

**Recent Trends in
Population, Labor Force, Employment, and Unemployment
Commonwealth of the Northern Mariana Islands
1973 to 1999
Second Edition
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**Department of Commerce
Central Statistics Division**

Contents

| | |
|--|----|
| Introduction | 7 |
| Summary | 9 |
| Chapter 1. CNMI Population | 11 |
| 1.0 Population | 11 |
| 1.1 Population by Age | 12 |
| 1.1.1 Median Age | 12 |
| 1.1.2 Age Distribution | 12 |
| 1.2 Population by Citizenship | 14 |
| 1.3 Population by Place of Birth | 15 |
| 1.4 Population by Ethnicity | 15 |
| 1.5 Year of Entry of CNMI Migrants | 16 |
| 1.6 Reason for Migration to the CNMI | 17 |
| Chapter 2. Labor Force Participation | 18 |
| 2.0 Labor Force Participation | 18 |
| 2.1 Labor Force by Age | 19 |
| 2.3 Labor Force by Citizenship | 19 |
| 2.4 Labor Force by Place of Birth | 20 |
| 2.5 Labor Force by Ethnicity | 20 |
| Chapter 3. Employment | 22 |
| 3.0 Total Employment | 22 |
| 3.1 Employment by Major Industries | 22 |
| 3.1.1 Employment by Major Industries and Sex | 23 |
| 3.1.2 Employment by Major Industries and Citizenship | 23 |
| 3.1.3 Employment By Industry and by Place of Birth | 24 |
| 3.1.4 Employment by Ethnicity | 24 |
| 3.2 Employment by Occupation | 25 |
| 3.2.1 Employment distribution by Occupation and sex | 25 |
| 3.2.2 Employment distribution by Occupation and citizenship | 26 |
| 3.3 Employment by Class of Workers | 26 |
| 3.3.2 Employment distribution by Class of Worker and by Citizenship | 27 |
| Chapter 4. Unemployment | 28 |
| 4.0 Unemployment | 28 |
| 4.1 Unemployment by Age | 28 |
| 4.3 Unemployment by Citizenship | 29 |
| 4.4 Unemployment by Place of Birth | 30 |
| 4.5 Unemployment by Ethnicity | 30 |
| Appendix A: Time Series Tables on Population, Labor Force, Employment, Unemployment, and Wages, Commonwealth of the Northern Mariana Islands, 1973 to 1999 | 31 |
| Appendix B: Procedure for Estimating Populations in the Surveys | 81 |

List of Tables

| | | |
|--------------|--|----|
| Table A.1.0 | CNMI Population by Age and Sex, 1973 to 1995 | 38 |
| Table A.2.0 | CNMI Population by Citizenship and Sex, 1973 to 1995 | 39 |
| Table A.3.0 | CNMI Population by Age and Citizenship, 1973 to 1995 | 40 |
| Table A.4.0 | CNMI Population by Place of Birth, 1973 to 1995 | 41 |
| Table A.5.0 | CNMI Population by Ethnicity, 1980 to 1995 | 42 |
| Table A.6.0 | Year of Entry of Persons Born Outside and Migrated into the CNMI, 1995 | 43 |
| Table A.7.0 | Reason for Migrating into the CNMI, 1995 | 44 |
| Table A.8.0 | Summary of Labor Force Participation by Sex in the CNMI, 1973 to 1995 | 45 |
| Table A.9.0 | CNMI Labor Force Participation by Age and Sex, 1973 to 1995 | 46 |
| Table A.9.1 | CNMI Labor Force Participation Rates by Age, 1973 to 1995 | 47 |
| Table A.10.0 | CNMI Labor Force Participation by Citizenship and Sex, 1973 to 1995 | 48 |
| Table A.10.1 | CNMI Labor Force Participation Rates by Citizenship, 1973 to 1995 | 49 |
| Table A.11.0 | CNMI Labor Force Participation by Birthplace and Sex, 1973 to 1995 | 50 |
| Table A.11.1 | CNMI Labor Force Participation Rates by Birthplace, 1973 to 1995 | 51 |
| Table A.12.0 | CNMI Labor Force Participation by Ethnicity and Sex, 1980 to 1995 | 52 |
| Table A.12.1 | CNMI Labor Force Participation by Ethnicity, 1980 to 1995 | 53 |
| Table A.13.0 | CNMI Total Employment by Major Industries, 1980 to 1995 | 54 |
| Table A.14.0 | CNMI Employment by Major Industries and Citizenship, 1980 to 1995 | 55 |
| Table A.15.0 | Born in the CNMI Employment by Major Industry, 1980 to 1995 | 56 |
| Table A.15.1 | Born in Micronesia Employment by Major Industry, 1980 to 1995 | 57 |
| Table A.15.2 | Born in the Philippines Employment by Major Industry, 1980 to 1995 | 58 |
| Table A.15.3 | Born in China Employment by Major Industry, 1980 to 1995 | 59 |
| Table A.16.0 | Chamorro Employment by Major Industry, 1980 to 1995 | 60 |
| Table A.16.1 | Carolinian Employment by Major Industry, 1980 to 1995 | 61 |
| Table A.16.2 | Micronesian Employment by Major Industry, 1980 to 1995 | 62 |
| Table A.16.3 | Filipino Employment by Major Industry, 1980 to 1995 | 63 |
| Table A.16.4 | Chinese Employment by Major Industry, 1980 to 1995 | 64 |
| Table A.17.0 | CNMI Employment by Occupation, 1980 to 1995 | 65 |
| Table A.18.0 | CNMI Employment by Occupation and Citizenship, 1980 to 1995 | 66 |
| Table A.19.0 | Born in the CNMI Employment by Major Occupation, 1980 to 1995 | 67 |
| Table A.19.1 | Born in Micronesia Employment by Major Occupation, 1980 to 1995 | 68 |
| Table A.19.2 | Born in the Philippines Employment by Major Occupation, 1980 to 1995 | 69 |
| Table A.19.3 | Born in China Employment by Major Occupation, 1980 to 1995 | 70 |
| Table A.20.0 | Chamorro Employment by Occupation, 1980 to 1995 | 71 |
| Table A.20.1 | Carolinian Employment by Occupation, 1980 to 1995 | 72 |
| Table A.20.2 | Micronesian Employment by Occupation, 1980 to 1995 | 73 |
| Table A.20.3 | Filipino Employment by Occupation, 1980 to 1995 | 74 |
| Table A.20.4 | Chinese Employment by Occupation, 1980 to 1995 | 75 |
| Table A.21.0 | CNMI Total Employment by Class of Worker, 1980 to 1995 | 76 |
| Table A.22.0 | CNMI Total Employment by Class of Worker and Citizenship, 1980 to 1995 | 77 |
| Table A.23.0 | CNMI Unemployment by Age Group and Sex, 1973 to 1995 | 78 |
| Table A.23.1 | CNMI Unemployment Rate by Age Group, 1973 to 1995 | 79 |
| Table A.24.0 | CNMI Unemployment by Citizenship and Sex, 1973 to 1995 | 80 |
| Table A.24.1 | CNMI Unemployment Rate by Citizenship, 1973 to 1995 | 81 |
| Table A.25.0 | CNMI Unemployment by Place of Birth and Sex, 1973 to 1995 | 82 |
| Table A.25.1 | CNMI Unemployment Rate by Place of Birth, 1973 to 1999 | 83 |
| Table A.26.0 | CNMI Unemployment by Ethnicity and Sex, 1980 to 1995 | 84 |
| Table A.26.1 | CNMI Unemployment Rate by Ethnicity, 1980 to 1995 | 85 |
| Table A.27.0 | CNMI Unemployment by Education Level, 1973 to 1995 | 86 |
| Table A.27.1 | CNMI Unemployment Rate by Education Level, 1973 to 1995 | 87 |
| Table A.28.0 | CNMI Mean Wages by Industry, 1980 to 1995 | 88 |
| Table A.29.0 | CNMI Mean Wages by Occupation, 1980 to 1995 | 89 |
| Table A.30.0 | CNMI Mean Wages by Class of Worker, 1980 to 1995 | 90 |
| Table A.31.0 | CNMI Mean Wages by Ethnicity, 1980 to 1995 | 91 |

