

**THE POPULATION OF THE UNITED STATES
AND INSULAR AREAS BASED ON THE
1990 CENSUS**

**Comparative Demographic, Social and Economic Characteristics
for the United States, Puerto Rico, U.S. Virgin Islands, Guam,
American Samoa, the Northern Mariana Islands, and Palau.**

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THE POPULATION OF THE UNITED STATES

BASED ON THE 1990 CENSUS

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I. INTRODUCTION

This paper provides basic comparative statistics from the 1990 Decennial Censuses of the United States, Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands (CNMI), and the Republic of Palau. These censuses were taken concurrently, with April 1 as the Census date in each case.

In order to simplify comparisons and decreased verbiage, certain conventions are needed. The following designations are used for the various areas under United States jurisdiction: the Commonwealth of *Puerto Rico*, the *Virgin Islands* of the United States (VI), the Territory of *Guam*, the Commonwealth of the *Northern Mariana Islands* (CNMI), and the Republic of *Palau*. Much to the annoyance of some of the Insular Areas, the Census Bureau made decisions about nomenclature which are followed here: all areas except the United States are referred to as *Puerto Rico and the Outlying Areas* or the *Areas*, all areas except the United States and Puerto Rico are referred to as the *Outlying Areas*, all Pacific areas become either the *Pacific Outlying Areas* or the *Pacific Islands*. As of this writing, current Pacific Island areas include only Guam, CNMI, and American Samoa. Palau has attained Free Association with the United States, as of October 1, 1994, and will not be included in future censuses; Palau is included here because it was part of the 1990 Census, and is currently still in transition, at least statistically.

The United States and each of the Areas had different questionnaires in 1990, although the items were similar enough to make comparisons. The specific differences are discussed in the various sections of the paper.

The islands of Puerto Rico and Guam, surrendered by Spain to the United States in October 1898, were ceded to the United States by the Treaty of Paris, ratified in 1899. Puerto Rico became a Commonwealth on July 25, 1952, thereby achieving a high degree of local autonomy under its own constitution. The Virgin Islands, comprising 50 islands and cays, was purchased by the United States from Denmark in 1917. American Samoa, a group of seven islands, was acquired by the United States in accordance with a convention among the United States, Great Britain, and Germany, ratified in 1900 (Swains Island was annexed in 1925).

By an agreement approved by the Security Council of the United Nations and the United States, the Northern Mariana Islands and Palau, previously under Japanese mandate, were administered by the United States from 1947 under the United Nations trusteeship system. The Northern Mariana Islands became a Commonwealth in 1986. The Republic of Palau began Free Association with the United Nations in 1994; under Free Association, the United States will no longer be mandated to take decennial censuses in Palau.

II. DEMOGRAPHIC CHARACTERISTICS

Demographic characteristics — age and sex distributions, and the fertility and mortality which together give the natural increase — show the structure of that population. These data are used to develop population estimates and projections, allowing program and policy makers to plan for new schools, health clinics, and recreational facilities.

Sex. The data on sex were derived from answers to questionnaire item 3, which was asked of all persons. About 51 percent of the population in the United States was female in 1990, about the same percentage as in 1980 (Table 1). The percentages for Puerto were about the same, and the ratio for the Virgin Islands decreased during the decade to be in the same range.

Table 1. Population by Sex: 1980 and 1990							
Sex	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
1990 Total	248,709,873	3,522,037	101,809	133,152	46,773	43,345	15,122
Males	121,239,418	1,705,642	49,210	70,945	24,023	22,802	8,139
Females	127,470,455	1,816,395	52,599	62,207	22,750	20,543	6,983
Percent	51.3	51.6	51.7	46.7	48.6	47.4	46.2
1980 Total	226,545,805	3,196,520	96,569	105,979	32,297	16,780	12,116
Males	110,047,513	1,556,842	46,204	55,321	16,384	8,817	6,279
Females	116,498,292	1,639,678	50,365	50,658	15,913	7,963	5,837
Percent	51.4	51.3	52.2	47.8	49.3	47.5	48.2
Source: U.S. Bureau of Census Publications.							

None of the Pacific were majority female. About 49 percent of American Samoa's population was female, 47 percent of Guam and the Northern Mariana Islands populations, and 46 percent of Palau's. These figure reflect selective immigration of male workers (although all of these areas were also majority male in 1980.)

Age. The data on age were derived from answers to questionnaire item 5. The age classification is based on the age of the person in complete years as of April 1, 1990. The age response in question 5a was used normally to represent a person's age. However, when the age response was unacceptable or unavailable, a person's age was derived from an acceptable year of birth response in question 5b.

Data on age are used to determine the applicability of other questions for a person and to classify other characteristics in census tabulations. Age data are needed to interpret most social and economic characteristics used to plan and examine many programs and policies. Therefore, age is tabulated by single years of age and by many different groups, such as 5-year age groups.

Table 2 shows the age distribution of the United States and its areas for 1990. Although this table shows numbers of individuals, subsequent tables will show percentages to permit comparisons; the numerical values can be obtained by multiplying by the totals presented.

Table 2. Population by Age: 1990							
Age Group	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
Total	248,709,873	3,522,037	101,809	133,152	46,773	43,345	15,122
Under 5 years	18,354,443	302,173	9,230	15,097	6,952	4,139	1,513
5 to 9 yrs	18,099,179	316,473	10,072	13,078	5,640	3,275	1,529
10 to 14 yrs	17,114,249	339,573	10,142	11,777	5,229	2,901	1,534
15 to 19 yrs	17,754,015	326,717	9,623	12,121	4,718	2,773	1,464
20 to 24 yrs	19,020,312	287,227	7,103	14,379	4,664	5,624	1,340
25 to 29 yrs	21,313,045	270,562	7,353	13,490	4,161	6,140	1,403
30 to 34 yrs	21,862,887	254,287	7,324	11,786	3,513	5,878	1,338
35 to 39 yrs	19,963,117	236,509	7,173	10,186	2,721	4,330	1,243
40 to 44 yrs	17,615,786	225,970	7,866	8,143	2,246	3,112	873
45 to 49 yrs	13,872,573	193,984	6,990	5,471	1,779	1,921	666
50 to 54 yrs	11,350,513	161,874	5,294	4,808	1,522	1,247	513
55 to 59 yrs	10,531,756	140,952	3,980	4,059	1,093	771	403
60 to 64 yrs	10,616,167	124,852	3,180	3,527	923	458	387
65 to 69 yrs	10,111,735	112,718	2,524	2,433	667	349	332
70 to 74 yrs	7,994,823	86,679	1,759	1,368	424	190	249
75 and over	13,135,273	141,487	2,196	1,429	521	237	335
Median	32.9	28.4	28.2	25.0	20.9	27.4	25.6
1980 Median	30.0	24.6	22.4	22.2	18.8	19.6	18.8
Source: U.S. Bureau of the Census Publications.							

Median Age. The median age divides the age distribution into two equal parts, with one-half of the cases falling below the median value and one-half above the value.

The median age of the United States population in 1990 was 32.9 years, an increase of almost 3 years during the decade (Table 3). The median age of the U.S. population was greater than that of Puerto Rico or any of the Outlying Areas. While the median ages for Puerto Rico and the Virgin Islands were about 4 1/2 years younger than that of the United States, Guam and Palau had medians more than 7 years younger than the U.S. median, the median for American Samoa was a full 12 years younger than for the United States.

The median for American Samoa increased during the decade from 18.8 years in 1980 to 20.9 in 1990, an increase of about 2 years. The median increased somewhat more for the United States and for Guam — about 3 years — but much more for the areas experiencing massive

migration (whether immigration only or immigration and emigration combined). Palau's and the Northern Mariana Islands' medians increased by about 7 years during the decade, while the Virgin Islands' median increased by 6 years. Although these areas all experienced some continued decline in fertility, the age structure was even more influenced by selective migration.

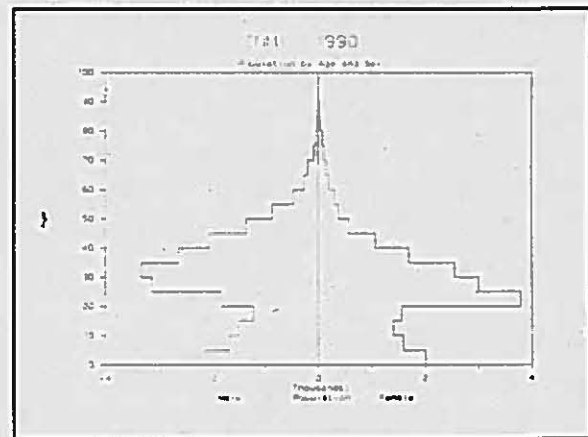
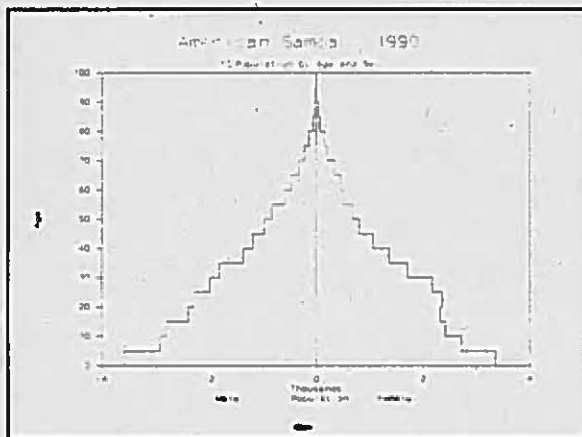
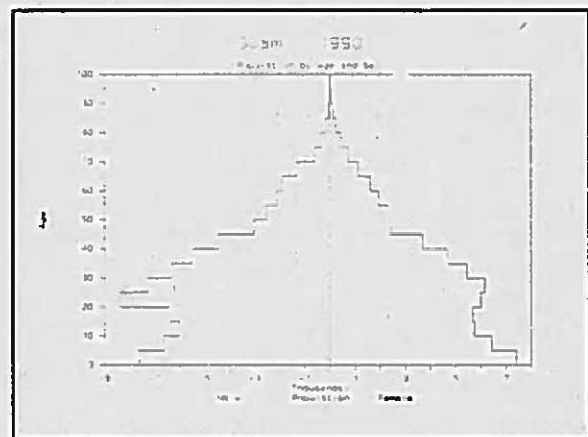
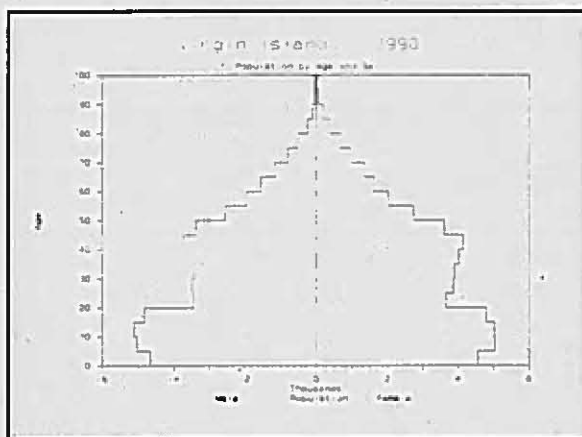
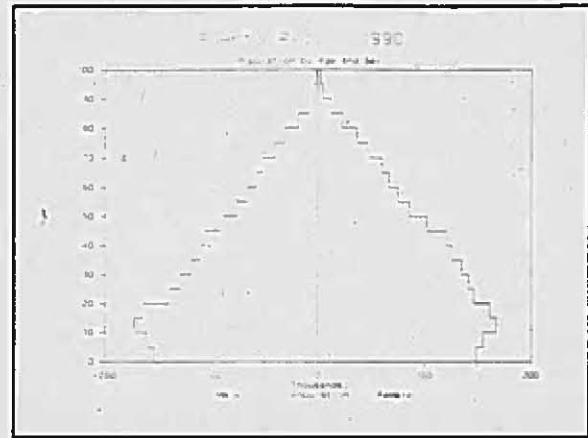
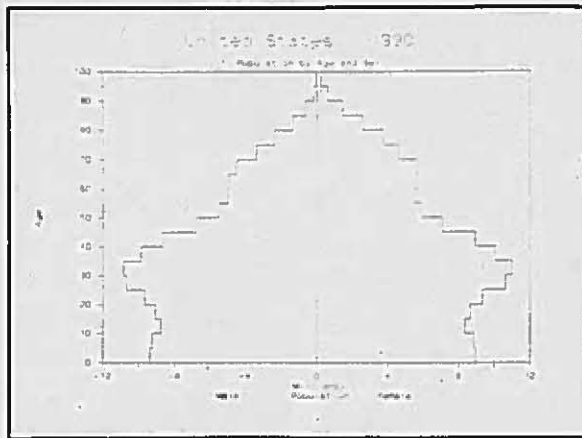
The very young median for American Samoa implies higher fertility, or at large percentages in the younger age groups. Table 3 shows this distribution to be the case for the areas shown. Almost 15 percent of American Samoa's population in 1990 was 5 years or younger, a much larger percentage than for any of the areas. More 11 percent of Guam's population was in this age group.

Table 3. Percent of Population by Age: 1990

Age Group	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
Total	248,709,873	3,522,037	101,809	133,152	46,773	43,345	15,122
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 5 years	7.4	8.6	9.1	11.3	14.9	9.5	10.0
5 to 9 yrs	7.3	9.0	9.9	9.8	12.1	7.6	10.1
10 to 14 yrs	6.9	9.6	10.0	8.8	11.2	6.7	10.1
15 to 19 yrs	7.1	9.3	9.5	9.1	10.1	6.4	9.7
20 to 24 yrs	7.6	8.2	7.0	10.8	10.0	13.0	8.9
25 to 29 yrs	8.6	7.7	7.2	10.1	8.9	14.2	9.3
30 to 34 yrs	8.8	7.2	7.2	8.9	7.5	13.6	8.8
35 to 39 yrs	8.0	6.7	7.0	7.6	5.8	10.0	8.2
40 to 44 yrs	7.1	6.4	7.7	6.1	4.8	7.2	5.8
45 to 49 yrs	5.6	5.5	6.9	4.1	3.8	4.4	4.4
50 to 54 yrs	4.6	4.6	5.2	3.6	3.3	2.9	3.4
55 to 59 yrs	4.2	4.0	3.9	3.0	2.3	1.8	2.7
60 to 64 yrs	4.3	3.5	3.1	2.6	2.0	1.1	2.6
65 to 69 yrs	4.1	3.2	2.5	1.8	1.4	0.8	2.2
70 to 74 yrs	3.2	2.5	1.7	1.0	0.9	0.4	1.6
75 and over	5.3	4.0	2.2	1.1	1.1	0.5	2.2
Median	32.9	28.4	28.2	25.0	20.9	27.4	25.6

Source: U.S. Bureau of the Census Publications.

The United States' 7.4 percent of the population being 5 years or younger was more than one percentage point less than Puerto Rico, the next smallest percentage. The Pacific areas all had higher percentages in the lowest age group, indicating continued higher fertility (although the percentages are heavily influenced by selection migration).



Because its median age was 4 years younger than Guam's — the next lowest median age — American Samoa also had higher percentages in the other low age groups, with 12 percent of the population being 5 to 9 years, and 11 percent 10 to 14 years.

The Northern Mariana Islands saw its biggest concentration of population in the age groups 20 to 24 through 35 to 39 years, largely because of the enormous influx of immigrants in the last half of the 1980s. The effects of this distribution are seen in the changes in median age by sex (Table 4). The median age for males in the CNMI increased by a full 9 years during the decade, a rather dramatic "aging" of the population. The median age for females increased by 6 1/2 years, still a very large increase in such a short time.

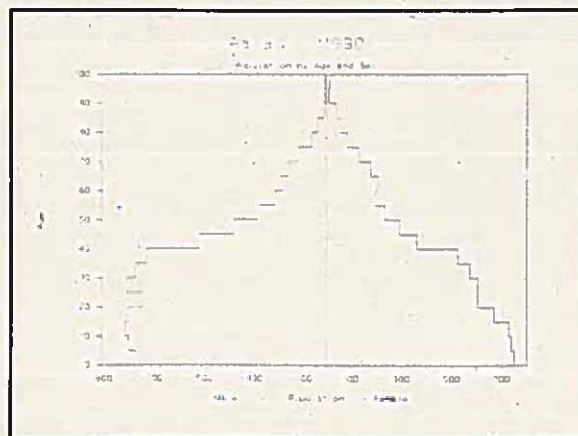


Table 4. Median Age: 1980 and 1990

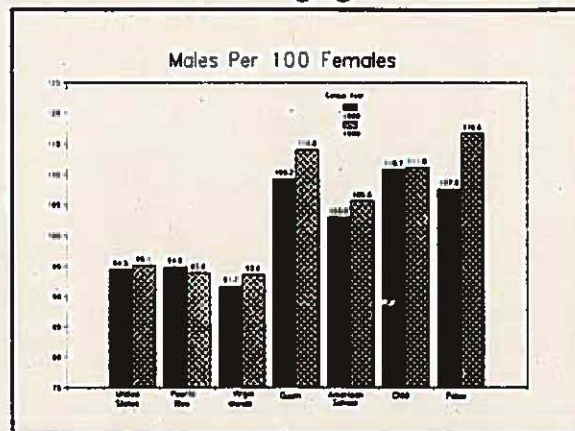
Median Age	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
MALES							
1990	31.7	27.2	27.1	25.2	20.6	29.9	26.0
1980	28.8	23.6	21.1	22.2	18.3	20.9	18.7
FEMALES							
1990	34.1	29.6	29.2	24.9	21.2	24.9	25.1
1980	31.3	25.5	23.6	22.2	19.2	18.3	18.9

Source: U.S. Bureau of Census Publications.

Usually, the median age for females is greater than for males because females live longer than males. The medians for females in the United States, Puerto Rico, the Virgin Islands and American Samoa followed this pattern. However, the median age of Guam's males was slightly higher than that of females (which could be attributed both to the presence of the heavily-male military as well as selective immigration of Asian and Pacific Islander males), and CNMI and Palau clearly showed the selective immigration of alien males of working ages in their data.

Sex ratio. The sex ratio is a measure derived by dividing the total number of males by the total number of females and multiplying by 100.

