Kosrae State Census Report

2000 FSM Census of Population and Housing

December 2002

Kosrae Branch Statistics Office
Division of Statistics
Department of Economic Affairs
National Government
Tofol, Kosrae 96944
Federated States of Micronesia

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President's Message

It gives me a great pleasure to publicize the results of the 2000 FSM Census of Population and Housing and to transmit to the people of Kosrae State Volume 1 of the Kosrae State Census Report.

The people of the State of Kosrae and the citizens of the FSM are our single most significant economic assets. The well-being of our citizens and that of our future generations depends on better planning and sound decision-making process undertaken today. These processes require full understanding and utilization of the Kosrae State Census Report as an important development tool. The census data as contained in the Report serve as benchmark information for both government and the private sector in terms of planning, coordination and integration of essential social services with the growing population. The census data also serve in large measures in our daily efforts for developing domestic resources in a manner that would meet the aspirations of our people, and would ensure that everyone equitably benefits from the highest possible living standards. Nevertheless, the census monographs contain essential information that permits policy makers and planners to establish direction and improvement strategies in dealing with economic development to accommodate the ever-expanding population.

I would also like to join the leaders at all levels of the government to express our gratitude for the technical support provided by the United States Government (Department of Interior) and the Secretariat of the Pacific Community for providing financial and technical support for the 2000 FSM Census Project. It is extremely important to extend special appreciation to Dr. Michael Levin from the U.S. Department of Interior (International Program Center) and Mrs. Vilimaina Rakaseta from the Secretariat of the Pacific Community for actively taking part in the planning and analysis of data in the census project. Furthermore, I would like to extend special recognition to the Secretary of the Department of Economic Affairs, the Honorable Sebastian L. Anefal and the staff within the Division of Statistics for bringing the 2000 FSM Census Project to a successful completion.

I would therefore encourage everyone to fully utilize the Kosrae State Census Report for better planning of any programs related to the development and well being of the State of Kosrae as well as the nation. Once again, the Office of the President wishes to express its special thanks to you all by saying "Kam Margargad", "Kinisou Chapur", "Kalahngan", "and Kulo Malulap".

Leo A. Falcam
President
Federated States of Micronesia

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GOVERNOR'S MESSAGE

It is with great pleasure that I transmit to the Government and the people of Kosrae State the first volume of the Kosrae State Census Report of the 2000 FSM Census of Population and Housing. Our need for timely and reliable information for our developing state is indisputable. This census report has been produced with an objective (among others) to make available, comparative data on demographic, social, and housing characteristics for this state.

It is extremely important to recognize the tremendous efforts that the National Government and its Department of Economic Affairs has provided during the planning and implementation of the 2000 FSM Census of Population and Housing. I join the President of the Federated States of Micronesia, The Honorable Leo A. Falcam in conveying our utmost gratitude for the technical and financial support for the 2000 FSM Census project provided by the United States Department of Interior and the Secretariat of the Pacific Community. I hereby encourage everyone to utilize the results presented in this publication for efficient and effective decision-making processes.

I certainly would like also to convey sincerest appreciation and "Kulo ma lulap" to all the people, individuals and leaders of the municipal and state governments for their full cooperation and support in making the 2000 Census a success. The Lieutenant Governor, Gerson A. Jackson and I also extend our appreciation to the Statistics Staff and Census Field Enumerators and Supervisors for the job well done.

Rensley A. Sigrah
Governor

/mia

"SHAPING TOMORROW TODAY"

DEPARTMENT OF ECONOMIC AFFAIRS
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Acknowledgement

The 2000 Kosrae State Census Report is part of Volume 1 of the 2000 FSM Census of Population and Housing published for the FSM by the Department of Economic Affairs. The data presented in this publication are important for planning and research by both government and the private sector. The 1994 Census Report, along with the 2000 Kosrae State Census Report, provides a wider range of useful information on the size, structure, distribution and socioeconomic patterns of the nation.

In this regard, I present to you this new publication with anticipation that planners and policy-makers would find it a very useful source of population reference and information. I would encourage leaders at all levels of government to fully utilize the information in the publication as a tool for formulating policy decisions predicated upon how the population is changing and how it may impact future planning and development activities in the State of Kosrae.

I would like to express our appreciation for the tremendous assistance that the United States Department of Interior, the Secretariat of the Pacific Community and all other international organizations involved have provided for this census project. I would also like to extend special appreciation to the FSM Congress for favorably considering the census project among other priorities. Without such support, the census project could not have been made possible.

It is also with great pleasure to offer recognition to Mr. Eneriko Suldan, Assistant Secretary for Statistics and to the tireless efforts of all the staff in the Division of Statistics, technical experts, and enumerators who were involved in this major census undertaking.

As we concentrate our efforts toward improving the statistical program activities in the FSM to become more responsive to those who use the data, the Department of Economic Affairs welcomes any constructive observation and comments regarding the 2000 Kosrae State Census report.

Sebastian L. Anefal
Secretary
Department of Economic Affairs

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PREFACE

The Division of Statistics, Department of Economic Affairs, FSM is the primary statistical arm of the government, which prepares for and conducts periodic censuses of population and housing. It also conducts surveys and research on various aspects of socio-economic conditions including national accounts, labor and employment and price situations in the country for the use of the government and the public. It also collects and processes data for statistical purposes from various offices and agencies of the government. More importantly, it enforces and carries out the provision of the FSM Public Law 5-77 in all statistical activities.

As demand for timely and reliable census of population and housing increased, it was decided to conduct another census count in the year 2000. The previous Censuses of the FSM were conducted in 1985, 1986, 1987, 1989 and 1994. The planning and preparation phases of the 2000 FSM Census of Population and Housing was conducted in 1999 mostly by the local staff within the Division of Statistics. The 2000 Census was the second to be organized and conducted at one point in time, therefore data from the two censuses are comparable. The third FSM Census of Population and Housing will be conducted by the year 2010.

During the 2000 Census, technical supports were received from the United States Bureau of the Census (USBC), International Programs Center, and the Secretariat of the Pacific Community (SPC). From the USBC, Dr. Michael Levin participated in the preparation phase until the final review of the census product. From SPC, Mrs. Vilimaina Rakaseta involved with the analysis phase. The Government of the FSM funded the 2000 Census with support from the United States Government. The FSM Congress appropriated $500,000 for the project and the United State Government through U.S. Office of the Insular Affairs provided in-kind contributions.

The actual enumeration was conducted from April 1 to 17, 2000. The field staff consisted of 39 field supervisors in Chuuk, 8 in Yap, 25 in Pohnpei and 5 in Kosrae. For Enumerators, 48 were hired for Yap, 185 for Chuuk, 130 for Pohnpei and 32 for Kosrae. Those with a good fieldwork record were hired for the preliminary review, coding and keying operation. There were 44 editors and coders recruited to edit and code the remaining variables not covered during the preliminary process and these were retained and trained as computer operators. Text tables were designed for the preparation of the 5 analytical reports: one for each state and a consolidated set to cover the entire FSM. The Division of Statistics staff and State Field Supervisors coordinated the write up of the census analytical reports for the FSM and each of the four states. The experts from USBC assisted in the review process and made comments on the reports. It was agreed that the State Census Reports would basically adopt the format used in the National Census Report, but detailed to the municipality level for consistency and comparison purposes.

It is important to thank the individual staff that were directly involved and dedicated their efforts to the 2000 FSM Census project. Mr. Tilson Kephas was responsible for programming and supervising the data processing and production of the tables. Ms. Brihmer Johnson, Ms. Itorie Amond and Mr. Joston Edmond were dedicated workers in their assignments and Ms. Alice Bridge Ehmes played a key role in the final report writing. The four state field supervisors namely Mr. Anthony Albert from Chuuk State, Mr. Stoney Taulung from Kosrae State, Ms. Virginia Helgenberger from Pohnpei and Mr. Thomas Foruw from Yap State, all worked closely with the Division of Statistics staff from the planning and designing phase until the finalization of the report. Many other staff of the statistics office also assisted including Ms. Mary Rose Nakayama of the Chuuk Branch Statistics Office, who was involved in the final editing of the report, Mrs. Marsellie Obed who was responsible for the administrative work of the project, and Mr. Glenn McKinlay who currently serves as the Statistics Advisor, whose services are funded by the Australian Aid for International Development, and provided tremendous work during the final phase of the project. The individuals involved in the 2000 Census project are permanent staff of the Statistics Division. This project would not have been possible without these individuals' contributions.

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I also wish to extend a special appreciation to Dr. Michael Levin from the USBC, International Program Center, who has contributed a lot to the 1994 and 2000 FSM Censuses. The type of support given by Dr. Levin is superb and hopefully the good working relationship will be continued in future statistical activities.

The 2000 FSM Census project provided a wealth of information needed to monitor and evaluate many aspects of the progress in the FSM. Such a project can only be conducted occasionally. The questionnaire, operations and presentation of the 2000 Census were kept consistent with the 1994 Census to ensure that the 2000 information can be compared directly with the 1994 Census. Together, these two censuses provide a comprehensive record of changes that are occurring in our country at this time. It is a rarity for a Pacific Island country to have two consistent and comprehensive censuses conducted so close together in time. It is also the second for the FSM and we who have worked on this project hope that the information will be used to benefit our country.

"Kamagar", *"Kinisou Chapur"*, *"Kalahngan"* and *"Kulo Malulap"*

Eneriko Suldan
Assistant Secretary for Statistics

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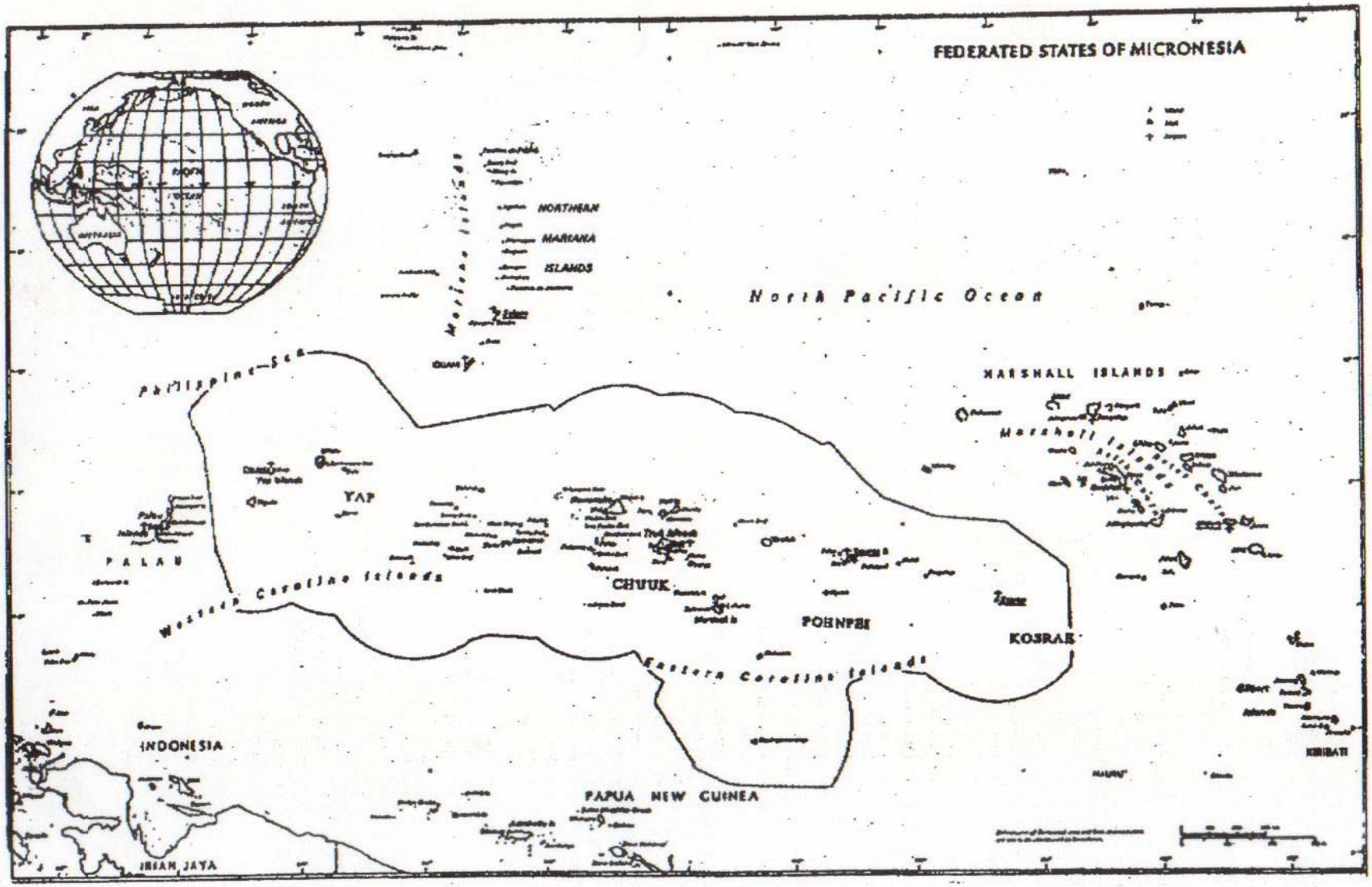
- A dash "–" represents zero or a percent which rounds to less than 0.1
- Three dots "..." means not applicable, or information suppressed for reasons of confidentiality
- "NA" means not available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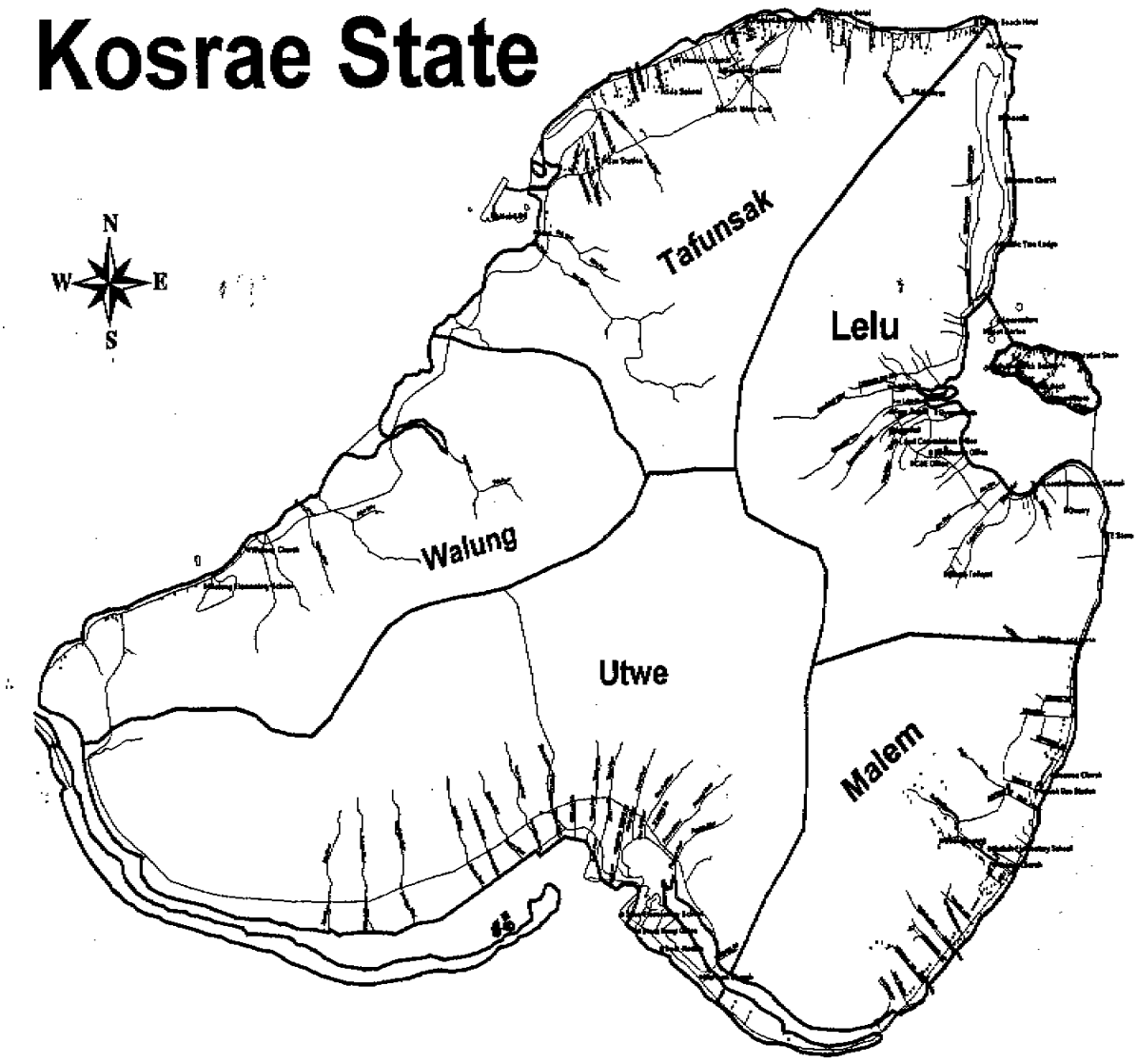

Kosrae State
N
W
E
S
Tafunsak
Lelu
Walung
Utwe
Malem

EXECUTIVE SUMMARY

This report presents the 2000 Kosrae State Census of Population and Housing data, along with historical data from recent censuses. The 2000 Kosrae State Census Report is the second volume published by the Statistics Office, Kosrae Branch under the FSM Department of Economic Affairs. It is organized into 13 chapters, which summarizes information on the population's demographic, social, economic and housing conditions. Apart from the obvious use of the report in planning, policy formulation, and in administration processes, the data presented in the report can also serve as a benchmark information in monitoring and evaluation activities.

The size of a population refers to the total number of people in a given area. In looking at structure, we talk about the basic composition of the population by gender (sex) and age. The population development refers to changes in size and structure, as well as the process or the specific population dynamic, with the changes that may take place. The three basic parameters that determine population size, structure and processes are births, deaths and migration. Further details on their importance and influence will be discussed in chapters 4, 5 and 6.

Demographic Characteristics

Population size and projections. The population of Kosrae State increased from about 3,984 in 1973 to 7,317 in 1994 and to about 7,686 in the year 2000. The population by municipality in 2000 was 2,591 in Lelu, 1,571 in Malem, 1,067 in Utwe and 2,457 in Tafunsak. In 1994, the population by municipality was 2,404 in Lelu, 1,430 in Malem, 1,056 in Utwe and 2,427 in Tafunsak. Between the two-Census period in 1994 and 2000, the population grew by about 0.98 percent per year, which is much lower than the 3.9 percent per year for the period 1973 to 1986 and by about 1.3 percent per year since 1986. If this growth rate of 0.98 continues, the population of Kosrae State will double in about 21 years. Using an assumption of moderately declining fertility and declining in-migration, the population of Kosrae State is projected to reach about 11,000 by the year 2014.

Population density. Describes the number of people living in a specific geographic area (country, island, province) divided by the landmass of this geographic area. The population density (persons per square mile) in the State of Kosrae in 2000 was about 181 persons per square mile (Lelu with 312, Malem 242, Utwe 97 and Tafunsak 149). In 1994, the population density of Kosrae State was about 173 persons per square mile.

Median Age. The median age — the age at which half of the population is younger and half older — in the State of Kosrae in 2000 was 19.2 years, an increase of about 4 years from the 14.9 years in 1973. The median age divides a population in exactly two equal halves.

Sex Ratio. Describes the proportion of males to females, usually expressed "X"males per 100females. Most human populations have slightly more male than female births. As the population ages, the difference decreases because of higher male mortality. The sex ratio (number of males per 100 females) for Kosrae State in 2000 was about 108 (about 98 in Lelu, 104 in Malem, Utwe about 98 and about 102 in Tafunsak).

Households. The total number of households increased from about 964 in 1994 to over 1,087 in 2000. By municipality, the total number of households reached 357 in Lelu, 248 in Malem, 156 in Utwe and 326 in Tafunsak. The average number of persons per household in Kosrae decreased from about 7.9 in 1973 to about 7.0 in 2000. Persons per household in 2000 were 7.2 in Lelu, 6.3 in Malem, 6.8 in Utwe, and 7.4 in Tafunsak.

Marital status. Adults in the State of Kosrae increasingly delay marriage. The average age at first marriage in Kosrae increased from about 25.3 years in 1986 to about 27.1 years in 2000. The proportion of married population decreased from about 61 percent in 1973 to about 54 percent in 2000. In 2000, proportions married were highest in Tafunsak (56 percent) and Lelu and Malem (54 percent) and lowest in Utwe (47 percent).

Fertility. Fertility decreased in the State of Kosrae in these decades before the 2000 Census. The crude birth rate was about 27 per 1,000 in 1994. The total fertility rate seems to have decreased from just over 7.6 children per women in 1973 to about 4.2 children per women in 1994 and further reduced to 3.8 in 2000. The rate at which fertility declined in the municipalities was not uniform. The Total Fertility Rate (TFR) in 1994 varied from a low 3.2 in Utwe to 3.5 in Tafunsak, 4.1 in Malem and to 4.5 in Lelu. The 2000 data showed that TFR increased in Utwe and Tafunsak while the other two municipalities experienced decline in the TFR. The results suggest that the use of family planning services, female educational attainment and female participation in the labor force contributed to the differences in the level and pattern of fertility.

Mortality. With the introduction of modern health care, mortality continued to decline, resulting in longer life and lower infant, childhood and maternal mortality. Nevertheless, census data suggest that these improvements might have slowed down in mid 1980's. For the State of Kosrae, the 1994 Census indirectly estimated an Infant Mortality Rate (IMR) of 49 per thousand life births and a life expectancy at birth of 65.2 years. The 2000 Census showed that estimated Infant Mortality rate for Kosrae State was declined to 44 per thousand and a life expectancy at birth of 66 years.

Birthplace. About 91 percent of Kosrae residents in 1994 were born in the State of Kosrae. The remaining 9 percent constituted the immigrants to Kosrae State. The results of the 2000 Census showed that 90 percent of the Kosrae residents were born in the State of Kosrae. The largest proportion of foreign-born individuals came from Asia in 1994 whereas in 2000, the largest proportion of foreign-born individuals was from elsewhere. The proportion of foreign born was highest in Tafunsak (about 14 percent) and lowest in Utwe (slightly over 1 percent).

