donald J. Bogue and Beverly Duncan, "A Composite Method for Estimating Postcensal Population of Small Areas, by Age, Sex, and Color," National Office of Vital Statistics, Vital Statistics Special Reports, Vol. XLVII, No. 6 (August 24, 1959).

sources on the number of U.S. civilian employees and their dependents, and on the number of aliens in the area.

The Trust Territory's local annual tallies of the indigenous population, derived from a variety of sources and prepared by local officials, are the basis of the Census Bureau's estimate for that area. An estimate of the nonindigenous population is based on information received from the Civil Service Commission pertaining to the number of U.S. civilian employees in the Territory.

#### LIMITATIONS OF THE ESTIMATES

As indicated in the section on Methodology, the estimates rely heavily on data obtained from local sources. Thus the accuracy of the estimates depends largely on the accuracy of the local reporting systems. Furthermore, since the areas differ substantially from one another in population size, composition, and statistical reporting systems, the accuracy of the estimates will vary considerably from area to area. Although not too much is known about the adequacy of the basic reporting systems or data of each of these areas, some relevant factors are as follows.

In Puerto Rico the estimates of net migration depend upon the balancing out of the large number of nonresident movements between Puerto Rico and the mainland of the United States. In recent years the annual gross movements to and from Puerto Rico have exceeded 1-1/2 million in each direction (1.8 million in 1968) with an estimated net movement of only 16,000 away from Puerto Rico in the year ending July 1, 1968. The migration of residents is now such a very small portion of the total passenger movement that the estimates of net migration are highly affected by any directional bias in the reporting of passenger arrivals and departures.

In the case of the Virgin Islands, the two basic methods used are similar to the methods used for developing estimates of local areas in the United States. Although the methods have been tested extensively in this connection, they have not been tested specifically in a situation covering areas such as the Virgin Islands.<sup>2</sup> There is little to suggest that the methods are not adequate to reflect the overall population of the area. However, there is the complicating factor of the number of contract

<sup>2</sup>See, for example, Current Population Reports, Series P-25, No. 371.

ers living in the Islands which tends to introduce another element of uncertainty in the adequacy of the estimates.

The local census of the indigenous population which is used as a basis for the population of the Trust Territory of the Pacific Islands has been conducted annually in recent years. There was no Federally-conducted 1960 Census; instead a locally-conducted census covering the entire population (indigenous and all others) was carried out in 1958 and tabulated by the U.S. Bureau of the Census. The results of a census taken in 1967 by Peace Corp volunteers are also available, but these figures were not used here since they appear to be substantially out of line with the regular local censuses of 1966 and 1968. Thus, the 1967 figure used here represents an interpolation between the results for 1966 and 1968.

There is little or no basis for evaluating the estimates for American Samoa, although the migration component appears to be adequate, in that it is derived from reported data of the American Samoan Office of Immigration.<sup>3</sup> However, the relative completeness of the registration of births and deaths is not known.

As indicated, the estimates for Guam are based on a type of "population-register" supplemented by statistics reported for the military personnel, U.S. employees, and their dependents. However, checks of the 1960 local data, as supplemented, against the 1960 Census provide figures reasonably consistent with the 1960 Census counts.

Estimates for the Canal Zone have not been included in this report because of serious questions concerning the adequacy of data on which to base the estimates. School enrollment statistics which have been used in the past appear to be inadequate because of the relatively low rate of participation, even in the elementary grades, in 1960. The proximity of the Canal Zone to the Republic of Panama may create problems concerning residence reporting in some of the basic statistics and unduly affect the results when such statistics are used to measure changes in resident population. School enrollment and vital statistics may be particularly affected. Estimates for 1960 to 1967 for the Canal Zone were published in Series P-25, No. 392, but these should now be interpreted with caution pending results of the 1970 Census.

<sup>3</sup>Wolf Management Services of New York, working under an Economic Development Administration contract to review and improve local data reporting systems, has been directing this operation.

## SOURCES OF DATA

American Samoa.--Vital statistics from Office of the Governor; immigration data from the Office of Immigration of American Samoa.