The maleness of these populations with many immigrants is seen in the sex ratios in 1990 (Table 5). The sex ratio for the United States in 1990 was 95 (meaning the U.S. had 95 males for every 100 females). This ratio is typical for the world's populations since females tend to live longer than males, and so more of them are around at any given time. Puerto Rico and the



Virgin Islands (both having 94 males per 100 females) followed this pattern. However, none of the Pacific Islands had more males than females. American Samoa was "least" male, with 106 males per 100 females. But the CNMI (at 111), Guam (114), and Palau (117) were all male "dominated". Guam has a large, predominantly male military population, while the CNMI and Palau have been experiencing massive, selectively male migration.

Table 5. Males per 100 Females: 1990

Age Group	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
Total	95.1	93.9	93.6	114.0	105.6	111.0	116.6
Under 5 years	104.8	103.6	102.3	103.8	107.3	106.0	102.5
5 to 9 yrs	104.8	104.0	100.2	103.6	107.7	106.1	107.7
10 to 14 yrs	105.0	103.5	102.2	105.1	116.3	106.2	111.0
15 to 19 yrs	105.2	102.8	100.8	113.7	103.2	78.0	118.8
20 to 24 yrs	103.5	96.4	94.5	139.4	97.4	48.3	122.6
25 to 29 yrs	100.7	91.1	90.3	118.7	91.3	104.3	132.3
30 to 34 yrs	99.0	88.3	88.3	116.6	105.9	130.7	134.7
35 to 39 yrs	98.4	87.6	78.3	118.3	99.8	155.5	137.7
40 to 44 yrs	97.4	87.3	90.2	120.4	110.3	190.8	143.2
45 to 49 yrs	96.4	89.1	93.6	123.9	121.0	237.6	128.9
50 to 54 yrs	94.5	88.5	93.6	110.0	121.5	223.1	119.2
55 to 59 yrs	91.6	87.3	95.9	108.5	120.8	152.8	106.7
60 to 64 yrs	87.3	86.4	96.7	119.6	102.4	133.7	87.9
65 to 69 yrs	81.2	86.7	85.9	117.0	94.5	126.6	86.5
70 to 74 yrs	74.3	87.0	84.2	84.6	110.9	81.0	88.6
75 and over	54.3	81.5	65.7	70.5	86.1	53.9	59.5

Source: U.S. Bureau of the Census Publications.

The pattern by age seen for the United States, Puerto Rico, and the Virgin Islands is also typical of the world's populations which are not having changes due to migration. In many populations, about 106 males are born for every 100 females. Since males experience higher mortality throughout their lives, in general, the older the age group, the more female the group will be. So while the United States had about 105 males for every 100 females in age groups up to age 20, the ratio began decline after that, becoming more female than male after age 30, and reaching a point after age 75 where there were almost 2 females for every male.

The Pacific Islands did not follow this pattern at all. Several different patterns emerged. For the youngest age groups, the male/female ratio was not that different from that seen for the States, but after that great differences appeared. For Guam, for example (and probably because of the military), more males than females were on island in every age group except for those over 69 years old. The presence of the military seems to be felt especially in the age group 20 to 24, where Guam saw almost 140 males for every 100 females.

Palau had similar male/female ratios for many age groups, rising to more than 130 males per 100 females for the 25 to 44 year olds, but these ratios are attributable to selective immigration of males for construction, retail trade, etc.

Certain of the age groups in Northern Mariana Islands were even more male, with more than 2 males for every female among those 45 to 54 years old, and with almost as disproportionate figures for those 30 to 69 years old, with no group having fewer than 126 males for every 100 females. The Northern Mariana Islands has seen heavy immigration in recent years, for construction and other infra-structure development, and much of this migration has been of males. The exception has been in the age groups 15 to 24 years, where large numbers of (mostly Asian) female garment workers have been brought to the commonwealth to manufacture clothing for export. The CNMI population had about 78 males for every 100 females 15 to 19 years, but only 48 males for every 100 females 20 to 24 years, again, meaning that for that age group, 2 females were in the Area for every male — the opposite of the situation for the 45 to 54 year old groups. The American Samoa situation is also different, with fairly equal proportions male and female until ages 45 to 59, when males predominate, with about 120 males for every 100 females.

The United States was slightly more male in 1990 than in 1980, because of increased female mortality during the decade (females beginning to suffer from heart and lung diseases previously being primarily male diseases) (Table 6). Of the Areas, only Puerto Rico became slightly more female during the decade. And, as shown above, because of the selective migration, many of the areas became much more male during the decade. Guam increased by about 5 points, but Palau increased from a ratio of about 108 in 1980 to 117 in 1990.

Table 6. Males per 100 Females: 1980 and 1990							
Year	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
1990	95.1	93.9	93.6	114.0	105.6	111.0	116.6
1980	94.5	94.9	91.7	109.2	103.0	110.7	107.6
Source: U.S. Bureau of Census Publications.							

Household Type and Relationship.

A household includes all the persons who occupy a housing unit. A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or, if vacant, is intended for occupancy) as a separate living quarters. Separate living quarters are those in which the occupants live and eat separately from any other persons in the building and which have direct access from the outside of the building or through a common hall. The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated persons who share living arrangements. The count of households or householders always equals the count of occupied housing units.

The data of relationship to householder were derived from answers to questionnaire item 2, which was asked of all persons in housing units. One person in each household was designated as the householder. In most cases, this was the person, or one of the persons, in whose name the home was owned, being bought, or rented and who was listed as person 1 on the census questionnaire. If no such person was in the household, any adult household member 15 years old and over could be designated as the householder.

Households are classified by type according to the sex of the householder and the presence of relatives. Two types of householders are distinguished: a family householder is a householder living with one or more persons related to him or her by birth, marriage, or adoption. The householder and all persons in the household related to him or her are family members. A nonfamily householder is a householder living alone or with nonrelatives only.

For other relatives: A spouse is the person married to and living with a householder (and includes persons in formal marriages, as well as persons in common-law marriages); a child is a son or daughter by birth, a stepchild, or adopted child of the householder, regardless of the child's age or marital status (and excludes sons-in-law, daughters-in-law, and foster children.); other relatives include grandchild, brother/sister, parent, etc.; nonrelatives include roomer, boarder or foster child, housemate or roommate, unmarried partner, etc.

Group quarters. All persons not living in household were classified by the Census Bureau as living in group quarters. Two general categories of persons in group quarters are recognized: (1) institutional persons and (2) other persons in group quarters (also referred to as "noninstitutional group quarters").

Institutionalized persons includes persons under formally authorized, supervised care or custody in institutions at the time of enumeration. Such persons are classified as "patients or inmates" of an institution regardless of the availability of nursing or medical care, the length of stay, or the number of persons in the institution. These institutions include correctional institutions, prisons, Federal Detention centers, military stockades, jails, halfway houses, nursing homes, hospitals, school for mentally retarded or physically handicapped, and juvenile institutions. *Other persons in group quarters* includes all persons who live in group quarters other than institutions. Persons who live in the following living quarters are classified as "other persons in group quarters" when there are 10 or more unrelated persons living in the unit: rooming houses, group homes (including for mentally ill, mentally retarded, physically handicapped, etc.), and religious group quarters. Persons residing in certain other types of living arrangements are classified as living in "noninstitutional group quarters regardless of the number of people sharing the unit: college dormitories, military quarters, agriculture workers' dormitories, emergency shelters for homeless persons, crews of maritime vessels, etc.

About 3 percent of the United States' population lived in group quarters in 1990 (Table 7). Only about one percent of the populations of Puerto Rico, the Virgin Islands, and American Samoa lived in this type of housing. However, about 4.5 percent of Palau's population lived in group quarters of some sort — mostly workers' barracks — and 6 percent of Guam's population — many in military barracks. More than 1 in every 4 persons in the Northern Mariana Islands, however, was living in group quarters, a phenomenal amount, given the size, and previous

structure of the population. Many of these persons were in construction barracks or garment workers' quarters.

Table 7. Household Type and Relationship: 1990

Household Type and Relationship	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	North. Mariana Islands	Palau
Total persons	248,709,873	3,522,037	101,809	133,152	46,773	43,345	15,122
In households	242,012,129	3,487,667	100,488	124,596	46,267	31,856	14,440
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Householder	26.7	25.4	22.9	21.9	13.6	16.7	16.9
Nonfamily householder	11.3	4.8	9.0	3.3	0.7	4.9	3.0
Spouse	21.0	18.2	13.1	17.1	11.1	12.4	12.8
Child	31.7	42.3	39.7	42.1	41.1	37.5	36.6
Grandchild	1.7	3.6	5.7	4.3	11.3	4.3	12.5
Other relatives	3.2	4.1	5.1	7.9	18.9	9.7	11.7
Nonrelatives	4.4	1.5	4.5	3.3	3.3	14.5	6.5
In group quarters	6,697,744	34,370	1,321	8,556	506	11,489	682
Percent	2.7	1.0	1.3	6.4	1.1	26.5	4.5
Inmate of institution	3,334,018	18,734	484	187	11	59	67
Other, in group quarters	3,363,726	15,636	837	8,369	495	11,430	615

Source: U.S. Bureau of the Census Publications

The percentage of persons living in noninstitutional group quarters did not change very much during the decade except for Guam and the Northern Mariana Islands. For Guam, the percentage living in noninstitutional group quarters increased from 4.6 to 6.3 percent, partly because of changing military population patterns and migration of H-2 and other workers in and out of Guam (Table 8). The percentage change for the Northern Mariana Islands was even more remarkable, with 3 percent of the population in these quarters in 1980 (being double the rate for the United States), but 26 percent living in these quarters in 1990 — as noted above, more than 1 in 4 of the total population.

Table 8. Percent of Population in Noninstitutional Group Quarters: 1980 and 1990

Year	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
1990	1.4	0.4	0.8	6.3	1.1	26.4	4.1
1980	1.4	0.3	0.3	4.6	1.0	3.0	2.5

Source: U.S. Bureau of Census Publications.

Of those persons under 18 years of age living in households, family and household structure varied considerably. About 9 in every 10 persons under 18 years in the United States in 1990 were own children, somewhat less than in 1980 (Table 9). All of the areas except Puerto Rico and the Northern Mariana Islands showed decreases in the percentage of this age group being own children; both of these areas showed small increases. All of the areas had smaller

percentages of own children than the United States, showing the greater existence of extended families in the areas.

Table 9. Percent Persons Under 18 Years Being Own Children or Other Relatives: 1980 and 1990							
Relationship and Year	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
Own child							
1990	90.3	87.8	79.5	83.9	64.1	80.7	62.0
1980	91.7	87.0	87.7	90.6	67.5	80.3	73.5
Other relative							
1990	7.3	11.1	18.7	15.0	33.9	17.1	37.4
1980	6.4	11.8	10.6	8.6	31.2	18.0	25.8
Source: U.S. Bureau of Census Publications.							

Puerto Rico's percentage of own children is only a few percentage points less than the U.S. While about 4 in every 5 persons under 18 years in the Virgin Islands and CNMI were own children, the ratio decreases to less than 2 in 3 in American Samoa and Palau. Since American Samoa and Palau have the most traditional societies, where children are frequently "adopted" into other households or move to those households to be near schools or other facilities, these smaller percentages are not surprising.

By the same token, American Samoa and Palau are also the areas having the greatest percentages of "other relatives". About 1 in every 3 persons 18 years and under in American Samoa was an "other relative" and about 3 in 8 in Palau. While the rate in American Samoa increased somewhat during the decade, the rate in Palau jumped from 29 percent to 37 percent during the 1980s. Since Palau has only one large high school, students are probably moving to have better access.

Only about 7 percent of the U.S. population under 18 years and living in households were "other relatives". The rate for Puerto Rico was 11 percent, and about 17 percent for the Northern Mariana Islands, neither showing much change during the decade. The figure for Guam was 15 percent, an increase of more than 6 percentage points, but the Virgin Islands' increase was even greater, at 8 percentage points in 1990 (and 19 percent of the group.)

Persons per Household and Persons per Family.

The *persons per household* is obtained by dividing the number of persons in households by the number of households (or householders). The *persons per family* is obtained by dividing the number of persons in families by the total number of families (or family householders).

The average household size in the United States decreased slightly between 1980 and 1990 (Table 10). The average household size also decreased for each of the other areas during the decade, but each of the other areas continued to have much larger households and families than the United States.

American Samoa continued to have the largest households, at 7.00 persons per household, more than double the U.S. rate, and about 2 persons more than Palau, which had the next largest households. The household size did not decrease in American Samoa over the decade, while it decreased by almost a full person in Palau. The Northern Mariana Islands saw the next largest decline, about 2/3rds of a person. The others showed less decline.

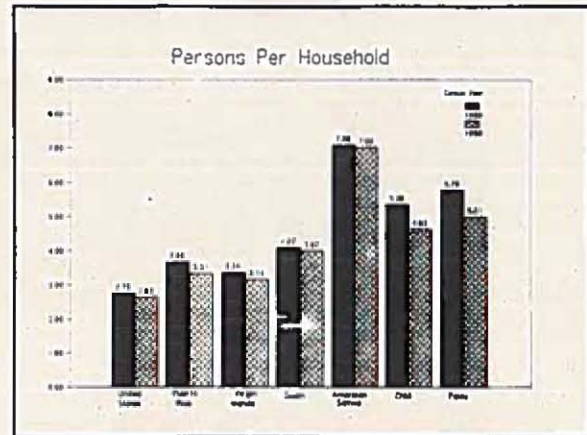


Table 10. Persons per Household and Persons per Family: 1980 and 1990

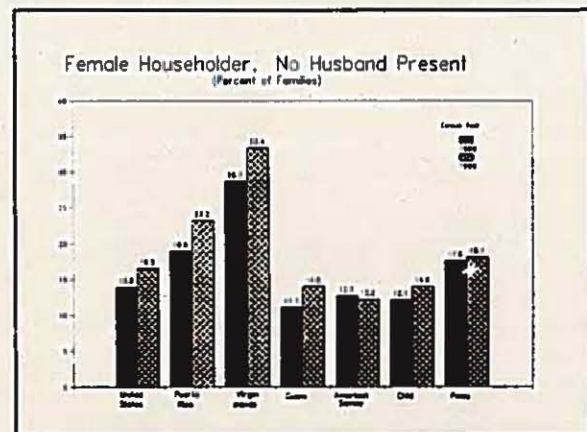
Characteristic	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
Per Household							
1990	2.63	3.31	3.14	3.97	7.00	4.63	5.01
1980	2.75	3.66	3.39	4.07	7.08	5.36	5.79
Per Family							
1990	3.16	3.69	3.78	4.26	7.05	4.83	5.34
1980	3.27	4.03	4.11	4.40	7.25	5.67	6.10

Source: U.S. Bureau of Census Publications.

Families tend to be larger than households because one person households do not constitute families. The figures show these larger families (than households), and show similar declines over the decade. Here, American Samoa shows a real decrease.

Family Type and Presence of Own Children.

A family consists of a householder and one or more other persons living in the same household who are related to the householder by birth, marriage, or adoption. All persons in a household who are related to the householder are regarded as members of his or her family. A household can contain only one family for purposes of census tabulations. Not all households contain families since a household may comprise a group of unrelated persons or one person living alone.



Families are classified by type as either a "married-couple family" or "other family" according to the sex of the householder and the presence of relatives. The data on family type are based on answers to questions on sex and relationship. A *married-couple family* is a family in which the householder and his or her spouse are enumerated as members of the same household. Other types of families are *male householder, no wife present* and *female householder, no husband present*.

About 4 out of every 5 families in the U.S. in 1990 were married-couple families, a decrease of about 4 percentage points during the decade (Table 11). This decrease reflects continued increased separation and divorce. Only American Samoa had a higher percentage of married-couple families than the United States, while Guam's percentage was slightly less than the U.S.

Table 11. Family Type: 1980 and 1990							
Family Type	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	CNMI	Palau
1990 Families	64,517,947	886,339	23,012	27,313	6,301	5,312	2,445
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Married-couple families	78.6	71.6	57.3	78.1	81.8	74.3	75.5
Female hholder, no husband present	16.5	23.2	33.4	14.0	12.2	14.0	18.1
Male hholder, no wife present	4.9	5.2	9.2	7.9	6.0	11.7	6.4
1980 Families	59,190,133	757,645	20,855	21,780	4,287	2,652	1,894
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Married-couple families	82.8	77.2	65.3	84.8	81.1	79.7	75.4
Female hholder, no husband present	13.9	18.9	28.7	11.1	12.7	12.1	17.6
Male hholder, no wife present	3.4	4.0	6.0	4.1	6.2	8.2	7.0
Source: U.S. Bureau of the Census Publications.							

While Palau (76 percent), the Northern Mariana Islands (74 percent), and Puerto Rico (72 percent) all had lower percentages than the U.S., Virgin Island's 57 percent was especially remarkable. The rate for the Virgin Islands decreased from 65 percent in 1980, which was also lowest of the areas in that year, and also lower than any of the areas in 1990. More than 1 in every 3 Virgin Islands families in 1990 was "Female householder, no husband present", about 50 percent higher than the 23 percent in Puerto Rico, and double the U.S. rate of 16 percent. The other areas had lower rates than Virgin Islands of "female householder, no husband present" families, but except for American Samoa, the rates increased during the decade.

Less than 5 percent of U.S. families were "male householder, no wife present." The CNMI had the largest percent of this type of household, probably representing recent selective migration patterns. The Virgin Islands also had a rate that was almost the double the U.S. rate. Except for American Samoa and Palau — the most traditional of the areas — the rates of "male householder, no wife present" families increased during the decade.

About 48 percent of all U.S. families had own children under 18 years, a smaller percentage than any of the areas, showing the low level of U.S. fertility (Table 12). For recent fertility — children under 6 years only — the Virgin Islands and Palau had even smaller percentages of families at around 10 percent, compared to 12 percent for the U.S. More than 1 in every 5 families in the CNMI had an own children under 6 years only, double the rate for the Virgin Islands and Palau.