Residence 5 years before the census. The population's residence 5 years before the FSM 2000 Census shows the level and pattern of short-term migration. Among the 1994 residents aged 5 years and over, slightly 7.5 percent lived outside Kosrae in 1989 (3.5 percent for Lelu, 2.9 percent for Malem, 1 percent for Utwe, and 16.8 percent for Tafunsak). The result also provided an estimation of interstate migration per year. In the preceding 5 years before the Census, the annual interstate migration rate was about 3 per 1000 net out-migration. For internal migration, Tafunsak and Malem experienced net in-migration (1.4 per 100 and .3 per 100, respectively) while Utwe had a net loss (2.8 per 100) in the total number of the resident population. Lelu had zero net migration within this period.

Residents Outside of the FSM. The emigration rate for Kosrae State was estimated to be about 5 per thousand per year. Using the 1994 Census results on family members residing outside of the FSM and results of the surveys of Micronesians in Guam and CNMI, about 1,100 person lived outside of the FSM.

Social Characteristics

Religion. The Protestant Church has been the major religion in Kosrae, with Congregational church as the dominating sect. About 88 percent of the Kosrae population in 1994 was Congregationalists (92.4 percent in Lelu, 89.5 percent in Malem, 94.9 percent in Utwe, and 82.2 percent in Tafunsak). The 2000 Census showed that more than 89 percent of the Kosrae population was Congregationalists. Other Protestants constituted about 3 percent.

Ethnicity and Language Spoken at Home. About 92 percent of the Kosrae residents had native ethnicity. Over 93 percent reported the local language as their most commonly used language. English was reported by about 90 percent as their second most commonly used language.

School Enrollment. As the population of Kosrae increased, the number of persons attending school in Kosrae also increased from about 2,500 in 1994 to about 2,600 in 2000. About 2 percent of the enrollment at elementary and .3 percent of those in high school were in private schools. Enrollment reached its peak at the age of 10. Dropout rates were quite high in Kosrae starting from the age of 20 years.

Educational Attainment. The 2000 Census data showed that over 68 percent of all persons 25 years old and over had high school and higher level of educational attainment, an increase from about 40 percent in 1980. The proportion of the population with no schooling decreased from about 13 percent in 1980 to about 6 percent in 1994 and continued to decline to 2 percent in 2000.

Economic Characteristics

Labor Force Participation. Labor force participation was compiled based on the current economic activity (that is, economic activities during a seven day reference period). The overall labor forces participation rate of person's 15 years and over during the week before the Census in Kosrae in 1994 was about 50 percent while the 2000 Census data showed that labor forces participation rate in Kosrae was 60 percent. The male participation rate (65 percent) was nearly twice that of females (31 percent). The unemployment rate in Kosrae in 1994, based on UN classification, was 15.1 percent while the 2000 Census showed that the unemployment rate for Kosrae state was 2 percent. By municipality in 1994, unemployment was 10.4 percent for Lelu, 24.4 percent for Malem, 27.7 percent for Utwe and 10.2 percent for Tafunsak. By municipality in 2000, unemployment was 1.9 percent for Lelu, 0.9 percent for Malem, 0.6 percent for Utwe and 0.8 percent for Tafunsak.

Subsistence. Out of about 1,800 employed persons in 1994, about 400 persons (that is, nearly 22 percent) were engaged in agricultural, fishery or related activities. About 74 percent were engaged in market oriented agricultural, fishery, or related activities while the remaining 26 percent were in pure subsistence (did subsistence for household consumption only and did not sell). The 2000 Census showed that out of the 1,962 employed persons, about 25 percent of the subsistence workers reported fishing as their main production and a combination of gardening and fishing was reported 18 percent.

Industry and Occupation. The formal experienced work force in Kosrae in 1994 was about 1,900 (nearly a 200 percent increase from 1980). About 14 percent of the employed persons 15 years and over in Kosrae were managerial and professional workers. Technicians and associate professionals (about 17 percent) and administrative support (about 15 percent) were also reported as major occupations. As for the 2000 Census data, the largest portions of the economically active worked in wholesale and retail trade (about 21 percent) followed by public administration (about 18 percent) and education (14 percent) and skilled agricultural and fishery workers constituted about 7 percent of all experienced workers.

Class of Worker. The percentage share of private workers in Kosrae in 1994 and 2000 was close to that of the public sector. In 2000, the majority of males were employed in the public sector while the majority of females were employed in the private sector.

Household Income. Out of the 964 households in Kosrae in 1994, about 907 reported some cash income during 1993. The median household income was about $6,700. The mean household income was higher at about $9,700. The median income of individuals was about $3,300. By municipality, median household income varied from about $8,700 in Lelu to about $4,800 in Utwe. As for the 2000 Census data, 1,087 households in Kosrae more than 1,000 reported with some cash income during 1999. The median household income was $7,600 while the mean household income was higher at more than $12,000.

Housing. The total number of housing units increased from about 600 in 1980 to over 1,000 in 1994 and to almost 1,100 in 2000. Around 94 percent of all housing units were reported occupied during 1980, 1994 and 2000 Censuses. The number of housing units with 5 or more rooms increased from about 12 percent in 1980 to about 29 percent in 1994 and to about 28 percent in 2000. Housing conditions in Kosrae improved over the two decades. More than half of all housing units were built between 1985 and 2000. In the 1994 and 2000 Censuses, more than 90 percent of the housing units had electricity compared to 34 percent in 1980. About 92 percent of all housing units had piped water as compared to about 36 percent in 1980. Similarly, of all housing units in 1994, over 85 percent had flush toilet and about 83 percent had bathtubs while the 1980 data showed that about 37 percent of the housing units reported flush toilet and about 8 percent with bathtubs or shower.

Lastly, a set of basic tables is presented at the end of the report. A set of detailed tables is also available in a separate publication. The tables provide a breakdown of data by municipality. These serve as a basic source of data on Kosrae's population and housing characteristics.

CHAPTER 1
INTRODUCTION

The creation of the independent and sovereign nation of the Federated States of Micronesia (FSM) under the Compact of Free Association with the United States caused a growing need for social and economic development planning. Consequently, as in many developing countries, administrators and planners in the FSM, in their quest for social and economic development often contend with incomplete or unavailable information when it is needed. The 1994 and 2000 FSM Censuses were thus conducted as part of the overall effort to provide current and updated information required for planning and administrative purposes. This report presents basic analysis of the 2000 FSM Census data, including comparison against the 1994 FSM Census.

This report provides the basic analysis of the 2000 FSM Census for Kosrae State. Chapter 1 locates Kosrae geographically and presents a brief history of census taking and the population distribution of Kosrae in selected census years, along with some background on the 2000 FSM Census. Chapter 2 presents population change and structure. Chapter 3 presents the household and marital status. Chapters 4 to 6 discuss the population dynamics (fertility, mortality, and migration) of the Kosrae. Chapters 7 to 11 provide the basic analysis of social and economic characteristics. Chapter 12 discusses the housing characteristics. A separate publication presenting detailed tabulations of the 2000 FSM Census results has also been compiled and disseminated by the Division of Statistics. Supplemental information and data from previous selected censuses (1973, 1980, the mid 1986 State Censuses, and 1994) are to compare with and to present changes over time.

Geographical Location, Climate and Physical Features

Kosrae State is the eastern-most state in the Federated States of Micronesia (FSM), about 5 degrees north latitude and 163 degrees east longitude. With an area of 42.3 square miles, it is the second largest single island in the FSM (after Pohnpei). It is the southeastern-most state of the Federated States of Micronesia and is located 347 southwest of Kwajelein in the Marshall Islands, and 2,813 miles southwest of Honolulu. Kosrae State is made up of four municipalities known as Lelu, Malem, Utwe and Tafunsak. The Capital of Kosrae is Lelu and it is known that the island is the home of the sleeping lady.

Kosrae is a volcanic high island, roughly triangular in shape, associated with surrounding reefs. The reefs vary in distance from the shoreline from only a few hundred feet at some points to a mile in other places. Heavy rainfall has carved out eroded river valleys and deep-water harbors. Most of the interior of the island is rough and rugged, with Mount Finkol elevated at 2064 feet as Kosrae's highest point. Rainfall occurs throughout the year and yields about 180 inches on the East Coast and more than 250 inches in the west. The trade winds blow predominantly from the northeast. The mean annual temperature is about 80 degrees Fahrenheit year round.

The rugged interior makes up about 70 percent of the landmass. It is densely forested with native tropical vegetation. Outside the rugged interior are the lower hillsides and the flat areas. They are suitable for cultivation of citrus, breadfruit and bananas. The island is known for the fresh water swamps for raising the giant swamp taro. Mangrove swamps surround most of the island.

Kosrae: A brief History of Census Taking in Kosrae:

The arrival of European explorers in Micronesia nearly five centuries ago opened the way for many changes in this portion of Oceania. One of the most important was demographic change. Although the particulars varied between islands, a basic pattern persisted throughout most of the region. An initial period of depopulation, usually due to diseases introduced by explorers, whalers, and missionaries from outside Micronesia; and a subsequent period of population growth resulting from improved health care and frequently leading to modern population larger than any known in the past (Taeuber 1963; Gorenflo and Levin 1992). The precise nature of these changes often varied. For the State of Kosrae, depopulation was particularly severe — nearly eradicating native inhabitants during the nineteenth century (Ritter 1981:22-24). Sustained demographic growth followed throughout most of the twentieth century, producing a population in 1994 greater than any previously documented.

Although the Spanish explorer Saavedra possibly sighted Kosrae in 1529 (Sarfert 1919:1; Office of the Chief of Naval Operations 1944:17; Lewis 1949:26), the first certain sighting by non-Micronesians was by the American ship Hope in 1801 (Hezel 1983:84). Kosrae was inhabited sometime after 1000 B.C. (Hezel 1983:3), though sparse evidence throughout the Carolines limits our understanding of the earliest phases of habitation (Campbell 1989:36) Three years later another American vessel, the Nancy, also sighted Kosrae, the captain naming it Strong's Island after the governor of Massachusetts

(Finsch 1893:194). Europeans did not actually set foot on Kosrae until June 1824, when a French scientific team aboard the corvette Coquille visited for ten days (see Duperrey 1838; Dumont d'Urville 1834; Lesson 1839). The native's unfamiliarity with white men and iron suggest that the French were the first non-Micronesians to visit the island (see Lesson 1839, 2:459-514). In late 1827 the Russian explorer Lutke also visited Kosrae, staying for roughly three weeks (Lutke 1835, 2:299-410). Early European visitors marveled at the native culture on Lelu Island, noting both the highly centralized political system there and the complex of stone-walled compounds on the western portion of the small island that housed Kosraean nobility (Hezel 1983:111; Kiste 1984:22).

Kosrae was probably populated in the 11th Century, but with certainty that a complex tribal society probably existed during the 15th Century. The Lelu ruins dated back to this time. The well-developed society associated with the ruins was extremely feudal. All the land was controlled and owned by the king and a few of the high chiefs. Commoners held the rights to use the land, provided that they supplied the king and the chief with food.

Spanish Administration

The Spaniards sighted the island of Kosrae at about the same time that they sighted the islands of Chuuk and Pohnpei around 1600. In 1827, a Russian explorer Feydor Lutke visited Kosrae. The total population of 2,000 as reported by anthropologists for that time is an estimate.

Spanish ships were the first from Europe to visit Micronesia in the early 16th century, claiming the islands in the region as part of Spain's growing global empire. But Spain paid little attention to most islands in Oceania for more than three centuries. Even in the face of challenges to its sovereignty by other nations, the Spanish presence in the Eastern Caroline Islands never amounted to more than the establishment in 1887. Of a small governmental station on Pohnpei that made officials brief visits to other islands in the area (Office of the Chief of Naval Operations 1944:19; Fischer and Fischer 1957:36-37; Wilson 1968:21) A strong typhoon struck Kosrae during the Spanish administration in 1891, destroying six houses and crops and killing an unknown number of people (Office of the Chief of Naval Operations 1944:6; Wilson 1968:18). Depopulation had stopped sometime near the end of the nineteenth century, most likely owing to growing natural immunity to some diseases and increased isolation from others (Lewis 1949:57). The limited presence of the Spanish in Kosrae had no known effect on the population. See Table 1.1 for the number and trend of population growth during the Spanish administration in Kosrae.

Table 1.1 Population of Kosrae During the Spanish Administration for Selected Years

Year	Population	Source
1856	975	Missionary Herald
1857	830	Missionary Herald
1858	748	Missionary Herald
1862	600	American Board of Comm.
1868	500	Missionary Herald
1872	300	Missionary Herald
1874	397	Missionary Herald

During the first part of the 19th century, whalers made frequent visits to Kosrae. The whaling period began in the late 1830's and lasted until about 1870. The whalers found Kosrae to be one of the most desirable places to spend during the winter. Because of the frequent visits of the whalers to Kosrae, new diseases such as influenza, syphilis, dysentery and smallpox were introduced. About 1851, the American Board of Foreign Mission sent Reverend Benjamin Snow to convert the population in Kosrae. The ministry of Snow was so successful, that other denominations were inactive. Reverend Snow took a census in 1805 that counted 1,106 people. Five years later, Mr. Snow conducted another census that provided a count of 748 people. In 1891, the population declined to as little as 200 to 400 people. Kosrae had experienced an extremely high level of mortality during this period.

German Administration

The German Administration in the Carolines was both intensive and short-lived. It brought better times to the Carolines. The Kosraeans enjoyed indirect rule, which enabled them to establish plantations of cotton, cacao and coffee. In 1901 to 1902, an estimation of the population made by Vice-Governor Berg was about 450 people. By this time, the population started to increase.

Germany competed with Spain for control of Micronesia during most of the late nineteenth century, pursuing mainly commercial ventures. Although frustrated in an attempt to annex several main islands throughout Micronesia in the mid-1880s (Hezel 1983:308-312; Shinn 1984:326), the Germans successfully established a branch of the Jaluit Trading Company in Kosrae in 1887 with little opposition from Spain (Office of the Chief of Naval Operations 1944:23-24). Germany eventually purchased the Caroline and Marshall Islands from Spain in 1899, following Spain's defeat in the Spanish-American War (Fischer and Fischer 1957:47; Brown 1977). Although Germany established a definite presence on several islands throughout Micronesia in an attempt to develop the area commercially, it paid little attention to Kosrae. With the expectation of planting some coconut groves to help meet increasing market demands for copra, the major German impact on Kosrae was religious — actively promoting a revival in Christianity that had waned over the previous few decades (Fischer and Fischer 1957:48-49; Ritter 1978:30-31; People 1985:54-55). Demographic impacts of Germany's administration consisted of a few German missionaries in residence; no German administrators resided permanently in Kosrae (Ritter 1978:31). Another major typhoon struck Kosrae in 1905, once more causing widespread destruction as well as killing five islanders (Office of the Chief of Naval Operations 1944:51; People 1985:30). Nevertheless, the period of depopulation clearly was past, and the number of Kosrae residents began a long period of growth (see Table 1.2).

Table 1.2 Population of Kosrae During the German Administration for Selected Years

Year	Population	Source
1880	200	Finch 1893
1888	350	Finch 1893
1890	380	Finch 1893
1895	400	Christian 1899
1899	450	Lewis 1949
1905	516	Sarfert 1919
1918	612	Lewis 1919

Japanese Administration

The Japanese period began in 1914, when Japan declared war on Germany and seized the German holdings in Micronesia. After the First World War, all German possessions north of the equator came under a League of Nations mandate under the Japanese control. During the Japanese Administration Kosrae experienced a period of profound economic development. Marine and forestry resources were exploited on a large scale that has not been repeated. In 1935, compulsory education was established for children within reasonable distance to attend. Japanese culture was emphasized in social and economic life. This was the influence of the Japanese Administration.

When Germany entered World War I, Japan occupied its Micronesian possessions (the Carolines, Northern Marianas, and Marshall Islands), with a Japanese squadron anchoring off Kosrae in October 1914 (Peattie 1988:43) and an army detachment of fifty enlisted men and three officers landing shortly thereafter (Lewis 1949:43). The League of Nations in 1920 granted the area to Japan as a Class C Mandate (Clyde 1935) 1967; Peattie 1988:56-59). Japanese interest in Kosrae had both commercial and military motives, the latter eventually becoming preeminent. Prior to the war effort, Japan showed little interest in Kosrae. Early in the Japanese Administration only one Japanese national (an army sergeant) resided in the archepelago (Lewis 1949:44; Ritter 1978: 32-33), and with the exception of small agricultural and timber operations, the new administration made little effort to develop Kosrae economically. In 1922, Japan constructed a branch public hospital on Kosrae (Office of the Chief of Naval Operations 1944:97;Peattie 1988:87), and eventually a small community of Japanese (numbering fewer than 100 persons and consisting mostly of Okinawan fishermen and traders) became established on Lelu Island (Peattie 1988:184). Development increased during this period of time. In part, this increase was due to the cash income received from increased copra production, as coconut groves planted during German times reached their productive stage, and in part it was due to Japanese-sponsored efforts to produce materials such as rope needed by the military (Peoples 1985:55).

Although strategically located, Kosrae did not figure greatly in Japan's war effort. Despite good harbors and a rugged, defensible interior on the main island, there was no good location for an airfield (Peattie 1988:231-232). Beginning in 1938 and continuing into the 1940s, the military buildup of Kosrae increased markedly (Ritter 1978:33). Japanese military leaders moved their own personnel as well as people from other parts of the Pacific (Ocean Island, Korea, Okinawa, and elsewhere in the Mandated Territory) to Kosrae (People 1985:56-57), promoting agricultural development in the hope of establishing a supply point for Japanese forces stationed in the Marshall Islands. After allied forces cut off supply lines, much of the war

bypassed Kosrae — with the exception of occasional bombing raids to ensure its neutralization. Although these raids killed some islanders (Wilson 1968:35;Ritter 1978:33), most fled inland from the coast and probably escaped the brunt of the bombing. As the war's end approached, famine ensued in Kosrae, leading to the death of 300 to 700 resident Japanese soldiers and untold numbers of Kosraeans. Prior to the war, the Micronesian population of Kosrae had grown steadily during the Japanese Administration, with the number of resident Pacific Islanders increasing by 403 persons (about 51 percent) between 1920 and 1935 (see Nan'yo-cho 1937).

The population of Kosrae changed substantially since the arrival of Europeans in the early nineteenth century. Previous research on Kosrae demography identified two phases of post contact demographic history: the period between European contact and 1880, when the archipelago experienced massive depopulation, and the period between 1880 and 1973, characterized by rapid population growth (Ritter 1978:36). Data from the two most recent censuses indicated a continuation of the later trend through 1994.

Table 1.3 presents a summary of population counts recorded in selected Censuses of Kosrae, in addition to several population estimates made prior to or between censuses, during and just after the Japanese administration. The population of Kosrae increased steadily between 1920 and 1947. The two contrasting trends in Kosrae's demographic history are evident in these data, as they are in the grasp of population change over time.

Table 1.3. Population of Kosrae During the Japanese Administration for Selected Years

Year	Population	Source
1920	786	Nan'yo-cho 1937
1925	886	Nan'yo-cho 1927
1930	990	Nan'yo-cho 1931
1935	1,189	Nan'yo-cho 1937
1947	1,701	Lewis 1949

American Administration

The American Administration in the FSM began in 1947. At this time, the Trusteeship Agreement between the United States of America and the United Nations was signed. The Trust Territory of the Pacific Islands (TTPI) originally covered six districts namely Palau, Yap, Pohnpei, Chuuk, Marshall Islands and the Mariana Islands. Kosrae was included in the District of Pohnpei. In 1977, Kosrae became a separate district within the TTPI. From July 1947 until July 1951, the responsibility for the civil administration of the islands was delegated to the Secretary of the Navy. After this interim period, the administrative responsibility was transferred to the Secretary of the Interior.

The United States began to administer Kosrae and other islands throughout Micronesia following the Japanese surrender in August 1945. In 1947 Kosrae became part of the Trust Territory of the Pacific Islands (TTPI), a strategic area established by the United Nations with the United States as "Administering Authority" (Shinn 1984:303-305; Peoples 1985:9). Because of the political subordination to Pohnpei in the Trust Territory organization and in part because it contained fewer than 2,000 inhabitants, Kosrae received limited attention during the decades immediately following the war (Peoples 1985:59-60). Even wartime destruction largely went unrepaired. As a result, the population reverted to subsistence agriculture (Lewis 1949:68-69), and the Kosraean standard of living dropped to the levels experienced before the Japanese Administration. In the early 1960s, the United States began sending increased funds to support development in Kosrae enabling improvements in the infrastructure and services (Peoples 1985:61-63). After years of separatist movements (Wilson 1968:29; Mason 1974:258-260), Kosrae split from Pohnpei District in 1977 and became a separate entity within the TTPI (Shinn 1984:325). Throughout the period of the American Administration, the population of Kosrae grew rapidly-generally at an average rate in excess of 3.0 percent annually.

In May 1979, Kosrae and three other Caroline Island areas of the TTPI (Chuuk, Pohnpei and Yap) approved a constitution and became a self-governing nation known as the Federated States of Micronesia. A Compact of Free Association, signed into law in November 1986, defined future relations between the FSM and the United States and provided funds and development assistance with the intention of helping the FSM achieve its economic and political independence (Shinn 1984:308-311).

Table 1.4 presents population counts during the American Administration starting from the Census taken by the U.S. Department of the Navy starting in 1947 until the current censuses that were coordinated by the U.S. Bureau of Census. The FSM 2000 Census of Population and Housing was conducted on April 1, 2000.

Table 1.4 Population of Kosrae During the American Administration for Selected Year

Year	Population	Source
1947	1,775	U.S. Dept. of the Navy
1951	1,952	U.S. Dept. of the Navy
1952	2,060	U.S. Dept. of Interior
1954	2,114	U.S. Dept. of State
1958	2,367	Office of the High Commissioner
1960	2,761	U.S. Dept. of State
1965	3,351	U.S. Dept. of State
1967	3,260	School of Public Health
1968	3,542	U.S. Dept. of State
1969	3,648	U.S. Dept. of State
1970	3,266	U.S. Bureau of Census
1971	3,854	U.S. Dept. of State
1972	4,614	U.S. Dept. of State
1973	3,989	Office of Census Coordinator
1975	4,190	U.S. Dept. of State
1976	4,330	U.S. Dept. of State
1978	4,610	U.S. Dept. of State
1980	5,491	U.S. Bureau of Census
1984	6,262	U.S. Dept. of State
1986	6,607	Office of Planning and Statistics
1994	7,317	Office of Planning and Statistics
2000	7,686	Dept. of Economic Affairs

The 2000 FSM Census

The Federated States of Micronesia (FSM) 2000 Census was the second census conducted jointly by the four states in the FSM and it covered all persons usually residing in Kosrae as of April 1, 2000. A Census of the usual residents is a *de jure* count of the population. Only people who had resided or intended to reside in the FSM for six months or more prior to the census were counted. Thus short-term visitors, staying for less than six months, were excluded. Usual residents who were overseas at the time of the Census were included if they intended to return to the FSM within six months. FSM citizens who were away for more than six months were not considered to be usual residents of FSM and were excluded from the census.