| | | |
|--------------|---|----|
| Table A.32.0 | CNMI Mean Wages by Industry and Place of Birth, 1980 to 1995..... | 92 |
| Table A.33.0 | CNMI Mean Wages by Occupation and Place of Birth, 1980 to 1995 | 93 |
| Table A.34.0 | CNMI Mean Wages by Class of Worker and Place of Birth, 1980 to 1995 | 94 |
| Table A.35.0 | CNMI Mean Wages by Place of Birth, 1980 to 1995 | 95 |
| Table A.36.0 | CNMI Household and Family Income, 1980 to 1995 | 96 |
| Table A.37.0 | CNMI Household and Family Median and Mean Income by Ethnicity, 1980 to 1995 | 97 |
| Table A.38.0 | CNMI Total Households, Family households, and Non-family Households, 1980 to 1995 | 98 |

List of Charts

| | | |
|---------------|---|----|
| Chart 1.0.1 | CNMI Population, 1920 to 1999 | 11 |
| Chart 1.1.2.1 | CNMI Male and Female Age Distribution, 1980, 1990, and 1999 | 13 |
| Chart 1.2.1 | CNMI Population Percent Distribution by Citizenship, 1980 to 1999 | 14 |
| Chart 1.2.2 | Male and Female Age Distribution by Citizenship in the CNMI in 1999 | 14 |
| Chart 1.3.1 | Population Percent Distribution by Birthplace, 1973 to 1999 | 15 |
| Chart 1.3.2 | CNMI Population Percent Distribution by Birthplace, 1999 | 15 |
| Chart 1.4.1 | CNMI Population Percent Distribution by Major Ethnic Groups, 1980 to 1999 | 16 |
| Chart 2.0.1 | Labor Force Participation Rates in the CNMI, 1973 to 1999 | 18 |
| Chart 2.0.2 | Male and Female Labor Force Participation Rates in the CNMI, 1973 to 1999 | 18 |
| Chart 2.1.1 | Labor Force Participation by Age Group, 1973 to 1995 | 19 |
| Chart 2.1.2 | Comparison of 1973 and 1995 CNMI Labor Force Age Distribution | 19 |
| Chart 2.3.1 | CNMI Labor Force Percent Distribution by Citizenship, 1973 to 1999 | 19 |
| Chart 2.3.2 | CNMI Labor Force Participation Rates by Citizenship, 1973 to 1999 | 20 |
| Chart 2.4.1 | CNMI Labor Force Participation Rates by Birthplace, 1995 | 20 |
| Chart 2.4.2 | CNMI Female Labor Force Percent Distribution by Birthplace, Fourth Quarter, 1999 | 20 |
| Chart 2.5.1 | CNMI Labor Force Participation Rates by Ethnicity, 1999 | 21 |
| Chart 2.5.2 | CNMI Labor Force Percent Distribution by Ethnicity, 1980 to 1999 | 21 |
| Chart 2.5.3 | CNMI Labor Force Percent Distribution by Ethnicity, 1999 | 21 |
| Chart 3.0.1 | Total Number of Employed Persons in the CNMI, 1980 to 1999 | 22 |
| Chart 3.1.1 | CNMI Employment Percent Distribution by Industry, 1980 to 1999 | 22 |
| Chart 3.1.1.1 | CNMI Male-Female Employment Composition by Industry, 1999 | 23 |
| Chart 3.1.1.2 | CNMI Female Employment Percent Distribution by Industry, 1999 | 23 |
| Chart 3.1.2.1 | CNMI Employment by Citizenship | 23 |
| Chart 3.1.2.2 | CNMI Employment, Citizenship Percent Distribution by Industry, Fourth Quarter, 1999 | 24 |
| Chart 3.1.4.1 | Chamorro Employment Distribution by Industry, CNMI, 1999 | 24 |
| Chart 3.1.4.2 | Carolinian Employment Distribution by Industry, CNMI, 1999 | 24 |
| Chart 3.1.4.3 | Micronesian Employment Distribution by Industry, CNMI, 1999 | 25 |
| Chart 3.1.4.4 | Filipino Employment Distribution by Industry, CNMI, 1999 | 25 |
| Chart 3.1.4.5 | Chinese Employment Distribution by Industry, CNMI, 1999 | 25 |
| Chart 3.2.1 | CNMI Employment Percent Distribution by Occupation, 1980 to 1999 | 25 |
| Chart 3.2.2.1 | CNMI Employment Percent Non-US Citizen by occupation, 1999 | 26 |
| Chart 3.3.1 | CNMI Employment Distribution by Class of Worker, 1980 to 1999 | 26 |
| Chart 3.3.2.1 | CNMI Employment Percent Non-US Citizenship by Class of Worker, 1980 to 1999 | 27 |
| Chart 4.0.1 | CNMI Unemployment Rate, 1973 to 1999 | 28 |
| Chart 4.1.1 | CNMI Unemployment Rate by Age Group, 1973 to 1995 | 28 |
| Chart 4.1.2 | CNMI Unemployment Percent Distribution by Age Group, 1973 and 1995 | 29 |
| Chart 4.3.1 | CNMI Unemployment Rate by Citizenship, 1980 to 1999 | 29 |
| Chart 4.3.2 | CNMI Unemployment Percent Distribution by Citizenship, 1973 to 1999 | 29 |
| Chart 4.5.1 | CNMI Unemployment Rate by Single Ethnic Group, 1995 and 1999 | 30 |
| Chart 4.5.2 | CNMI Unemployment Percent Distribution by Ethnicity, 1999 | 30 |