Table 12. Family Type by Presence of Own Children: 1990							
Family Type and Presence of Own Children	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	CNMI	Palau
Families	64,517,947	886,339	23,012	27,313	6,301	5,312	2,445
With own children under 18 years	47.9	55.0	56.7	65.6	73.1	71.4	62.9
Under 6 years only	12.2	12.0	9.8	17.7	13.4	20.5	10.0
Married-couple families	50,708,322	634,872	13,197	21,342	5,153	3,947	1,847
With own children under 18 years	46.3	57.3	53.8	67.1	79.7	74.7	70.4
Under 6 years only	12.3	13.8	9.2	18.1	15.0	20.9	11.3
Female householder, no husband present	10,666,043	205,508	7,693	3,824	768	743	442
With own children under 18 years	56.5	51.1	63.3	63.8	44.9	62.6	41.0
Under 6 years only	11.9	7.2	9.5	15.1	6.0	12.4	5.2
Source: U.S. Bureau of the Census Publications.							

Families with "female householder, no husband present" in the United States were more likely than all families to have own children under 18 years. Here, though, great difference appeared among the areas, and many of the differences were cultural. The Virgin Islands, which had a much larger percentage of this type of family, also had much higher percentages with own children as well. The Virgin Islands rate of 63 percent was only slightly lower than Guam's, and the Virgin Islands does not have the military and selective immigrant populations Guam has.

For this category, Guam and the Northern Mariana Islands were more likely to have own children under 6 years only than the U.S. or the other areas.

Table 13 shows the percentage of families with own children under 18 years old. These families decreased from 52 to 48 percent of all families in the United States during the decade. All of the areas also saw decreases, but all remained above the U.S. percentage, showing continued higher fertility. Almost 3 in every 4 American Samoa families had own children under 18 years. More than 7 in every 10 Northern Marianas families were also in this category. The Pacific areas were likely to have own children in the family than the Caribbean areas. And, Palau showed the greatest decrease in own-children families, declining from 76 to 63 percent of all families (but the Virgin Islands decline was also very steep — from 68 to 57 percent.)

Table 13. Percentage of Families with Own Children Under 18 years: 1980 and 1990

Year	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
1990	47.9	55.0	56.7	65.6	73.1	71.4	62.9
1980	51.5	60.1	68.5	73.1	77.2	74.2	76.0

Source: U.S. Bureau of the Census Publications.

Marital Status. The data on marital status were derived from answers to questionnaire item 6, which was asked of all persons. The marital status classification refers to the status at the time of enumeration. Couples who live together (unmarried persons, persons in common-law marriages) were allowed to report the marital status they considered the most appropriate.

About 31 percent of U.S. males and 23 percent of females had never married, according to the 1990 Census, in both cases, the lower than any of the areas (Table 14). Percentages for Puerto Rico were only slightly higher than for the U.S. For the others, however, large differences appeared. About 2 out of every 5 adult males in the Virgin Islands, American Samoa, and Palau had never married; over half of all females in the CNMI had never married, reflecting selective immigration for work (primarily in the garment industries, but also as maids).

Table 14. Marital Status: 1990

Marital Status	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	CNMI	Palau
Male, 15 years and over	93,817,315	1,217,848	34,377	50,564	14,689	17,492	5,773
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Never married	30.7	31.5	39.5	36.3	42.9	34.1	41.8
Now married, except separated	57.3	58.4	46.8	57.4	53.9	62.2	52.8
Separated	2.0	2.3	4.2	0.9	0.7	1.1	2.1
Widowed	2.5	2.6	2.2	1.3	1.3	1.3	1.4
Divorced	7.4	5.2	7.2	4.1	1.1	1.3	1.9
Female, 15 years and over	101,324,687	1,345,970	37,988	42,636	14,263	15,538	4,773
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Never married	23.4	24.4	36.7	29.1	35.8	50.5	32.4
Now married, except separated	52.4	52.8	41.9	58.1	54.5	42.3	52.6
Separated	2.6	3.7	4.5	1.1	1.1	1.5	2.5
Widowed	12.0	9.8	6.3	5.9	6.5	4.0	9.5
Divorced	9.5	9.4	10.5	5.8	2.1	1.8	3.0

Source: U.S. Bureau of the Census Publications.

Because so many Virgin Islanders had never married, their "now married, except separated" rates were the lowest of any of the areas. Only 42 percent of Virgin Islands females had ever married (slightly less than for the CNMI females for reasons noted above), and only 47 percent of the Virgin Islands males. The reason the percentages by sex can vary so much is because of

different denominators. By contrast, CNMI males had the highest rate for "now married", possibly because immigrant males leave wives and families behind, and send remittances as they work in construction or other infra-structure activities.

The Virgin Islands had the highest separation and divorce rates of any of the areas (although its male divorce rate was less than for the U.S.). The Pacific Islands had comparatively low rates of separation and divorce.

The singulate mean age at marriage (SMAM) is an indirect method of obtaining the mean age at first marriage from percentages never married by age. The singulate mean age at marriage is an estimate of the mean number of years lived by a cohort before their first marriage. The statistic is calculated from the proportion of males or females single in successive age groups as reported in the census. The basic assumption is that the change in the proportion single from age x to age $x+1$ is a measure of the proportion of a birth cohort who married at that age.

For 1990, the singulate age at marriage in the United States was 27.6 years for males and 25.4 for females, a difference of about 2 years (Table 15). This age difference is seen in both Puerto Rico and the Virgin Islands, although Puerto Ricans married at younger ages and Virgin Islanders at older ages than the U.S. population.

Table 15. Singulate Mean Age at Marriage by Sex: 1990							
Age Group	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
Males	27.6	25.4	30.0	26.8	28.3	28.5	29.2
Females	25.4	23.5	27.5	24.4	25.7	28.5	25.7
Source: U.S. Bureau of the Census Publications and Hajnal 1953: 111-136.							

The Pacific Islanders showed a different pattern. Guam's pattern was similar to the U.S., although people marry about one year younger on Guam, than in the U.S. (which may reflect the military contingent). American Samoa males were about 3 years older than their wives at marriage, and Palauans about 4 years older. In the Northern Mariana Islands, however, the spouses were about the same age, the oldest of the ages for females, perhaps reflecting the influx of never married garment workers.

Fertility. The data on fertility (also referred to as "children ever born") were derived from answers to questionnaire item 20, which was asked of women 15 years old and over regardless of marital status. Stillbirths, stepchildren, and adopted children were excluded from the number of children ever born. Ever-married women were instructed to include all children born to them before and during their most recent marriage, children no longer living, and children away from home, as well as children who were still living in the home. Never-married women were instructed to include all children born to them.

The data presented here are in terms of aggregate number of children ever born to women in the specified category and in terms of the rate per 1,000 women. For purposes of calculating the aggregate, the open-ended response category "15 or more" was assigned a value of 15.

The average number of children per 1,000 females in the United States continued to decrease during the 1980s, from 1,302 in 1980 to 1,223 in 1990 for women aged 15 to 44 years (Table 16). In 1980, women in the Northern Mariana Islands had the highest fertility, but by 1990, the level decreased by about half. In fact, only the Northern Mariana Islands had fertility as low as the United States in 1990, mostly because of the large number of immigrant women who had had no children. When only Chamorro women are considered, the fertility remains high (Levin, 1993). Fertility in American Samoa was highest in 1990 (about 1.8 children per woman), followed by the Virgin Islands (1.7). Aside from the Northern Mariana Islands, Palau had the steepest decrease in fertility during the decade, dropping by about 1/2 child per woman.

Table 16. Fertility for Females 15 to 44 years: 1980 and 1990							
Fertility	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
1990 Females	58,539,930	828,848	24,355	31,649	10,996	13,669	3,327
Children ever born	71,622,747	1,253,255	40,477	48,200	19,316	16,758	5,309
Per 1,000 women	1,223	1,512	1,662	1,523	1,757	1,226	1,596
1980 Females	52,878,032	749,993	23,602	25,057	7,334	3,582	2,392
Children ever born	68,837,664	1,289,246	45,077	42,891	14,097	7,942	4,979
Per 1,000 women	1,302	1,719	1,910	1,712	1,922	2,217	2,082
Source: U.S. Bureau of the Census Publications.							

By 1990, fertility in all of the areas was fairly low compared to world standards, and was decreasing in all areas. Some of the decrease in some areas must be attributed to large numbers of never married, fertility-aged females migrating to U.S. outlying areas to work (and, thus increasing the denominator while not increasing the numerator.) Evidence from the Northern Mariana Islands, however, suggests that many of these women were beginning to have babies, especially on Saipan, and in 1993, the number of Filipino births exceeded the number of Chamorro births for the first time — some of these births were to women who came to the Northern Mariana Islands to give birth, but many were to females resident in the Northern Mariana Islands to work (CNMI, 1994). Females also travel to many of the other areas to take advantage of advanced medical facilities, but it is not clear that these births affect the Census rates since the women are probably not enumerated.

Conclusions. During the decade of the 1980s, many of the areas became more like the United States demographically. Nevertheless, the areas tended to be younger, to be more male, to have more extended families, and to have slightly higher fertility than the United States.

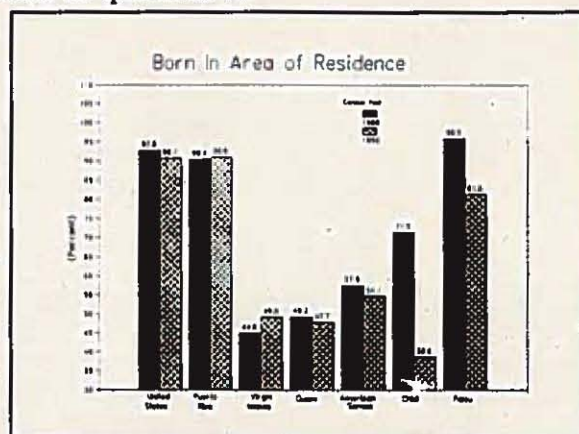
III. MIGRATION

Although the demographic characteristics give the basic structure of a population, the actual growth of that population is heavily (and for the areas "mainly") influenced by migration patterns. All of the areas are experiencing large migrations, some outward, but mostly inward, and these huge influxes of population are having impacts on the infra-structure, on the environment, and on facilities.

Birthplace and Citizenship.

The data on place of birth were derived from answers to question 7.

The place of birth question asked for the name of the place where the person was born according to current international boundaries. Since numerous changes in boundaries of foreign countries have occurred in the last century, some persons may have reported their place of birth or their parents' place of birth in terms of boundaries that existed at the time of the birth or emigration, or in accordance with their own national preference.



The data on citizenship were derived from answers to questionnaire item 8, which was asked on the sample in the United States and Puerto Rico, but of all persons in the other Areas. The question differed from Area to Area.

For American Samoa, Guam, and the Northern Mariana Islands: "Citizens or nationals" were persons who responded in one of these four categories of citizenship: (1) born in this area, (2) born in the United States or another U.S. Territory or Commonwealth, (3) born elsewhere of U.S. parent or parents, or (4) U.S. citizen by naturalization. Naturalized citizens were foreign-born persons who had completed the naturalization process at the time of the census and upon whom the rights of citizenship had been conferred. Persons "Not a citizen or national" were foreign-born persons who were not citizens, including persons who had begun but not completed the naturalization process at the time of the census. These included persons who resided "permanently" in the area and those who resided only "temporarily" in the area.

For Palau, persons born in Palau were considered to be citizens of Palau. U.S. citizens were persons who responded that they were U.S. born, born in a U.S. Territory or Commonwealth, or were foreign-born persons who were naturalized. The three categories of U.S. citizenship were: (1) born in the United States or another U.S. Territory or Commonwealth, (2) born elsewhere of U.S. parent or parents, or (3) U.S. citizen by naturalization. Naturalized citizens were foreign-born persons who had completed the U.S. naturalization process at the time of the census and upon whom the rights of citizenship had been conferred. Persons "Not born in Palau and not a U.S. citizen" were foreign-born persons who were not born in Palau and also were

not U.S. citizens, including persons who had begun but not completed the naturalization process at the time of the census.

More than 9 out of every 10 people living in the United States and Puerto Rico were born in their areas of residence (Table 17). About 8 in every 10 people in Palau were born there (although this proportion is decreasing rapidly, based on change seen in recent censuses). But the other areas have seen massive immigration.

Table 17. Birthplace and Citizenship: 1990

Citizenship	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
All persons	248,709,873	3 522,037	101,809	133,152	46,773	43,345	15,122
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Born in this area	90.7	90.9	49.0	47.7	54.7	38.6	81.5
U.S. citizen, born in the U.S. or other U.S. Territory or Commonwealth	0.6	6.5	18.8	22.7	7.6	5.5	3.4
U.S. citizen, born elsewhere of U.S. parent(s)	0.7	0.3	1.0	2.0	1.0	0.5	0.0
U.S. citizen by naturalization	3.2	1.0	14.1	12.1	0.4	1.6	0.2
Other, not born in this area, and not a U.S. citizen	4.7	1.2	17.2	15.5	36.4	53.7	14.9

Source: U.S. Bureau of Census Publications.

About 55 percent of American Samoa's population was born in American Samoa. This percentage was the smallest for any census in this century, and continues a downward decline. Large numbers of Tongans and Western Samoans have travelled to American Samoa to live and work, and to travel on to the United States to live and work (Ahlburg and Levin, 1990). American Samoa is seeing some return migration (about 8 percent of the population was born in the United States or one of its territories, although some women may have gone to Hawaii or the U.S. mainland to deliver and returned soon to American Samoa, recording the births of these babies in the United States. But most of the non-American Samoa born were born elsewhere in the Pacific, more than one-third in 1990.

None of the other areas had as much as half its populations born in the area. About half of the Virgin Islands population was born there, but about 1 in 5 were born in the United States (or Puerto Rico) and moved to (or returned to) the Virgin Islands. About 1 in every 6 were born elsewhere (mostly in the Caribbean) and were not citizens, somewhat fewer were U.S. citizens by naturalization.

Guam is unique among the areas because of its large military population. In 1990, this population is seen in the 23 percent of Guam's population born in the United States or another territory. About 12 percent were U.S. citizens by naturalization, and more than 15 percent were not U.S. citizens.

The Northern Marianas is the only area to have more than half its population being aliens — 54 percent in 1990. Only 39 percent of the Northern Mariana Islands' population had been born there, with about 6 percent born in Guam, the U.S. or other U.S. areas. The particular immigration patterns in the Northern Mariana Islands create a very different situation from the other areas, although Palau has also begun to turn to large numbers of aliens in its work force. As is seen in the next section, much of this migration is very recent.

Year of Entry. The data on year of entry were derived from answers to questionnaire item 9, which was asked of the sample in the United States and Puerto Rico, and of all persons in the other Areas. The question in the Areas was "When did this person come to this area to stay?" was asked of persons who indicated in the citizenship question that they were not born in the area.

The 1990 census questions, tabulations, and census data products about citizenship and year of entry include no reference to immigration. All persons who were born and resided outside the area before becoming residents of the area have a date of entry. Some of these persons were U.S. citizens by birth (for example, persons both in the U.S., Puerto Rico, another U.S. Commonwealth, U.S. Territory (except Palau), or born abroad of American parents).

Table 18 shows the distribution of persons born outside the area by year of entry. About 1 in every 4 persons born outside the United States but living in the U.S. in 1990 had migrated to the U.S. between 1985 and 1990. The recent migration stream to each of the other areas was faster, although the percentage moving to the Virgin Islands in the 5 years before the Census was closest to the U.S. About 1 in every 3 migrants to Puerto Rico migrated there between 1985 and 1990, but more than 4 of every 10 migrants to American Samoa were recent migrants. Because of the movements of military, construction and other H-2 migrations, and Federated States of Micronesia "impact of Compact of Free Association" movers, more than 6 of every 10 migrants to Guam moved there in the 5 years before the Census. The migrations to the Northern Mariana Islands and to Palau were the most recent of all, with more than 8 of 10 migrants to those areas arriving within 5 years of the Census.

Table 18. Year of Entry to this Area: 1990

Year of Entry	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
All persons	248,709,964	3,522,128	101,858	133,200	46,828	43,384	15,203
Born in this area	225,695,826	3,200,940	49,839	63,504	25,573	16,752	12,321
Percent	90.7	90.9	48.9	47.7	54.6	38.6	81.0
Born outside this area	23,014,047	321,097	51,970	69,648	21,200	26,593	2,801
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1985 to 1990	24.2	32.7	26.5	62.6	43.9	82.7	81.0
1980 to 1984	18.3	16.3	15.3	12.6	23.7	9.4	10.2
1975 to 1979	13.6	13.8	11.0	8.3	12.8	3.7	4.6
1970 to 1974	10.7	14.5	12.7	7.5	8.0	2.3	2.2
1960 to 1969	14.8	18.1	25.2	5.9	8.3	1.0	1.3
Before 1960	18.3	4.5	9.4	3.1	3.3	0.9	0.6

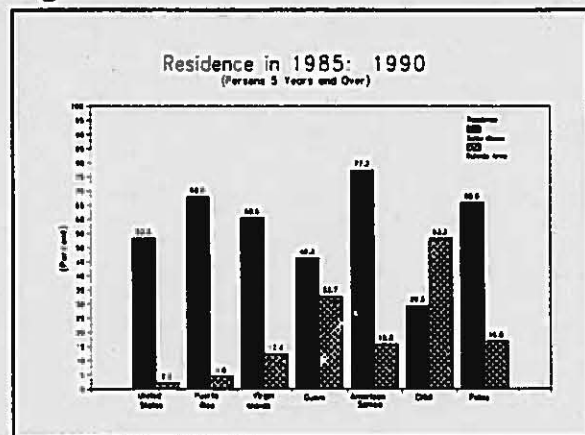
Source: U.S Bureau of the Census Publications.

Because of these strong recent migrations, what is a stream of migrants to the United States, Puerto Rico, and the Virgin Islands (based on the percentage distributions shown in Table 19) was a torrent for the other areas. More than 9 of every 10 migrants to the Northern Mariana Islands and Palau arrived between 1980 and 1990 (so only 1 in every 10 migrants to these areas arrived before 1980), and about 2 of every 3 migrants to American Samoa and 3 of every 4 migrants to Guam arrived between 1980 and 1990. Inevitably, the impact on the infrastructure is considerable (as can be seen, for example, in frequent power and water outages in many of the areas.) Although this paper does not look at housing characteristics, anecdotal evidence suggests that the many immigrants have put considerable stress on housing, increasing prices and decreasing availability in these areas.