The Census also covered housing units (living quarters), both occupied and intended for occupancy (vacant) at the time of the census. Excluded were building for businesses, offices, institutions, and other structures not used as living quarters.

The 1994 and 2000 Censuses implementation phases are briefly summarized below:

Planning and Preparation

For the 1994 Census, due to limited experience in nationwide census planning in the country, staff members from Statistics Office were sent to the US Bureau of the Census (USBC), International Programs Center for training in Census/Survey methods and organization, and Census data processing. Additional training was also given to the Branch Statistics Offices on the fieldwork and interviewing techniques.

A series of workshops were also conducted to establish the administrative setup for the census. Participants in the workshop were representatives from the National and State Statistics Office and the workshop Consultants were from the U.S. Department of Interior and U.S. Bureau of the Census.

Enumeration

Field workers (crew leaders and enumerators) were hired and trained to carry out the task of actual field enumeration. Each crew leaders was responsible for supervising about 5 enumerators on the average. Each enumerator was assigned to conduct interviews for every housing unit and household (about 50 housing units on the average) in his or her enumeration district (ED), and fill out a questionnaire for every household. The fieldwork was conducted from April 4, 1999 through the early part of June.

Editing, Coding and Data Processing

The Census questionnaires were edited and coded. The Preliminary data editing and coding operation were initiated and completed at the state Branch Statistics Offices. Preliminary tables were compiled and disseminated from this operation. The questionnaire were then reviewed (for processability), coded, keyed and verified for further analysis. Following the verification of the keyed data, specifications and programs were developed for data cleaning. The U.S. Bureau of the Census (USBC) assisted the national and state staff in carrying out the data cleaning and programming activities in Washington D.C. The software used in data cleaning, processing and table production was the Integrated Micro-computers Processing System (IMPS).

Data Analysis and Report Writing

A data analysis workshop was held to review the progress of the report writing and consistency of the data presented in the report. The national and state staffs were assisted by Dr. Michael Levin of the USBC and Mrs. Vilimaina Rakaseta, a demographer from the Secretariat of the Pacific Community (SPC).

Geographical Distribution

One of the important uses of a Census is to provide a geographical distribution. This information is very useful in the decision making processes of a country such as allocation of funds, development planning, policy making and apportioning seats in the decision making body. Other important uses are as follows:

i. Information on the change in the size and composition of Kosrae population.

ii. Current population figures for making very realistic estimates of Kosrae and FSM population for the allocation of funds to the states and municipalities, and for the revision of municipal and electoral boundaries.

iv. A framework for sampling for post census surveys

The 2000 Census of Population and Housing in the State of Kosrae was held on April, referring to the Census Night as the midnight of April 1, 2000. The enumeration period was conducted for about three weeks.

Population Distribution

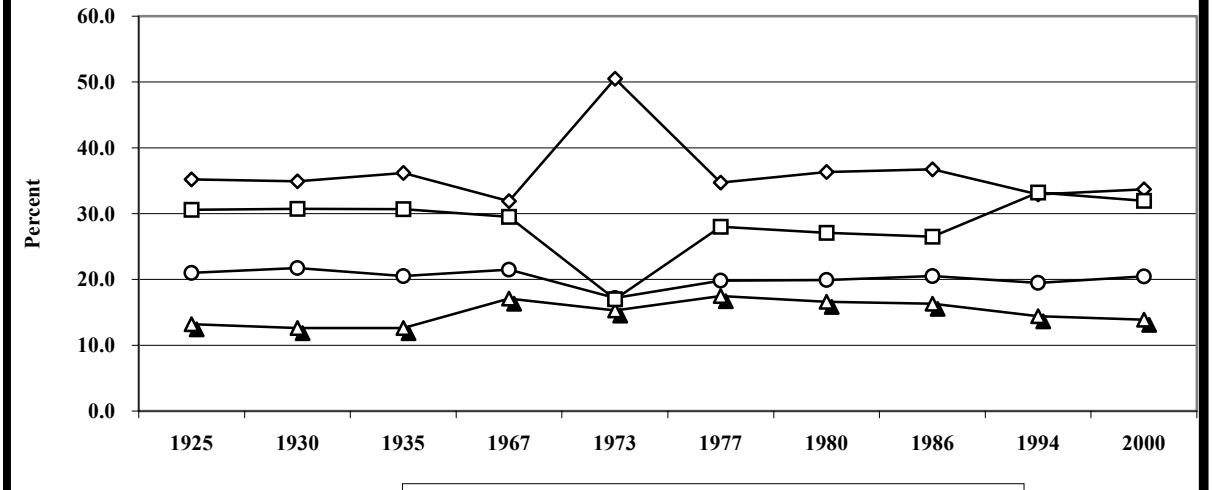
Table 1.5 and Figure 1.1 present data on the proportional distribution of Kosrae State from from 1920 to 2000. The population increased slowly over the years and then gained momentum in the last 20 years. For instance, from 1980 to 2000, the population slowly increased by more than 2,300 persons.

Table 1.5: Proportional Distribution by Municipality, Kosrae State: Selected Census Years

Municipality	Census years											
	1920	1925	1930	1935	1958	1967	1973	1977	1980	1986	1994	2000
Total	786	886	990	1,189	2,367	3,260	3,266	3,989	5,491	6,607	7,317	7,686
Percent	...	100.0	100.0	100.0	...	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Lelu	...	35.2	34.9	36.2	...	31.9	50.5	34.7	36.3	36.7	32.9	33.7
Malem	...	21.0	21.7	20.5	...	21.5	17.2	19.8	19.9	20.5	19.5	20.4
Utwe	...	13.2	12.6	12.6	...	17.1	15.3	17.5	16.6	16.3	14.4	13.9
Tafunsak	...	30.6	30.7	30.7	...	29.5	17.0	28.0	27.1	26.5	33.2	32.0

Source: Nan'yo (1927, 1931, 1937); Office of the Census Coordinator (1975); Office of the High Commissioner (1959; School of Public Health (n.d.); US Bureau of the Census (1972, 1983a); Kosrae Office of Planning and Budget (1992a, 1988, 1989); 1994 & 2000 FSM Census Table P13

Figure 1.1 Population Distribution by Municipality, Kosrae State: 1925 to 2000



Source: Table 1.5

The percentage distribution of the population across the states also changed over the years. Lelu's share in the composition of the Kosrae's population decreased from 35 percent to 34 percent, Malem's share also decreased from 21 percent to 20, Utwe's share increased from 13 percent to 14 percent while Tafunsak share's also increased from 31 percent to 32 percent.

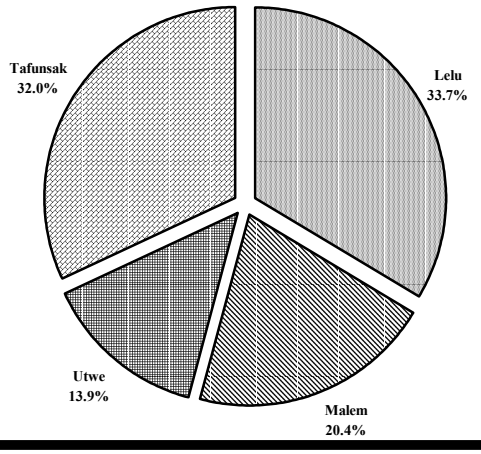
Table 1.6 presents data on the 1994 and 2000 distribution of Kosrae population by municipality and sex. Of the 7,686 persons living in Kosrae in 2000, 3,856 (50 percent) were males and 3,827 (50 percent) were females. The population was distributed unevenly among the municipalities (see Figure 1.2). Tafunsak and Lelu were the most populated municipalities, with about 33 percent of the population in both areas. Tafunsak and Lelu were followed in order with Malem comprise of (20 percent), and Utwe with 14 percent. The current distribution of population was very much similar to the 1994 Census.

Table 1.6: Population Distribution by Municipality, Kosrae State: 1994 and 2000

Municipality	1994 Census			2000 Census		
	Total	Males	Females	Total	Males	Females
Total	7,317	3,806	3,511	7,686	3,859	3,827
Lelu	2,404	1,210	1,194	2,591	1,288	1,303
Malem	1,430	735	695	1,571	802	769
Utwe	1,056	509	547	1,067	528	539
Tafunsak	2,427	1,352	1,075	2,457	1,241	1,216

Source: 1994 and 2000 FSM Censuses, Table P13

Figure 1.2 Kosrae Population Distribution for 2000



Population Density

The population density (number of persons per square mile) slightly increased between 1994 and 2000, from 21 to 182 (Table 1.7). In the 2000 Census, the number of persons per square mile increased to (182) which was ninth times that of 1925. Lelu was the most densely populated municipality in 1925, with 38 persons per square mile. During the 2000 Census, persons per square mile for Lelu had increased to 312, while Malem had 242 persons per square mile. Tafunsak Municipality had 149 persons per square mile and Utwe was the least densely populated Municipality with 97 persons per square mile.

Table 1.7: Persons per Square Mile by Municipality, Kosrae State: 1925 to 2000

Municipality	Land Area (sq.mi.)	Census year									
		1925	1930	1958	1967	1970	1973	1980	1986	1994	2000
Total	42.3	21	23	28	77	77	94	130	156	173	182
Lelu	8.3	38	42	52	125	199	167	240	292	290	312
Malem	6.5	29	33	38	108	86	121	166	208	220	242
Utwe	11.0	11	11	14	51	45	63	83	98	96	97
Tafunsak	16.5	16	18	22	47	34	68	90	106	147	149

Source: 1994 and 2000 FSM Censuses, Table P13; FSM Information Handbook, No. 1, Vol 1, 1992

Conclusion

Census taking improved in the 50 years prior to the 2000 Census. Over the last 100 years, the population of Kosrae increased continuously. The population growth was quite remarkable during the 60's, 70's and early 80's. In 2000, Lelu was the most densely populated municipality with 312 persons per square miles. Total land area for Lelu Municipality is 8.3 square miles. Malem had 242 persons per square mile with total land area of 6.5 square miles. Tafunsak municipality had the largest land area of 16.5 square miles with 149 persons per square miles. Utwe is the least populated with 97 persons per square mile and a total land area of 11.0 square miles.

CHAPTER 2
AGE AND SEX STRUCTURE

Introduction

The age and sex distribution of a population provides basic information necessary for planning and for analyzing the social and economic characteristics. Age composition helps identify populations for schooling, employment, voting, retirement, and etc. Sex distribution is important for social characteristics, trends in community structure and the population's economic potential.

Data Description

Age

The 2000 Census obtained information on age from the response to the date of birth question and the age reported in questionnaire item 4a and 4b. The age was in completed years as of April 1, 2000. In cases where age was not reported or clearly appeared to be incorrect, the Census Office employees imputed age according to relationship, marital status and other related characteristics of other individuals.

Sex

Information on sex was asked of all persons in the census. In cases where sex was not reported, Census personnel determined it from the person's name. Otherwise, sex was imputed according to relationship, marital status and other related variables.

Limitation and Comparability. There is no limitation to the 2000 age and sex data. Every Census conducted in Kosrae State collected age and sex data.

Analysis of Age and Sex Data

Some important measures derived from the age and sex data will be analyzed in this chapter, namely the sex ratio, dependency ratio, intercensal growth rate, and median age. Also, we will look at the changes in the population distribution and age-sex structure and some probable causes for these changes.

Population Change and Intercensal Growth

One of the most important uses of any census is to throw light on the rate at which the population is growing annually (the intercensal growth). The intercensal growth between 1994 and 2000 falls within the range of 0.9 to 1.1 percent annually (Table 2.1). The current rate places Kosrae among other states having the highest population growth rate in the FSM (Table 2.2). The annual change from 1973 to 1989 was 2.6 percent. The annual growth rate in 1973 to 1980 period was highest at 4.6 percent, then declined to 0.8 percent during 1994 and 2000. In addition, it should be noted that the intercensal growth rate would have been much higher had it not been for the effect of increasing emigration.

The annual growth rate varied significantly by age group. In the 30 years prior to the current Census, the growth rate for the very young (0 to 4 age group) declined from 4.4 between 1973 and 1980 to 1.8 between 1994 and 2000. The annual growth rate of the very old (75 and over) age group also declined from 6.9 percent between 1973 to 1980 to 3.5 percent in 1994 to 2000. The difference in growth may be due to the combined effect of a decline in fertility rates (lowering in the growth rate of the young) and declining rates of mortality (increasing the proportion of the old age population).

Table 2.1: Population Change and Annual Growth Rate by Age Group, Kosrae State: 1973 to 2000

Age groups	Number					Population change				Annual Intercencal Growth Percent change (%)			
	1973	1980	1986	1994	2000	1973-1980	1980-1986	1986-1994	1994-2000	1973-1980	1980-1986	1986-1994	1994-2000
Total	3,984	5,491	6,607	7,317	7,686	1,507	1,116	1,826	1,079	4.6	3.1	3.6	0.8
Less than 5 yrs	748	1,018	1,105	922	1,026	270	87	-96	-79	4.4	1.4	-1.2	1.8
5 to 9 years	693	866	1,104	1,078	953	173	238	212	-151	3.2	4.0	2.7	-2.1
10 to 14 years	575	753	896	1,066	1,079	178	143	313	183	3.9	2.9	4.3	0.2
15 to 19 years	458	578	677	780	939	120	99	202	262	3.3	2.6	3.7	3.1
20 to 24 years	294	503	511	535	604	209	8	32	93	7.7	0.3	0.8	2.0
25 to 29 years	244	388	497	524	497	144	109	136	0	6.6	4.1	3.8	-0.9
30 to 34 years	174	325	410	483	473	151	85	158	63	8.9	3.9	5.0	-0.3
35 to 39 years	170	223	361	471	444	53	138	248	83	3.9	8.0	9.3	-1.0
40 to 44 years	156	177	240	376	436	21	63	199	196	1.8	5.1	9.4	2.5
45 to 49 years	103	183	185	318	366	80	2	135	181	8.2	0.2	6.9	2.3
50 to 54 years	113	128	172	204	263	15	44	76	91	1.8	4.9	5.8	4.2
55 to 59 years	60	94	131	179	183	34	37	85	52	6.4	5.5	8.1	0.4
60 to 64 years	63	81	96	149	144	18	15	68	48	3.6	2.8	7.6	-0.6
65 to 69 years	53	69	79	79	118	16	10	10	39	3.8	2.3	1.7	6.7
70 to 74 years	43	45	51	75	65	2	6	30	14	0.6	2.1	6.4	-2.4
75 yrs & over	37	60	92	78	96	23	32	18	4	6.9	7.1	3.3	3.5
Median	14.8	15.9	16.5	18.8	19.2	...	...	...	...	…	…	…	…

Source: 1973 & 1980 TTPI Censuses; 1986 Kosrae Census; 1994 & 2000 FSM Census

Table 2.2: Selected Demographic Indicators from Other Pacific Countries, Kosrae State: Various Years

Country	Census year	Intercensal growth (%)	Median age	Sex ratio	Dependency ratio
FSM	(2000)	0.3	18.9	103	79
Yap	(2000)	0.1	20.9	96	69
Chuuk	(2000)	0.1	18.5	103	81
Pohnpei	(2000)	0.4	18.9	105	79
Kosrae	(2000)	0.9	19.2	101	77
Guam	(1990)	2.3	25.0	114	58
Kiribati	(1995)	2.3	19.9	98	85
Marshall Islands	(1999)	4.2	14.1	105	124
Nauru	(1992)	2.9	18.0	105	83
CNMI	(1995)	9.5	27.4	111	36
Palau	(1995)	2.0	25.2	117	64

Source: 1973 TTPI Censuses, T4a; 1980 TTPI Census, Unpublished; 1994 & 2000 FSM Census, unpublished

Age and Sex Distribution

Table 2.3 presents data on the present distribution of the Kosrae population by five years age group and by sex, from 1973 to 2000. The data also show that the proportion of males under 15 years of age decreased. The reduction in the proportion for the population below 15 years of age is a consequence of a decline in fertility. With few exceptions, the proportion of the population at age groups 15 and over increased. The relative change in the proportion of females across the various age groups over the past two decades indicate similar change, but at different levels.

Table 2.3: Percentage Distribution of Population by Age Group and Sex, Kosrae State: 1973 to 2000

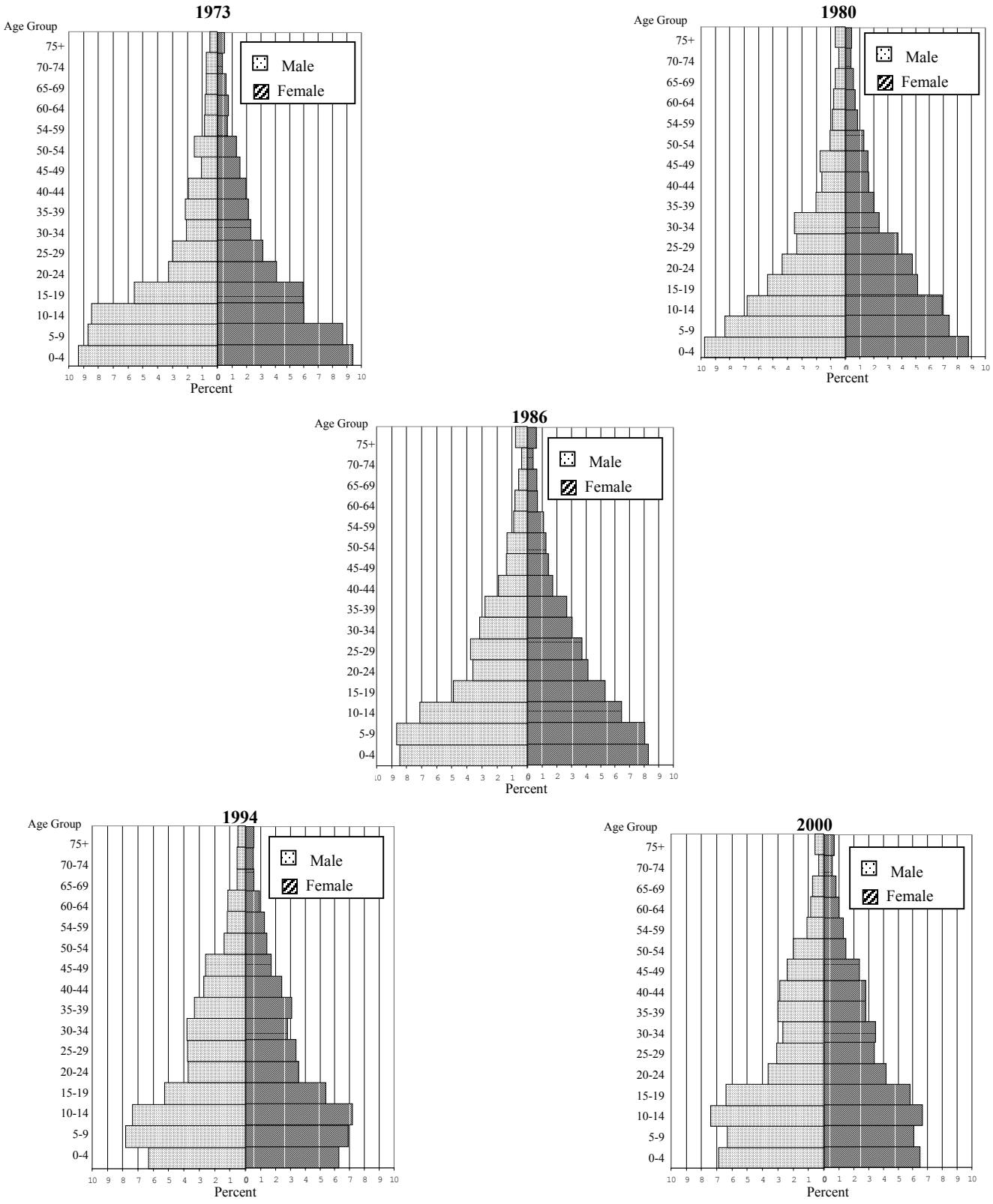
Age groups	Males					Females				
	1973	1980	1986	1994	2000	1973	1980	1986	1994	2000
Total	2,021	2,825	3,340	3,806	3,859	1,963	2,666	3,267	3,511	3,827
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 yrs	18.5	19.0	16.7	12.1	13.7	19.1	18.1	16.7	13.1	13.0
5 to 9 years	17.2	16.2	17.1	15.0	12.6	17.6	15.3	16.3	14.4	12.2
10 to 14 years	16.7	13.2	14.1	14.2	14.7	12.1	14.3	13.0	15.0	13.3
15 to 19 years	11.0	10.4	9.7	10.1	12.8	12.0	10.6	10.8	11.2	11.7
20 to 24 years	6.4	8.5	7.1	7.2	7.3	8.4	9.9	8.4	7.4	8.4
25 to 29 years	5.9	6.5	7.5	7.3	6.2	6.4	7.7	7.6	7.1	6.8
30 to 34 years	4.1	6.8	6.2	7.3	5.3	4.6	5.0	6.2	5.8	7.0
35 to 39 years	4.2	4.0	5.5	6.4	5.9	4.3	4.2	5.4	6.5	5.6
40 to 44 years	3.9	3.1	3.8	5.2	5.7	4.0	3.3	3.5	5.1	5.6
45 to 49 years	2.1	3.4	2.8	5.0	4.7	3.1	3.3	2.8	3.6	4.8
50 to 54 years	3.0	2.0	2.6	2.6	3.9	2.6	2.7	2.6	3.0	2.9
55 to 59 years	1.7	1.7	1.8	2.3	2.2	1.3	1.7	2.2	2.6	2.6
60 to 64 years	1.6	1.6	1.6	2.2	1.7	1.5	1.4	1.3	1.9	2.0
65 to 69 years	1.4	1.3	1.1	1.0	1.5	1.2	1.2	1.3	1.1	1.6
70 to 74 years	1.4	0.9	0.7	1.0	0.6	0.7	0.8	0.8	1.0	1.1
75 yrs & over	0.9	1.3	1.6	1.0	1.2	0.9	0.9	1.2	1.2	1.3

Source: 1973 TTPI Census, T4a; 1980 TTPI Census, unpublished; 1986 Kosrae Census; 1994 & 2000 FSM Censuses, unpublished

A useful representation of the age and sex data of the population is the population pyramid. It provides insights into the population structure of a country and is a useful basis for future planning. The age and sex structure is affected by each of the components of population growth: fertility, mortality, and migration. Figure 2.1 shows the Kosrae population pyramids from 1973 to 2000 for comparative purposes.