Introduction

This report is an update of the initial report on trends in population, labor force, employment and unemployment in the CNMI. This report include the results of the 4th quarter 1999 Current Labor Force Survey in the CNMI. The fourth quarter, 1999, CLFS included Saipan, Rota, and Tinian making the results comparable to prior censuses; however, the survey did not collect data on education and wages. Hence, this report update trends in population, labor force, employment, and unemployment, but not wages in the CNMI.

Unlike the first report that had two sets of tables, this update only has one set of tables in Appendix A.

The format of the report remained the same—the report summarizes the trends in the body of the report and makes extensive references to tables in Appendix A.

Population in the CNMI from 1996 to 1999 were estimated based on the methodology described in Appendix B.

Summary

The following summary highlights major trends and changes in the CNMI population, labor force, employment, and unemployment from 1973 to 1999.

Population

- Population in the CNMI increased dramatically between 1980 and 1990 and continued to increase through 1999.
- Migration was the main reason for the drastic increase in the CNMI population during this period.
- Employment and business purposes were the main reasons for migrating into the CNMI—the majority of all migrants in the CNMI were temporary resident workers, business persons and their spouses and dependents. The migrant-worker population now outnumbers the local population. The vast majority of migrant-workers were non-US citizens who came from Asian countries, particularly, from the Philippines and China.
- The growth in the migrant-worker population has influenced the demographics of the overall CNMI population. From 1980 to 1999,
 - Age distribution shifted from a younger population to a working-middle-age population
 - Median age increased from 19.6 in 1980 to 27.4 years of age in 1995.
 - Birthplace of the population shifted from a majority born in the CNMI in 1980 to majority born outside of the CNMI in 1990 and after.
 - Citizenship of the population shifted from a majority US citizens in 1980 to a majority non-US citizens in 1990 and after.
 - Ethnic composition changed from a Chamorro majority in 1980 to Asian majority with Filipino becoming the largest single ethnic group by 1990 and after.

Labor Force and Employment

- Drastic increases in economic activities during this period led to high labor force participation and employment in the CNMI. The local population entered the labor force in unprecedented numbers. Because of a relatively small population base, the economy began to rely on outside sources for manpower needs resulting in a large number of migrant-workers.
- The reliance on migrant labor resulted in shifts in the labor force.
 - From a minority in 1973, migrant workers increased drastically after 1980 becoming the majority of the total CNMI labor force by 1990.
 - From a minority in 1980, non-US citizens become the majority of the total CNMI work force by 1990.
 - The birthplace of the labor force shifted from a majority born in the CNMI to a majority born outside.
 - The ethnic composition of the labor force changed from a predominantly Chamorro in 1980 to predominantly Asians, with Filipinos being the largest single ethnic group in the labor force by 1990 and after.
 - By 1990 and after, migrant workers outnumbered local workers in all industries, except in “public administration” and “finance, insurance, and real estate”.

Unemployment

- Unemployment rate was high in 1973 (12.6%), low in 1980 (2.4%) and 1990 (2.3%), but increased in 1995 to 7.3 percent and was estimated at 4.3 percent in 1999, fourth quarter.
 - Unemployment rate has been higher for the local work force compared to the migrant work

force. However, migrant-workers are becoming a significant proportion of the total unemployment—from about 10 percent in 1980 to about 44 percent of total unemployment in 1995 and estimated at about 24 percent in 1999, fourth quarter.

- Between 1980 and 1999, age distribution of the unemployment population has shifted higher.
- The birthplace of unemployed persons changed from 1980 to 1999—persons born outside have been increasing as a proportion of total unemployed.
- The citizenship composition of unemployed persons changed from mostly US citizens in 1980 to a significantly non-US citizens by 1995.
- The ethnic composition of unemployed persons in the CNMI became more Micronesians and Asians and relatively less Chamorros and Carolinians.

Chapter 1. CNMI Population

1.0 Population

The total population in the Commonwealth of the Northern Mariana Islands (CNMI) increased steadily from 8,290 (in 1958) to 16,780 (in 1980). The Commonwealth's population more than doubled between 1980 and 1990 to 43,345 persons, an annual growth rate of 9.5 percent. The population in the CNMI continued to grow at an annual rate of 5.6 percent from 1990 to 1995, reaching 58,846 persons in 1995. By 1999, the population was estimated at about 81,000 persons.