Residence 5 Years before the Census. The question of residence 5 years before the census gives information about short term migration, in contrast to information from the birthplace question which gives information about long term migration.

The data on residence in 1985 were derived from answers to question 14b, which was asked for the place of residence on April 1, 1985, for those persons reporting in question 14a that they lived in a different house than their current residence on that date. Persons living in the same area in which they were enumerated were also asked to report the name of the village in which they lived 5 years earlier.

The tabulation category "Same house" in the area included all persons 5 years old and over who did not move during the 5 years as well as those who had moved but by 1990 had returned to their 1985 residence. The category "Different house" in the area included persons who lived in the



same area in 1985 but in a different house or apartment from the one they occupied on April 1, 1990. These movers were then further subdivided according to whether or not they previously lived in the same municipality, county, or district (depending on the area), as their current residence.

The number of persons who were living in a different house in 1985 will be somewhat different from the total number of moves during the 5-year period. Some persons in the same house at the two dates had moved during the 5-year period; but by the time of the census, they had returned to their 1985 residence. Other persons who were living in a different house had made one or more intermediate moves. For similar reasons, the number of persons living in a different municipality, county, or district may be understated.

More than half of all persons 5 years and over living in the United States in 1990 had lived in the same house in 1985 as 1990. People in several of the areas — Puerto Rico, the Virgin Islands, American Samoa, and Palau — were even more likely than their counterparts in the United States *not* to have moved during the 5 year period (or, at least, to have been in the same house in 1985 as 1990). The rapid, recent immigration to Guam and the Northern Mariana Islands makes these areas show different patterns. Guam, of course, has its military population, as well as its many short-term migrants for work, and the longer term migrants who plan to stay (both from Asia and Micronesia); less than half of the people 5 years and over on Guam in 1990 had lived in the same house in 1985 as 1990.

Table 19. Residence in 1985: 1990							
Residence	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
Persons 5 years and over	230,445,777	3,219,765	92,579	118,055	39,821	39,206	13,609
Same house in 1985	122,796,970	2,190,479	56,098	54,665	30,759	11,479	8,962
Percent	53.3	68.0	60.6	46.3	77.2	29.3	65.9
Different house in 1985	102,540,097	879,691	25,003	24,763	2,763	6,870	2,355
Same county 1/	80,954,800	584,469	23,842	10,075	1,152	6,536	...
Percent (of different house)	78.9	66.4	95.4	40.7	41.7	95.1	...
Different county 1/	21,585,297	295,222	1,161	14,688	1,611	334	...
Outside area in 1985	5,108,710	149,595	11,478	38,627	6,299	20,857	2,292
Percent	2.2	4.6	12.4	32.7	15.8	53.2	16.8
1/ For the United States and American Samoa, same and different county, Puerto Rico same and different municipio, Virgin Islands same and different island, Guam same and different district, Northern Mariana Islands same and different municipality.							
Source: U.S. Bureau of the Census Publications.							

Only 3 in every 10 Northern Mariana Islands persons lived in the same house in 1985 as 1990; that is, 7 in every 10 persons did not live in the same house in 1985 as 1990. More than half of the Northern Mariana Islands population 5 years and over lived outside the Northern Mariana Islands in 1985 but were living inside in 1990 (so about 1 in every 5 persons lived in the Northern Mariana Islands but in a different house in 1985.)

One of the complicating features of geographical analysis among the areas is that county equivalents differ from area to area. Note that the data in the table for the United States and American Samoa are for same and different county, Puerto Rico same and different municipio, Virgin Islands same and different island, Guam same and different district, Northern Mariana Islands same and different municipality. About 4 in every 5 persons living in a different house but in the United States in 1985 as 1990 lived in the same county. Persons in the Virgin Islands and the Northern Mariana Islands who lived in a different house were almost always living in the same country-equivalent (more than 95 percent of the time), but the figures decrease to 2 in 3 for Puerto Rico, and only about 4 in 10 in Guam and American Samoa. That is, persons in American Samoa and Guam were more likely to change houses, and move between county-equivalents than persons living in other areas. Palau did not have data for this part of the item.

Only 2 percent of the United States population lived abroad in 1985. About 5 percent of Puerto Rico's population lived outside Puerto Rico in 1985 but inside in 1990 (including persons from Puerto Rico who were living in the United States in 1985 but in Puerto Rico in 1990). Normally, this 5 percent would seem extremely high since it means that 1 in every 20 persons living in Puerto Rico moved there during the 5 year period before the census. However, this figure pales by comparison with some of the others.

About 1 in every 8 persons in the Virgin Islands moved there from outside during the 5 years before the census, as did about 3 in every 20 American Samoans and 1 in every 6 Palauans. The big movers, were for Guam and the Northern Mariana Islands. About 1 in every 3 persons 5 years and over and living on Guam in 1990 had lived outside the area in 1985. For the Northern Marianas, the situation was even more striking — more than half of the population of the Northern Mariana Islands lived outside the commonwealth in 1985 but inside in 1990. The comparable data for the United States would be if 115 million persons 5 years and over lived outside the United States in 1985, but had moved inside by 1990!

Conclusions. All of the areas except Puerto Rico are experiencing massive migration movements, which clearly are altering the socio-cultural (as well as the physical) environments of these areas. Much of the migration was very near the time of the 1990 Census, so the full impact of these movements has yet to be measured.

IV. SOCIAL CHARACTERISTICS

The 1990 Censuses collected some information on social conditions in the United States and its areas. These social data give insights into the social well-being of the communities.

Language Spoken at Home. The data on language spoken at home were derived from answers to questionnaire items 15b, 15c, and 15d. They were intended to measure the extent to which languages other than English were spoken and, for the Pacific Areas, how frequently they were spoken relative to English.

Persons were asked whether they currently spoke a language other than English at home. They were not to include languages spoken only at school or languages for which the ability was

limited to a few words or slang. Persons who spoke only English at home were instructed to answer "No" and to skip the remainder of the language questions.

Those persons who reported speaking a language other than English were asked in question 15c to report the non-English language spoken at home. If more than one non-English language was spoken, the person was asked which language was spoken most often. If it could be determined which was spoken most often, the first language the person learned to speak was to be recorded. The response was written on the form by the enumerator and later given a three-digit code in a separate operation. Answers were coded using a detailed list of languages which distinguished more than 380 languages or language groups. If more than one language was written on the form only the first non-English language was coded.

In 1990, about 14 percent of the United States population 5 years and over spoke a language other than English at home, an increase of about 4 percentage points during the decade (Table 20). A smaller percentage spoke a language other than English at home in the United States than in any of the areas where these data were collected (Puerto Rico collected different information). About 1 in every 4 persons in the Virgin Islands spoke another language at home, and about 5 in every 8 persons in Guam. The percentage for the Virgin Islands increased during the decade, the percentage for Guam decreased somewhat.

Table 20. Language Spoken at Home for Persons 5 Years and over: 1980 and 1990						
Language Spoken at Home	United States	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
1990 Persons	230,445,777	92,579	118,055	39,821	39,206	13,609
Speak only English at home	198,600,798	70,442	44,048	1,203	1,878	414
Speak another language at home	31,844,979	22,137	74,007	38,618	37,328	13,195
Percent	13.8	23.9	62.7	97.0	95.2	97.0
1980 Persons	210,247,455	85,856	92,977	27,511	14,316	10,715
Speak only English at home	187,187,415	69,754	33,182	1,077	710	104
Speak another language at home	23,060,040	16,102	59,795	26,434	13,606	10,611
Percent	11.0	18.8	64.3	96.1	95.0	99.0
Source: U.S. Bureau of the Census, 1980 PC80-1-C1 and PC80-1-C/D.						
Note: These data not collected in Puerto Rico.						

Almost no one in American Samoa, the Northern Mariana Islands or Palau spoke English at home (only 3 percent spoke English at home in American Samoa and Palau, and 5 percent in the Northern Mariana Islands). The percentages changed little during the decade, with the percentage of English speaking in American Samoa even going down during the decade. The percentage of English speakers in the Northern Marianas remained the same, but increased in Palau, probably because of selective immigration of non-Palauan speakers.

School Enrollment. Data on school enrollment were derived from answers to questionnaire item 10. Persons were classified as enrolled in school if they reported attending a "regular" public or private school or college at any time between February 1, 1990, and the time of

enumeration. The question included instructions to "include only pre-kindergarten, kindergarten, elementary school, and schooling which would lead to a high school diploma or a college degree" as a regular school. Enumerators were instructed that enrollment in a trade or business school, company training, or tutoring were not to be included unless the course would be accepted for credit at a regular elementary school, high school, or college.

The enumerator instructions defined a "public" public school as "any school or college controlled and supported by a local or Federal Government." "Schools supported and controlled primarily by religious organizations or other private groups" were defined as private.

Persons who were enrolled in school were classified as enrolled in "preprimary school," "elementary school," "high school," or "college," according to their response to question 11a (years of school completed or highest degree received). Persons who were enrolled and reported completing pre-kindergarten school or less were classified as enrolled in "preprimary school," which includes kindergarten. Similarly, enrolled persons who had completed at least kindergarten, but not 8th grade, were classified as enrolled in elementary or high school. Persons who completed at least the 8th grade, but who were not high school graduates, were classified as enrolled in high school. Enrolled persons who reported completing high school or some college or having received a post-secondary degree were classified as enrolled in "college." Enrolled persons who reported completing the twelfth grade but receiving "NO DIPLOMA" were classified as enrolled in high school.

The distribution of school attendees was somewhat influenced by availability of particular types of schooling. Only 9 percent of the populations of Palau and CNMI, for example, were attending college because each of those areas only has a single, 2 year college, both of recent origin (although the Palau Community College replaced the Micronesian Occupational Center) (Table 21). American Samoa and Virgin Islands also have fewer tertiary institutions than the other areas. Also, with lower educational attainment in some of the areas, fewer students are eligible to go on for continued schooling.

Table 21. School Enrollment and Type of School: 1990							
School Enrollment	U.S. [Numb. in 000s]	Puerto Rico [000s]	Virgin Islands	Guam	Amer- ican Samoa	CNMI	Palau
Persons 3 + years enrolled	64,987	1,025	32,658	37,131	16,132	8,092	4,119
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Preprimary school	6.9	4.1	5.9	5.9	8.9	5.8	2.4
Elementary school, 1st-8th grade 1/	48.7	50.4	79.8	52.7	52.1	59.1	57.4
High school, 9th to 12th grade 2/	16.8	24.5	(NA)	25.4	27.2	26.0	31.0
College	27.6	20.9	14.3	16.0	11.7	9.2	9.3
1/ For Virgin Islands, Elementary 1st to 8th Grade and High school 9th to 12th grade are combined and for the United States 1st-9th grade.							
2/ For the United States 10th to 12th grade.							
Source: U.S. Bureau of the Census Publications.							

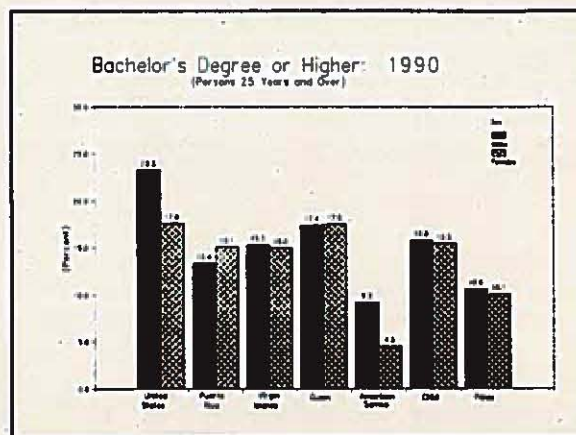
Similarly, Palau has few preprimary schools, so the percentage in these schools will be less than in other areas. American Samoa, on the other hand, sends many of its children to these schools, presumably including Headstart programs.

Table 22 shows the percentage of students enrolled in public school. About 84 percent of all students enrolled in school in the United States were in public school. Only American Samoa had a higher percentage in public school, at 91 percent. Only about 3 in every 4 students in Puerto Rico attended public school, but this low figure was partly influenced by college students, less than half of whom attended public colleges and universities.

Table 22. Percentage Enrolled in Public School: 1990							
Type of School	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
Persons 3+ years enrolled	84.4	75.4	78.2	82.5	91.1	80.5	80.8
Preprimary school	59.5	66.3	56.9	64.3	90.5	64.6	67.0
Elementary school, 1st-8th grade 1/	89.7	83.4	81.3	82.1	90.5	79.5	83.5
High school, 9th to 12th grade 2/	91.5	83.5	(NA)	85.5	92.2	85.8	76.5
College	77.1	48.4	69.9	86.2	91.9	82.6	81.7
1/ For Virgin Islands, Elementary 1st to 8th Grade and High school 9th to 12th grade are combined and for the United States 1st-9th grade.							
2/ For the United States 10th to 12th grade.							
Source: U.S. Bureau of the Census Publications.							

About 92 percent of high school students living in the United States and in American Samoa were in public school. All the other areas had smaller percentages in public school (so, larger percentages in private school).

Educational Attainment. Data on educational attainment were derived from answers to questionnaire item 11a. Persons are classified according to the highest grade of school completed or the highest degree received. For persons currently enrolled in school, the question included instructions to report the level of the previous grade attended or the highest degree received. The question included response categories which allowed persons to report completing the 12th grade without receiving a high school diploma. Respondents were to report as "high school graduate(s)" persons who received either a high school diploma or the equivalent, for example, passed the Test of General Educational Development (G.E.D.), and did not attend college.



Enumerators were instructed that schooling completed in foreign or ungraded school systems should be reported as the equivalent level of schooling in the regular American system; that

vocational certificates or diplomas from vocational, trade, or business schools or college were not to be reported unless they were college level degrees; and the honorary degrees were not to be reported. The instructions gave "medicine, dentistry, chiropractic medicine, optometry, osteopathic medicine, pharmacy, podiatry, veterinary medicine, law, and theology" as examples of professional school degrees, and specifically excluded "barber school, cosmetology, or training for a specific trade" from the professional school degree category.

Note that *High School Graduate or Higher* includes persons whose highest degree was a high school diploma or its equivalent, persons who attended college or professional school, and persons who received a college, university, or professional degree. Persons who reported completing the 12th grade but not receiving a diploma were not included.

About 3 in every 4 persons 25 years and over in the United States in 1990 were high school graduates, up from about 2 in 3 in 1980 (Table 23). The proportions for Guam were only slightly lower. But, for the other areas the rates were much lower. Less than half of Puerto Rico's adult population were high school graduates in 1990 (which was still 10 percentage points more than in 1980.) And, while American Samoa showed impressive improvement in the percentage high school graduates, its percentage surpassed only Puerto Rico of the U.S. areas. The Northern Mariana Islands and Palau showed the most dramatic improvements, but a large part of the improvement in each case, came from the better-educated immigrants. Palau improved from 34 percent high school graduates in 1980 to 58 percent in 1990, while the Northern Mariana Islands went from 45 percent to 66 percent (and increase of 21 percentage points).

Table 23. Percent High School and College Graduates: 1980 and 1990							
Level and Year	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
HIGH SCHOOL							
1990	75.2	49.7	56.5	73.3	54.5	66.3	57.6
1980	66.5	39.5	50.0	65.6	42.1	44.7	33.9
COLLEGE							
1990	20.3	14.3	15.1	17.5	6.9	15.6	10.3
1980	16.2	9.4	14.2	17.5	7.6	11.3	5.4
Source: U.S. Bureau of Census Publications.							

In most cases, the improvement for percentage of college graduates was much less. In American Samoa, for example, the percentage being college graduates actually decreased during the decade (although the decrease was less than one percentage point), but at only 7 percentage, cause for concern in terms of potential economic development. The percentage of college graduates remained at 17.5 percent for Guam, still second to the United States. Both Puerto Rico and the Northern Mariana Islands showed dramatic increases in the percentages being college graduates. Palau showed the greatest improvement, with the percentage being graduates almost doubling during the decade; however, at about 10 percent, Palau had the second lowest percentage of college graduates.

All areas except Puerto Rico and the Virgin Islands had higher percentages of male college graduates than females, but all areas saw improvements for both sexes (Table 24). Only Puerto Rico males in 1990 had less than half being high school graduates; in 1980, Puerto Rico, American Samoa, the Northern Mariana Islands, and Palau males and females all had less than half of adults being high school graduates.

Table 24. Percent High School Graduates by Sex: 1980 and 1990							
Sex and Year	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
MALES							
1990	75.7	49.1	54.5	75.2	55.9	69.1	62.1
1980	67.3	40.1	50.0	69.3	46.6	49.7	39.3
FEMALES							
1990	74.8	50.3	58.3	71.0	53.0	62.3	52.2
1980	65.8	39.0	50.1	61.6	37.4	38.2	28.6
Source: U.S. Bureau of Census Publications.							

Females clearly showed more improvement than males over the decade. While females in the United States increased by 9 percentage points, the increase was 11 points for Puerto Rico females, 16 for American Samoa, and 24 points for the Northern Mariana Islands and Palau. Again, some of the difference is attributed to better education of the migrant communities, but the native communities also saw general improvement in educational attainment as well. Except for Palau, the percentage point increases were smaller for males than females.

In the United States in 1990, about 23 percent of males and 18 percent of females 25 years and over were college graduates (Table 25). While females on Guam had about the same percentage of college graduates as the United States, all other groups in the areas had smaller percentages. The percentages for college graduates was about the same for both sexes in the Virgin Islands (15 percent), Guam (17 percent), the Northern Marianas (16 percent), and Palau (more than 10 percent). Male American Samoans were more than twice as likely to be college graduates than females, and in Puerto Rico, a large percentage of females than males were college graduates.