Consider the population structure in 2000. The bar for age group 0 to 4 was narrow compared to the bars for age groups 5 to 14, indicating that fertility declined in the four years before the Census (see Chapter 4). The narrow bars at the older ages show fewer people. The most obvious explanation is that people die when they grow old; therefore, the narrow bars at the older ages reflect mortality. Another interesting feature of this pyramid is the sharp indenting at the 15 to 19 and 20 to 24 bars. The result however, does not come from mortality, as mortality at these ages is relatively low. The more likely explanation lies in overseas emigration, as young people seek education and job opportunities abroad.

Figure 2.1 Population Structure for Kosrae State: 1973 to 2000



Source: Table 2.3

Table 2.4 shows data on the distribution of Kosrae State by 5 years age group and by gender for 1994 and 2000 Censuses. The data demonstrated that as the population becomes older, its population gets smaller. This pattern was true for both 1994

and 2000. For instance, the proportion of the population below 5 years comprised 13 percent of the population whereas the population aged 75 and above accounted for 1 percent of the population. This decline reflects the effect of increasing mortality by age.

Table 2.4: Population by Age Group and Sex, Kosrae State: 1994 and 2000

Age groups	1994						2000					
	Number			Percent			Number			Percent		
	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females
Total	7,317	3,806	3,511	100.0	100.0	100.0	7,686	3,859	3,827	100.0	100.0	100.0
Less than 5 yrs	922	462	460	12.6	12.1	13.1	1,026	528	498	13.3	13.7	13.0
5 to 9 years	1,078	572	506	14.7	15.0	14.4	953	486	467	12.4	12.6	12.2
10 to 14 years	1,066	540	526	14.6	14.2	15.0	1,079	569	510	14.0	14.7	13.3
15 to 19 years	780	386	394	10.7	10.1	11.2	939	493	446	12.2	12.8	11.7
20 to 24 years	535	274	261	7.3	7.2	7.4	604	281	323	7.9	7.3	8.4
25 to 29 years	524	276	248	7.2	7.3	7.1	497	238	259	6.5	6.2	6.8
30 to 34 years	483	279	204	6.6	7.3	5.8	473	206	267	6.2	5.3	7.0
35 to 39 years	471	244	227	6.4	6.4	6.5	444	229	215	5.8	5.9	5.6
40 to 44 years	376	198	178	5.1	5.2	5.1	436	220	216	5.7	5.7	5.6
45 to 49 years	318	191	127	4.3	5.0	3.6	366	183	183	4.8	4.7	4.8
50 to 54 years	204	100	104	2.8	2.6	3.0	263	151	112	3.4	3.9	2.9
55 to 59 years	179	86	93	2.4	2.3	2.6	183	83	100	2.4	2.2	2.6
60 to 64 years	149	83	66	2.0	2.2	1.9	144	66	78	1.9	1.7	2.0
65 to 69 years	79	39	40	1.1	1.0	1.1	118	57	61	1.5	1.5	1.6
70 to 74 years	75	39	36	1.0	1.0	1.0	65	24	41	0.8	0.6	1.1
75 yrs & over	78	37	41	1.1	1.0	1.2	96	45	51	1.2	1.2	1.3

Source: 1994 and 2000 FSM Censuses, Table P13

Median Age

The median age is a measure that divides the entire population into two equal parts (the age at which half of the population is older and half is younger). A change in the median age indicates whether the population is getting older or younger. The median age is especially useful as one measurement when comparing the composition of a population over time and to other populations.

The Kosrae State median age increased by over 4 years in the 27 years before the 2000 Census, indicating that Kosrae population is getting older (Table 2.5). From 1973 to 2000 the median age for both males and females increased by 4 years as well. The median age in 2000 was about 19, suggesting that the FSM has one of the youngest populations in the Pacific Island Nations. During the last decade, the median age in the Pacific countries ranged from 18 to 30 (see Table 2.2).

The median age varied geographically in the Kosrae in the last Census, as well as in the Census years before that. In the 2000 Census, the median age was quite remarkable for all the municipalities for which the median age increased by about 14 years to 19 years. The median age for males in Kosrae increased by 4 years from 14.4 in 1973 to 18.5 in 2000 while that of females increased by less than 5 years, from 14.9 to 19.9. Kosrae's median age was the second highest in the FSM (after Yap).

Table 2.5: Median Age by Municipality and Sex, Kosrae State: 1973 to 2000

Municipality of usual residence	Census Years				
	1973	1980	1986	1994	2000
Total	14.9	15.9	16.5	18.8	19.2
Lelu	15.7	17.0	17.1	18.3	19.0
Malem	14.4	14.9	17.0	18.2	19.7
Utwe	15.0	15.1	14.4	17.3	19.4
Tafunsak	14.2	17.0	16.4	20.9	19.0
Males	14.4	15.8	16.0	19.3	18.5
Lelu	15.1	16.1	16.8	17.8	18.0
Malem	14.0	14.3	16.7	18.1	19.2
Utwe	14.4	13.9	13.6	16.5	18.6
Tafunsak	14.0	17.5	16.4	23.8	18.6
Females	14.9	16.1	16.9	18.3	19.9
Lelu	15.1	15.9	17.3	18.7	19.8
Malem	16.2	15.6	17.2	18.3	20.4
Utwe	15.5	16.7	15.7	18.1	20.4
Tafunsak	14.4	16.5	16.4	18.1	19.5

Source: 1973 TTPI Census, T4a; 1980 TTPI Census, Unpublished: 1986 Kosrae Census; 1994 & 2000 FSM Censuses, P13

Age and Sex Ratios

Sex Ratio

The sex ratio of Kosrae increases from about 104 males per 100 females in 1973 to 106 in 1980, and then decreased to 102 in both 1986 and further increased to 108 in 1994. In 2000 there were about 100 males per 100 females in Kosrae as illustrated in Table 2.6. Between 1994 and 2000, the sex ratio for Kosrae state increased except for Lelu, which decreased from 101 to 98 while Malem dropped slightly from 106 to 104. This somewhat high sex ratio may in part due to the recent immigration of working age males to the state. In recent Census years, the sex ratio remained above 100 with gradual increase in the number of males. The change in the sex ratio over the past 27 years was most significant in Lelu and Malem.

Table 2.6: Males per 100 Females by Municipality, Kosrae State: 1973 to 2000

	Census Years				
Age groups	1973	1980	1986	1994	2000
Total	104.4	106.0	102.2	108.4	100.8
Lelu	113.7	107.6	101.7	101.3	98.8
Malem	95.5	97.6	104.5	105.8	104.3
Utwe	95.2	97.8	94.9	93.1	98.0
Tafunsak	105.5	115.8	106.0	125.8	102.1

Source: 1973 TTPI Census, T4a; 1980 TTPI Census,T24; 1996 Kosrae Census; 1994 & 2000 FSM Census, P13

The Kosrae State sex ratio was about 101 in 2000 (Table 2.7). In most societies more males than females are born (about 103 to 107 males to every 100 females). However, because male mortality is higher than female mortality, in most population, females outnumber males towards the older age groups. The shortage of males for ages 20 to 34 is attributed to emigration, while the shortage of males at ages 50 and older is explained by a combined effect of emigration and mortality (the tendency for males to die younger than females), resulting in the excess of females in the older age groups.

Table 2.7: Male per Females by Age Group and Municipality, Kosrae State: 1994 and 2000

Age groups	1994					2000				
	Municipality					Municipality				
	Total	Lelu	Malem	Utwe	Tafunsak	Total	Lelu	Malem	Utwe	Tafunsak
Total	108.4	101.3	105.8	93.1	125.8	100.8	98.8	104.3	98.0	102.1
Less than 5 yrs	100.4	99.4	97.9	103.6	102.1	106.0	111.0	86.6	128.1	105.7
5 to 9 years	113.0	133.8	120.2	94.6	100.6	104.1	103.0	114.0	87.7	105.3
10 to 14 years	102.7	87.8	113.7	106.0	111.9	111.6	119.4	122.3	97.3	104.5
15 to 19 years	98.0	103.1	88.3	103.0	97.2	110.5	99.4	123.5	115.7	113.4
20 to 24 years	105.0	89.0	91.7	75.0	142.5	87.0	79.1	98.4	123.1	75.2
25 to 29 years	111.3	81.5	100.0	64.9	179.5	91.9	94.6	79.3	88.1	100.0
30 to 34 years	136.8	127.8	128.6	88.5	167.6	77.2	72.1	77.4	77.1	81.7
35 to 39 years	107.5	86.6	108.9	78.6	141.7	106.5	104.3	119.5	80.6	112.3
40 to 44 years	111.2	82.8	111.4	59.5	185.4	101.9	101.3	131.9	61.5	96.8
45 to 49 years	150.4	162.5	145.5	95.8	173.2	100.0	94.1	106.7	58.3	134.7
50 to 54 years	96.2	89.2	56.0	133.3	123.3	134.8	151.6	129.6	119.0	133.3
55 to 59 years	92.5	75.0	80.0	109.1	119.2	83.0	87.9	68.2	108.3	78.8
60 to 64 years	125.8	134.8	190.0	75.0	114.3	84.6	80.0	86.7	100.0	83.3
65 to 69 years	97.5	55.6	142.9	266.7	91.7	93.4	66.7	73.3	88.9	150.0
70 to 74 years	108.3	130.0	85.7	150.0	100.0	58.5	50.0	42.9	200.0	60.0
75 yrs & over	90.2	76.9	125.0	81.8	88.9	88.2	73.7	140.0	81.8	72.7

Source: 1994 FSM Census, Table P13; 2000 FSM Census, Table P2-1

Dependency Ratio

The dependency ratio measures the degree of economic ease or hardship inherent in a given age-sex structure. However, it is only an index as it assumes the selected age groups as exclusive "producers" or "consumers". The dependency ratio is obtained by adding the population below 15 years to the population aged 65 years and over (the dependents), and then dividing the sum by the population aged 15 to 64 (the workers). Often the dependency ratio is divided into old dependency (ratio of those 65 years and over to those ages 15 to 64) and young dependency (ratio of those under 15 to those ages 15 to 64). The dependency ratio should not be confused with the economically active ratio. The former considers all persons of working age, while the latter considers only those individuals of working age who are economically active, which is usually less than the dependency ratio (For more discussion on the economically active population see Chapter 9).

In the 2000 Census, the dependency ratio for Kosrae was 83 (meaning that for every 100 persons of working-age there are 83 consumers, in terms of food, clothing, shelter, and so forth). The dependency ratio declined from 116 in 1973 to 83 in 2000 showing a relative increase in the working age population (see Table 2.8). The young dependency ratio was declining from 95 in 1994 to 76 in 2000 and the old age dependency ratio remained constant at about 6 percents during both 1994 and 2000 FSM Censuses.

Among the municipalities in Kosrae, the dependency ratio in 2000 was highest in Lelu while lowest in Utwe. The lower ratio in Utwe may attribute to the fact that the expatriates were in the working age groups. Similar to the overall ratio, the dependency ratio in the municipalities declined over the Census years observed. The decline in the dependency ratio during the 2000 Census stemmed from declining fertility and age –selective immigration.

Table 2.8: Dependency Ratio by Municipality, Kosrae State: 1973 to 2000

Municipality	Total					Young					Old				
	1973	1980	1986	1994	2000	1973	1980	1986	1994	2000	1973	1980	1986	1994	2000
Total	116.1	104.9	101.4	82.1	76.7	108.7	98.4	94.7	76.3	70.3	7.4	6.5	6.8	5.8	6.4
Lelu	107.8	105.9	96.9	85.4	78.8	99.1	98.7	90.3	79.6	71.8	8.6	7.2	6.6	5.7	7.0
Malem	122.7	118.2	95.1	86.4	75.7	115.3	110.0	88.0	78.5	69.0	7.4	8.2	7.1	8.0	6.7
Utwe	109.3	110.1	125.1	92.3	71.3	104.5	104.6	116.7	84.9	64.4	4.8	5.5	8.4	7.5	6.9
Tafunsak	127.8	92.1	99.9	72.6	77.7	120.2	87.1	94.0	68.6	72.2	7.6	5.0	5.9	4.0	5.4

Source: 1973, T4a and 1980 TTPI Census; 1986 Kosrae Census; 1994 & 2000 FSM Censuses

Accuracy of Age Reporting

To evaluate the accuracy of reported age and sex data, the Myers Index was used to measure the level of digit preference and make comparisons between populations. The method measures the preference and dislike for ages ending in all the digits 0 to 9. The lower the index, the lower the extent of digit preference and hence the better the quality of the data. Age reporting improved for both males and females since 1973.

Table 2.9: Myers and Bachi Method of Measuring Digit Preference, Kosrae State: 1967 to 2000

Terminal digit	Myers method			Bachi method		
	Total	Males	Females	Total	Males	Females
2000:						
0	-0.2	0.3	-0.7	-0.5	0.6	-1.5
1	-0.8	-1.1	-0.5	0.3	-0.2	0.8
2	-0.4	-0.5	-0.3	0.4	0.2	0.5
3	0.1	-	0.3	-	-0.1	0.1
4	0.4	-0.5	1.2	0.4	-0.5	1.3
5	0.5	1.4	-0.4	0.5	1.5	-0.5
6	0.1	0.1	0.1	-0.3	-0.2	-0.4
7	-0.1	-0.4	0.2	-0.6	-0.8	-0.5
8	-0.1	0.1	-0.3	-0.6	-0.6	-0.5
9	0.5	0.5	0.4	0.8	0.5	1.2
--Index--						
1967	5.8	7.6	7.3	4.7	5.0	5.3
1973	6.5	14.8	6.0	3.7	8.2	4.3
1980	2.4	6.6	5.0	1.8	4.5	2.6
1986	6.0	9.9	6.5	3.6	5.7	3.2
1994	8.1	9.6	7.5	2.6	4.9	2.6
2000	3.2	4.8	4.4	2.2	2.6	3.6

Source: 1967, 1973 & 1980 TTPI Censuses; 1986 Kosrae State Census; 1994 & 2000 FSM Censuses

Note: The index for Myers method is the sum of the absolute values of the deviations; for Bachi method, the index is the sum Of the positive deviations (one-half the sum of the absolute deviations).

The Myers Index in 2000 was 3.2 (Table 2.9) showing the age reporting to be accurate. It also showed that males were reporting their age more accurately than their female counterparts.

Conclusion

The age and sex composition of Kosrae changed substantially between 1973 and 2000 Censuses. Shifts in the age and sex structure of the Kosrae population have important implications as well as for the future population structure of Kosrae.

The annual rate of growth for Kosrae for the period 1986 to 2000 was 1.3 percent, declining from 4.6 for the period 1973 to 1980. This decline is attributed mostly to a decline in fertility and an increase in emigration.

Kosrae's population during the last three decades has aged, the median age increasing from below 15 years in 1973 to nearly 19 years in 2000. The tempo of increase was remarkable during the recent decades. This increase most certainly came from the combination of decreased fertility, continued low mortality, and selective migration. Low fertility reduced births, the low mortality increased the number of survivors and the migration for work introduced more population in the working age

group. The change in the population structure was mainly accounted for by declining fertility. The distribution of males and females was fairly even in Lelu and Malem municipalities. The male population outnumbered the female population in Tafunsak while females outnumbered males in Utwe in Kosrae, in 2000. Unlike in the previous Censuses, the overall sex ratio for 2000 showed an excess of males in the population (with 101 males per 100 females). This was mainly because of the male- dominated foreign workers in the State, in 2000 than in any other census year.

The dependency ratio for Kosrae was 83, which means for every 100 persons in the working age group (the population aged 15-64 years) looked after 83 children (aged 0-14 years) and elderly (aged 65 years and over). Although the decrease in the dependency ratio can be considered a positive change (more people of working-age and fewer to support), it also implies a greater need for employment.

CHAPTER 3
HOUSEHOLDS AND MARITAL STATUS

Introduction

This chapter presents a summary of analysis on size and composition of households and families in the state. The household and family structures in the Kosrae, in most cases, are similar. The determining factor for household is sharing meals by a group of people living together. But for family, the determining factor is relationship by blood, marriage, or adoption. In Kosrae, most people live together because they are related. Households with unrelated members are usually found in the town centers where unrelated people may share housing temporarily to minimize financial burden. Extended families and households consisting of a householder, perhaps a spouse, children, parents, grandparents, grandchildren, siblings and other relatives have always been the norm in Kosrae State. By 2000, extended families had become somewhat less common, as fertility and family size decreased, more people became employed in the cash (rather than subsistence) economy, and increasing numbers of immigrants arrived with different family structures. Demographic changes and socioeconomic shifts affect changes in household and family structure.

Since marital status affects the households and family structure it is included in this chapter. As married couples tend to have their own family, marriages increase the number of households and families in the state. The data on marital status provided in this chapter examine the change in the marital status and the effects on the demographic and other socio-cultural pattern.

Definition

Household Type and Relationship

Question 2 on the 2000 Census questionnaire asked for relationship of every household member to the householder. The major relationships were: householder, husband/wife, natural son/daughter, adopted son/daughter, brother/sister, father/mother, other relatives, and non-relatives. The other relative category was later re-coded to include son/dauther in-law, father/mother in-law, niece/nephew, grandparent, uncle/aunt, and cousin.

Household was defined during the census as a person or a group of people living together in a housing unit and sharing meals together. These people did not need to be related but as long as they shared their meals, they were considered a household for census purposes. A housing unit was a house, apartment, mobile home, group of rooms, or single room that was occupied as a separate living quarters. A unit may have had more than one household if the occupants did not share their meals together.

There were two types of living quarters used in the census: regular household and group quarters. *Regular households* were those where the occupants may have been a single family, one person living alone, two or more families living together, or any other group of related or unrelated persons who shared living arrangements. *Group quarters* were those places where people either lived or stayed other than their usual house or apartment such as schools, hotels or motels, hospitals, prisons, etc.

Persons per household were obtained by dividing the number of persons in households by the number of households (householders). In cases where persons in households are classified by ethnic origin or race, persons in the household are classified by the ethnic origin or race of the householder rather than the ethnic origin or race of each individual.

Persons per family were obtained by dividing the number of persons in family household (householders where two or more members were related to the householder) by the number family households.

Householder and relationship to householder were defined as follows:

- *Householder* -- the person (or one of the persons) in whose name was the owner, being bought, or rented and who was listed as person 1 on the census questionnaire. If there was no such person in the household, any adult household member 15 years old and over could be designed as the householder. Households were classified by type according to the sex of the householder and the presence of relatives to the householder. The census distinguished two types of householders: a "family householder" and a "nonfamily householder." A family householder and all persons in the household related to him or her

were family members. A nonfamily householder was a householder living alone or with nonrelatives only.

- *Spouse* -- a person married to and living with a householder. This category included persons in formal marriages, as well persons in common-law marriages. The number of spouses was equal to the number of "married-couple families" or married couple households." The number of spouses, however, generally be less than half the number of married persons with spouse present, since more than one married couple could in a household but only spouses of householders were specifically identified as spouse. The number of spouses, however, generally was less than half the number of married persons with spouse present, since more than one married couple could live in a household but only spouses of householders were specifically identified as spouse. The number of married persons with spouse present included married-couple subfamilies and married-couple families.

- *Child* -- sons or daughters by birth, stepchildren, or adopted children of the householder, regardless of the child's age or marital status. The category excluded sons-in-law and daughters-in-law.

- *Natural Born or adopted son/daughter* -- a son or daughter by birth, regardless of the age of the child. This category also included sons or daughters of the householder by legal adoption, regardless of the age of the child. If a householder had legally adopted a stepson or stepdaughter, the child still was classified as a stepchild.

- *Stepson/Stepdaughter* -- a son or daughter of the householder through marriage but not by birth. If the householder had legally adopted a stepson or stepdaughter, the child was still classified as a stepchild.

- *Own Child* -- a never-married child under 18 years who was a son or a daughter by birth, a stepchild, or an adopted child of the householder. In certain tabulations, own children were further classified as living with two parents or with one parent only. Own children of the householder living with two parents by definition were found only in married-couple families. In a subfamily, an own child was a never-married child under 18 years of age who was a son, daughter, stepchild, or an adopted child of a mother in a mother-child subfamily, a father in a father-child subfamily, or either spouse in a married-couple subfamily.

- *Related children* -- own children and all other persons under 18 years of age in the household, regardless of marital status, which are related to the householder (except the spouse of the householder).

- *Other Relatives* -- a person who was related to the householder by blood, marriage, or adoption. (Other relatives are considered as nephew, aunt, uncle, cousin, in-laws, and so forth).

- *Grandchild* -- the grandson or daughter of the householder.

- *Brother/Sister* -- the brother or sister of the householder, including stepbrothers, stepsisters and brothers and sisters by adoption. Brother-in-law and sister-in-law are included in the "other relative" category on the questionnaire.

- *Parent* -- the father and mother of the householder, including a stepparent or adoptive parent. Fathers-in-law and mother-in-law are included in the "other relative" category on the questionnaire.

- *Other Relatives* -- anyone not listed in a reported category above that was related to the householder by birth, marriage, or adoption (brother-in-law, grandparent, nephew, aunt, mother-in-law, daughter-in-law, cousin, and so forth).
- *Nonrelatives* -- any household member not related to the householder by birth, marriage, or adoption. The following categories may be presented in more detailed tabulations: roomer, boarder, housemate or roommate; unmarried partner; and other nonrelatives.

Marital Status

Question 5 asked for marital status of all residents. However, data were tabulated for persons aged 15 years and older. The marital status referred to the status at the time of enumeration. Traditional marriages were classified under now married.

The five marital categories were: never married, now married, widowed, divorced, and separated. They are defined below:

Never married – persons who never had been married, including persons whose only marriages were annulled.

Now married – all persons whose current marriage had not ended by widowhood or divorce and regardless of whether his or her spouse was living in the household, unless they were separated.

Widowed – person whose spouse had died.

Divorced – person who had legally divorced his or her spouse.

Separated – persons legally separated or otherwise absent from their spouse because of marital discord. Included were persons how had been deserted or who had parted because they no longer wanted to live together but who had not obtained a divorce.

When a person did not report his or her marital status, the marital status was imputed according to the relationship to the householder and sex and age of the person.