Since 1980, the vast majority (about 90%) of CNMI's total population has resided in Saipan. Saipan is the biggest island of the 14 Northern Mariana Islands and is where most of the economic activities take place. In the fourth quarter, calendar year 1999, Saipan's population was estimated at 73,000 persons while Rota's population was estimated at about 4,400 and Tinian's population at about 3,400. Table 1.0 below shows population trends in the CNMI by island from 1920 to 1999. Population estimates for 1996 to 1999 are explained in Appendix C.

The main reason for the dramatic growth in population in the CNMI was migration. The main reasons for migrating into the CNMI were for employment and business opportunities. As shown in this report, CNMI's overall population characteristics—age, ethnicity, citizenship, place of birth, gender—have changed dramatically because of the large increase in the migrant population in the Commonwealth.

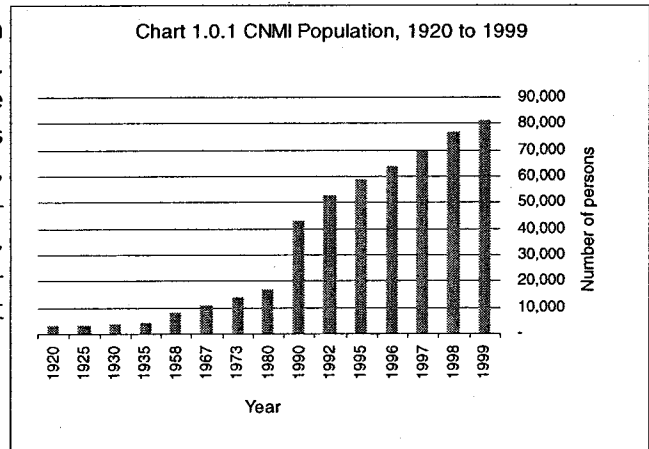


Table 1.0 CNMI Total Population by Island, 1920 to 1999

| Year | Number of persons | | | | | Percent distribution | | | | |
|-------|-------------------|--------|-------|--------|-----------|----------------------|--------|------|--------|-----------|
| | Total | Saipan | Rota | Tinian | N.Islands | Total | Saipan | Rota | Tinian | N.Islands |
| 1999* | 81,126 | 73,272 | 4,440 | 3,414 | - | 100.0 | 90.4 | 5.8 | 3.8 | - |
| 1998* | 76,708 | 69,421 | 4,350 | 2,937 | - | 100.0 | 90.5 | 5.7 | 3.8 | - |
| 1997* | 69,801 | 62,956 | 4,023 | 2,822 | - | 100.0 | 90.2 | 5.8 | 4.0 | - |
| 1996* | 63,613 | 57,181 | 3,721 | 2,711 | - | 100.0 | 89.9 | 5.8 | 4.3 | - |
| 1995 | 58,846 | 52,698 | 3,509 | 2,631 | 8 | 100.0 | 89.6 | 6.0 | 4.5 | 0.0 |
| 1992* | 52,900 | 47,786 | 2,561 | 2,553 | - | 100.0 | 90.3 | 4.8 | 4.8 | - |
| 1990 | 43,345 | 38,896 | 2,295 | 2,118 | 36 | 100.0 | 89.7 | 5.3 | 4.9 | 0.1 |
| 1980 | 16,780 | 14,549 | 1,261 | 866 | 104 | 100.0 | 86.7 | 7.5 | 5.2 | 0.6 |
| 1973 | 14,333 | 12,382 | 1,104 | 714 | 133 | 100.0 | 86.4 | 7.7 | 5.0 | 0.9 |
| 1967 | 10,986 | 9,035 | 1,078 | 610 | 263 | 100.0 | 82.2 | 9.8 | 5.6 | 2.4 |
| 1958 | 8,290 | 6,654 | 969 | 405 | 262 | 100.0 | 80.3 | 11.7 | 4.9 | 3.2 |
| 1935 | 4,297 | 3,194 | 788 | 24 | 291 | 100.0 | 74.3 | 18.3 | 0.6 | 6.8 |
| 1930 | 3,829 | 2,915 | 644 | 43 | 227 | 100.0 | 76.1 | 16.8 | 1.1 | 5.9 |
| 1925 | 3,493 | 2,639 | 487 | 180 | 187 | 100.0 | 75.6 | 13.9 | 5.2 | 5.4 |
| 1920 | 3,398 | 2,449 | 651 | 112 | 186 | 100.0 | 72.1 | 19.2 | 3.3 | 5.5 |

Note:* Population for these years is based on estimates while population for all other years are census counts.

1.1 Population by Age

The age structure of the CNMI population changed significantly between 1980 and 1990: the median age of the population increased and the age distribution of the population changed from a relatively young population to a more middle-aged population.

1.1.1 Median Age

The median age of the CNMI population increased quite drastically from 19.6 years in 1980 to 27.4 years in 1990. The median age is the age that divides the population into two halves; for example, half of the population in the CNMI was younger than 27.4 and the other half was older than 27.4 years of age. The median age increased during this period for two reasons: (1) the CNMI's indigenous population was aging, people were living longer and birth rate was declining; but more importantly, (2) the presence of a large migrant-worker population in the CNMI, which is concentrated between ages 20 and 54, pulled the median age of the CNMI's total population higher. The median age remained at this higher level between 1990 and 1999.