Table 25. Percent Bachelor's degree or higher by Sex: 1980 and 1990

Sex and Year	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
MALES							
1990	23.3	13.4	15.3	17.4	9.2	15.8	10.6
1980	20.1	10.0	15.8	18.4	10.4	14.2	6.8
FEMALES							
1990	17.6	15.1	15.0	17.5	4.5	15.5	10.1
1980	12.8	8.9	12.8	16.6	4.6	7.5	4.0

Source: U.S. Bureau of Census Publications.

Except for Guam and American Samoa males (and American Samoa females), the percentage being college graduates increased for all groups between 1980 and 1990. Less than 5 percent of all American Samoa females were college graduates in 1990, a slight decrease over the decade. The percentage of Palauan females being college graduates more than doubled to 10 percent of adult females in Palau, but Palau continued to lag behind the other areas (except American Samoa). Except for Guam's females, all other areas were at least two percentage points lower than the 18 percent for U.S.

Males were doing even worse. Guam, the best of the areas, was still 6 percentage points lower than the 23 percent for U.S. males. Once again, in terms of potential for economic development, the better educated the population, the more likely the human resources available for improvement.

Veteran Status. The data on veteran status were derived from responses to questionnaire item 17. The term "active duty" refers to active service in the Armed Forces of the United States in the Army, Navy, Air Force, Marine Corps, or Coast Guard and to service as a Merchant Marine Seaman during World War II; it does not include active duty in the military Reserves or National Guard for the 4 to 6 months of initial training or yearly summer camps. A "civilian veteran" is a person 16 years old or over who has served (even for a short time) but is not now serving on active duty in the U.S. Army, Navy, Air Force, Marine Corps, or the Coast Guard, or who served as a Merchant Marine seaman during World War II. Persons who served in the National Guard or military Reserves are classified as veterans only if there were ever called up for active duty not counting the 4 to 6 months duty for initial training or yearly summer camps. All other civilians 16 years old and over are classified as nonveterans. The military Reserves consists of the reserve branches of the U.S. Army, Navy, Air Force, Marine Corps, and Coast Guard.

About 14 percent of the adult population in the United States were veterans in 1990, partly as a result of large scale participation in World Wars I and II, the Korean War, and the Vietnam Conflict, as well as peace time participation (Table 26). While all of the other areas are entitled to participate in military service, many of these areas only recently became eligible to participate, and so are less likely to have served, and then become veterans.

Table 26. Veterans: 1990

Veterans	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
Persons 16+ years	191,829,271	2,497,078	70,323	90,990	27,991	32,522	10,238
Veterans	27,481,055	138,150	4,884	7,974	830	552	49
Percent	14.3	5.5	6.9	8.8	3.0	1.7	0.5
Source: U.S. Bureau of Census Publications.							

Guam had the highest percentage of veterans in 1990, at 9 percent, 2 percentage points more than the Virgin Islands, and 3 percentage points more than Puerto Rico. Only 3 percent of American Samoa's adult population were veterans, 2 percent of the Northern Mariana Islands adults, and less than 1 percent of Palauans.

Conclusions. The areas were more likely to speak a language other than English at home, more likely to be less educated, and less likely to be veterans than their counterparts in the U.S. All of these variables indicate continued traditional cultural intensities.

V. ECONOMIC CHARACTERISTICS

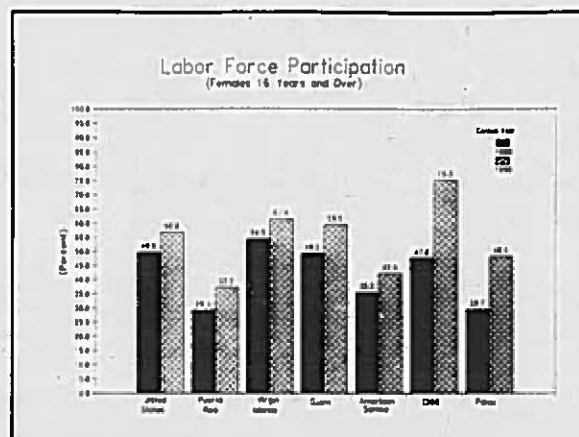
The data on labor force participation and commuting characteristics were related to the reference week; that is, the calendar week preceding the date on which the respondents were interviewed by enumerators. This week is not the same for all respondents since the enumeration was not completed in one week. The occurrence of holidays during the enumeration period could affect the data on actual hours worked during the reference week, but probably had no effect on overall measurement of employment status.

The data on employment status were derived from answers to questionnaire items 21, 25, and 26, which were asked of persons 15 years and over. The series of questions on employment status was designed to identify, in this sequence: (a) persons who worked at a job or business or farm at any time during the reference week; (b) persons who did not do such work during the reference week, but who had jobs or businesses from which they were temporarily absent (excluding layoff); (c) persons on layoff; and (d) persons who did not do such work during the reference week, but who were looking for work to earn money during the last 4 weeks and were available for work during the reference week.

Labor Force Participation.

Persons in the *labor force* were those classified in the civilian labor force plus members of the Armed Forces (persons on active duty with the United States Army, Air Force, Navy, Marine Corps, or Coast Guard). The *civilian labor force* consists of persons classified as employed or unemployed as described below.

Employed persons were all civilians 16 years old and over who were either (a) "at work" — those who did any work at all during the reference week as paid employees or in their own business or profession, or on their own farm, or who worked 15 or more hours as unpaid workers on a family farm or in a family business; of (b) were "with a job but not at work" — those who did not do such work during the reference week, but who had jobs or businesses from which they were temporarily absent due to illness, bad weather, industrial dispute, vacation, or other personal reasons. Excluded from the employed are persons without jobs or businesses whose only activity consisted of work around the house or unpaid volunteer work for religious, charitable, and similar organizations; persons without jobs or businesses who did subsistence activity only during the reference week; and persons on active duty in the United States Armed Forces.



Unemployed persons were all civilians 16 years old and over who (a) were neither "at work" nor "with a job but not at work" during the reference week, or who did subsistence activity only; (b) were looking for work to earn money during the last 4 weeks; and (c) were available to accept a job. Examples of job seeking activities are:

- ◆ Registering at a public or private employment office
- ◆ Meeting with prospective employers
- ◆ Investigating possibilities for starting a professional practice or opening a business
- ◆ Writing letters of application
- ◆ Being on a union or professional register

Also included as unemployed are civilians 16 years old and over who did not work at a job or business during the reference week and were waiting to be called back to a job from which they had been laid off.

Persons were *not in the labor force* if they were 16 years old and over and not classified as members of the labor force. This category consisted mainly of persons doing subsistence activity, students, housewives, retired workers, seasonal workers enumerated in an "off" season who were not looking for work, institutionalized persons, and persons doing only incidental unpaid family work (less than 15 hours during the reference week).

Subsistence Activity. A person engaged in subsistence activities if he or she mainly produced goods for his or her own or family's use and needs, such as growing/gathering food, fishing, cutting copra for home use, raising livestock, making handicrafts for home use, and other productive activities not primarily for commercial purposes. Persons who did subsistence activity only during the reference week are *not* classified as "employed," unless they were "with a job but not at work".

About 65 percent of persons 16 years and over in the United States in 1990 were in the labor force (Table 27). American Samoa was much lower, at just more than 50 percent, and Puerto Rico's labor force participation was less than 50 percent. About 6 in every 10 adults in Palau were in the labor force, as were about 3 in every 3 in the Virgin Islands. But Guam and the Northern Mariana Islands had much higher percentages - 73 percent of Guam's adult population and fully 82 percent of the Northern Mariana Islands adults were in the labor force in 1990.

Table 27. Labor Force Status: 1990							
Labor Force Status	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	North. Mariana Islands	Palau
Persons 16 + years	191,829,271	2,497,078	70,323	90,990	27,991	32,522	10,238
In labor force	125,182,378	1,180,162	47,553	66,138	14,198	26,589	6,072
Percent	65.3	47.3	67.6	72.7	50.7	81.8	59.3
Armed forces	1,708,928	5,486	110	11,952	11	8	2
Civilian labor force (CLF)	123,473,450	1,174,676	47,443	54,186	14,187	26,581	6,070
Employed	115,681,202	934,736	44,267	52,144	13,461	25,965	5,599
Unemployed	7,792,248	239,940	3,176	2,042	726	616	471
Percent of CLF	6.3	20.4	6.7	3.8	5.1	2.3	7.8
Not in labor force	66,646,893	1,316,916	22,770	24,852	13,793	5,933	4,166
Subsistence activity only	...	...	...	396	543	185	448
Source: U.S. Bureau of the Census Publications.							

Both labor force participation and the civilian employment rates are very dependent on prevailing economic conditions at the time of the decennial census. And, since not all areas have the same "boom and bust" cycles, the rates may not be completely comparable. Also, the changes over the decade may also need to be regarded with some caution.

However, if the unemployment rates were compatible, Puerto Rico had an astronomical unemployment rate of more than 20 percent in 1990. Puerto Rico's rate was more than 3 times the U.S. rate during the reference week. The Virgin Islands rate of 6.7 percent and Palau's of 7.8 percent were both higher than the U.S. unemployment, while the rates for American Samoa (5.1 percent), Guam (3.8 percent), and the Northern Mariana Islands (2.3 percent) were lower.

Subsistence activity was collected only in the Pacific Islands area. The data in Table 27 show that very few people in the areas continue to do subsistence activities, that is, most adults have moved into the money economy. Palau, with 448 people doing subsistence only (4.4 percent of the population 16 years and over), had the highest percentage of the areas (but Palau will no longer be included in the decennial censuses because of its change in status.) Almost 2 percent of American Samoa's population engaged in subsistence activities only, but less than one percent of Guam's and the Northern Mariana Islands' adults were doing subsistence.

The percentage of adult males in the labor force in the United States decreased slightly between 1980 and 1990, while the percentage of females increased from 49.9 percent to 56.8 percent (Table 28). The percentages for males in the Virgin Islands were about the same as for the United States, and Guam's male participation increased somewhat, but in the other areas were

more striking. The male labor force participation rate in Palau increased from 53 percent in 1980 to 68 percent in 1990 (an increase of 15 percentage points). The rate in the Northern Mariana Islands increased by 10 percentage points, while American Samoa and Puerto Rico increased less, and saw their rates still remain below 6 in 10. Fully 7 in every 8 male adults in the Northern Mariana Islands were in the labor force.

Table 28. Percent in the Labor Force by Sex: 1980 and 1990

Sex and Year	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
MALES							
1990	74.4	58.4	74.5	83.8	58.8	87.4	68.3
1980	75.1	54.4	75.4	82.2	55.6	77.1	52.6
FEMALES							
1990	56.8	37.2	61.4	59.5	42.4	75.3	48.4
1980	49.9	29.1	54.5	49.2	35.5	47.6	29.7

Source: U.S. Bureau of Census Publications.

The Northern Marianas also led in female labor force participation. In 1990, about 3 in every 4 adult females in the Northern Mariana Islands were in the labor force, a jump of 27 percentage points during the decade. Female labor force participation increased impressively in all areas, with increases of 10 percentage points for Guam and 18 points for Palau being more impressive. The down side is that only 37 percent of Puerto Rico's females were in the labor force, and 42 percent of American Samoa's in 1990. Clearly, females dropping out of the labor force to have and raise families influence these rates, so it is not clear how many females would like to be in the labor force, but were not there. The Census does collect data on unemployment, but people must declare that they are actively looking for work to be included in the labor force.

About 1.4 percent of the United States adult population in 1990 were in the Armed Forces (Table 29). All of the other areas except Guam had rates below one percent. On Guam, however, 18 percent of the population in labor force were in the armed forces, and these numbers, of course, influence the distributions of occupations, industries, and class of workers.

Table 29. Percent in the Armed Forces: 1990

Armed Forces	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
In labor force	125,182,378	1,180,162	47,553	66,138	14,198	26,589	6,072
Armed forces	1,708,928	5,486	110	11,952	11	8	2
Percent	1.4	0.5	0.2	18.1	0.1	0.0	0.0

Source: U.S. Bureau of the Census Publications.

Industry, Occupation, and Class of Worker

The data on industry, occupation, and class of worker were derived from answers to questionnaire items 28, 29, and 30, respectively. Information on industry relates to the kind of business conducted by a person's employing organization; occupation describes the kind of work the person does on the job.

For employed persons, the data refer to the person's job during the reference week. For those who worked at two or more jobs, the data refer to the job at which the person worked the greatest number of hours. For unemployed persons, the data refer to their last job. The industry and occupation statistics are derived from the detailed classification systems developed for the 1990 census. The *Classified Index of Industries and Occupations* provides additional information on the industry and occupation classification systems.

Occupation. The occupation classification system developed for the 1990 census consisted of 500 specific occupational categories for employed persons arranged into 6 summary and 13 major occupational groups. This classification was developed to be consistent with the Standard Occupational Classification (SOC) Manual: 1980.

Some occupation groups are related to certain industries. Operators of transportation equipment, farm operators and workers, and private household workers account for major portions of their respective industries of transportation, agriculture, and private households. However, the industry categories include persons in other occupations. For example, persons employed in agriculture include truck drivers and bookkeepers; persons employed in the transportation industry include mechanics, freight handlers, and payroll clerks; and persons employed in the private household industry include occupations such as chauffeur, gardener, and secretary.

About 26 percent of all employed persons 16 years and over in the United States were in managerial and professional specialty occupations, a larger percentage than for any of the areas (Table 30). Palau, at 24 percent, and Puerto Rico and Guam, at 23 percent, followed. Only 18 percent of the Northern Mariana Islands employed persons were managers and professionals.

Table 30. Occupation: 1990							
Occupation	U.S. [Numb. in 000s]	Puerto Rico	Virgin Islands	Guam	Amer- ican Samoa	Northern Mariana Islands	Palau
Employed persons 16 + years	115,681	934,736	44,267	52,144	13,461	25,965	5,599
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Managerial and professional specialty	26.4	22.8	21.5	23.2	19.7	17.9	24.0
Technical, sales and admin. support	31.7	29.8	30.3	31.3	19.1	14.0	21.6
Service	13.2	14.5	18.9	15.8	10.3	17.5	19.8
Farming, forestry, and fishing	2.5	2.3	1.7	1.2	2.5	2.3	6.4
Precision production, craft, & repair	11.3	11.6	14.6	16.9	15.1	23.4	16.8
Operators, fabricators, and laborers	14.9	19.0	13.1	11.5	33.3	24.5	11.4
Source: U.S. Bureau of the Census Publications.							

The largest occupational category was technical, sales, and administrative support personnel in all of the areas except American Samoa and the Northern Mariana Islands, where the category

of operators, fabricators, and laborers prevailed. Undoubtedly, here we are seeing the impact of the tuna canneries in American Samoa and garment factories in the Northern Mariana Islands. Fully 1 in every 3 American Samoa workers were operators, fabricators, and laborers.

About 1 in 4 of the Northern Mariana Islands workers were operators, fabricators, and laborers, and slightly fewer were in precision production, crafts and repair occupations.

The distributions of occupations in Puerto Rico, the Virgin Islands, and Guam were similar to those of the United States, with few exceptions. Workers in Puerto Rico were less likely to be in managerial and professional specialties and more likely to be operators, fabricators, and laborers than the average worker in the U.S. In the Virgin Islands and Guam, workers were less likely to be managers and more likely to be in service or precision production than the U.S. workers.

A series of short tables illustrates the changes in occupational distribution over the decade for males and females separately. Table 31 shows change for managerial and professional specialty occupations by sex.

Table 31. Percent Managerial and Professional Specialty Occupations by Sex: 1980 and 1990							
Sex and Year	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
MALES							
1990	25.2	19.1	18.6	21.3	20.0	19.0	21.9
1980	23.6	17.8	20.9	24.1	24.6	25.1	22.7
FEMALES							
1990	27.8	28.3	24.6	25.8	19.3	16.3	27.8
1980	21.5	24.7	25.1	26.1	22.4	19.7	26.0
Source: U.S. Bureau of Census Publications.							

Only the United States and Puerto Rico saw increases in the percentage of the employed population in managerial and professional occupations during the decade, except for Palau's females. The percentages decreased as more immigrants filled entry level positions, developing the areas' economies.

Almost 44 percent of all U.S. employed females were working in technical, sales, and administrative support occupations in 1990, a 2 percentage decrease from 1980 (while males in these occupations increase almost 3 percentage points during the decade (Table 32). The two Caribbean areas and Guam experienced increases in the percentages of females in these occupations, while the percentages for American Samoa, Palau, and especially the Northern Mariana Islands, decreased. While 45 percent of CNMI females in 1980 were working in technical, sales, and administrative support occupations, this figure decreased to 19 percent in 1990.

Table 32. Percent Technical, Sales, and Administrative Support Occupations by Sex: 1980 and 1990

Sex and Year	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
MALES							
1990	21.7	23.2	17.0	18.2	13.2	10.2	13.3
1980	19.0	21.6	14.6	18.9	15.1	15.7	15.4
FEMALES							
1990	43.6	39.6	45.0	49.4	27.5	18.9	35.8
1980	45.6	36.8	41.0	48.2	33.0	44.6	40.1

Source: U.S. Bureau of Census Publications.

The percentage of males in these occupations increased for the Caribbean areas, but decreased in all of the Pacific areas (although the decrease in Guam was slight.)

About 10 percent of the United States employed males were in service occupations in 1990, a slight increase from 1980, and about 17 percent of the employed females, a slight decrease from 1980 (Table 33). By contrast, more than 31 percent of Palau's females (up from 20 percent in 1980) were in service occupations (compared to 13 percent of the males). About 1 in every 4 females in the Virgin Islands and in the Northern Mariana Islands were in service occupations, but in both cases these percentages were lower than in 1980.

Table 33. Percent Service Occupations by Sex: 1980 and 1990

Sex and Year	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
MALES							
1990	10.2	14.6	15.1	13.2	10.1	12.0	13.1
1980	9.2	13.6	14.2	13.5	12.6	13.3	13.4
FEMALES							
1990	16.9	14.3	23.0	19.4	10.6	24.9	31.3
1980	17.9	16.2	27.1	21.3	13.2	30.9	20.1

Source: U.S. Bureau of Census Publications.