Limitations and Comparability: The results from the 1973 and 1994 Censuses are used in the 2000 FSM Census analysis because the data are comparable.

Analysis of Household and Marital Status

Household (and Families)

Table 3.1 shows data on the type of living quarters in Kosrae from 1973 to 2000. Over the 27 years, the population increased from 4,305 in 1973 to about 7,686 in 2000. The average number of persons per family (7.2 percent per family) was higher than the average number of persons per household by only about 0.3 people per household, showing there were only few cases of one-person or unrelated member households in Kosrae. The results for persons per family in the previous Censuses could not be presented here because of the difference in the definitions used during previous Censuses.

As the total number of persons grew in Kosrae, the number of people living in the regular households increased as well. Thus, the proportion of people living in regular households slowly increased from 92 percent in 1973 to 95 percent in 1994 and to 99 percent in 2000. The proportion of person's in-group quarters, on the other hand, decreased from 2 percent in 1973 to less than 1 percent in 2000.

The average family size for Kosrae State was about 7.9 in 1973 while the 1994 Census data showed a decline to 7.2 and further declined to 7.1 in 2000. The average family size was reported at 5.8 persons per family in 1973 and increased to 7.2 persons in 2000.

Table 3.1: Type of Living Quarters in Kosrae State: 1973 to 2000

Characteristics	Census years			
	1973	1986	1994	2000
Total persons	4,305	6,607	7,317	7,686
In regular households	3,948	6,496	6,984	7,615
Percent	91.7	98.3	95.4	99.1
In group quarters	68	111	333	71
Percent	1.6	1.7	4.6	0.9
Persons per household	7.9	7.5	7.2	7.1
Persons per family	5.8	-	7.5	7.2

Source: 1973 TTPI Census, Table T3; 1986 Kosrae Census; 1994 FSM Census, Table P14; 2000 FSM Census, Table P2-2

Table 3.2 shows data on the relationship of the household members to the householder. This table and the next two (Table 3.3 & 3.4) excluded those people living in-group quarters. In 2000, almost 47 percent of the persons enumerated were children of householders, as opposed to 57 percent in 1994.

The composition of households in Kosrae showed no major changes from 1973 to 2000 in terms of relationship to the head of the household. There was a decrease in the proportion of 'children of householder' as a result of factors such as decline in fertility rates (less children per household) plus more children moving out to establish their own households or migrating overseas for employment or schooling. Also, there was an increase of 'other relatives' persons as more people moved to extended family households for many reasons including the convenience of traveling to and from school or work.

Table 3.2: Households Composition, Kosrae State: 1973 to 2000

Relationship	Census Years				Percent			
	1973	1986	1994	2000	1973	1986	1994	2000
In regular households	3,948	6,607	6,984	7,615	100.0	100.0	100.0	100.0
Householder	497	882	964	1,087	12.6	13.3	13.8	14.3
Spouse	427	753	802	849	10.8	11.4	11.5	11.1
Child	2,136	3,123	3,980	3,561	54.1	47.3	57.0	46.8
Other relative	831	1,585	1,190	2,005	21.0	24.0	17.0	26.3
Nonrelative	57	264	48	113	1.4	4.0	0.7	1.5

Source: 1973 TTPI Census, Table T3; 1986 Kosrae Census; 1994 & 2000 FSM Census, Table P14

Table 3.4 shows data on the household composition in 1994 to 2000 for the four municipalities. From this table, the number of persons per household showed a moderate variation across the municipalities. Household size was highest in Tafunsak with an average of 8.2 persons per households while this was lowest in Malem with almost 7 persons per household in 1994. In 2000, the household size continued the same pattern whereas Tafunsak remain highest with an average of 7.4 persons per household while Malem was lowest with just 6.3 persons per household. This, among other things, is due to the more movements of people to Tafunsak from neighboring municipalities primarily for employment and schooling.

Table 3.3: Household Composition by Municipality, Kosrae State: 1994 & 2000

Usual residence	1994							2000						
	Relationship							Relationship						
	Total	Percent	House-holder	Spouse	Child	Other Relative	Non-Relative	Total	Percent	House-holder	Spouse	Child	Other Relative	Non-Relative
Total	6,984	100.0	13.8	11.5	57.0	17.0	0.7	7,615	100.0	14.3	11.1	46.8	26.3	1.5
Lelu	2,371	100.0	14.6	12.4	58.2	14.4	0.5	2,557	100.0	14.0	10.8	45.6	27.5	2.2
Malem	1,430	100.0	14.8	12.3	54.6	17.8	0.5	1,567	100.0	15.8	12.4	50.9	20.2	0.6
Utwe	1,054	100.0	13.9	11.5	56.0	17.5	1.1	1,067	100.0	14.6	11.6	47.6	24.8	1.3
Tafunsak	2,129	100.0	12.2	10.0	57.7	19.3	0.8	2,424	100.0	13.4	10.5	45.0	29.7	1.4

Source: 1994 FSM Census, Table P14; 2000 FSM Census, Table P2-2

Furthermore, the number of households with 10 or more persons increased. In 2000, Tafunsak had the most households with 10 or more persons and persons per household, Lelu had the second highest, and Malem had the least.

Table 3.4: Persons per Households by Municipality, Kosrae State: 1994 and 2000

Usual residence	1994 Census					2000 Census				
		House-	Person per	Households with 10+ persons			House-	Person per	Households with 10+ persons	
	Persons	holds	Household	Number	Percent	Persons	holds	Household	Number	Percent
Total	6,984	964	7.2	218	22.6	7,615	1,087	7.0	218	20.1
Lelu	2,371	345	6.9	69	20.0	2,557	357	7.2	77	21.6
Malem	1,430	212	6.7	35	16.5	1,567	248	6.3	32	12.9
Utwe	1,054	147	7.2	32	21.8	1,067	156	6.8	25	16.0
Tafunsak	2,129	260	8.2	82	31.5	2,424	326	7.4	84	25.8

Source: 1994 FSM Census, Table P15; 2000 FSM Census, Table P2-2

Marital Status

Table 3.5 presents information to compare marital status for 1973, 1986, 1994 and 2000. In the 2000 Census, the proportion 'never married' persons in Kosrae was about 3 percent higher than 1994 while the 1986 Census showed that the proportion 'never married' persons in Kosrae was nearly 1 percent higher than 1973. The proportion 'now married' persons decreased from 61 percent in 1973 to about 58 percent in 1994 and further decreased to 54 percent in 2000. The proportion of person's separated/divorced increased slowly while the population widowed increased from 1973 to 2000.

The proportion of 'never married' persons for both sexes increased, while 'now married' decreased, possibly due to factors including changing attitudes towards marriage and delay caused by schooling among the younger generation. The proportion of 'separated and divorced' persons for male decreased from 60 percent in 1994 to 54 percent in 2000 while the proportion of female 'separated and divorced' person decreased.

Table 3.5: Marital Status for Age 15 Years and Over by Sex, Kosrae State: 1973 to 2000

Marital Status	1973	1986	1994	2000
Total	685	3,502	4,251	4,628
Percent	100.0	100.0	100.0	100.0
Never married	36.2	37.1	36.8	40.1
Now married	60.9	58.3	58.2	53.8
Separated/divorced	0.3	1.3	1.2	1.6
Widowed	2.6	3.2	3.8	4.5
Males	333	1,738	2,232	2,276
Percent	100.0	100.0	100.0	100.0
Never married	37.2	38.8	36.9	42.9
Now married	61.3	58.4	60.1	54.0
Separated/divorced	-	1.3	1.1	1.4
Widowed	1.5	1.6	1.8	1.7
Females	352	1,764	2,019	2,352
Percent	100.0	100.0	100.0	100.0
Never married	35.2	35.5	36.6	37.5
Now married	60.5	58.3	56.0	53.5
Separated/divorced	0.6	1.4	1.3	1.9
Widowed	3.7	4.9	6.0	7.1

Source: 1973 TTPI Census, Table T5; 1986 Kosrae Census; 1994 FSM Census, Table P22; 2000 FSM Census, Table P2-10

Table 3.6 compares marital status by municipalities by sex for the 1994 and 2000 Censuses. The pattern found among the four municipalities was quite similar to the Kosrae pattern, where the proportion of 'never married' increased while the proportion of 'now married' decreased. In Lelu the proportion of 'never been married' increased from about 35 percent in 1994 to 39 percent in 2000. This pattern is also found in the other three municipalities. Surprisingly, the rate of separation and divorce between 1994 and 2000 were most noticeable in Tafunsak for both sexes.

Table 3.6: Marital Status for Age 15 Years and Over by Municipality, Kosrae State: 1994 and 2000

Municipality	1994						2000					
	Total	Percent	Never married	Now married	Separated/ divorced	Widowed	Total	Percent	Never married	Now married	Separated/ divorced	Widowed
Total	4,251	100.0	36.8	58.2	1.2	3.8	4,628	100.0	40.1	53.8	1.6	4.5
Lelu	1,371	100.0	35.2	59.5	1.5	3.8	1,550	100.0	39.1	54.2	1.9	4.8
Malem	828	100.0	37.7	56.6	1.0	4.7	954	100.0	38.9	54.3	1.8	5.0
Utwe	590	100.0	43.9	50.7	1.0	4.4	666	100.0	48.2	47.4	0.8	3.6
Tafunsak	1,462	100.0	34.8	60.8	1.2	3.1	1,458	100.0	38.4	55.8	1.7	4.0
Males	2,232	100.0	36.9	60.1	1.1	1.8	2,276	100.0	42.9	54.0	1.4	1.7
Lelu	680	100.0	37.2	59.9	1.3	1.6	740	100.0	40.5	56.2	1.9	1.4
Malem	419	100.0	40.3	55.6	1.0	3.1	484	100.0	44.2	51.9	1.9	2.1
Utwe	275	100.0	41.5	54.2	1.5	2.9	323	100.0	51.1	47.4	0.6	0.9
Tafunsak	858	100.0	33.6	64.5	0.9	1.0	729	100.0	40.7	56.2	0.8	2.2
Females	2,019	100.0	36.6	56.0	1.3	6.0	2,352	100.0	37.5	53.5	1.9	7.1
Lelu	691	100.0	33.3	59.2	1.6	5.9	810	100.0	37.8	52.3	1.9	8.0
Malem	409	100.0	35.0	57.7	1.0	6.4	470	100.0	33.4	56.8	1.7	8.1
Utwe	315	100.0	46.0	47.6	0.6	5.7	343	100.0	45.5	47.5	0.9	6.1
Tafunsak	604	100.0	36.6	55.6	1.7	6.1	729	100.0	36.1	55.4	2.6	5.9

Source: 1994 FSM Census, Table P22; 2000 FSM Census, Table P2-10

Table 3.7 shows data on the Singulate Mean Age at Marriage (SMAM) for Kosrae State in 1986, 1994 and 2000 Censuses. The SMAM is determined from the distribution of 'never married' people, and is the point where half are ever married. The upward movement of SMAM since 1986 showed that Kosrae State population (at age 15 and over) was more likely getting married later in life than before. The mean age at first marriage increased for both males and females between 1986 and 1994, but more significantly for males. The mean age at marriage for male increased from 26.4 years in 1986 to 27.2 years in 1994 while it increased from 24.2 years in 1986 to only 24.9 years for females in 1994. The increase in the SMAM also showed some variation among the municipalities. The SMAM was highest (about 27 years) in Malem in 1986. The SMAM increased by over one year— from below 25 years to about 26 years—in Lelu and Tafunsak. For Malem and Utwe the increase was less than half a year—from well over 26 years to nearly 27 (see Table 3.9).

Table 3.7: Singulate Mean Age at Marriage for Aged 15 Years and Over by Municipality and Sex, Kosrae State: 1986 to 2000

Municipality	1986			1994			2000		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
Total	25.3	26.4	24.2	26.1	27.2	24.9	27.1	28.6	25.7
Lelu	24.6	25.6	23.6	26.0	27.3	24.9	27.1	27.7	26.8
Malem	26.5	28.5	24.4	26.7	28.9	24.8	26.8	29.2	24.4
Utwe	26.1	27.1	25.1	26.8	27.4	24.8	28.4	30.0	26.7
Tafunsak	24.7	25.8	23.8	25.7	26.6	24.4	26.9	28.5	25.4

Source: 1986 Kosrae State Census; 1994 2000 FSM Census, Table P22; 2000 FSM Census, Table P2-10

Conclusion

The average household size in Kosrae State remained at about 7 from 1973 to 2000. Both household composition and marital status changed in Kosrae over the decades. As immigration to the State continued, dominated at least in the last decade by working age males, the percentage of the total population living in households decreased. Barring any major change in migration patterns, this trend for the percentage in households to decline likely will continue. The selective out-migration of other Kosraeans for schooling and jobs on Guam, CNMI, Hawaii, and the U.S. mainland also affects the composition of the families and households remaining in Kosrae.

Marital patterns also have evolved in Kosrae over the last 20 years. In general, the percentage of married individuals increased between 1973 and 2000 among both males and females. The proportion of males separated or divorced increased substantially, as did the percentage of widowed females. Both males and females tended to be older when marrying for the first time in 2000.

The total number of householders in Kosrae nearly doubled from 502 in 1973 to 1,087 in 2000. There were about 380 added householders during 1973 to 1986 and about 123 additional householders from 1994 to 2000. The proportion of female-headed households also doubled during the last two decades. Male-headed households decreased from about 93 percent in 1973 to about 85 in 2000 while the proportion for female-headed households increased from about 7 percent in 1973 to nearly 15 percent in 2000.

CHAPTER 4
FERTILITY

Introduction

Before large-scale international migration became common, population growth was determined mostly by the difference between the number of people being born and the number of people dying. At present, births are not the only contributing factor to population growth, but they make up a significant portion, especially in the Pacific region where most families are characterized by a high level of fertility.

Fertility refers to the reproductive behavior of a population, relating to the number of live births a woman has had. The fertility of a population depends on various factors:

- Demographic composition of the population (particularly number/age of women);
- Fecundity (ability to reproduce);
- Age of cohabitation/marriage;
- Availability and use of family planning;
- Psycho-social and cultural concept (breastfeeding, family size preference/value of children);
- Level of economic development;
- Status of women (place in society, level of education, work status).

Birth or fertility rates measure the impact that births have on population structure and growth. As a rule, Censuses do quite well in estimating fertility as questions and techniques have been refined over the years. The two approaches for measuring fertility — direct measures and indirect measures —can both be applied to the 2000 FSM Census. Since both methods can be used, a useful starting point is to compare the results obtained from each. If the results differ widely, it suggests that the data used in one or both methods are incorrect, or the indirect method does not apply.

Changes in fertility patterns and levels are often due to the availability and usage of family planning methods (contraceptives), women's educational background, and rate of women's participation in the labor force. Census data on fertility provide benchmark information on fertility to look for changes in patterns and levels. In most countries, family planning methods, such as contraceptives, usually lower fertility levels of older women first.

Data Description

Vital registration in Kosrae is not complete, making estimates on fertility reliant on estimates derived from a census or survey. The 2000 FSM Census asked 4 questions on fertility in order to get information on recent births, previous births, and child mortality. Fertility questions were asked to all females born before April 1, 2000 (all women aged 13 and over) but were tabulated for women aged 15 and over. Questions asked included how many children born to each woman were living at home, living elsewhere or dead and categorized by sex. Also asked was the date and sex of the last child born alive and whether that child was still alive.

Limitations and comparability. Accurate fertility data are sometimes difficult to capture because of poor recollection by mothers on number of births or dates of births of their children. Indirect methods of measuring fertility help to compensate for these weaknesses in the data. The 1973 TTPI Census asked questions on children ever born children still alive and date of the last child born, by sex, to women aged 14 and over. The 1980 Census asked women 15 and over for number of children ever born and surviving and babies born in the 12 months before the census. The 1980 collection technique would have caught women who had multiple births in the year while the 1973, 1994 and 2000 only considered most recent births, missing those women who had multiple births in the year before the Census. Fertility data editing techniques for the earlier Censuses were slightly different than the 1994 and 2000 FSM Censuses.

Analysis of Fertility Data

Crude Birth Rate

The crude birth rate (CBR) is the number of births in a year divided by the mid-period population. Note that the mid-period population is not the Census population, that is, the reported births refer to the last 12 months while the population refers to

the date of enumeration that must be adjusted to the mid-year. The CBR is a crude rate because the base of the calculation is the whole population, and the rate is affected by the age and sex structure.

At least two measures of how many births occurred in the 12 months prior to the Census can be derived from Census data. The first is the number of births reported by women in the Census; the second is the population under 1 year plus the estimated number of infant deaths (during the year to persons under 1 year). These two figures were not equal for the period September 1994 to April 1, 2000.

For year 2000, if we use the data on births reported by women of reproductive ages in the year before the Census we find a CBR of 35.5 (205 divided by 7,270 and multiplied by 1,000), which means about 36 births per 1,000 populations in the year preceding the Census. However, this is likely to be an under report in view of the estimate derived from the second method. The second method is based on reverse survival. This estimate considers that the children counted in the census below 1 year of age, were born in the year before the Census. The method also recognizes that some babies born during this year died before the Census was taken. Once these "deaths" have been added to the children counted in the Census, an estimate of births during the year is obtained. It is further assumed that the effects of migration on the estimates of births are negligible (and the migration data suggest that for children below age 15, this assumption is reasonable).

Using the survivorship ratios and the population aged 0 counted in the Census, we find the crude birth rate (Table 4.1). The survivorship ratio permits the estimation of children who have died before the census. Survivorship ratios have been selected from model life tables (Coale-Demeny West level 20 — for calculation see Chapter 5 on mortality), which are required since the birth and death civil registration systems in the state of Kosrae are not complete. In theory, the survivorship ratios are intended to calculate survivors forward to a later age, while here, we are surviving them backward in time to estimate the number of births; hence the term "reverse survival". To calculate the number of births in the year, the number of persons enumerated in the census aged 0 to 1 (column 1) is divided by the survivorship ratio (column 2). It is then necessary to estimate the mid-year population. The earlier mid-year population was estimated using the approximate annual growth rate of 1.3 percent and the total census population. As the last column shows, the CBR using reverse survival for October 1993 to September 1994 is 26.8 per 1,000 while the reverse survival for April 1999 to March 2000 is 28.5 per 1,000.

Table 4.1: Crude Birth Rate, Kosrae State: 1993 to 2000

Characteristics	1994	2000
Population aged zero	188	211
Survivorship Ratio	0.9626	0.9667
Estimated Births (1994 =1993-94) & (2000 = 1999 -2000)	195	218
Mid-period Population	7,270	7,652
CBR (1994 = 1993-94) & (2000 = 1999-2000)	26.8	28.5

Source: 1994 FSM Census, Table P15 and unpublished data; 2000 FSM Census, Table P2-3 and unpublished data

The same procedure was used for 5-year periods going back 15 years before the Census. The estimated crude birth rates are given in Table 4.2. The table reveals a great deal about fertility in the state of Kosrae. For the most recent period covered in the above table, 1989-1994, the CBR is more than 27 per thousand populations compare to the 1995-2000 CBR of about 29. In the ten-year interval from that time to the most recent period 1994-2000, fertility decline by about 26 percent. Since the rate before the census was 28.5, lower than the most recent five-year rate, the fertility decline observed has probably continued during the five years before the Census.

Table 4.2: Estimation of Crude Birth Rates, Kosrae State: 1979 to 2000

Age group	Years in which born	Census Population	Survivorship Ratio since Birth	Estimated Births in 5 Year period	Mid-period Population	Crude Birth Rate
1994 CENSUS						
Less than 5 years	1989-1994	922	0.9487	972	7,083	27.4
5 to 9 years	1984-1989	1,078	0.9375	1,150	6,637	34.7
10 to 14 years	1979-1984	1,066	0.9327	1,143	6,220	36.8
2000 CENSUS						
Less than 5 years	1995-2000	1,026	0.9559	1,073	7,518	28.6
5 to 9 years	1990-1995	953	0.9471	1,006	7,056	28.5
10 to 14 years	1985-1990	1,079	0.9430	1,144	6,623	34.6

Source: 1994 FSM Census, unpublished data and Table P15

Note: Survivorship ratio is the life table probability of surviving from birth to the age groups specified and is approximately equivalent To the average probability of surviving from birth during the period specified to the time of the census.

Table 4.3 presents data on the CBRs as compiled from registration statistics obtained from the department of health, for comparison purposes. As mentioned earlier, the registration lacked completeness, and the coverage was not consistent over the years.

As long as the assumptions made in choosing the life table and the rate of growth used are appropriate, the errors in fertility estimates resulting from the lack of better data will be small. The principal merits of the CBR as a measure of fertility are its relative simplicity and its interpretation as a direct contribution to the rate of natural growth. However, the CBR in relation to the total population tells little about the fertility of women neither at reproductive ages nor about the age structure of childbearing. We must be very careful in using CBR for comparison. The CBR estimates are dependent on the age structure of a population. As a result, unless standardized, they are not comparable over time or across regions with different age structures. Fortunately, the census data do enable us to measure fertility in more detail.

Age Specific Fertility

To look at the recent age structure of births we use, the age groups of mothers with children born in the past year. This tabulation enables the calculation of age specific fertility rates (ASFR), that is, the average number of children born to each woman in an age group during the year. Relating fertility experience to age provides a more detailed description of fertility behavior, or family formation, and provides a control for changes in age structure for comparative purposes.

This report provides two methods for calculating and adjusting age specific fertility rates. One involves reverse survival of births and the other involves comparing current fertility to previous fertility to check for under counting. The reverse survival method is discussed first.

Table 4.3: Adjustment of Births in Year Prior to the Census, Kosrae State: 1994 and 2000

Age groups	1994 census					2000 census				
	Number of women	Reported Births	Unadjusted ASFR	Adjusted Births	Adjusted ASFR	Number of women	Reported Births	Unadjusted ASFR	Adjusted Births	Adjusted ASFR
Total	1,639	186	...	196	...	1,810	205	...	206	...
15 to 19 years	394	18	0.046	19	0.048	347	12	0.035	13	0.039
20 to 24 years	261	47	0.180	49	0.188	323	53	0.164	62	0.192
25 to 29 years	248	50	0.202	53	0.214	259	59	0.228	63	0.243
30 to 34 years	204	33	0.162	35	0.172	267	41	0.154	40	0.152
35 to 39 years	227	22	0.097	23	0.101	216	24	0.111	11	0.051
40 to 44 years	178	12	0.067	13	0.073	215	15	0.070	16	0.073
45 to 49 years	127	4	0.031	4	0.031	183	1	0.005	1	0.004
TFR	...	...	3.925	...	4.135	...	...	3.832	...	3.767

Source: 1994 & 2000 FSM Census, Table P15

Note: Adjustment factor equals total births (reverse survival) divided by the number of women reporting a birth in the past year.