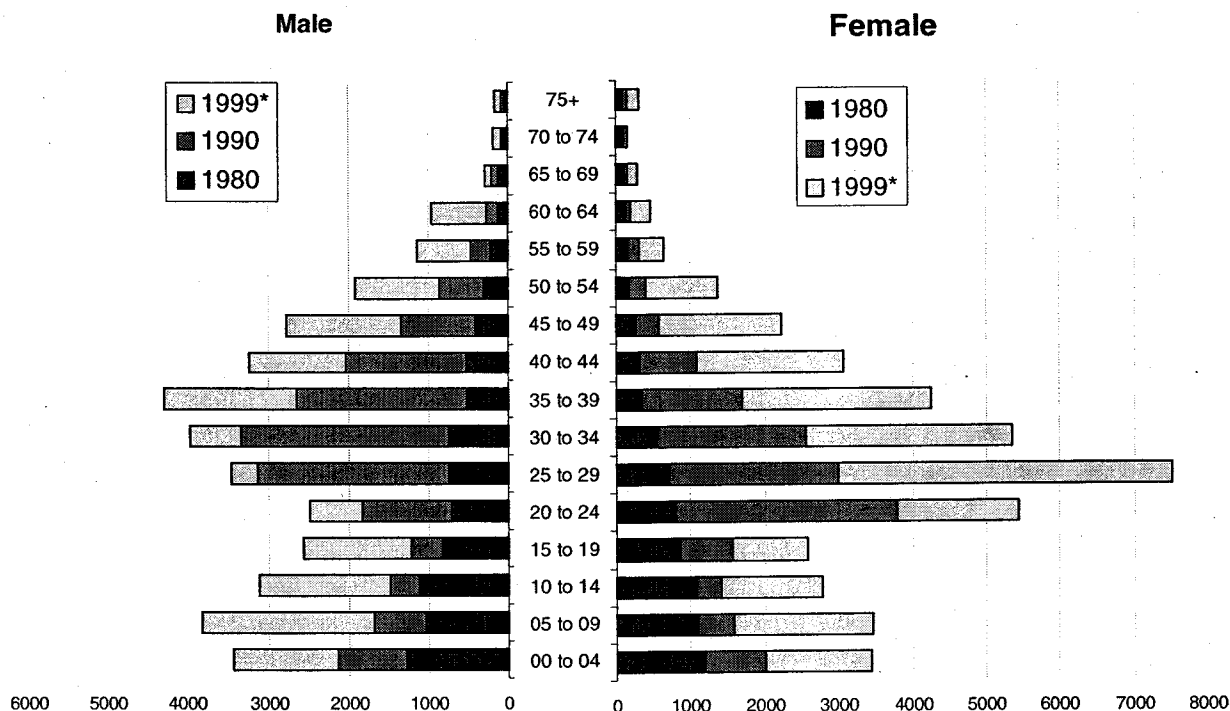
1.1.2 Age Distribution

The age distribution of the CNMI total population shifted significantly between 1980 and 1990. In 1973, and in 1980, age group 0 to 4 years old, constituted the largest age group followed by age groups 5 to 9, 10 to 14, 15 to 19, 20 to 24, ..., 80 to 84, and 85 and over. But by 1990, age group 25 to 29 became the largest age group followed by age groups 30 to 34, age group 20 to 24, age group 35 to 39 and then age group 0 to 04 years old. Since 1990, age groups between 20 to 39 years of age (the middle age-groups) have continued to outnumber the lower and the higher age groups. The shift in the age structure of the CNMI population is best described using a population pyramid chart.

In a population pyramid, a horizontal bar represents each age group of the male population and each age group of the female population. The horizontal bars for each age group for male and female populations together form a chart that resembles a pyramid, such as the top part of Chart 1.1.2.1 below. The shape of the pyramid depicts the age structure of the study population.

In 1980, the CNMI population pyramid resembled a regular pyramid shape, where age group 0-4, at the bottom of the chart, was the largest age group followed by age group 5-9, 10-14, 15-19 and on up to age group 75 and over. The shape of the CNMI population pyramid shifted from this regular shape between 1980 and 1990. By 1990, the horizontal bars no longer resembled a regular pyramid, but looked more like a Christmas tree or a two-tier pyramid, one bigger pyramid sitting on top of a smaller one. In 1995 the age group horizontal bars deviated even further from the regular pyramid shape. This two-tier pyramid shape continued up to 1999. The shift in age distribution, as depicted by the population pyramid, resulted from the age distribution of the migrant-worker population in the CNMI. The shape of the larger pyramid on top, that starts at age group 20 to 24 through age group 45 to 49, is dictated by the number of migrant workers in the Commonwealth who outnumbered the indigenous population in these age groups. The smaller pyramid on the bottom, that starts from age group 0 to 4 through 15 to 19 age group, reflects the increasing number of total births in the CNMI in recent years. But although the number of births has been increasing in recent years, the number of migrant workers remains higher still. Comparing the age pyramids for 1980 through 1999 also explains why the median age of the CNMI population is much higher now than it was in 1973 or 1980.

Chart 1.1.2.1 CNMI Male and Female Age Distribution, 1980, 1990, and 1999



The percent distribution of the age groups also shows the shift in the age structure of the CNMI's population. As shown in Table A.1.0., in 1973, age group 0 to 4 years old constituted the largest age group at 16.7% of total population followed by age group 5 to 9 years of age, 10 to 14, and 15 to 19 at 15.1%, 13.2%, and 11.3 %, respectively. But by 1990, age group 25 to 29 years old became the largest age group at 15.9% of total population, followed by age group 30 to 34 years of age, 35 to 39 and 20 to 24 age groups at 14.1%, 10.8%, and 9.8%, respectively.

Age distributions among males and females were similar in 1973 and 1980, but by 1990 and after, the female population became relatively younger than the male population. The age percent distribution of females and males in 1995 reveals that, on the one hand, the female age group 25 to 29 years constituted almost 18% of total females followed by the 20 to 24 and 35 to 39 age groups at 14.2% and 12.9%, respectively. On the other hand, the male age group 30 to 34 years of age constituted 13.3% of total male population followed by age groups 35 to 39 and 25 to 29 years of age at 12.4% and 12.4%, respectively.

The same population age structure in the CNMI in 1995 continued through to 1999, as shown in Table A.1.0 in Appendix A.