The percentages of both males and females working as operators, fabricators, and laborers in the United States decreased during the decade, each by about 3 percentage points (although the percentage of males was twice the females in 1980, and 2 1/2 times in 1990.) (Table 34). Puerto Rico's males saw a small decrease, and Palau's a much larger decrease, but American Samoa males working in these fields increased by more than 9 percentage points.

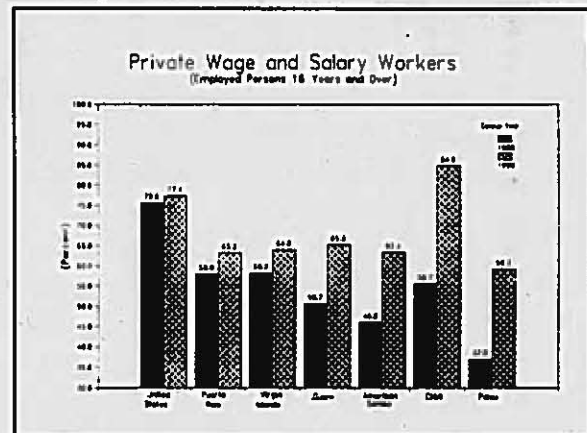
Table 34. Percent Operators, Fabricators, and Laborers by Sex: 1980 and 1990

Sex and Year	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
MALES							
1990	20.3	22.2	21.3	17.4	29.7	15.2	16.7
1980	23.2	23.7	21.3	16.4	20.6	13.9	21.3
FEMALES							
1990	8.5	14.3	4.0	3.4	38.4	36.8	2.1
1980	11.7	18.9	3.1	2.4	13.8	2.0	5.9

Source: U.S. Bureau of Census Publications.

More remarkably, the Northern Mariana Islands females increased their percentage working as operators, fabricators, and laborers, from 2 percent in 1980 to 37 percent in 1990, the result of the introduction of the garment factories and other labor-intensive industries. The percentage of American Samoa females in this occupational category was even higher than the Northern Mariana Islands females — 38 percent — but the American Samoa females were only 14 percent of their 1980 labor force. Only 2 percent of Palau's females, 3 percent of Guam's, and 4 percent of the Virgin Islands' were operators, fabricators, or laborers.

Class of Worker. The data on class of worker were derived from answers to questionnaire item 30. The information on class of worker refers to the same job as a respondent's industry and occupation and categories person according to the type of ownership of the employing organization. *Private Wage and Salary Workers* included persons who worked for wages, salary, commissions, tips, pay-in-kind, or piece rates for a private for profit employer or a private not-for-profit, tax-exempt or charitable organization. Self-employed persons whose business was incorporated are included with private wage and salary workers because they were paid employees of their own companies.



The industry category "Public Administration" is limited to regular government functions such as legislative, judicial, administrative, and regulatory activities of governments. Other government organizations such as school, hospitals, liquor stores, and bus lines are classified by industry according to the activity in which they are engaged. On the other hand, the class of worker government categories include all government workers.

In the United States in 1990, more than 77 percent of employed persons were private wage and salary workers, a larger percentage than for any of the areas except the Northern Mariana Islands (Table 35). In the CNMI, almost 85 percent of all workers (17 out of every 20 workers)

worked in the private sector, for private wages and salary. The other areas had percentages in the private sector ranging from 65 percent for Guam down to 59 percent for Palau.

Table 35. Percent Private Wage and Salary Workers by Sex: 1980 and 1990							
Sex and Year	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
MALES							
1990	77.9	65.8	66.7	66.0	61.4	83.8	60.0
1980	76.0	60.2	61.3	50.6	42.5	54.9	35.0
FEMALES							
1990	76.8	59.4	61.0	64.3	66.3	86.2	58.2
1980	75.0	54.1	54.4	50.9	51.4	57.1	41.0
Source: U.S. Bureau of Census Publications.							

Palau's comparatively low percentage still is an impressive increase in private sector development during the decade. In 1980 only 35 percent of the males and 41 percent of the females worked for private wages or salaries; hence, about 2 in every 5 workers were private sector workers. By 1990, a flip-flop had occurred, and about 3 in every 5 workers were private sector workers.

The Northern Mariana Islands showed similarly dramatic changes. While 55 percent of the males and 57 percent of the females in 1980 worked for private wages and salary, by 1990, 84 percent of the males and 86 percent of the females were in this category.

All areas, in fact, showed increases in private sector employment between 1980 and 1990, although the gains in the Caribbean were more modest than in the Pacific areas (but greater than for the United States, although, except for the Northern Marianas, not reaching U.S. levels.)

In 1990, larger percentages of males than females worked for private wages in all areas except American Samoa and the Northern Mariana Islands (the two areas of most intense manufacturing.) In 1980, Palau had a higher percentage of females than males in the private sector, and Guam had about half of both sexes employed in the private sector.

Guam had the largest percentage of Federal government workers — 12 percent — many of whom were in the military or civilians employed to work on base (Table 36). The United States, Puerto Rico, and the Virgin Islands all had 3 percent Federal Government workers, and the other areas had fewer.

Table 36. Class of Worker: 1990							
Class of Worker	U.S. [Numb. in 000s]	Puerto Rico	Virgin Islands	Guam	Amer- ican Samoa	Northern Mariana Islands	Palau
Employed persons 16 + years	115,681	934,736	44,267	52,144	13,461	25,965	5,599
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Private wage and salary workers	77.4	63.2	64.0	65.3	63.4	84.8	59.3
State/local/territorial govt workers	11.8	27.5	24.3	19.6	32.6	12.5	35.4
Federal government workers	3.4	3.0	3.3	11.9	1.6	1.0	2.4
Self-employed workers	7.0	6.1	8.1	3.1	2.2	1.5	2.7
Unpaid family workers	0.4	0.2	0.2	0.1	0.2	0.2	0.2
Source: U.S. Bureau of the Census Publications.							

Palau had the largest number of local government workers, at 35 percent, and 3 percentage points more than American Samoa, in second place. Because of its robust private sector, the Northern Mariana Islands had only 12 percent local government workers, only a slightly larger percentage in the United States (which was the lowest).

About 8 percent of the workers in the Virgin Islands were self employed, compared to 7 percent in the U.S., and 6 percent in Puerto Rico. The other areas had much smaller percentages of self-employed workers.

The percentage distributions by sex did not differ too much from the total populations. About 84 percent of the Northern Mariana Islands male employed were private wage and salary workers, compared to 78 percent for the U.S. and smaller percentages for the other areas (Table 37). More than 13 percent of Guam males were working for the Federal government, compared to 10 percent of the females (Table 38).

Table 37. Class of Worker for Males: 1990							
Class of Worker	U.S. [Numb. in 000s]	Puerto Rico	Virgin Islands	Guam	Amer- ican Samoa	Northern Mariana Islands	Palau
Employed males 16 + years	62,705	557,639	23,285	30,140	7,901	14,782	3,542
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Private wage and salary workers	77.9	65.8	66.7	66.0	61.4	83.8	60.0
State/local/territorial govt workers	9.6	22.7	18.4	17.3	33.6	13.0	34.4
Federal government workers	3.6	2.8	3.1	13.5	1.9	1.1	2.1
Self-employed workers	8.5	8.4	11.6	3.1	2.9	1.9	3.3
Unpaid family workers	0.3	0.2	0.2	0.1	0.1	0.1	0.1
Source: U.S. Bureau of the Census Publications.							

However, about 14 percent of U.S. females were working as State or local government workers compared to only 10 percent of the U.S. males. Some of the areas had even greater differences. Almost 23 percent of Puerto Rico's male employed worked for local government compared to more than 34 percent of the females; that is, more than 1 out of every 3 female workers in

Puerto Rico worked for local governments in some capacity. Similarly, almost 31 percent of the Virgin Islands females worked for their local government compared to only 18 percent of the males.

Table 38. Class of Worker for Females: 1990

Class of Worker	U.S. [Numb. in 000s]	Puerto Rico	Virgin Islands	Guam	Amer- ican Samoa	Northern Mariana Islands	Palau
Employed females 16 + years	52,977	377,097	20,982	22,004	5,560	11,183	2,057
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Private wage and salary workers	76.8	59.4	61.0	64.3	66.3	86.2	58.2
State/local/territorial govt workers	14.4	34.5	30.9	22.8	31.1	11.9	37.0
Federal government workers	3.1	3.2	3.6	9.7	1.1	0.9	2.8
Self-employed workers	5.1	2.6	4.3	3.0	1.2	0.8	1.7
Unpaid family workers	0.5	0.2	0.2	0.2	0.3	0.2	0.2

Source: U.S. Bureau of the Census Publications.

Industry. The industry classification system developed for the 1990 census consisted of 235 categories for employed persons, classified into 13 major industry groups. Since 1940, the industrial classification was based on the Standard and Industrial Classification Manual (SIC). The SIC was designed primarily to classify establishments by the type of industrial activity in which they were engaged. However, census data, which were collected from households, differ in detail and nature from those obtained from establishment surveys. Therefore, the census classification systems, while defined in SIC terms, cannot reflect the full detail in all categories.

Table 39 shows the distribution of industry categories for the 1990 censuses. About 23 percent of all employed persons in the United States were in professional and related services industries (health, education, or similar professional services.) Professional services was also the largest category for Puerto Rico and Palau, but retail trade was the largest industry category for the Virgin Islands and Guam, and manufacturing was largest for American Samoa and the Northern Mariana Islands.

Table 39. Industry: 1990
[Numbers in thousands]

Industry	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
Employed persons 16 years and over	115,681	935	44	52	13	26	6
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture, forestry, fisheries, and mining	3.3	2.9	1.4	1.1	2.5	2.7	8.0
Construction	6.2	7.6	12.9	15.4	8.8	22.2	15.4
Manufacturing	17.7	16.7	6.6	4.4	33.8	21.9	1.7
Nondurable goods	7.0	10.5	3.9	1.9	32.7	21.2	0.6
Durable goods	10.7	6.2	2.7	2.6	1.1	0.7	1.0
Transportation	4.4	3.2	6.7	6.8	5.0	4.5	6.0
Communications and other public utilities	2.7	3.4	3.3	4.0	2.5	1.8	2.5
Wholesale trade	4.4	5.0	1.6	3.0	1.9	1.4	2.3
Retail trade	16.8	15.2	18.6	19.1	10.8	11.9	12.0
Finance, insurance, and real estate	6.9	4.3	5.7	5.3	1.3	2.0	2.1
Business and repair services	4.8	4.5	4.3	3.9	2.2	3.2	3.2
Personal, entertainment and recreation services	4.6	3.9	10.6	9.5	2.5	15.0	13.4
Professional and related services	23.3	19.5	16.7	16.6	18.2	7.9	18.7
Health services	8.4	6.4	4.2	3.8	3.6	2.0	3.6
Educational services	8.3	10.0	8.2	8.2	11.2	4.0	11.3
Other professional and related services	6.6	3.1	4.4	4.6	3.4	2.0	3.8
Public administration	4.8	13.8	11.6	10.9	10.6	5.4	14.8

Source: U.S. Bureau of the Census Publications.

The largest single industry category was for American Samoa: more than 1 in every 3 American Samoa employed persons worked in manufacturing (nondurable goods). As noted, about 1 in every 4 in the U.S. were in professional and related services, but more than 1 in every 5 workers in the Northern Mariana Islands was working in manufacturing, and another 1 in 5 were in construction.

More than 10 percent of employed males in the United States worked in construction industries in 1990, up about 1 percentage point from 1980 (Table 40). These values were smaller than for any of the areas. While about 12 percent of Puerto Rico's males were doing construction, this was true for about 14 percent of American Samoans, 22 percent of the Virgin Islanders, 23 percent of Palauans, 25 percent of Guamanians, but 38 percent of the Northern Mariana Islanders! That is, almost 4 of every 10 employed males in the Northern Mariana Islands were working in construction activities in 1990. Except for Guam (3 percent), no more than 2 percent of the females in the U.S. or the areas had more than 2 percent in construction industries.

Table 40. Percent in Construction Industries by Sex: 1980 and 1990							
Sex and Year	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
MALES							
1990	10.3	11.9	22.4	24.7	13.9	37.6	23.3
1980	9.4	11.0	17.8	14.8	12.0	24.9	22.8
FEMALES							
1990	1.4	1.2	2.4	2.7	1.5	1.9	1.8
1980	1.2	1.0	1.1	1.6	0.9	1.4	6.7
Source: U.S. Bureau of Census Publications.							

About 22 percent of the U.S. males were in manufacturing industries, down about 5 percentage points during the decade (Table 41). Decreases were seen in all the areas, also, except for American Samoa (where the percentage increased from 20 to 27), and the Northern Mariana Islands (increasing from 2 percent in 1980 to 9 percent in 1990), clearly showing the effect of the great immigration stream in the late 1980s.

Table 41. Percent in Manufacturing Industries by Sex: 1980 and 1990							
Sex and Year	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
MALES							
1990	21.8	15.5	8.8	5.4	27.1	9.1	2.1
1980	26.6	17.7	11.8	6.9	20.3	2.1	3.9
FEMALES							
1990	12.8	18.5	4.1	3.0	43.5	38.9	0.8
1980	16.8	23.4	5.2	2.2	28.5	1.4	0.9
Source: U.S. Bureau of Census Publications.							

Of course, that migration stream is seen even more strongly for females. Almost 4 out of every 10 employed females in the Northern Mariana Islands in 1990 were working in manufacturing industries. The percentage of CNMI females working in these industries increased by more than 37 percentage points during the decade.

An even larger percentage of American Samoa employed females was in this category — at 44 percent, and increase of 15 percentage points during the decade, reflecting increased activity of these females in the tuna processing plants and other manufacturing industries in American Samoa. (Disaggregating the workers by birthplace would give even more interesting information, but is not the focus of this paper.)

More than 18 percent of Puerto Rico's females were involved in manufacturing industries, a decrease from 23 percent in 1980, and following the trend in the United States, which saw females in manufacturing decreasing from 17 percent to 13 percent over the decade.

The percentage of U.S. males in retail trade increased from 14 to 15 over the decade, while the percentage for females decreased somewhat, while staying around 19 percent of the employed females (Table 42). The percentage of males in retail trade remained about the same in most of the areas (although dropping somewhat in Guam), and almost doubling in Palau (to 8 percent, still lowest of the areas).

Table 42. Percent in Retail Trade by Sex: 1980 and 1990							
Sex and Year	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
MALES							
1990	15.2	16.4	14.5	13.6	9.4	9.1	8.2
1980	13.8	15.8	14.2	15.0	7.8	9.0	4.4
FEMALES							
1990	18.8	13.4	23.1	26.7	12.9	15.6	18.5
1980	19.2	10.8	20.4	27.0	12.4	22.8	15.2

Source: U.S. Bureau of Census Publications.

The percentage of females in retail trade decreased in the Northern Mariana Islands, partly because so many females were working in manufacturing in 1990. While the percentage of females in retail trade remained about the same in Guam and American Samoa, the other areas — Palau, Puerto Rico, and the Virgin Islands — all saw increases.

More than one-third of all employed females in the United States were in professional service industries — industries like education and medicine (Table 43). The percentage for the U.S. increased, but decreased for all of the areas. The Northern Mariana Islands had the steepest decrease, from 24 percent of the employed females to 10 percent, but part of this decrease can be attributed to the enormous amount of immigration for other types of work, thus skewing the percentage distribution. Still, CNMI's 10 percent in these industries is less than one-third the rate in the United States.

Table 43. Percent in Professional Service Industries by Sex: 1980 and 1990							
Sex and Year	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
MALES							
1990	13.7	10.9	9.4	9.7	14.2	6.1	11.4
1980	11.9	11.1	10.3	11.0	16.3	10.6	22.0
FEMALES							
1990	34.8	32.2	24.8	26.2	23.9	10.3	31.2
1980	31.6	36.3	32.3	31.5	29.8	23.7	44.3

Source: U.S. Bureau of Census Publications.

The percentage of Palau's females in professional service industries decreased from 44 percent in 1980 to 31 percent, while the male percentage decreased by 50 percent, from 22 percent in 1980 to about 11 percent in 1990. As for females, the percentages for males in professional service industries decreased for all areas, while increasing for the U.S.

Finally, while about 5 percent of the U.S. employed population were in public administration in 1980 and 1990, most of the areas showed decreases, partly as a result of economic development's increasing the private sector (Table 44). The Northern Mariana Islands, for example, saw the percentage of males in public administration decrease from 23 percent to 6 percent in 1990, and females, from 18 percent to 4 percent.

Table 44. Percent in Public Administration by Sex: 1980 and 1990							
Sex and Year	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
MALES							
1990	5.0	12.5	9.3	12.0	12.3	6.5	16.7
1980	5.4	12.3	11.2	20.7	23.3	23.2	21.2
FEMALES							
1990	4.5	15.7	14.1	9.5	8.2	4.0	11.6
1980	5.1	13.2	12.0	13.9	14.4	17.5	9.1
Source: U.S. Bureau of Census Publications.							

Similarly, American Samoa's male percentage in Public Administration decreased from 23 percent to 12 percent, and the females from 14 to 8 percent. The percentages for females in Puerto Rico, the Virgin Islands, and Palau, however, increased over the decade, showing increased participation of females in the American-style political and bureaucratic structure.

Means of Transportation to Work. The data on means of transportation to work were derived from answers to questionnaire item 23a, which was asked of persons who indicated in question 21 that they worked at some time during the reference week. Means of transportation to work refers to the principal mode of travel or type of conveyance that the person usually used to get from home to work during the reference week.

Persons who used different means of transportation on different days of the week were asked to specify the one they used most often, that is, the greatest number of days. Persons who used more than one means of transportation to get to work each day were asked to report the one used for the longest distance during the work trip. The category "Car, truck, or private van/bus" includes workers using a car (including company cars but excluding taxicabs), a truck of one-ton capacity or less, or a privately-owned van or bus. The category "Public transportation" includes workers who used a boat, public van/bus, or taxicab even if each mode is not shown separately in the tabulation. The category "Other method" includes workers who used a mode of travel that is not identified separately within the data distribution.