Before producing age specific rates through reverse survival, we adjusted the number of births in the past year reported by women (see Table 4.1). This type of question is not under reported and considerable care is needed to use the results. Consider, for example, the 195 estimated births for the year 1993-94 based on reverse survival and shown in Table 4.1. Assuming that the effects of migration for infants below one year were moderate and discrepancies arising from multiple births and maternal deaths were negligible, the response to the question eliciting information on births in the past year should be the same, or at least very close. As Table 4.3 shows, the total number of women reporting a birth in the past year was 186, only slightly lower than the 195 estimated using reverse survival.

In order to correct for the under count, an adjustment factor is calculated by dividing the estimated births from reverse survival by the reported number of births. In 2000, the 205 estimated births divided by 221 reported births resulting in an adjustment factor of 0.95 (see Table 4.4). The adjustment factor is then applied to the births to correct for the under count.

The technique used took advantage of the relative strengths of two approaches. Using the ratio of births estimated from reverse survival to the mothers reporting a birth as a correction factor retained the age specific pattern of fertility, but fixed the level of fertility based on the more plausible reverse survival estimate of births.

The fertility pattern illustrated in the last column of Table 4.4 appears very smooth. The low rates at 15 to 19 reflect the delay in childbearing due to a later age of marriage. In 1994, the peak fertility is reached at ages 25 to 29, with 0.214 children per women, and continues to increase in 2000 to 0.243. While age specific fertility falls quite sharply after age 35,

the slope is not sufficiently steep to suggest an extensive use of family planning; for example, women ages 40 to 44 continue to bear on average 0.073 children during both census years.

Although the age specific fertility rates provide detailed information it is usually difficult to use ASFRs for comparison purposes. A very useful composite index is the total fertility rate (TFR), which effectively sums the current age specific fertility for each year of a woman's reproductive life. The TFR thus provides a measure of the average number of children a woman would bear under a given schedule by the end of her childbearing years. Computation from the age specific rates is relatively simple, involving the summing of annual age specific rates. The rates that are provided in Table 4.4 would yield a TFR of 3.9 in 1994. Given the fertility levels of 4.1 in 1994 to 3.8 in 2000, one woman would give birth on average to 3.9 children during her reproductive lifetime.

Table 4.4: Calculation of Total Fertility Rate with P/F Ratio, Kosrae State: 1994 & 2000

Age group	Children Ever Born per Woman (Parity, P)	Age-Specific Fertility Rates (ASFR, fi)	Summation of ASFR's Mulitiplied by 5 (Phi)	Adjustment of phi (F)	Parity Divided by Adjusted phi (P/F)	Adjusted ASFR by factor of 1.08
1994 CENSUS						
15 to 19 years	0.099	0.046	0.228	0.249	0.398	0.049
20 to 24 years	0.820	0.180	1.129	0.738	1.112	0.195
25 to 29 years	1.831	0.202	2.137	1.743	1.051	0.218
30 to 34 years	3.025	0.162	2.946	2.651	1.141	0.175
35 to 39 years	4.251	0.097	3.430	3.238	1.313	0.105
40 to 44 years	5.365	0.067	3.767	3.612	1.485	0.073
45 to 49 years	6.740	0.032	3.925	4.026	1.674	0.034
TFR	...	3.925	...	...	...	4.245
2000 CENSUS						
15 to 19 years	0.054	0.035	0.135	0.046	1.179	0.039
20 to 24 years	0.607	0.164	0.955	0.564	1.076	0.192
25 to 29 years	1.788	0.228	2.094	1.653	1.081	0.243
30 to 34 years	0.813	0.154	2.862	2.606	0.312	0.152
35 to 39 years	3.819	0.111	3.094	2.971	1.285	0.051
40 to 44 years	4.963	0.070	3.465	3.366	1.474	0.073
45 to 49 years	5.361	0.005	3.492	3.486	1.538	0.004
TFR	...	3.832	...	...	...	3.767

Source: 1994 & 2000 FSM Census, unpublished data

The P/F ratio method of estimating fertility compares the reported historical fertility (parity) of women to the current fertility of the same women and establishes a correction factor to apply to the age specific fertility rates to calculate a more precise total fertility rate. The correction factor adjusts for under-response and poor recollection of fertility data by older women who might underreport births. Once we find the difference in reported parity and fertility, we can correct for the under count. As for Kosrae State, we have chosen a correction factor of 1.08, which corrects the age specific fertility rates and results in an adjusted TFR of 4.2 in 1994 to 3.8 in 2000 (see Table 4.5). The correction factor was taken from the P/F ratio that applied to women 20 to 24 and 25 to 29 to average out the fluctuation caused by reporting errors. (For more details on this method see United Nations Manual X "Indirect Techniques for Demographic Estimation.") The increase in the P/F value suggests that a growing disparity existed between current fertility and parity and supports our conclusion that current fertility is lower than previous fertility, that is, fertility is declining.

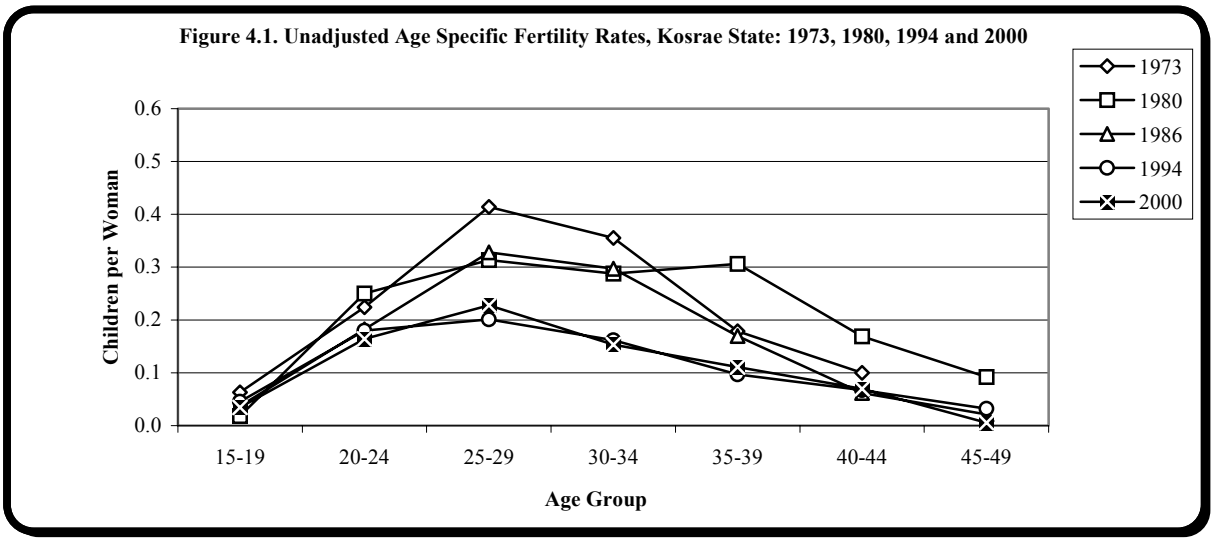
Given the fertility levels for 2000, a Kosraean woman would bear 3.8 children on average in her lifetime. The crude birth rates suggested declining fertility over the past 15 years; *adjusted* age specific fertility rates show a similar trend, falling from 7.6 in 1973 and 1980, to 6.6 in 1986, to 4.2 in 1994, and continuing to decline to 3.8 in 2000 (see Table 4.6). The high fertility levels in 1973 and in 1980 were probably a reflection of changing health conditions in Kosrae. In 1973 and 1980 public health had brought down child mortality but women were still having large families to replace those children who potentially would not survive.

Figure 4.1 displays data on the changes in ASFRs over time. The reduction in the peak at ages 25 to 29 and the flattening of the curve suggests a decline in fertility. Although women aged 25 to 29 were having fewer children they continued to bear children into the later reproductive years, implying small effects of contraceptives on fertility behavior. A reduction in the early reproductive ages can be seen in the figure.

Table 4.5: Age-specific Fertility Rates, Kosrae State: 1973 to 2000

Age group	Implied 1973	Adjusted 1973	Implied 1980	Adjusted 1980	Implied 1986	Adjusted 1986	Implied 1994	Adjusted 1994	Implied 2000	Adjusted 2000
15 to 19 years	0.063	0.072	0.018	0.019	0.037	0.044	0.046	0.049	0.035	0.039
20 to 24 years	0.224	0.256	0.251	0.264	0.182	0.219	0.180	0.195	0.164	0.192
25 to 29 years	0.414	0.472	0.314	0.330	0.328	0.393	0.202	0.218	0.228	0.243
30 to 34 years	0.355	0.405	0.288	0.303	0.297	0.356	0.162	0.175	0.154	0.152
35 to 39 years	0.179	0.204	0.306	0.323	0.169	0.203	0.097	0.105	0.111	0.051
40 to 44 years	0.100	0.114	0.169	0.177	0.062	0.074	0.067	0.073	0.070	0.073
45 to 49 years	-	-	0.092	0.097	0.022	0.026	0.032	0.034	0.005	0.004
TFR	6.675	7.615	7.185	7.564	5.487	6.568	3.925	4.245	3.832	3.767
Adj. Factor	...	1.14	...	1.05	...	1.20	...	1.08	...	3.77

Source: 1973 & 1980 TTPI Censuses, unpublished data; 1986 Kosrae Census, unpublished data; 1994 & 2000 FSM Census, unpublished data



The gross reproduction rate (GRR) and net reproduction rate (NRR) measure only female births and are indices of generational replacement. The GRR is the average number of daughters born that will replace each woman in the absence of female mortality from birth through the childbearing years. Given a TFR of 3.8 in 2000 the gross reproduction rate can be calculated by multiplying the proportion of female births by the TFR. For Kosrae in 2000 the GRR, or number of daughters a woman will have on average, was 2.3. The net reproduction rate is calculated by taking the mortality of the daughters into account because some daughters will die before having children. The NRR came to 1.8 in 2000. A common benchmark for the NRR is when the NRR equals 1, which is replacement level fertility. This implies that exactly one woman will be replaced after a generation. The fertility level in 2000 for Kosrae suggests that each woman would be replaced by nearly 2 women in about 30 years time (given that an average length generation was 30 years).

Fertility of Population Subgroups

Different economic and social groups tend to have varying fertility rates. It is interesting to look at the fertility rates to see which subgroups have high fertility and which subgroups have low fertility. Considering historical parity or current fertility can do this. In this report we have chosen to use both, parity (children ever born) as well as the total fertility rates were used in order to compensate for the small numbers.

Table 4.6 presents data on the age specific fertility rates for different educational backgrounds. This pattern seems contrary to the expectation that the fertility level of a woman were at lower levels of education. Those women with no and few years of education tended to have fewer children while those women with more education, excepting for those with college level education. Given the fertility rates, women with college education had on average 1.0 birth in 1994 and increase to 1.7 in 2000. Women with a high school education had on average 4.8 children in 1994 and slightly decrease to 4.6 children in 2000. Fertility level increased with women education to some college level. This finding is common because some education often increases a woman's health awareness enough to improve her ability to bear children and to understand the importance of pre-natal care. However, once this threshold has been met, increased education seems to reduce fertility.

Table 4.6: Age Specific Fertility Rates by Mother's Educational Attainment, Kosrae State: 1994 and 2000

Age group	1994 Census							2000 Census						
	Total	No School	Elam-Entry	High School	H.S. Graduates	Some College	College Graduates	Total	No School	Elam-Entry	High School	H.S. Graduates	Some College	College Graduates
15 to 19 years	0.099	0.107	0.213	0.066	0.116	0.167	-	0.069	0.000	0.044	0.048	0.105	0.080	-
20 to 24 years	0.820	0.750	0.875	0.976	1.022	0.493	-	0.607	0.500	0.688	0.622	0.771	0.474	0.370
25 to 29 years	1.831	1.158	1.750	2.139	2.100	1.577	-	1.788	0.000	1.613	2.102	2.077	1.885	1.140
30 to 34 years	3.025	1.917	3.138	3.133	3.933	2.375	1.600	2.798	3.000	3.068	2.908	2.667	2.692	2.349
35 to 39 years	4.251	3.000	4.684	4.964	4.000	3.314	-	3.810	2.000	3.717	3.817	4.972	3.588	2.893
40 to 44 years	5.365	4.286	5.225	6.143	6.130	4.913	5.000	4.977	0.000	5.326	5.379	4.394	4.313	4.118
45 to 49 years	6.740	7.417	6.433	7.579	7.750	5.400	4.667	5.361	3.000	5.580	5.306	5.391	5.714	4.895
TFR	3.925	2.235	3.605	4.020	4.825	5.395	1.000	3.832	3.750	4.063	3.785	4.577	3.757	1.671

Source: 1994 & 2000 FSM Census, Table P102

Another determinant of fertility was whether a mother was in the labor force. Table 4.7 presents data on fertility rates for women who were in the labor force, employed or unemployed, subsistence, and those who were not in the labor force. As would be expected, those women who were in the labor force had lower fertility levels (TFR of 3.8) in 1994 and decline to 2.5 in 2000.

In the year 2000, women in the labor force had a TFR of 2.5 while women who were not in the labor force had a TFR of 4.7. Within the labor force women who were working full time (35+ hours) had the lowest fertility rates. This difference is probably because some women who had children in the year before the census took themselves out of the labor force to care for their child and because women who were working full time (35+ hours) had the lowest fertility rates. Women who were looking for work (or unemployed) had lower fertility than the women did in any other category. Women in the subsistence had fertility higher than other women who were employed; however, it was lower than women not in the labor force.

Table 4.7: Age Specific Fertility Rates by Labor Force Participation, Kosrae State: 1994 and 2000

Age group	1994 Census						2000 Census					
		Labor force						Labor force				
			Employed						Employed			
	Total	Total in Labor force	Total Employed	Employed 35+ hours	Unemployed	Not in Labor force	Total	Total in Labor force	Total Employed	Employed 35+ hours	Unemployed	Not in Labor force
15 to 19 years	0.099	0.238	0.056	0.167	0.311	0.073	0.071	0.087	0.095	0.083	0.000	0.068
20 to 24 years	0.820	0.616	0.459	0.350	0.804	0.973	0.562	0.511	0.494	0.420	0.714	0.644
25 to 29 years	1.831	1.698	1.663	1.438	1.775	1.975	1.773	1.775	1.794	1.726	1.400	1.796
30 to 34 years	3.025	2.978	2.812	2.962	3.478	3.063	2.653	2.595	2.610	2.317	3.000	2.979
35 to 39 years	4.251	3.725	3.549	3.074	4.350	4.603	3.768	3.757	3.796	3.658	3.000	3.858
40 to 44 years	5.365	5.431	4.982	4.810	7.133	5.321	4.753	4.567	4.567	4.233	-	5.272
45 to 49 years	6.740	6.868	6.731	6.571	7.167	6.685	5.244	4.944	5.029	5.244	2.000	5.625
TFR	3.925	3.765	3.885	3.090	2.795	4.115	3.832	2.549	2.516	2.509	2.714	4.728

Source: 1994 & 2000 FSM Census, Table P134

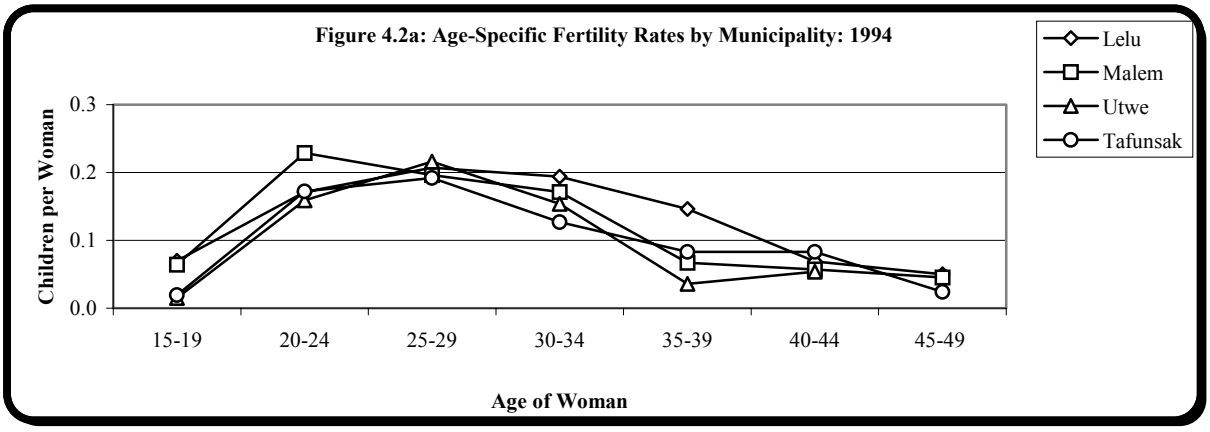
Finally, fertility differentials by municipality are considered in Table 4.8 and Figure 4.2. The reported age specific fertility rate was used to assess the differentials in current level of fertility. In 1994, Lelu had the highest fertility rates with 4.5 births on average per woman. Utwe had the lowest fertility rates with 3.2 births per woman. Different rate was experience in 2000, where Tafunsak had the highest fertility rate and Lelu being the lowest. Malem and Lelu had high fertility at both young ages and older ages, suggesting the absence of family planning.

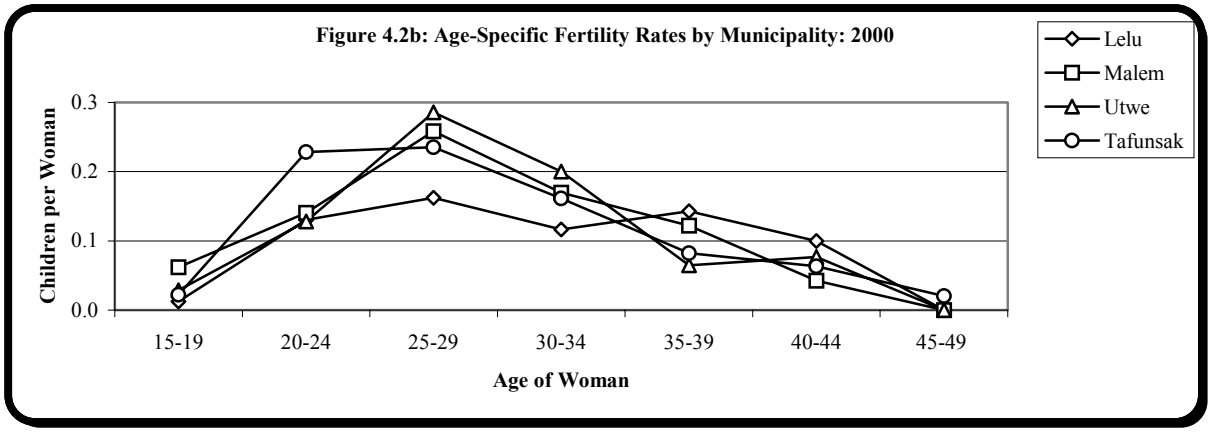
Table 4.8: Summary of Adjusted Fertility Rates by Municipality, Kosrae State: 1994 and 2000

Age group	1994 Census					2000 Census				
	Total	Lelu	Malem	Utwe	Tafunsak	Total	Lelu	Malem	Utwe	Tafunsak
15 to 19 years	0.046	0.070	0.064	0.015	0.019	0.027	0.012	0.062	0.029	0.022
20 to 24 years	0.180	0.171	0.229	0.159	0.172	0.164	0.130	0.141	0.128	0.229
25 to 29 years	0.202	0.207	0.196	0.216	0.192	0.228	0.162	0.259	0.286	0.235
30 to 34 years	0.162	0.194	0.171	0.154	0.127	0.154	0.116	0.170	0.200	0.161
35 to 39 years	0.097	0.146	0.067	0.036	0.083	0.047	0.143	0.122	0.065	0.082
40 to 44 years	0.067	0.069	0.057	0.054	0.083	0.074	0.100	0.043	0.077	0.063
45 to 49 years	0.031	0.050	0.045	-	0.024	0.005	-	-	-	0.020
TFR	3.925	4.537	4.147	3.170	3.504	3.492	3.321	3.976	3.920	4.068

Source: 1994 & 2000 FSM Census, unpublished data

Figure 4.2 shows fertility pattern by age groups. Fertility peaks at age 25 to 29 in all the municipalities except for Lelu (at ages 15 to 19).





Children ever born per woman provides the total number of children a woman is likely to have had by the time she has reached a specified age group. This measure does not reflect current fertility, except for the youngest age group. The final age groups, ages 40 to 44 and 45 to 49, and gives an estimate of lifetime fertility. Women in the state of Kosrae who were finishing their reproductive years (ages 45 to 49) had on average 6.7 in 1994 and decline to 5.4 in 2000 (Table 4.9). Similar to the total fertility rates, Utwe had the smaller number of children ever born per mother. Women in Lelu, Malem and Tafunsak had about 5.5 children per women while women in Utwe had about 5.0 children per mother by the ages of 44 years. The pattern continue in 2000 for the age group 45 to 49 with Utwe being the lowest and the other three municipality had about 5.0 age groups, probably because of the small number of women in that age group and also due to reporting errors.

Table 4.9: Children Ever Born per Woman by Municipality, Kosrae State: 1994 and 2000

Age of Mother	1994 Census					2000 Census				
	Total	Lelu	Malem	Utwe	Tafunsak	Total	Lelu	Malem	Utwe	Tafunsak
15 to 19 years	0.099	0.133	0.074	0.045	0.113	0.054	0.037	0.074	0.086	0.045
20 to 24 years	0.820	0.707	0.979	0.636	0.931	0.607	0.530	0.563	0.513	0.752
25 to 29 years	1.831	1.696	2.065	2.162	1.685	1.788	1.554	2.000	1.571	1.953
30 to 34 years	3.025	2.861	3.257	3.462	2.915	0.813	2.523	2.962	2.914	2.914
35 to 39 years	4.251	4.146	4.378	3.607	4.542	3.819	3.514	4.049	3.516	4.110
40 to 44 years	5.365	5.466	5.486	4.973	5.458	4.963	5.163	5.106	4.154	4.937
45 to 49 years	6.740	6.600	6.409	7.208	6.780	5.361	5.544	5.033	4.722	5.776

Source: 1994 & 2000 FSM Census, Table B03

4.4 Conclusion

Kosrae had a total fertility rate of 3.9 in the 1994 Census while the 2000 FSM Census data showed that the total fertility rate declined to 3.8. This rate is high by world standards and creates a rapidly growing population.