1.2 Population by Citizenship

The migrant-worker population has influenced the characteristics of the overall population in the CNMI. One way to see this influence is to look at the total population by citizenship over time. As shown in the Chart 1.2.1, in 1973 over 80 percent of the CNMI population were US citizens and in 1980 just under 80 percent were U.S citizens. But by 1990 and later, more than

50 percent of total CNMI population were non US citizens. A summary of the CNMI total population by sex and by citizenship is shown in Table A.2.0 in Appendix A. Recent labor force survey in the CNMI indicates the same trend, as shown in Table A.2.0

The fact that the migrant-worker population was concentrated between 20 to 54 years is best depicted in a population pyramid showing males and females by age group and citizenship. For example, Chart 1.2.2 below reveals clearly that non-US citizens outnumbered US citizens in the middle age-groups (20 to 54 years old).

In addition to the pyramid chart, as shown in Table A.3.0 in Appendix A, in 1995, non-US citizen females outnumbered US citizen females more than 4 to 1 in age group 25 to 29, more than 3 to 1 in age group 20 to 24 and 30 to 34, and 2 to 1 in age groups 35 to 39. Similarly, non-US citizen males outnumbered US citizen males 3 to 1 in age groups, 30 to 34 and 35 to 39 and 2 to 1 in age groups 25 to 29 and 40 to 44. Recent labor force survey in the CNMI indicates this same trend, as shown in Table A.3.0, non-US citizens continued to outnumber US citizens in the middle age-groups in the CNMI in 1999.

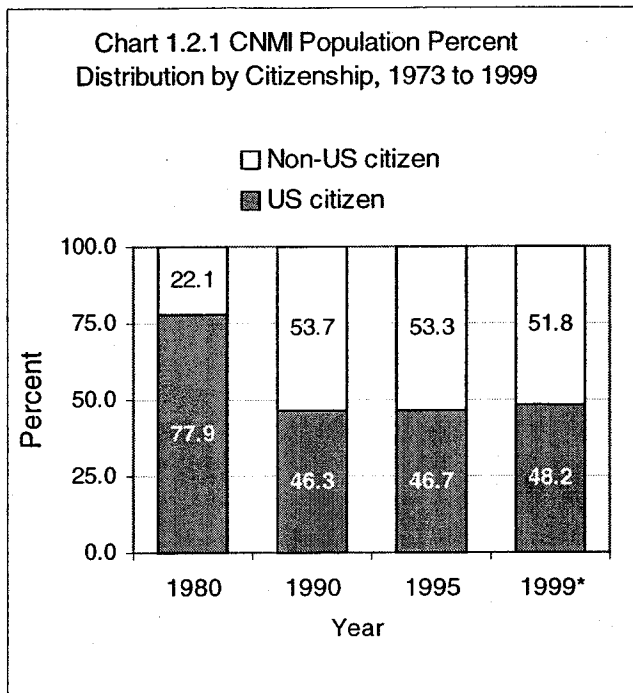
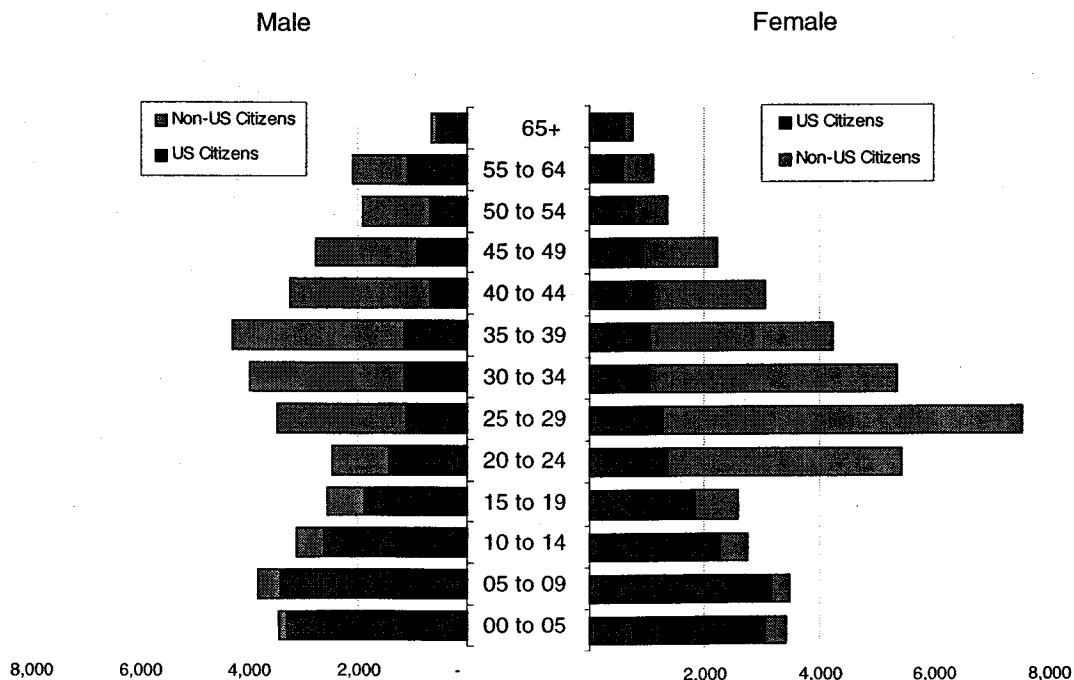