The means of transportation data for some areas may show workers using modes of public transportation that are not available in those areas (for example, taxicab riders in an area where there actually is no taxicab service). This result is largely due to persons who worked during the reference week at a location that was different from their usual place of work (such as persons away from home on business in an area where taxicab service was available) and persons who used more than one means of transportation each day but whose principal means was unavailable where they lived.

More than 86 percent of the workers in the United States used a car, truck or other private vehicle to get to work during the reference week in 1990 (Table 45). The only area with a larger percentage of private transportation was Guam, at 89 percent. Only 2 out of every 3 workers in the Northern Mariana Islands got to work by private vehicle, about half of Palau's workers, and much less than half of American Samoa's workers.

Table 45. Means of Transportation to Work: 1990							
Means of transportation	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
Workers 16 years and over	115,070,274	915,872	41,769	62,753	13,328	25,556	5,548
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Car, truck, or private van/bus	86.5	79.7	73.7	89.1	43.0	57.5	52.1
Public van/bus 1/	5.1	10.1	6.3	0.5	43.0	0.3	1.1
Boat	0.0	0.1	0.8	0.1	0.1	0.1	1.4
Taxicab 2/	0.2	0.1	4.6	0.2	0.2	0.1	7.4
Motorcycle	0.2	0.2	0.2	0.3	0.1	0.1	0.6
Bicycle	0.4	0.4	0.0	0.6	0.1	0.1	0.1
Walked	3.9	6.5	7.7	5.1	10.1	16.8	23.5
Other method	0.7	1.7	4.5	2.8	0.5	1.0	0.5
Worked at home	3.0	1.3	2.2	1.5	3.0	13.8	13.4
1/ This category for the United States includes bus or trolley bus, streetcar or trolley car, subway or elevated, or railroad in 1990.							
2/ This category for the Virgin Islands includes safari or taxi bus in 1990.							
Source: U.S. Bureau of the Census Publications.							

If United States and the other areas used public transportation to the extent American Samoa does, the energy crisis would probably be greatly diminished. Fully 43 percent of American Samoa's workers use public transportation to get to work. About 10 percent of Puerto Rico's workers also used some form of public transportation. Less than one percent of the workers in Guam and the Northern Mariana Islands, and only 1 percent in Palau used public transportation, attesting to virtual nonexistence of public transportation in those areas. Guam has tried to institute mass transit buses, but no far with little success.

About 4 percent of the U.S. workers walked to work, compared to less than 10 percent of those in Puerto, the Virgin Islands, and Guam, 10 percent in American Samoa, 17 percent in the Northern Mariana Islands and 24 percent in Palau. The latter two figures probably reflect agricultural activities near home.

These latter two areas also had the largest percentages of persons working at home — 13 percent for Palau and 14 percent for the Northern Mariana Islands, with many of the workers engaged in agriculture and fishing. About 3 percent of workers in the United States and American Samoa worked at home, and smaller percentages of home workers were recorded for the other areas.

Private Vehicle Occupancy. The data on private vehicle occupancy or carpooling were derived from answers to questionnaire item 23b. This question was asked of persons who indicated in question 21 that they worked at some time during the reference week and who reported in question 23a that their means of transportation to work was "Car, truck or private van/bus"

Private vehicle occupancy refers to the number of persons who usually rode to work in the vehicle during the reference week. The category "Drove alone" includes persons who usually drove alone to work as well as persons who were driven to work by someone who then drove back home or to a nonwork destination. The category "Carpooled" includes workers who reported that two or more persons usually rode to work in the vehicle during the reference week.

The *persons per private vehicle* measure was obtained by dividing the number of persons who reported using a car, truck, or private van/bus to get to work by the number of such vehicles that they used. The number of vehicles used is derived by counting each person who drove alone as one vehicle, each person who reported being in a two-person carpool as one-half vehicle, each person who reported being in a three-person carpool as one-third vehicle, and so on, and then summing all the vehicles.

United States workers were the mostly likely to drive alone, with almost 85 percent following in this category (Table 46). About 78 percent of the potential carpoolers in Puerto Rico and Guam drove alone, but only 32 percent of those in the Northern Mariana Islands, 34 percent in Palau, and 36 percent in American Samoa.

Table 46. Carpooling: 1990							
Carpooling	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	North. Mariana Islands	Palau
Car, truck, or private van/bus	99,592,932	729,749	30,774	55,890	5,730	17,261	2,890
Drove alone	84,215,298	568,580	21,219	43,762	2,075	5,545	985
Percent	84.6	77.9	69.0	78.3	36.2	32.1	34.1
Carpooled	15,377,634	161,169	9,555	12,128	3,655	11,716	1,905
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2-person carpool	78.5	73.6	71.1	68.9	51.1	31.2	54.9
3-person carpool	13.0	14.8	16.3	8.8	9.3	8.4	13.3
4-person carpool	4.6	7.0	7.5	5.0	7.6	6.3	9.9
5-person carpool	1.4	2.6	2.6	2.9	2.7	4.4	3.9
6-person carpool	0.6	0.8	0.9	1.9	2.2	4.4	3.3
7 or more person carpool	1.9	1.2	1.6	12.4	27.0	45.3	14.8
Persons per private vehicle	1.1	1.1	1.2	1.1	1.7	2.0	1.7
Source: U.S. Bureau of the Census Publications.							

Of those who did carpool, 2-person carpools were the most popular. Only the Northern Mariana Islands had less than half its carpools in 2-person carpools; in fact, 45 percent of the carpools in the Northern Mariana Islands were in "7 or more person" carpools, most likely, minivans or buses, used just for transporting people to work. In Samoa, where 27 percent were in this category, many rode *aiga* (family) buses, often made from pickup trucks and plying the roads of American Samoa throughout the day.

American Samoa and Palau had 1.7 persons per vehicle, and the Northern Mariana Islands had 2.0 persons per vehicle, but the other areas, because of the many people driving alone, had only about 1 person per vehicle, on average.

Travel Time to Work. The data on travel time to work were derived from answers to questionnaire item 24b. This question was asked of persons who indicated in question 21 that they worked at some time during the reference week and who reported in question 23a that they worked outside their home. Travel time to work refers to the total number of minutes that it usually took the person to get from home to work during the reference week. The elapsed time includes time spent waiting for public transportation, picking up passengers in carpools, and time spent in other activities related to getting to work.

Table 47 shows the amount of time workers took to get to work. It took the average worker in the United States about 22.3 minutes to get to work. Workers in Palau had the shortest commute, at 10.5 minutes, followed by the Northern Mariana Islands at 11.6 minutes. Puerto Ricans, at 26.1 minutes, had the longest commute, followed closely by those in American Samoa, at 25.6 minutes.

Table 47. Travel Time to Work: 1990							
Travel Time to Work	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
Workers 16 years and over	115,070,274	915,872	41,769	62,753	13,328	25,556	5,548
Did not work at home	111,664,249	904,076	40,839	61,830	12,934	22,030	4,807
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 10 minutes	16.4	12.7	13.4	22.1	10.3	41.8	46.9
10 to 19 minutes	33.1	30.4	37.9	38.9	23.8	37.3	39.7
20 to 29 minutes	20.1	14.9	20.8	20.5	16.7	13.4	6.5
30 to 44 minutes	18.0	23.8	21.8	15.0	34.4	7.0	5.5
45 or more minutes	12.5	18.2	6.1	3.5	14.8	0.5	1.4
Mean (minutes)	22.3	26.1	19.8	16.7	25.6	11.6	10.5
Worked at home	3,406,025	11,796	930	923	394	3,526	741

Source: U.S. Bureau of the Census Publications.

About 12 percent of all U.S. workers took 45 or more minutes to get to work. More than 18 percent of Puerto Rico's workers were in this category, but less than one percent of the CNMI workers, and about 1 percent of Palau's workers. On the other hand, almost half of Palau's workers took less than 10 minutes to get to work.

Work Status in 1989. The data on work status in 1989 were derived from answers to questionnaire item 31.

Work Status in 1989 — Persons 16 years old and over who worked 1 or more weeks according to the criteria described below are classified as "Worked in 1989"; all other persons 16 years old and over are classified as "Did not work in 1989":

Weeks Worked in 1989 — The data on weeks worked in 1989 were derived from answers to questionnaire item 31b. Question 31b (weeks worked in 1989) was asked of persons who indicated in Question 31a that they worked in 1989. The data pertain to the number of weeks during 1989 in which a person did any work for pay or profit (including paid vacation and paid sick leave, but, in the Pacific Islands, excluding subsistence activity) or worked without pay on a family farm or in a family business. Weeks of active service in the Armed Forces also are included.

Usual Hours Worked per Week Worked in 1989 — The data on usual hours worked per week worked in 1989 were derived from responses to questionnaire item 31c. This question was asked of persons 16 years and over who indicated that they worked in 1989. The data pertain to the number of hours a person usually worked during the weeks worked in 1989. The respondent was to report the number of hours worked per week in the majority of the weeks he or she worked in 1989. If the hours worked per week varied considerably during 1989, the respondent was to report an approximate average of the hours worked per week. The statistics on usual hours worked per week worked in 1989 are not necessarily related to the data on actual hours worked during the census reference week (question 21b).

About 7 in every 10 persons 16 years and over in the United States worked at some time in 1989 (Table 48). Those in the Northern Mariana Islands were most likely to work, those in Puerto Rico least likely. About half of American Samoa's and more than half of Puerto Rico's potential workers did not work in 1989. On the other hand about 2 out of every 3 in the Virgin Islands and 3 out of 4 in Guam did do some work in 1989.

Table 48. Work Status in 1989: 1990

Work Status	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
Persons 16+ yrs	191,829,271	2,497,078	70,323	90,990	27,991	32,522	10,238
Worked in 1989	134,529,779	1,076,839	47,630	67,675	13,902	26,342	6,030
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
50 to 52 weeks	62.8	62.5	64.7	74.2	83.9	67.4	67.9
40 to 49 weeks	12.8	13.4	12.5	6.5	6.2	13.2	10.5
27 to 39 weeks	7.5	5.3	8.8	4.6	3.3	5.2	4.1
14 to 26 weeks	8.6	9.1	6.9	7.5	3.6	7.7	8.6
1 to 13 weeks	8.2	9.6	7.0	7.1	3.0	6.5	8.9
Did not work in 1989	57,299,492	1,420,239	22,693	23,315	14,089	6,180	4,208
Percent	29.9	56.9	32.3	25.6	50.3	19.0	41.1

Source: U.S. Bureau of Census Publications.

Of those who did work, about 5 in every 8 workers in the United States worked 50 to 52 weeks in 1989, essentially the whole year. Most workers in the areas also worked during the whole year, ranging from rates near the U.S. figure for Puerto Rico and the Virgin Islands to 84 percent for American Samoa.

While 10 percent of Puerto Rico's workers worked only 1 to 13 weeks in 1989, only 3 percent of American Samoa's workers were in that category. The other areas were in between.

On the weeks worked in 1989, about 78 percent of the U.S. workers worked 35 hours or more — that is, were full-time workers (Table 49). All of the areas had a larger percentage of full-time workers than did the United States, ranging from 80 percent for Puerto Rico to 97 percent for the Northern Mariana Islands.

Table 49. Hours Usually Worked in 1989: 1990

Hours Usually Worked in 1989	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
Worked in 1989	134,529,779	1,076,839	47,630	67,675	13,902	26,342	6,030
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Usually worked:							
35+ hours per week	78.3	79.9	88.7	90.2	95.2	96.9	92.9
15-34 hrs per week	17.5	16.2	9.5	8.1	4.1	2.4	5.1
Less than 15 hrs	4.2	3.8	1.8	1.7	0.7	0.7	2.0

Source: U.S. Bureau of Census Publications.

About 18 percent of the U.S. workers worked 15 to 34 hours per week during the weeks worked in 1989, compared to about 16 percent for Puerto Rico, but ranging down to 4 percent for American Samoa, and 2 percent for the Northern Mariana Islands. Similarly, less than 1 percent

of American Samoa and Northern Mariana Islands' workers worked less than 15 hours per week.

Workers in Family in 1989. The workers in family in 1989 was obtained by determining the work status in 1989 for each person, and then summing the number of persons in the family who worked last year.

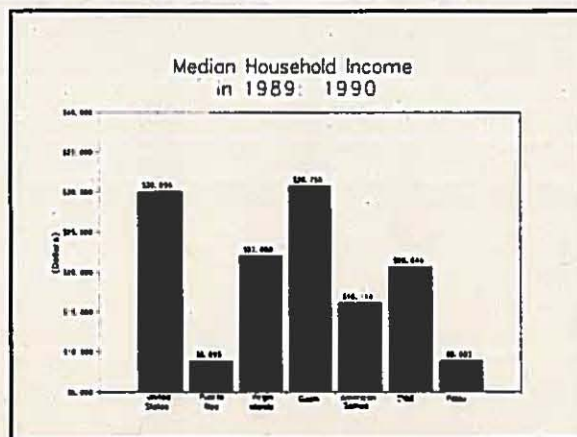
About 59 percent of U.S. families had 2 or more workers in 1989 (Table 50). Both the Caribbean areas had smaller percentages of families in this category, all of the Pacific areas had larger percentages. Fully 2 out of every 3 families on Guam had 2 or more workers, but less than 1 in every 3 families in Puerto Rico.

Table 50. Workers in Family in 1989: 1990							
Workers in Family in 1989	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
Families	65,049,428	899,998	23,012	27,313	6,301	5,312	2,445
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No workers	13.0	27.8	10.2	5.2	7.2	5.4	8.4
1 worker	28.0	40.6	35.7	27.8	31.6	30.7	30.8
2 or more workers	58.9	31.5	54.2	67.0	61.2	63.9	60.8

Source: U.S. Bureau of Census Publications.

On the other hand, while 13 percent of all U.S. had no workers, almost 28 percent of Puerto Rico families had no workers. Only 5 percent of Guam's and CNMI's families had no workers.

Income. The data on income in 1989 were derived from answers to questionnaire items 32 and 33. Information on money income received in the calendar year 1989 was requested from persons 15 years old and over. "Total income" is the algebraic sum of the amounts reported separately for wage and salary income; net nonfarm self-employment and farm self-employment income; interest, dividend, or net rental or royalty income; Social Security or railroad retirement income; public assistance or welfare income; retirement or disability income; remittance (in the Pacific Islands); and all other income. "Earnings" is defined as the algebraic sum of wage or salary income and net income from farm and nonfarm self-employment. "Earnings" represent the amount of income received regularly before deductions for personal income taxes, Social Security, bond purchases, union dues, medicare deductions, etc.



Receipts from the following sources are not included as income: money received from the sale of property (unless the recipient was engaged in the business of selling such property); the value

of income "in kind" from food stamps, public housing subsidies, medical care, employer contributions for persons, etc; withdrawal of bank deposits; money borrowed; tax refunds; exchange of money between relatives living in the same household; gifts and lump-sum inheritances, insurance payments, and other types of lump-sum receipts.

The *median income* divides the income distribution into two equal parts, one having incomes above the median and the other having incomes below the median. The median income is based on the distribution of the total number of units including those with no income. (The median income values are computed on the basis of more detailed income intervals than shown in these tabulations. Median income figures are calculated using linear interpolation.)

The *mean income* is the amount obtained by dividing the total income of a particular statistical universe by the number of units in that universe. Thus, mean household income is obtained by dividing total household income by the total number of households. For the various types of income the means are based on households having those types of income. "per capita income" is the mean income computed from every man, woman and child in a particular group. It is derived by dividing the total income of a particular group by the total population in that group.

Care should be taken in using and interpreting mean income values for small subgroups of the population. Because the mean is influenced strongly by extreme values in the distribution, it is especially susceptible to the effects of misreporting and processing errors. The median, which is not affected by extreme values, is, therefore, a better measure than the mean when the population base is small. The mean, nevertheless, is shown in some data products for most small subgroups because, when weighted according to the number of cases, the means can be used to obtain summary measures for areas and groups other than those shown in census tabulations.

The median household income in the United States increased about \$2,000 over the decade, when adjusted for inflation (Table 51). (To adjust 1979 dollars to 1989, an inflation factor of 1.676 is used; all 1979 values are multiplied by 1.676 to allow us to see real change, not change merely due to inflation.) Real median household income in Puerto Rico (about \$8,900) and American Samoa (\$16,100) actually decreased slightly during the decade. Household income increased by about \$1,000 in Palau, but by more than \$3,000 in the Virgin Islands, \$4,000 in Guam, and more than \$5,000 in the Northern Mariana Islands.

Table 51. Median and Mean Household Income in 1979 and 1989: 1980 and 1990
[In 1989 dollars]

Income and Year	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
MEDIAN							
1990	\$30,056	\$8,895	\$22,050	\$30,755	\$16,114	\$20,644	\$8,882
1980	\$28,226	\$8,963	\$18,587	\$26,400	\$16,287	\$15,009	\$7,886
MEAN							
1990	\$38,453	\$13,777	\$29,953	\$38,873	\$21,146	\$34,713	\$13,395
1980	\$34,033	\$12,969	\$24,223	\$36,193	\$23,231	\$22,341	\$11,273

Source: U.S. Bureau of Census Publications.

It is important to note that the U.S. inflation rate was applied to all areas, even though those areas may have had different rates of inflation over the decade. Unfortunately, in most cases the real inflation in the areas cannot be determined because most of the areas have neither periodic income and expenditures surveys nor Consumer Price Indexes. Hence, these values are estimates based on what the figures would be in the areas had the same inflation as the U.S.

The median household incomes in Palau and Puerto Rico are less than one-third the household income of the United States. Only Guam had a higher median household income than the U.S., and that was about \$700 more for 1989. American Samoa's household income was about half that of the United States, and the Northern Mariana Islands and the Virgin Islands, about two-thirds.

The mean household income was higher than the median income because of extreme cases affecting the figures. The mean household income in the United States was about \$38,500, increase of more than \$4,000 during the decade. Again, Guam had the highest mean household income, at \$38,900, but the Northern Mariana Islands had the largest increase over the decade — more than \$12,000, placing it second among the areas, behind Guam.