Fertility levels in Kosrae continue to decrease, as they have been for the past two decades. Furthermore, the TFR had declined from about 8 in 1973 to about 4 in 2000, a decline of about 1 child in 12 years. The decline was, however, faster since 1986. The TFR decreased by more than 2 children during 1986 throughout 1994. Fertility rates were lower for those women with higher education and those women who were in the labor force. It also appears that the current age specific fertility rate was lower partly because of the use of family planning method. Fertility planning in Kosrae State is therefore yet to have its desired effect.

CHAPTER 5
MORTALITY

Introduction

As reported in Chapter 4, fertility rates in the State of Kosrae are declining. However, mortality rates in Kosrae have been brought to a low level, and thus little decline occurred in the recent past. This has contributed to the moderation of the growth rate. In this chapter we estimate mortality indirectly for the state of Kosrae, to find the effect of mortality reduction on growth and to compare mortality over time.

Data Description

Mortality cannot be estimated through direct methods from the 1994 and 2000 FSM Censuses because no direct questions were asked regarding deaths. Indirect estimates of early age mortality can be derived from the questions concerning children ever born and children still alive (questionnaire items 17a & b). The proportion of children surviving can be applied to model life tables to produce basic mortality rates. Children ever born and surviving were asked to women in the 1973 and 1980 Censuses as well and data are provided for comparison.

Mortality indices of interest are crude death rate, infant mortality rate, child mortality rate, and life expectancy at birth. The *crude death rate* (CDR) is the most common direct measure of mortality and is defined as the number of deaths per 1,000 persons. Similar to the crude birth rate, the crude death rate is dependent on the age-sex structure, thus it is a crude measure. An adjustment must be made before any attempt can compare mortality over time or for different regions or countries. The *infant mortality rate* (IMR) is defined as the number of infant deaths per 1,000 live births during the year. The IMR is a good indicator of the quality of health care in a nation because mortality is high during the first months of life and small improvements can be measured. It is also an adjusted measure that is not dependent on the age-sex structure of a region. The *child mortality rate* is defined as the probability of dying between ages 1 and 5. *Life expectancy at birth* is the average number of years a newborn baby can expect to live, given the current level and pattern of mortality. Unlike the crude birth rate this measure is independent of the age structure of a nation and is thus a good measure for comparison between countries or regions.

Life expectancy is obtained from a life table constructed based on a set of age specific death rate, from which probability of surviving to a specific age is determined. These survival probabilities are applied to an assumed cohort of births that occurred in the same year, following the survivors as they reach successive ages until all have eventually died. From the total number of all years lived, the probability of survival from one age to another and the life expectancies at the various ages are estimated (see Arriaga, 1994 pp 74 – 83 for details on the derivation). In Kosrae, however, deaths are under-registered, making it difficult to obtain the life table from age specific death rates calculated from registration data. As an alternative, a life table implied by childhood survivorship ratios has been presented in this chapter.

Analysis of Mortality Data

Crude Death Rate (CDR)

Direct measures of mortality are calculated using deaths registered with the Department of Health. Unfortunately these events are under-registered and inconsistently covered, providing only a guide to the patterns of mortality but not to the level. To compensate for the different levels of coverage and to smooth some erratic patterns, Table 5.1 presents three four-year averages of mortality rates. In both cases the CDR comes to approximately 5 per 1,000 persons, which, as we will see is under reported. The CDR is calculated using the total number of deaths in a year divided by the estimated mid-year population. Age-specific mortality rates in the case of the Kosrae were erratic and inaccurate because of the small number of persons and deaths and because of inaccuracies in reporting. The reported age specific death rates also shows that the coverage problem was significant for childhood mortality. Direct estimation of mortality is not possible without an accurate and complete vital registration system. Kosrae State must make greater efforts to improve the coverage of the vital registration program.

Table 5.1: Average Age-specific Mortality Rates, Kosrae State: 1986 to 1989 & 1990 to 1993 & 1995 to 2000

Age groups	1986-1989			1992-1995			1996-1999		
	Deaths	Mid-period Population	Age-specific Mortality rate	Deaths	Mid-period Population	Age-specific Mortality rate	Deaths	Mid-period Population	Age-specific Mortality rate
Total	23	6,481	3.5	39	7,239	5.4	48	7,531	6.4
0 to 4 years	9	852	10.6	5	915	5.5	5	986	5.1
5 to 9 years	1	1,100	0.9	-	1,058	-	1	997	1.0
10 to 14 years	1	921	1.1	-	1,053	-	1	1,074	0.9
15 to 19 years	-	693	-	2	777	2.6	2	876	2.3
20 to 24 years	-	515	-	-	531	-	1	577	1.7
25 to 29 years	-	502	-	1	516	1.9	1	507	2.0
30 to 34 years	-	421	-	1	476	2.1	1	477	2.1
35 to 39 years	1	377	2.7	1	464	2.2	1	454	2.2
40 to 44 years	1	258	3.9	2	374	5.3	2	412	4.9
45 to 49 years	1	202	5.0	2	316	6.3	2	347	5.8
50 to 54 years	1	177	5.6	1	204	4.9	3	240	12.5
55 to 59 years	2	138	14.5	3	177	16.9	3	180	16.7
60 to 64 years	1	103	9.7	4	147	27.2	6	146	41.1
65 to 69 years	1	79	12.7	4	79	50.6	5	101	49.5
70 to 74 years	-	54	-	4	74	54.1	4	68	58.8
75 yrs & over	4	89	44.9	9	78	115.4	10	89	112.4

Source: Department of Health Services, FSM; 1994 & 2000 FSM Censuses, unpublished data

The crude death rate, based on the registration system, is almost certain to be an underestimate due to the incomplete registration of deaths. In order to get better estimates of mortality, we use an indirect method to calculate child and infant mortality and find a model life table applicable to the state of Kosrae. The life table is basically a statistical model of mortality experience based on given mortality rates. Model life tables allow us to project mortality rates (and other demographic indices) once we have matched a model to the population. Given the model life table we have estimated the crude death rate in 1994 to be approximately 8.8 per 1,000 individuals. Also, the CDR implied by the life expectancy at birth should be considered as an upper bound, mainly because, while applying the indirect techniques, we could have possibly slightly over adjusted the date. The technique gives best results when fertility and mortality rates have not changed much in recent past. Thus, the results obtained from indirectly estimated CDR provide only indications for monitoring purposes.

The life table is indirectly estimated from child survival information (for further discussion on this method see United Nation Manual X “Indirect Techniques for Demographic Estimation”). The 1994 and 2000 FSM Censuses asked women for the number of children ever born and the number of children surviving. With these data, estimations were made about the level of child mortality over the past 15 to 20 years before the respective censuses. This method assumes that the survivorship of children from women in different age groups reflects the child mortality for given periods before the census. It also provides estimations of infant mortality, child mortality, and life expectancy at birth, and approximate changes in level for different years prior to the Census.

The life table is indirectly estimated from child survival information (for further discussion on this method sees United Nations Manual X "Indirect Techniques for Demographic Estimations"). The 2000 FSM Census asked women for the number of children ever born and the number of children surviving. With these data, estimations were made about the level of child mortality over the past 20 years. The 15 and 20 years starts from the reported proportion surviving among children ever born to women 15 to 19, 20 to 24, 25 to 29, 30 to 34, 35 to 39, 40 to 44, and 45 to 49 years. The technique assumes that the survivorship of children from women in different age groups reflects the child mortality for given periods before the census. This technique provides estimations of infant mortality, child mortality, and life expectancy at birth for different years prior to the census. When we apply this method to the past four censuses we can approximate the change in level over the two decades before the 2000 Census.

Table 5.2 shows the historical trends of proportion of children surviving by age of mother. As can be seen from the table, the proportion of children surviving has increased over time. In 1973 about 91 percent of children born to women ages 45 to 49 years survived to the census day. In 2000, about 92 percent of all children born to mother’s ages 45 to 49 years survived to the census day. Thus child mortality in the state of Kosrae had no major changes between 1973 and 2000. The improvement between 1973 and 1980 was much greater than the improvement between 1980, 1994 and 2000.

Table 5.2: Number of Children Ever Born (CEB) and Children Surviving (CS) and Proportion Surviving (PS) by Age Group of Mother, Kosrae State: 1973 to 2000

Age groups	1973			1980			1986			1994			2000		
	CEB	CS	PS	CEB	CS	PS	CEB	CS	PS	CEB	CS	PS	CEB	CS	PS
15 to 19 years	7	7	100.0%	12	12	100.0%	27	26	96.3%	39	37	94.9%	24	23	95.8%
20 to 24 years	54	52	96.3%	238	224	94.1%	205	194	94.6%	214	202	94.4%	196	191	97.4%
25 to 29 years	92	87	94.6%	456	436	95.6%	616	572	92.9%	454	428	94.3%	463	433	93.5%
30 to 34 years	157	147	93.6%	561	543	96.8%	765	707	92.4%	617	578	93.7%	747	696	93.2%
35 to 39 years	176	156	88.6%	687	650	94.6%	933	871	93.4%	965	910	94.3%	821	786	95.7%
40 to 44 years	238	219	92.0%	610	585	95.9%	841	791	94.1%	955	890	93.2%	1,072	1,010	94.2%
45 to 49 years	187	171	91.4%	615	580	94.3%	663	607	91.6%	856	813	95.0%	981	904	92.2%

Source: 1973 TTPI Census, Table T25 & T26; 1980 TTPI Census, Table T19; 1994 & 2000 FSM Censuses, Table P15

Data on children ever born and children surviving classified by age of mother can be used to determine probabilities of surviving to specific ages. These probabilities of surviving can then be fit to a model life table, which allows us to calculate the approximate infant mortality rates and the corresponding life expectancy at birth for different time periods (United Nations, 1983; Feeny, 1976, 1980; Sullivan 1972; Coale, A., and Trussel Jl, 1974, 1977). The resulting mortality indices for recent Censuses are summarized in Tables 5.3. The results show no significant decline in mortality rates over the 20 years before the Census. Data for women aged 15 to 19 years were ignored because the numbers were small and child mortality for young mothers is often selectively high. The most accurate information applied to women aged 20 to 34 years. These calculations could be done separately for males and females; however, in order to have an adequate numbers of cases the data here are presented for both sexes.

The estimates provide mortality indices for years prior to the census (see the reference dates in Table 5.3). The average of the three age groups 20 to 24, 25 to 29, and 30 to 34 give the most accurate data and apply to an average reference date of about 4 years before each census.

Table 5.3: Indirect Estimates of Early Age Mortality CEB/CS, Kosrae State: 1973 to 2000

Age Groups	Children Ever Born	Children Surviving	Proportion Dead	Age (x)	Prob. of Dying by Age (x)	Reference Date	Infant Mortality Rate	Child Mortality Rate	Life Expectancy
1973 Census									
20 to 25 years	0.931	0.897	0.037	2	0.041	Nov. 1971	0.037	0.010	67.7
25 to 30 years	3.172	3.000	0.054	3	0.058	Jul. 1970	0.048	0.016	65.1
30 to 35 years	5.065	4.742	0.064	5	0.068	Nov. 1968	0.051	0.018	64.3
1980 Census									
20 to 25 years	0.905	0.852	0.059	2	0.066	Jan. 1977	0.057	0.021	63.0
25 to 30 years	2.235	2.137	0.044	3	0.045	Jan. 1974	0.038	0.011	67.6
30 to 35 years	4.250	4.114	0.032	5	0.032	Aug. 1974	0.027	0.006	70.5
1986 Census									
20 to 25 years	0.748	0.708	0.053	2	0.060	Sep. 1984	0.052	0.018	64.0
25 to 30 years	2.494	2.316	0.071	3	0.076	Jun. 1983	0.061	0.023	62.1
30 to 35 years	3.787	3.500	0.076	5	0.081	Oct. 1981	0.060	0.022	62.3
1994 Census									
20 to 25 years	0.820	0.774	0.056	2	0.060	Aug. 1992	0.052	0.018	64.0
25 to 30 years	1.831	1.726	0.057	3	0.058	Sep. 1990	0.042	0.016	65.2
30 to 35 years	3.025	2.833	0.063	5	0.064	Apr. 1989	0.049	0.016	64.9
2000 Census									
20 to 25 years	0.607	0.591	0.026	2	0.029	May 1998	0.027	0.006	70.4
25 to 30 years	1.780	1.672	0.061	3	0.064	Nov. 1996	0.052	0.018	64.2
30 to 35 years	2.798	2.607	0.068	5	0.071	Dec. 1994	0.054	0.019	63.7

Source: 1973 & 1980 TTPI Censuses and 1994 & 2000 FSM Censuses, unpublished data

Mortality indicators showed no improvement during both census intervals. The ratio of infant deaths to births in a year remained around 45 to 50 per 1,000 during the early 70's and late 80's. Child mortality rate (the mortality between the ages of 1 and 5 varied between the ages of 13 to 21. Finally, the average life expectancy at birth remained about 65 throughout the 70's and 80's. Furthermore, the degree of improvement in longevity for 1969 and 1976 was similar to 1983 and 1990 census periods.

Table 5.4: Summary Indicators from Indirect Estimation of Early Age Mortality, Kosrae State: 1996 to 2000

Reference date	Infant Mortality Rate (per '000)	Child Mortality Rate (per '000)	Life Expectancy
1996	44	14	66.1
1990	49	17	64.7
1983	58	21	62.8
1976	41	13	67.0
1969	45	15	65.7

Source: Preceding Table 5.3

Note: These rates are calculated using the Coale-Demeny life table model West 20.

The trend observed in infant mortality and life expectancy at birth could have also been slightly distorted by the quality of the mortality data in earlier censuses. As the case in many developing countries, the quality of data collection is improving over time (better educated enumerators and respondent, better computer facilities, etc.). In this respect, the higher life expectancy and lower infant mortality rate observed in 1976 could be partly due to the suspected under reporting of mortality data in 1980 Census.

A comparison of mortality rates for Kosrae State as well as the FSM to other neighboring Pacific Islands is summarized in Table 5.5. Kosrae infant mortality rate of 44 was significantly higher than the average of 33. This rate reported (44) in Kosrae was lower than the rates in Kiribati and the Marshall Islands (65 and 63). The high level of infant mortality rate in Kosrae is a major concern and one that policy makers, particularly in the health sector, should prioritize.

Table 5.5: Mortality Data from Other Pacific Island Nations, Various Years, Kosrae State: 1994 and 2000

Country	Infant Mortality (per '000)	Life Expectancy
Kosrae from 2000 FSM Census data	44(1996)	66(1996)
FSM from 2000 Census data	40(1996)	67(1996)
Kosrae from 1994 FSM Census data	49 (1990)	65 (1990)
FSM from 1994 Census data	46 (1990)	65 (1990)
FSM according to SPC data	52 (1989)	64 (1989)
Guam	9 (1991)	74 (1992)
Kiribati	65 (1990)	60 (1990)
Marshall Islands	63 (1988)	61 (1988)
Nauru	26 (1992)	56 (1981)
CNMI	9 (1991)	68 (1981)
Palau	25 (1990)	67 (1990)

Source: South Pacific Commission, 1995, "Pacific Island Populations."

Finally, for the purpose of generating life tables for Kosrae, we used life expectancy at birth, computed separately from males and female's survivorship data of 1994 and 2000 FSM Censuses (see Appendix A, Table B03A). The male and female life expectancy at birth for the period around 2000 was estimated at 67.7 and 64.3 years, respectively. Using a Coale and Demeny model life table for West pattern, we generated a life table for Kosrae that best matched the estimated life expectancies at birth. The result is presented in Table 5.6. The life table could serve useful purposes both within the demographic community and also in the world at large. The life table provides estimates of life expectancies at the various ages and survival ratios for each age group that could be used in population projections, constructing nuptiality tables, constructing actuarial tables, etc. It is, however, important to note that the life table was based on level of childhood mortality and the resulting level and pattern of adult mortality may not be accurate, and therefore should be used with caution.

Table 5.6 Life Table as Implied by Coale & Demeny Model Life Table for the West Pattern of Females and Males, Kosrae State: 1994 and 2000

	1994 Census									2000 Census								
Age	M(x,n)	Q(x,n)	I(x)	D(x,n)	L(x,n)	S(x,n)	T(x)	E(x)	A(x,n)	M(x,n)	Q(x,n)	I(x)	D(x,n)	L(x,n)	S(x,n)	T(x)	E(x)	A(x,n)
Females																		
0	0.05853	0.05592	100000	5592	95544	0.93828 /A/	4290000	62.9	0.203	0.05567	0.05332	100000	5332	95787	0.93860 /A/	6433000	64.3	0.210
1	0.00429	0.01698	94408	1603	373597	0.98564 /B/	6194455	65.6	1.485	0.00539	0.02126	94668	2012	373514	0.98345 /B/	6337213	66.9	1.437
5	0.00140	0.00696	92804	646	462406	0.99383	5820858	62.7	2.500	0.00151	0.00752	92655	697	461535	0.99330	5963699	64.4	2.500
10	0.00108	0.00537	92158	495	459553	0.99310	5358452	58.1	2.500	0.00118	0.00587	91959	540	458444	0.99288	5502163	59.8	2.500
15	0.00182	0.00909	91663	833	456381	0.98893	4898899	53.4	2.678	0.00178	0.00888	91419	812	455182	0.98954	5043719	55.2	2.645
20	0.00258	0.01281	90830	1163	451330	0.98682	4442518	48.9	2.575	0.00241	0.01196	90607	1084	450422	0.98697	4588537	50.6	2.590
25	0.00268	0.01333	89667	1195	445380	0.98593	3991188	44.5	2.529	0.00282	0.01400	89523	1253	444554	0.98491	4138116	46.2	2.559
30	0.00304	0.01507	88472	1333	439112	0.98328	3545808	40.0	2.566	0.00328	0.01628	88270	1437	437844	0.98224	3693562	41.8	2.562
35	0.00379	0.01879	87138	1637	431769	0.97812	3106695	35.6	2.604	0.00393	0.01944	86832	1688	430066	0.97846	3255717	37.5	2.573
40	0.00518	0.02561	85501	2190	422323	0.96912	2674926	31.2	2.633	0.00486	0.02400	85144	2043	420802	0.97257	2825652	33.2	2.592
45	0.00755	0.03711	83312	3092	409283	0.95460	2252603	27.0	2.647	0.00641	0.03156	83101	2622	409258	0.96246	2404850	28.9	2.618
50	0.01131	0.05510	80220	4420	390703	0.93219	1843320	22.9	2.648	0.00910	0.04454	80479	3585	393896	0.94685	1995592	24.8	2.630
55	0.01720	0.08267	75800	6266	364211	0.89841	1452617	19.1	2.640	0.01307	0.06340	76894	4875	372961	0.92156	1601696	20.8	2.639
60	0.02629	0.12372	69534	8603	327211	0.84906	1088407	15.6	2.622	0.02024	0.09659	72019	6956	343706	0.87990	1228734	17.1	2.644
65	0.04019	0.18326	60931	11166	277823	0.77676	761195	12.4	2.597	0.03196	0.14855	65063	9665	302427	0.81327	885028	13.6	2.632
70	0.06261	0.27152	49765	13512	215801	0.67324	483372	9.7	2.556	0.05249	0.23306	55398	12911	245955	0.71255	582601	10.5	2.596
75	0.09834	0.39408	36253	14287	145285	0.45703 /C/	267572	7.3	2.482	0.08578	0.35385	42487	15034	175254	0.47941 /C/	336645	7.9	2.527
80+	0.17963	…	21966	21966	122287	…	122287	5.5	5.567	0.17010	…	27453	27453	161391	…	161391	5.9	5.879
Males																		
0	0.04527	0.04365	100000	4365	96425	0.95070 /A/	6680000	66.8	0.181	0.03580	0.03473	100000	3473	97021	0.96275 /A/	6769999	67.7	0.142
1	0.00375	0.01485	95635	1420	378923	0.98821 /B/	6583575	68.8	1.453	0.00186	0.00742	96527	716	384351	0.99322 /B/	6672977	69.1	1.548
5	0.00113	0.00564	94215	532	469745	0.99497	6204652	65.8	2.500	0.00079	0.00395	95811	378	478107	0.99642	6288626	65.6	2.500
10	0.00088	0.00441	93683	413	467383	0.99455	5734906	61.2	2.500	0.00064	0.00321	95432	307	476395	0.99569	5810519	60.9	2.500
15	0.00139	0.00693	93270	646	464836	0.99176	5267524	56.4	2.657	0.00118	0.00587	95126	558	474340	0.99286	5334124	56.1	2.693
20	0.00191	0.00949	92624	879	461006	0.98960	4802688	51.8	2.597	0.00165	0.00820	94567	775	470952	0.99168	4859784	51.4	2.569
25	0.00226	0.01123	91744	1030	456212	0.98784	4341682	47.3	2.564	0.00167	0.00830	93792	779	467033	0.99125	4388831	46.8	2.525
30	0.00265	0.01318	90714	1195	450665	0.98548	3885470	42.8	2.570	0.00189	0.00939	93013	873	462948	0.98946	3921798	42.2	2.574
35	0.00324	0.01607	89519	1439	444119	0.98192	3434806	38.3	2.586	0.00242	0.01204	92140	1109	458068	0.98551	3458850	37.5	2.626
40	0.00413	0.02046	88080	1802	436088	0.97614	2990687	33.9	2.607	0.00354	0.01754	91031	1597	451431	0.97786	3000782	33.0	2.667
45	0.00566	0.02790	86278	2408	425684	0.96651	2554598	29.6	2.630	0.00560	0.02765	89434	2473	441434	0.96504	2549352	28.5	2.680
50	0.00816	0.04000	83870	3355	411428	0.95180	2128915	25.3	2.638	0.00890	0.04358	86961	3790	426000	0.94461	2107918	24.2	2.677
55	0.01191	0.05795	80515	4666	391597	0.92797	171487	21.3	2.647	0.01430	0.06921	83171	5756	402406	0.91348	1681917	20.2	2.663
60	0.01859	0.08908	75850	6757	363390	0.88804	1325890	17.4	2.653	0.02248	0.10674	77415	8263	367591	0.86746	1279511	16.5	2.642
65	0.02992	0.13975	69093	9655	322704	0.82291	962499	13.9	2.643	0.03540	0.16324	69152	11288	318871	0.79817	911921	13.2	2.618
70	0.04978	0.22240	59437	13219	265557	0.72360	639795	10.7	2.607	0.05644	0.24825	57864	14365	254514	0.69776	593050	10.2	2.577
75	0.08235	0.34236	46219	13823	192158	0.48654 /C/	374238	8.0	2.539	0.09013	0.36797	43499	16006	177591	0.47541 /C/	338535	7.8	2.507
80+	0.16693	…	30395	30395	182080	…	182080	5.9	5.990	0.17082	…	27493	27493	160945	…	160945	5.9	5.854

Source: Implied by childhood survivorship data from 1994 & 2000 FSM Censuses, unpublished data.