Chart 1.2.2 Male and Female Age Distribution by Citizenship in the CNMI in 1999



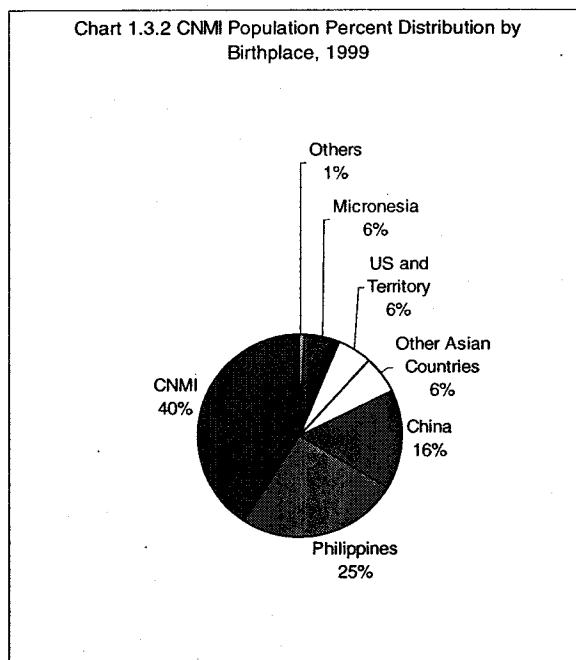
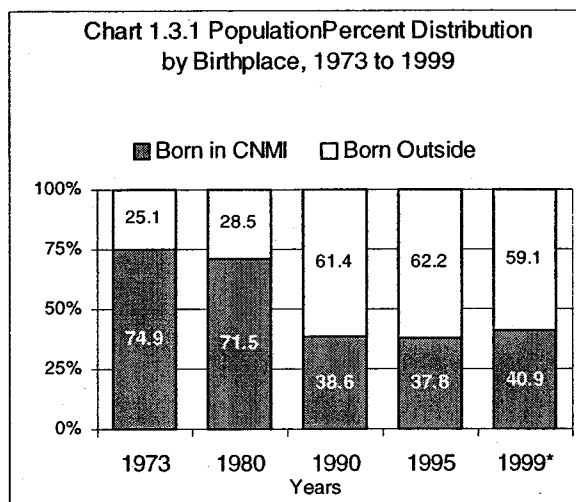
1.3 Population by Place of Birth

A look at the CNMI population by place of birth is similar to what has been shown by looking at total population by citizenship; that is, the majority of total population were migrant workers and their dependents who were born outside and migrated into the CNMI recently.

As shown in Chart 1.3.1, in 1973 and 1980, the vast majority (74.9% and 71.5%, respectively) of the CNMI population were born in the Marianas. But by 1990 and after, the majority of the total population in the CNMI were born outside, mostly in Asian countries, particularly in the Philippines and, more recently, China. In 1995, almost 50 percent of total population were born in Asian countries and migrated into the CNMI; 30.4 percent were born in the Philippines and 11.5 percent were born in China. CNMI-born were 37.8 percent of total population while persons born in Micronesia were almost 6 percent of the total population.

Recent labor force survey in the CNMI indicate the same population trend by place of birth. According to recent survey, as shown in Chart 1.3.2, in 1999, persons born in the CNMI were 40 percent of the CNMI's total population, followed by persons born in the Philippines (25%) and persons born in China (16%). Persons born in Micronesia were about 5 percent of the CNMI's total population in 1999.

As shown in Table A.4.0, birthplace by sex reveal that females born in China increased much faster than any other group, since 1990, becoming the second largest group of the total female population in the CNMI in 1999, at over 24 percent.

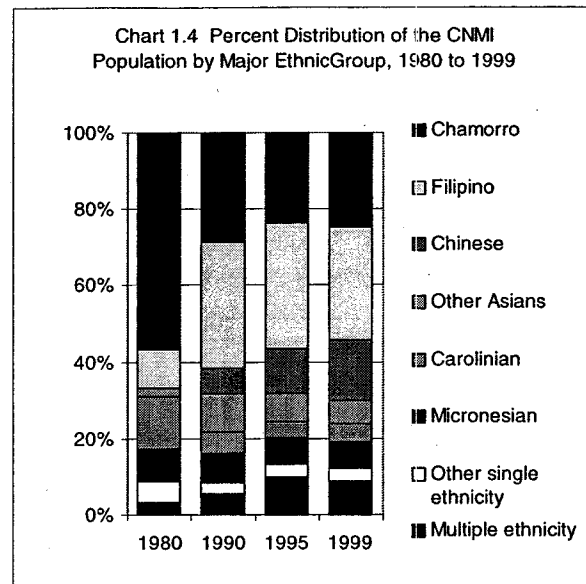


1.4 Population by Ethnicity

With the presence of a large migrant worker population, the CNMI is now a multi-ethnic population.

As shown in Table A.5.0, in 1980, about 57 percent of the CNMI population were Chamorros, about 14 percent were Carolinians, 10 percent were Filipinos, and about 9 percent were Micronesians (from Palau, FSM, and the Marshall Islands). However, by 1990 Filipinos surpassed Chamorros as the largest single ethnic group. In 1990, about 32 percent of CNMI's population were Filipinos, 29 percent were Chamorros, over 5 percent were Carolinians, 8 percent were Micronesians and about 7 percent were Chinese. In the 90s, the Filipinos contin-

ued to be the largest single ethnic group while Chinese were the fastest growing ethnic group. The Chinese were less than one percent (0.2%) of CNMI's population in 1980, but increase to 6.7% in 1990, and 11.5% in 1995. Recent labor force survey, as shown Chart 1.4.1 and in Table A.5.0, indicate that Chinese were about 16% of the CNMI's total population in 1999. Since 1980, Chamorros and Carolinians have been declining while Asians have been increasing as proportions of the CNMI's population. The Micronesians have remained at about the same proportion of the total population since 1980.



The number of Individuals who report multiple ethnic background has been increasing since 1980, perhaps reflecting growing inter-marriage among different ethnic groups in the CNMI. Persons who reported multiple ethnic background were only 3% of the total CNMI population in 1980, but by 1995 this group had increased to almost 10% of the total CNMI population.

More recent data on ethnicity in the CNMI indicate that, like the place of birth by sex, in 1999, Chinese women constituted the second largest single ethnic group of the total female population in the CNMI while Filipino males constituted the largest single ethnic group of the total male population in the CNMI, as shown in detail in Table A.5.0 in Appendix A.