Guam.--Local "population-register" of the Office of Chief Commissioner; data provided by the U.S. Department of Interior; number of aliens from U.S. Immigration and Naturalization Service; number of civilian and military dependents from Department of Defense; number of Federal civilian employees from U.S. Civil Service Commission.

Puerto Rico.--Vital statistics from National Center for Health Statistics, U.S. Public Health Service; data on migration from Puerto Rico Planning Board supplemented by statistics on civilians carried by military transports from Department of Defense.

Trust Territory.--Annual compilations of indigenous population conducted locally, provided by U.S. Department of Interior; number of U.S. civilian employees from U.S. Civil Service Commission.

Virgin Islands.--Vital statistics from the Virgin Islands Department of Health; school enrollment from the Virgin Islands Department of Education; number of temporary aliens from data of the U.S. Immigration and Naturalization Service.

All statistics on the number of Armed Forces stationed in the areas are provided by the Department of Defense.

## RELATED REPORTS

Estimates for Puerto Rico, the Canal Zone, and the Virgin Islands, for the years 1940 to 1949, are shown in Current Population Reports, Series P-25, No. 80, and for all the outlying areas for 1950 to 1959 and 1960 to 1966 in Series P-25, Nos. 336 and 392, respectively. Estimates of the total population of the United States for 1950 to 1969 are given in Series P-25, No. 418. Estimates of the total population of States are given for 1960 to 1968 in Series P-25, Nos. 414 and 380, and for 1950 to 1959 in Series P-25, No. 304.

## ROUNDING OF ESTIMATES

Each estimate in this report has been rounded independently to the nearest thousand (Puerto Rico) or hundred (other areas) from figures computed to the last digit; hence, the sum of parts may differ from the totals shown. Percents are based on the unrounded figures.

**ESTIMATES OF THE TOTAL RESIDENT AND CIVILIAN RESIDENT POPULATION OF THE OUTLYING AREAS OF THE UNITED STATES: JULY 1, 1968 AND 1967**

(Total resident population includes persons in the Armed Forces stationed in each area. Each estimate has been rounded to the nearest thousand for Puerto Rico and to the nearest hundred for the other areas)

Area and type of population	July 1, 1968 (provisional)	July 1, 1967 (revised)	April 1, 1960 <sup>1</sup> (census)	Total change, 1960 to 1968		Average annual Percent change <sup>2</sup>	
				Num- ber	Per- cent	1960 to 1968	1950 to 1960
<b>TOTAL RESIDENT POPULATION</b>							
American Samoa.....	30,800	28,800	20,051	10,800	53.6	5.2	0.6
Canal Zone.....	(NA)	(NA)	42,122	(NA)	(NA)	(NA)	-2.3
Guam.....	100,100	91,900	67,044	33,100	49.3	4.9	1.2
Puerto Rico.....	2,723,000	2,695,000	2,349,544	374,000	15.9	1.8	0.6
Trust Territory of the Pacific Islands..	96,000	95,300	76,256	19,800	25.9	2.8	3.0
Virgin Islands of the United States.....	55,600	54,500	32,099	23,500	73.3	6.7	1.9
<b>CIVILIAN RESIDENT POPULATION</b>							
American Samoa.....	30,800	28,800	20,046	10,800	53.7	5.2	0.6
Canal Zone.....	(NA)	(NA)	34,520	(NA)	(NA)	(NA)	-2.2
Guam.....	83,000	77,500	57,106	25,900	45.4	4.5	3.5
Puerto Rico.....	2,712,000	2,682,000	2,338,087	373,000	16.0	1.8	0.6
Trust Territory of the Pacific Islands..	95,800	94,700	75,851	19,900	26.3	2.8	3.3
Virgin Islands of the United States.....	54,800	54,400	31,993	22,800	71.4	6.5	1.9

NA Not available.

<sup>1</sup>Census counts for total resident population except for Trust Territory where the population was estimated from a census taken in 1958 under the direction of the High Commissioner of the Trust Territory of the Pacific Islands and tabulated by the Bureau of the Census.

<sup>2</sup>Computed by the formula for continuous compounding,  $P_1 = P_0 e^{rt}$ .