About 6 percent of U.S. households in 1989 had household incomes of less than \$5000 (Table 52). Only Guam had a smaller percentage of these households. About 1 in every 3 households in Puerto Rico and Palau had household incomes of less than \$5,000. As noted above, more than half of the households in these two areas had incomes of less than \$10,000 (54 percent in Puerto Rico and 55 percent in Palau).

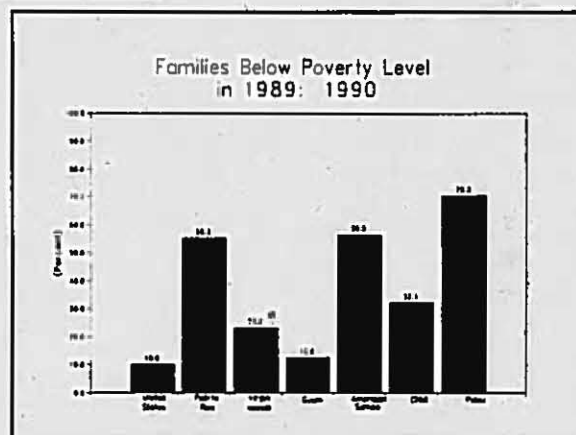
Table 52. Household Income in 1989: 1990

Income in 1989	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	Northern Mariana Islands	Palau
Households	91,993,582	1,057,357	32,020	31,373	6,607	6,873	2,885
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than \$5,000	6.2	30.0	11.0	5.2	11.3	10.7	29.9
\$5,000 to \$9,999	9.3	24.4	10.6	4.9	19.0	13.9	25.0
\$10,000 to \$14,999	8.8	15.3	13.1	8.4	16.7	12.5	15.4
\$15,000 to \$24,999	17.5	15.8	20.3	20.7	23.3	21.1	17.7
\$25,000 to \$49,999	33.7	11.2	28.9	35.7	22.5	25.9	12.1
\$50,000 or more	24.5	3.3	16.1	25.1	7.2	15.9	...

1/ \$25,000 or more for Palau in 1990.
Source: U.S. Bureau of the Census Publications.

Only about 14 percent of Puerto Rico's and 12 percent of Palau's households had incomes of \$25,000 or more, even though more than 58 percent of United States households were in this category. More than 1 in every 4 U.S. and Guam households had incomes of \$50,000 or more, compared to about 1 in 6 for the Virgin Islands and the Northern Mariana Islands, less than 1 in 12 for American Samoa, and about 1 in 30 or Puerto Rico.

Poverty. The data on poverty status were derived from answers to the same questions as the income data, questionnaire items 32 and 33. Poverty statistics presented in census publications were based on a definition originated by the Social Security Administration in 1964 and subsequently modified by Federal interagency committees in 1969 and 1980 and prescribed by the Office of Management and Budget in Directive 14 as the standard to be used by Federal agencies for statistical purposes.



At the core of this definition was the 1961 economy food plan, the least costly of four nutritionally adequate food plans designed by the Department of Agriculture. It was determined from the Agriculture Department's 1955 survey of food consumption that families of three or more persons spend approximately one-third of their income on food; hence, the poverty level for these families was set at three times the cost of the economy food plan. For smaller families and persons living alone, the cost of the economy food plan was multiplied by factors that were slightly higher to compensate for the relatively higher fixed expenses for these smaller households.

The income cutoffs used by the Census Bureau to determine the poverty status of families and unrelated individuals included a set of 48 thresholds arranged in a two-dimensional matrix consisting of family size (from 1 person to 9 or more persons) cross-classified by presence and number of family members under 18 years old (from no children present to 8 or more children

present). Unrelated individuals and two-person families were further differentiated by age of the household (under 65 years old and 65 years old and over.)

The total income of each family or unrelated individual in the sample was tested against the appropriate poverty threshold to determine the poverty status of that family or unrelated individual. If the total income was less than the corresponding cutoff, the family or unrelated was classified as "below the poverty level." The number of persons below the poverty level was the sum of the number of persons in families with incomes below the poverty level.

The poverty thresholds are revised annually to allow for changes in the cost of living as reflected in the Consumer Price Index. The average poverty threshold for a family of four persons was \$12,674 in 1989. Poverty thresholds were applied on a national basis for the U.S. and were not adjusted for regional, State, or local variations in the cost of living.

For "persons for whom poverty status is determined", poverty status was determined for all persons except institutionalized persons, persons in military group quarters and in college dormitories, and unrelated individuals under 15 years old. These groups also were excluded from the denominator when calculating poverty rates.

About 1 in every 10 families in the United States was in poverty by this poverty definition in 1989 (Table 53). More than 7 in every 10 families living in Palau, however, were in poverty, as were more than half of those living in Puerto Rico and American Samoa. Families living in the Northern Mariana Islands were more than 3 times as likely as those in the U.S. to be in poverty, and those in the Virgin Islands were more than twice as likely. Only in Guam was a person only slightly more likely to be in poverty than if they were in the U.S.

Table 53. Income in 1989 Below Poverty Level: 1990							
Income in 1989 Below Poverty Level	United States	Puerto Rico	Virgin Islands	Guam	American Samoa	North Mariana Islands	Palau
Families	6,487,515	492,025	5,349	3,429	3,563	1,707	1,719
Percent below poverty level	10.0	55.3	23.2	12.6	56.5	32.1	70.3
Persons, poverty status is determined	31,742,864	2,057,377	27,334	18,957	27,170	22,084	10,972
Percent below poverty level	13.1	58.9	27.1	15.0	58.6	51.3	73.9
Source: U.S. Bureau of the Census, 1990 Census of Population and Housing, 1990 CPH.							

The definition of poverty does not always work very well in the other areas since it is tied to family structure and standard of living. Because American Samoan and Palauan families are larger than those in the States, they are pushed into different cells in the poverty matrix, and so are more likely to be put in poverty. Also, the market basket used for the Consumer Price Index for the United States may not be the best measure for the other Areas. Only Puerto Rico has regular household income and expenditures surveys to readjust the Consumer Price Index (and their index is not considered when developing the poverty levels). Palau has never had a Consumer Price Index at all, and, in many of the areas, no adjustments are made for differences

in life-style and spending patterns. Further, in several of the areas, non-cash income in the form of subsistence and small scale fishing or agriculture businesses, skew the data with unreported production activities. Nonetheless, the U.S. poverty indices are useful for giving insight into some of the differences in living standards between the U.S. and the areas.

The percentages for persons living in poverty were even higher than the percentages for families. While more than 13 percent of U.S. persons were in poverty, this was true for 51 percent of those living in the Northern Mariana Islands, 59 percent of those in Puerto Rico and American Samoa, and 74 percent — almost 3 in every 4 — of those in Palau.

Conclusions. The areas showed more variation in economic characteristics than in demographic or social characteristics. Several of the areas have labor force distributions which are much more private-sector oriented than the United States, but others are even more public-sector oriented than the United States. The areas show vast differences in their occupational and industrial distributions, depending on individual economic development strategies. The areas tended to be poorer than the United States, measured both by income levels and percent in poverty.

VI. DISCUSSION AND CONCLUSIONS

This paper has briefly described population characteristics for the United States, Puerto Rico, the Virgin Islands, Guam, American Samoa, the Northern Mariana Islands, and Palau.

The Bureau of the Census collects data on Population and Housing for Puerto Rico, the Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands (CNMI), and American Samoa every 10 years as required by federal law. The Office of Territorial and International Affairs (OTIA), The Department of the Interior (DOI), has been providing technical assistance to improve statistical data collection and analysis in all areas (except Puerto Rico) as well as Palau, the Federated States of Micronesia (FSM) and the Republic of the Marshall Islands (RMI).

The major uses of census data include: the disbursement of federal grants based on population, statistical benchmarking for population estimates and projections, decision making and planning at various levels of government, market research and analysis by businesses, academic research, application by service organizations for a variety of purposes, and by individuals.

There are, however, limitations to the value of census data as they become less and less useful as the time passes after census date. Moreover, as census data become dated, the areas may not receive their complete share of federal program funds that are based on census data. Scientific sample surveys and administrative records provide valuable, cost effective supplements to census data in intercensal years.

Sample surveys can provide similar data to censuses at higher levels of geography, and there are advantages in carrying out these sample surveys: the cost of conducting a sample survey is considerably less than that of a census; the accuracy of a well controlled sample survey can approach, and, in some cases, exceed, that of a census; a sample survey provides a degree of

improved currency and timeliness of data; the burden of response in a sample survey is much less than that of a census; and, the provision of data to federal agencies as required in many programs is likely to enhance the chances of additional funding to the areas where dated or unreliable data have been used in the past.

The Census Bureau, however, is not mandated to provide assistance to the areas for intercensal data collection and analysis. The majority of the questions used in the census questionnaire are designed by the Bureau of the Census for use in the U.S. For obvious reasons, there are some questions that deal with items that are not relevant in the areas. However, any effort to include a question that is not in the questionnaire but is deemed to be of substantive value to the areas must be thoroughly justified to the Census Bureau. Thus, since the decennial census is virtually the only vehicle currently available to the areas for collection of some of these data, the areas face real dilemma in having requests refused.

The preponderant importance of the decennial census to the areas lies in the fact that the data must satisfy the needs of the local governments for 10 years. Title 13 of the United States Code states that "during intervals between each census of population ... the Secretary ... shall annually produce and publish for each State, county, and local unit of general purpose government which has a population of fifty thousand or more, current data on total population and population characteristics ..." (Subchapter IV, Section 181, p. 16, 1976). So far, the Bureau of the Census has not interpreted this very narrowly for the areas.

The Bureau of the Census has begun to devote an increasing share of its resources to postcensal census updates for the States. These updates are designed to bring forward in time basic population and housing information found on the decennial schedule. None of these updates are provided for the areas, so they must depend on estimates and projections made from dateline census data, no matter the magnitude of the demographic changes taking place since the last census. The Census Bureau has not provided estimates for most of the areas since 1988.

The areas express the need for current and reliable demographic, social, and economic data at all levels in the government and in the private sector. Among the items regularly requested are: population size and growth, family size and composition, labor force (employment and unemployment), educational attainment, ethnic origin, health/fertility, income, types of expenditures, number of housing units at address, tenure of unit, value of home, source of water, telephone, and social attitudes.

Data on the labor force, for example, can provide invaluable information for decision making on appropriate labor policy; income and expenditures data can be used to establish a sorely needed consumer price index; and, immigration/emigration data can be the basis for labor strategies and planning in health and human services.

The Bureau of the Census has relied significantly on modern sampling methods since 1940 as an integral part of the decennial census. It currently relies primarily on two national surveys — the Current Population Survey (CPS) and the Housing Survey — to update the census. A third survey, the Survey of Income and Program Participation (SIPP) is also collected monthly. The areas are not included in either monthly survey. Thus, in the absence of any vehicle for

data collection more than once in 10 years, sampling offers the most cost effective means of producing the data needed for the purposes specified above. The Statistical Offices in the areas have responded on occasion to the needs of government agencies for data for planning through the conduct of sample surveys. The areas, however, continue to need statistical assistance in developing survey sampling capabilities.

Starting in 1985, The Department of the Interior funded joint statistical activities for the areas. These activities included: 1980 Census Workshops, Statistical Yearbooks Workshops, Intercensal Surveys Workshop, Integrated Microcomputer Processing System (IMPS) Workshops, 1990 Census Workshop, Population Estimates Workshop, Vital Statistics Workshop, and Geographic Information System (GIS) Workshop.

The Department of the Interior was also instrumental in developing islander to islander communication on statistical matters. One of the results is the Statistical Association of the Insular Areas. In November, 1993, participants in the Population Estimates workshop formed a new organization called the Statistical Association of the Insular Areas. Frank Mills, chair of the Virgin Islands Territorial Data Center, was selected as chair of this new organization. The primary purposes of the association are: to enable the members to share information that is useful; to confer with one another on topics of common interest; and to approach the Bureau of the Census jointly on issues that affect the areas in common. This organization is one of the major accomplishments of the Department of the Interior-funded activities, since it has always been The Department of the Interior's mission through technical assistance to give control of statistical activities to the areas as quickly as possible.

Another accomplishment of the statistical activities has been the development of Statistical Acts. The first of these was in the Northern Mariana Islands. The Commonwealth of the Northern Mariana Islands (CNMI) Statistical Act of 1990 serves as a blueprint for statistical activities in the CNMI. Because of the need for statistical coordination in each of the areas, each area should consider developing, within legal constraints, a similar act for its government. The Act should not require up-front additional funding, and may actually reduce costs by eliminating duplicated data collection efforts.

The Department of the Interior has also supported development of the State Data Center programs in the areas, including bringing the heads of the Statistical departments to Washington each year for the State Data Center meetings. Guam's, CNMI's, and the Virgin Islands' Territorial Data Centers (part of the Census Bureau's State Data Center program) have been extremely successful. These areas receive a large variety of useful publications automatically because they are part of the State Data Center program, which distributes the Summary Tape Files (STFs) and the Public Use Microdata Sample (PUMS), and other products.

The Department of the Interior has also supported mapping activities in most of the areas. Each of the areas needs to obtain and update maps in order to draw samples for intercensal surveys. Unfortunately, since the Census Bureau will not release Decennial Census maps, the Department of the Interior seems to be the fall back for obtaining these maps. The Department of the Interior has already funded mapping activities in Guam, Palau, and the Virgin Islands.

The Department of the Interior and the areas have agreed about the urgent need for Current Labor Force Surveys. Only Guam has a recurring labor force survey, a 5 percent sample collected four times a year. The CNMI collected a labor force survey in 1992, and is the process of trying to develop a quarterly survey, but so far they have not received funding from their legislature. Every effort should be made in each of the areas to develop the capacity to collect quarterly labor force data to assist in short term and long term economic development. Because of the large amount of migration in all areas, it is essential to have continuing data collections activities in these areas for planning purposes. When, like Guam, each Area has a set of enumerators in place to collect the data in a timely fashion, and adaptations to Guam's IMPS package are made, the Department of the Interior and the areas will all benefit from having current economic and migration data. Of course, a labor force survey based on a sample of the households will only be successful if the areas have good maps, and that these maps are updated periodically.

The need for migration cards is also urgent. Each area is experiencing relatively large scale migration, in most cases, both immigration and emigration. Censuses can give "point" information for the total population, and surveys can give "point" information for a sample population, but neither data collection method can give on-going information. Current information can only be obtained by using the point data in connection with ongoing data collection efforts. These data are obtained through entry/exit cards. While some of the areas may have legal problems collecting some of the needed information, others do not. American Samoa and Palau have the best systems in place, with perforated cards for entry and exit, but even these areas do not compile and tabulate the information by machine. The areas need to consider the best methods of obtaining this needed information for planning.

Along with migration statistics, computerized birth and death data are also needed to give appropriate population estimates for the areas. The Department of the Interior has been planning to institute a special project to assist the areas in obtaining retrospective data by keying all birth and death records back to the beginning of the respective area's records. The Department of the Interior also already has a proven track record in Health programs in the areas, so this document is not intended to focus on those. However, because any statistical system requires health data to provide data for certain demographic and socioeconomic indicators, it is important to develop methods of data collection, display, and analysis which provide information for Federal programs, and also meet the needs of the areas. The most important area, from the Census Bureau's point of view, is complete vital registration of births and deaths. While most of the areas collect fairly complete birth and death registration data, the areas do not always publish the aggregated data, nor do they compile all useful data for analysis.

Guam has traditionally published and distributed the fullest data, and they have recently been instrumental in converting to IMPS processing of the vital data, leading to a greatly improved, more quickly released annual vital statistics report. The 1994 Department of the Interior workshop in Honolulu permitted the other areas to see the work Guam has done in this area, and to adapt the programs for use in their own areas. Several of the areas are in the process of revising their birth and death certificates as modified US forms (Guam, CNMI, and the Virgin Islands already use the US form and should not convert). The forms are being developed so that when data are inputted using IMPS, the birth or death certificate can be generated by IMPS

using a laser printer; hence, the data will be keyed only once, and this single keying will produce the birth certificate AND by non-numeric data (like birthplace and occupation) will be converted to numbers automatically for statistical processing.

The CNMI currently has an integrated health system — MUMPS — which is somewhat expensive and somewhat complicated for adoption in some of the smaller areas. Guam and the Virgin Islands are probably also candidates for this type of complicated system. However, in some areas, a simpler integrated statistical health system is needed. It is likely that should this system be developed, incorporating the vital statistics, in- and out-patient visits, and other health contacts (both on and off island), the other areas might want to consider adapting such a system. The system could be developed using IMPS since many of the offices in the areas already use IMPS for various types of processing, and the various programmers can assist each other, as needed.

The Department of the Interior has also been instrumental in providing IMPS training. We have now successfully completed an areas-wide Integrated Microcomputer Processing System (IMPS) training at the East-West Center in 1992, and in-area IMPS workshops in Guam (in 1991), CNMI (in 1993), and the Virgin Islands (1994). American Samoa will probably request funding for an in-territory IMPS workshop.

Finally, Interior has assisted in providing technical assistance for archiving data sets. None of the areas has a systematic method of archiving data sets. Most of the areas have some kind of archives for government records, and these archives may or may not be the best repository for Census and survey data sets. The Department of the Interior may have to urge the governments to develop systems so that archiving is in place; some areas have already lost data because the data were not properly archived. It is probably a good idea to back and store data in several places to guard against destruction through normal wear and tear in tropical climates as well as wear and tear caused by typhoons. Each archiving agency must guarantee the maintenance of confidentiality of the data, as well as access when necessary.

CONCLUSIONS. The 1990 Decennial Census data provide snapshots of demographic, social, and economic characteristics of the United States and its areas. The United States and Puerto Rico, and Guam, to a certain extent, collect regular intercensal survey data to assist in planning for programs and policy decisions during the mid-decade. As we prepare for the 2000 Census, the other areas are each conducting mid-decade surveys to give new snapshots to be used for their planning for economic development and to assist with development of 2000 Census content and procedures. The results of the 1995 Virgin Islands Labor Force Survey, the 1995 American Samoa Household Income and Expenditures Survey, the 1995 Guam Consumer Expenditures Survey, and the 1995 Census of Commonwealth of the Northern Mariana Islands. will all assist in these efforts.

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