1.5 Year of Entry of CNMI Migrants

The fact that the majority of the current CNMI population are workers who migrated into the Commonwealth in recent years is best described by looking at the "year-of-entry" of those born

Table 1.5 Year of Entry of Persons Born Outside CNMI, 1995

| Year of Entry | Total no. of persons born outside | Percent Distribution | Percent cumulative Distribution |
|--------------------------------|-----------------------------------|----------------------|---------------------------------|
| Total Born outside CNMI | 36,626 | 100.0 | - |
| 1994 or 1995 | 17,319 | 47.3 | 47.3 |
| 1990 to 1993 | 12,357 | 33.7 | 81.0 |
| 1987 to 1989 | 3,216 | 8.8 | 89.8 |
| 1985 to 1986 | 1,029 | 2.8 | 92.6 |
| 1980 to 1984 | 1,269 | 3.5 | 96.1 |
| 1975 to 1979 | 605 | 1.7 | 97.7 |
| 1965 to 1974 | 547 | 1.5 | 99.2 |
| Before 1965 | 284 | 0.8 | 100.0 |
| Not a US citizen | 31,357 | 100.0 | - |
| 1994 or 1995 | 15,284 | 48.7 | 48.7 |
| 1990 to 1993 | 10,976 | 35.0 | 83.7 |
| 1987 to 1989 | 2,675 | 8.5 | 92.3 |
| 1985 to 1986 | 789 | 2.5 | 94.8 |
| 1980 to 1984 | 880 | 2.8 | 97.6 |
| 1975 to 1979 | 390 | 1.2 | 98.8 |
| 1965 to 1974 | 250 | 0.8 | 99.6 |
| Before 1965 | 113 | 0.4 | 100.0 |

outside and who migrated into the CNMI. In 1995, the most recent year when complete data are available, over 62% (36,626 persons) of the total CNMI population were born outside and migrated into the CNMI. Of this total, almost half (17,319 persons) came into the CNMI within the 2 years (1994 and 1995) preceding the census date, September 9, 1995. Another one-third came within the 3 to 5 years preceding the census date. In other words, over 80 percent of migrants had only been in the CNMI 5 years of the 1995 census date.

As shown in Table A.6.0 in Appendix A, about 90 percent of the estimated total migrants in the CNMI in 1999 were non-US citizens. About 47 percent of these came to the CNMI within the 3 years before the 4th quarter, 1999, survey period, 80 percent came within the 10 years of survey period.

Recent survey data in the CNMI indicates the same trend—that the majority of migrants came into the CNMI in recent years, as shown in Table A.6.0.

1.6 Reason for Migration to the CNMI

Almost all migrants in the CNMI came for employment and business purposes. Again, based on the 1995 census, the most recent year when complete data are available, almost 92 percent of all migrants were in the CNMI for employment or business purposes or spouses, dependents or family members of employed or business persons, as shown in Table 1.6 below.

Recent labor force survey data in the CNMI indicates the same trend—that the vast majority of migrants come to the CNMI because of employment and business purposes, as shown in Table A.7.0.

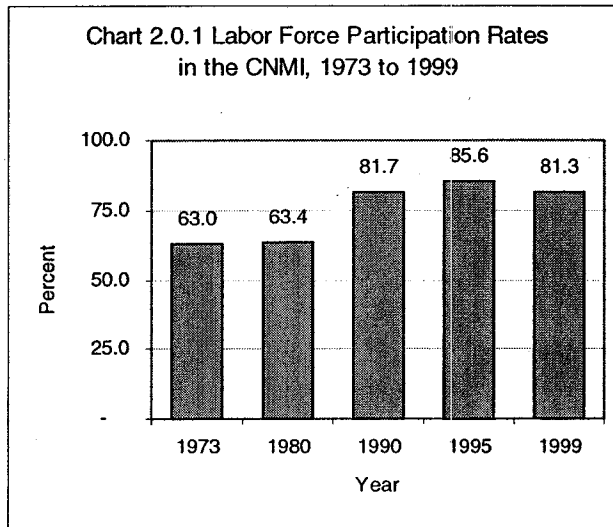
Table 1.6 Reason for Migrating into the CNMI, 1995

| | Total no. of persons born outside | Percent distribution | Percent cumulative distribution |
|-------------------------------|---|-------------------------|---------------------------------------|
| All Persons Born outside CNMI | 36,626 | 100.0 | - |
| Employment | 27,558 | 75.2 | 75.2 |
| Business | 996 | 2.7 | 78.0 |
| Spouse of employed person | 2,460 | 6.7 | 84.7 |
| Dependent of employed person | 1,620 | 4.4 | 89.1 |
| Family member of employed | 975 | 2.7 | 91.8 |
| Student attending school/col | 173 | 0.5 | 92.2 |
| Missionary activities | 27 | 0.1 | 92.3 |
| Visiting/vacation | 1,204 | 3.3 | 95.6 |
| Other | 1,613 | 4.4 | 100.0 |

Chapter 2. Labor Force Participation

2.0 Labor Force Participation

The labor force population includes persons who are 16 years of age and older who are employed or who can be employed and are willing to be employed; the labor force population excludes persons less than 16 years old and those not looking and/or not willing to take a job. (Detailed definitions for labor force participation and other related terms may be found in several sources such as the 1990 Census of Housing and Population). As already established in Chapter 1, the migrant-worker population is concentrated in the middle age-groups and came to the CNMI primarily for employment and business purposes. Hence, the influence of the migrant-worker population is more pronounced on the CNMI labor force demographics—age, citizenship, place of births, ethnicity, and gender—than in the CNMI total population.



The number of persons participating in the labor force in the CNMI increased dramatically between 1980 and 1990 and continued to increase through the rest of the 1990s. The tremendous economic growth in the second half of the 80s and the 90s not only required importation of labor but also enabled the indigenous population to enter the labor force in unprecedented numbers. As shown in Chart 2.0.1, in 1973 and 1980, only 63% of persons 16 years of age and older participated in the labor force. By 1990, labor force participation rate had increased to about 82 percent and has remained over 80 percent since.

Labor force participation rates have increased over time for both males and females; however, it is important to note, as shown in Chart 2.0.2, and Table A.8.0, that while the male labor force participation rate has been relatively high, the female labor force participation rate was low in 1973 (39.6%) and increased to a high of over 81 percent in 1995. Recent labor force survey results in Saipan indicate that female participation rate has remained high in the CNMI, as shown in Table A.8.0.