Note: /A/ VALUE GIVEN IS FOR SURVIVORSHIP OF 5 COHORTS OF BIRTH TO AGE GROUP 0-4 = L(0,5)/500000
/B/ VALUE GIVEN IS FOR S(0,5)=L(5,5)/L(0,5)
/C/ VALUE GIVEN IS S(75+,5)=T(80)/T(75)
M(x,n) = Age specific central death rate
Q(x,n) = Probability of dying between exact ages x and x+n (age-specific mortality rate)
L(x) = Number of survivors at age x.
D(x,n) = Number of deaths occurring between ages x and x+n
L(x,n) = Number of person-years lived between ages x and x+n
T(x) = Number of persons-years live after age x.
E(x) = Life expectancy at age x.
A(x,n) = Average person-years lived by those who die between ages x and x+n

Conclusion

Census information collected from the 2000 FSM Census suggests that Kosrae State life expectancy increased by less than 2 years in 1983 and 1990. The results for 1973 and 1980 Censuses indicated even higher life expectancy than the recent Census. The result for the earlier Census, however, was based on fewer cases, whereby omission of one or two cases could distort the overall mortality estimate. Direct estimation of mortality is not possible without an accurate and complete vital registration system. The state of Kosrae must make greater efforts to improve the coverage of the vital registration program.

The level of mortality was second highest in FSM (that is, next to Chuuk). It has also been indicated that Kosrae mortality level was still among the highest compared to the neighboring Pacific Island nations (both in terms of life expectancy and infant mortality) and the decline in infant mortality rate was not satisfactory. Given the result of the 2000 Census alone, the high level of Infant mortality rate should be a real worry for Kosrae state policy makers, particularly in the Health sector.

CHAPTER 6
MIGRATION

Introduction

In previous chapters we discussed several demographic topics including population structure, fertility, and mortality. From these discussions, it is very clear that migration plays an important role in the population dynamics of the Kosrae. Migration is one of the main determinants of population size and growth (the others are fertility and mortality). Some people migrate for employment, others for education, vacationing, visiting, and so forth.

Migration involves movement from one place to another. In the case of Kosrae, three types of migration are present; internal migration (within Kosrae state), interstate migration (between Kosrae and other FSM states), and international migration (between Kosrae and outside Kosrae—including the other FSM states). A person who migrates is referred to as an immigrant or in-migrant with respect to the area of destination, and an emigrant or out-migrant with respect to the place of origin (in each case the former term is used for international migration and the latter for internal migration). Censuses, as we shall see, are not the most reliable sources for measuring international migration. Data from other sources will be used in this report to provide at least some insight into emigration from Kosrae. On the other hand, the census is a reliable source for measuring internal and interstate migration.

Migration has emerged as an extremely important factor shaping the demography of the Pacific (Connell, 1990). This is true for Kosrae, although the levels and patterns of migration differ in many respects from other parts of the Pacific.

Because the Census asks different questions about migration, it actually defines migration in different ways for different purposes. This is an important point for census data users to understand because it means that different migration figures presented in the different tables may not be strictly comparable with each other. For example, even though data on birthplace and residence 5 years ago provide a basis for measuring migration, the measures so obtained are defined differently, serve different purposes, and are not comparable. For the same reason, unlike with fertility or mortality, it is not easy to make comparisons of levels of internal migration between different countries.

Data Description

Birthplace
The 1994 and 2000 Censuses asked everyone for details of place of birth and recorded island/village, municipality, and FSM state if a person was born in the FSM. When a person's birthplace was outside FSM, the name of the foreign country was recorded. This was obtained from questionnaire item P8.

Citizenship and Legal Residence
Details of citizenship were obtained for all persons in the FSM. The question requested the municipality and state of legal residence (place where a person is a registered voter) for FSM citizens. For non-FSM citizens, the country of citizenship was recorded.

Continuous Residence
Continuous residence was obtained from questionnaire item P11a and P11b asked of all persons residing in Kosrae. The question requested respondents to provide the month and year they started living continuously at the present place of residence. If respondents had not been living continuously in the present residence since birth, they were requested to provide the name of the municipality, FSM State, or foreign country in which they previously resided.

Residence in 1995
All individuals who responded that they lived in a different municipality or overseas on April 1, 1995 (five years prior to the census) were requested to give the name of the municipality and FSM State, or foreign country of residence.

Limitations and Comparability. Due to changes in the boundaries of foreign countries over the past decades, some persons may have reported their place of birth in terms of boundaries that existed at the time of their birth but have since changed.

Not all migratory moves in the five years before the census were covered. For example, some persons may have resided in the same place in the 1995 and 2000 but moved in the interim. This migration was not taken into account. The migratory

information that was collected include, where persons moved more than once in the five years before the census, only the place of residence five years before and the current place of residence were recorded.

Analysis of Migration Data

The data from the 2000 Census used to determine the migration pattern in Kosrae include place of birth, citizenship, continuous residence, and residence in 1995. These data were compared with the 1994 and 1973 Census data (if available) to analyze the changes overtime.

Birthplace

Birthplace provides useful data on lifetime migration and mobility patterns, covering an indefinite time interval, determined by people's ages and the timing and direction of movement. Table 6.1 compares the birthplace of Kosrae residents in 1986, 1994 and 2000 Census periods.

With few exceptions the data show that the overseas-born immigrant population to Kosrae was male dominated, especially from Asia. These differences in sexes could have important implications for future composition of Kosrae population, particularly if the international migration were to increase. The figures suggest that immigration, particularly from Asia, increased rapidly between 1986 and 2000. The Kosrae-born population was about 637 persons from 1994 and grew slowly to 295 persons in 2000, whereas the Asian-born population decline from 302 persons in 1994 and further decline to 40 persons in the 2000 Census.

Table 6.1: Birthplace of Kosrae Residents by Sex: 1986 to 2000

Birthplace	1986			Males per	1994			Males per	2000			Males per
	Total	Males	Females	100 females	Total	Males	Females	100 females	Total	Males	Females	100 females
Total	6,607	3,191	3,136	101.8	7,317	3,806	3,511	108.4	7,686	3,859	3,827	100.8
In FSM	6,276	3,155	3,121	101.1	6,818	3,410	3,408	100.1	7,282	3,649	3,633	100.4
Kosrae	5,996	3,006	2,990	100.5	6,633	3,318	3,315	100.1	6,910	3,449	3,461	99.7
Lelu	2,147	1,079	1,068	101.0	2,310	1,148	1,162	98.8	3,648	1,810	1,838	98.5
Malem	1,206	601	605	99.3	1,323	676	647	104.5	743	369	374	98.7
Utwe	1,009	497	512	97.1	1,044	504	540	93.3	460	217	243	89.3
Tafunsak	1,634	829	805	103.0	1,956	990	966	102.5	2,059	1,053	1,006	104.7
Yap	2	1	1	100.0	6	3	3	100.0	14	6	8	75.0
Chuuk	23	10	13	76.9	20	7	13	53.8	62	41	21	195.2
Pohnpei	255	138	117	117.9	159	82	77	106.5	296	153	143	107.0
Outside FSM	331	185	146	126.7	499	396	103	384.5	404	210	194	108.2
USA	196	87	109	79.8	78	50	28	178.6	159	82	77	106.5
Asia	129	94	35	268.6	320	302	18	1677.8	53	37	16	231.3
Elsewhere	6	4	2	200.0	101	44	57	77.2	192	91	101	90.1

Source: 1986 Kosrae Census; 1994 & 2000 FSM Censuses, Table P17

Note: 1. USA includes Guam and CNMI

Table 6.2 shows data on place of usual residence by country of birth in 1994 and 2000 to reveal some details of international migration. Nearly 91 percent of the Kosrae residents in 1994 were born in Kosrae whereas in 2000 Kosrae born were about 90 percent. The immigrant population accounted for a little over 9 percent of the total population. The immigrant population was comprised of foreigners and Kosrae citizens born overseas who had returned to Kosrae. The highest percentage of the immigrant populations came from Asia (at more than 4 percent of Kosrae's total population) which was comprised mostly of China-born and Philippine-born persons, likely to be fishermen in the fishing industry or hired labor for construction businesses.

By Municipalities, the proportions of Asian-born persons were highest in Tafunsak with 11.5 persons in 1994. On the other hand, Utwe lacks Asian-born persons. In 2000, the proportions of the population born elsewhere were highest in Lelu (72) persons and lowest in Utwe (15) persons.

The proportion of the Asian resident had declined slightly between 1994 and 2000. Tafunsak had the highest proportion of Asian-born residents at 12 percent in 1994 and declined to less than 1 percent in 2000.

Table 6.2: Birthplace of Kosrae Residents: 1994 and 2000

Place of birth	1994 Place of residence					2000 Place of residence				
	Total	Lelu	Malem	Utwe	Tafunsak	Total	Lelu	Malem	Utwe	Tafunsak
Number	7,317	2,404	1,430	1,056	2,427	7,686	2,591	1,571	1,067	2,457
FSM born	6,818	2,305	1,387	1,042	2,084	7,282	2,416	1,475	1,023	2,368
Kosrae born	6,633	2,263	1,340	1,022	2,008	6,910	2,310	1,389	982	2,229
Other FSM state born	185	42	47	20	76	372	106	86	41	139
Non-FSM born	499	99	43	14	343	404	175	96	44	89
USA	78	28	11	8	31	159	71	35	28	25
Asia	320	38	4	-	278	53	31	7	1	14
Elsewhere	101	33	28	6	34	192	73	54	15	50
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
FSM born	93.2	95.9	97.0	98.7	85.9	94.7	93.2	93.9	95.9	96.4
Kosrae born	90.7	94.1	93.7	96.8	82.7	89.9	89.2	88.4	92.0	90.7
Other FSM state born	2.5	1.7	3.3	1.9	3.1	4.8	4.1	5.5	3.8	5.7
Non-FSM born	6.8	4.1	3.0	1.3	14.1	5.3	6.8	6.1	4.1	3.6
USA	1.1	1.2	0.8	0.8	1.3	2.1	2.7	2.2	2.6	1.0
Asia	4.4	1.6	0.3	-	11.5	0.7	1.2	0.4	0.1	0.6
Elsewhere	1.4	1.4	2.0	0.6	1.4	2.5	2.8	3.4	1.4	2.0

Source: 1994 & 2000 FSM Census, Table P17
Note: 1. USA includes Guam and CNMI

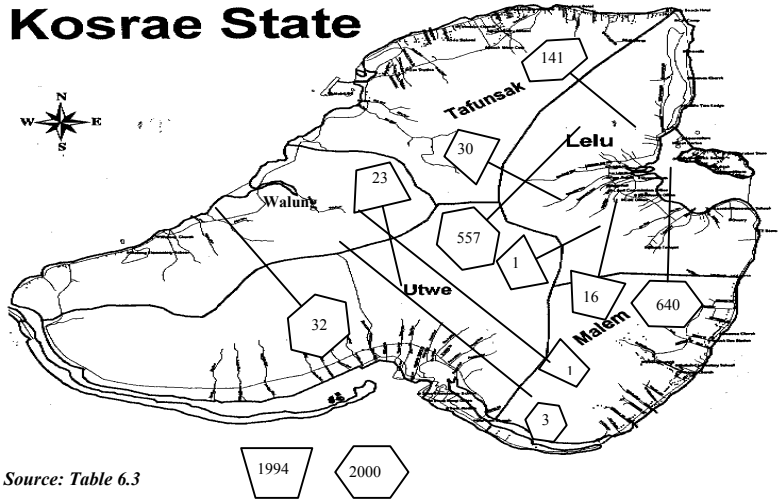
Table 6.3 presents data on internal lifetime migration within the four municipalities of Kosrae State. Of the 6,633 persons born in 1994, 6,310 resided in their municipality of birth. The balance was the 323 who now resided in different municipality to the one in which they were born, the so-called *internal lifetime migrant*s. The 2000 data shows that of 6,910 persons born in Kosrae, 5,110 resided in the municipality of birth. That is 2,205 persons in Lelu, 636 persons in Malem, 321 persons in Utwe and 1,948 persons in Tafunsak. The differences of 1,800 persons (interstate-migrants) were those who resided in different municipalities to the one in which they were born.

Table 6.3: Municipality and State of Birth of Kosrae Residence, Kosrae State: 1994 and 2000

Municipality and state of birth	1994 place of usual residence					2000 place of usual residence				
	Total	Lelu	Malem	Utwe	Tafunsak	Total	Lelu	Malem	Utwe	Tafunsak
Total	6,818	2,305	1,387	1,042	2,084	7,282	2,416	1,475	1,023	2,368
Kosrae born	6,633	2,263	1,340	1,022	2,008	6,910	2,310	1,389	982	2,229
Lelu	2,310	2,189	45	26	50	3,648	2,205	675	587	181
Malem	1,323	29	1,260	13	21	743	35	636	39	33
Utwe	1,044	25	13	965	41	460	30	42	321	67
Tafunsak	1,956	20	22	18	1,896	2,059	40	36	35	1,948
Outside Kosrae	185	42	47	20	76	372	106	86	41	139
Yap	6	4	1	-	1	14	1	2	1	10
Chuuk	20	6	7	1	6	62	8	11	1	42
Pohnpei	159	32	39	19	69	296	97	73	39	87

Source: 1994 & 2000 FSM Census, Table P17

Figure 6.1. Internal Lifetime Net-migration Flows, Kosrae State: 1994 and 2000



Source: Table 6.3

The effects of lifetime migration on the composition of the state populations can be seen in table 6.4. Of the 1,808 lifetime migrants in 2000, 285 migrated to Tafunsak, to Utwe as described in the table as in-migrants (also includes out-migrants from their states of birth). All other municipalities also received lifetime migrants, 105 to Lelu, 757 to Malem and 661 to Utwe.

Lifetime interstate migration differed by sex. The 2000 Census data showed that female movers still outnumbered their male counterparts, with 1004 female lifetime migrants compared to 804 males. This is probably due to the fact that females tend to move to their husband's home when they marry. However, the net effects of migration by sex were not evenly distributed among the municipalities. Utwe lost more males than females as a result of lifetime migration, while Lelu lost more females. Malem and Tafunsak, the main destination of internal migrants, gained overall, 14 males and 3 females for Malem and 20 males and 30 females for Tafunsak.

Table 6.4: Internal Lifetime Migration by Municipality, Kosrae State: 1994 and 2000

Municipality	1994 Census					2000 Census				
	Non-Movers	In-Migrants	Out-Migrants	Net-Migrants	Lifetime migration rate (Percent)	Non-Movers	In-Migrants	Out-Migrants	Net-Migrants	Lifetime migration rate (Percent)
Total										
Lelu	2,189	74	121	-47	-2.1	2,215	105	1,451	-1346	-60.8
Malem	1,260	80	63	17	1.3	636	757	107	650	102.2
Utwe	965	57	79	-22	-2.3	321	661	139	522	162.6
Tafunsak	1,896	112	60	52	2.7	1,948	285	111	174	8.9
Males										
Lelu	1,111	15	37	-22	-2.0	1,122	29	699	-670	-59.7
Malem	666	24	10	14	2.1	346	358	23	335	96.8
Utwe	480	12	24	-12	-2.5	173	314	44	270	156.1
Tafunsak	974	36	16	20	2.1	1,015	103	38	65	6.4
Females										
Lelu	1,078	59	84	-25	-2.3	1,093	76	752	-676	-61.8
Malem	594	56	53	3	0.5	290	399	84	315	108.6
Utwe	485	45	55	-10	-2.1	148	347	95	252	170.3
Tafunsak	922	76	44	32	3.5	933	182	73	109	11.7

Source: 1994 & 2000 FSM Census, Table P17 & unpublished

The last column of each year's data in table 6.4 describes net-migration as a rate, dividing the net-migrants by the total population. However, since the timing of the migration is not determined, the rate expressed does not relate to any specific period, but enables broad comparison between municipalities. General migration patterns shifted slightly between 1994 and 2000.

In 2000, the effect of internal lifetime migration was greatest in Malem and Utwe, though in opposite ways. Malem had a lifetime migrants of 757 persons while Utwe had a lifetime migrants of 661.

Lifetime interstate migration differed by sex. The total number of female movers outnumbered their male counterparts, with female movers being highest in all four municipalities. Likewise, the net effects of migration by sex were not evenly distributed among the municipalities.

Citizenship and Legal Residence

A similar migration pattern was found when place of birth was used to estimate migration flow was citizenship. Most residents in Kosrae were FSM citizens (see Table 6.5). The 2000 Census data showed that the majority of non-Kosraean citizens were Asians, who were accounted for about 40 percent of the non-Kosraean citizens. The highest proportion of non-citizen population (U.S.A, Asia, Elsewhere) resided in Tafunsak, accounting for a little over 13 percent of the population in the municipality of Tafunsak.

Table 6.5: Usual Residence by Citizenship: 1994 and 2000

Place of Residence	1994								2000							
			FSM					Else-where			FSM					Else-where
	Total	Percent	Total	Kosrae	Other FSM	USA	Asia		Total	Percent	Total	Kosrae	Other FSM	USA	Asia	
Total	7,317	100.0	94.4	93.6	0.8	0.7	4.3	0.5	7,686	100.0	98.6	97.1	1.5	0.5	0.5	0.5
Lelu	2,404	100.0	97.3	96.7	0.6	1.0	1.2	0.6	2,591	100.0	97.3	95.9	1.4	0.9	1.0	0.8
Malem	1,430	100.0	99.2	98.5	0.7	0.3	0.2	0.3	1,571	100.0	99.1	98.8	0.3	0.3	0.1	0.6
Utwe	1,056	100.0	99.7	99.4	0.3	0.2	-	0.1	1,067	100.0	99.3	99.0	0.4	0.5	0.1	0.1
Tafunsak	2,427	100.0	86.4	85.2	1.2	1.0	11.8	0.7	2,457	100.0	99.3	96.4	3.0	0.2	0.3	0.1

Source: 1994 FSM Census, Table P18; 2000 FSM Census, Table P2-6

Table 6.6 presents data on usual resident by citizenship. Legal residence is defined as the place in which a person casts his or her votes during elections. The data showed that in both years most residents in the Kosrae were citizens of the FSM and legal residence of Kosrae State (see Table 6.6). For example, in 2000 about 94 percent of Malem populations were legal residence of Malem. There were 14 legal resident of Lelu, 11 legal resident of Malem and 12 legal resident of Tafunsak residing in Utwe.

Table 6.6: State/Municipality of Legal Residence by Municipality of Usual Residence, Kosrae State: 1994 and 2000

	1994					2000				
	Total	Lelu	Malem	Utwe	Tafunsak	Total	Lelu	Malem	Utwe	Tafunsak
Number	6,907	2,338	1,418	1,053	2,098	7,541	2,500	1,553	1,060	2,428
Yap	8	2	2	-	4	9	-	1	1	7
Chuuk	5	2	3	-	-	40	1	1	1	37
Pohnpei	43	10	5	3	25	47	23	3	2	19
Kosrae	6,851	2,324	1,408	1,050	2,069	7,445	2,476	1,548	1,056	2,365
Lelu	2,304	2,256	27	8	13	2,482	2,405	39	14	24
Malem	1,366	17	1,342	-	7	1,500	21	1,466	11	2
Utwe	1,101	34	23	1,039	5	1,100	29	41	1,019	11
Tafunsak	2,080	17	16	3	2,044	2,363	21	2	12	2,328
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Yap	0.1	0.1	0.1	-	0.2	0.1	-	0.1	0.1	0.3
Chuuk	0.1	0.1	0.2	-	-	0.5	-	0.1	0.1	1.5
Pohnpei	0.6	0.4	0.4	0.3	1.2	0.6	0.9	0.2	0.2	0.8
Kosrae	99.2	99.4	99.3	99.7	98.6	98.7	99.0	99.7	99.6	97.4
Lelu	33.4	96.5	1.9	0.8	0.6	32.9	96.2	2.5	1.3	1.0
Malem	19.8	0.7	94.6	-	0.3	19.9	0.8	94.4	1.0	0.1
Utwe	15.9	1.5	1.6	98.7	0.2	14.6	1.2	2.6	96.1	0.5
Tafunsak	30.1	0.7	1.1	0.3	97.4	31.3	0.8	0.1	1.1	95.9

Source: 1994 & 2000 FSM Census, Table P18

Continuous Residence

Data on continuous residence were also used to determine migration levels and patterns. Table 6.7 gives the distribution of the non-migrant population. In 1994, about 82 percent of the Kosrae population responded that they had been living in their present municipality of residence their entire life, or were non-movers while more than 77 percent responded that they were non-movers in 2000. On the other hand, about 16 percent responded they had changed place of residence, or were movers in 1994 compared to an increase of about 23 percent in 2000.

As in 1994 and 2000, data showed different patterns and level of migration in the municipalities. Persons in Utwe, Lelu and Tafunsak were likely to be non-movers with the level of migration were reported equally at more than 79 percent. For Malem, about 69 percent were reported as non-movers. These differences were partly due to the different immigration and in-migration levels occurring in each municipality.

Table 6.7: Distribution of Non-movers and Previous Residence by Municipality, Kosrae State: 1994 and 2000

Length of continuous residence / Previous residence	1994 Census					2000 Census				
	Municipality					Municipality				
	Total	Lelu	Malem	Utwe	Tafunsak	Total	Lelu	Malem	Utwe	Tafunsak
Total	7,317	2,404	1,430	1,056	2,427	7,686	2,591	1,571	1,067	2,457
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Lived in municipality since birth	84.3	88.3	86.4	90.2	76.5	77.2	78.8	69.4	78.9	79.9
Previous residence elsewhere	15.7	11.7	13.6	9.8	23.5	22.8	21.2	30.6	21.1	20.1

Source: 1994 & 2000 FSM Censuses, Table P19

Table 6.7 present data on "previous residence elsewhere" (the movers), and further illustrates the duration of their residence and their previous place of residence. In 2000, more than half of the non-movers continuously resided in their municipality of residence for 5 years or more. The 1994 data show that a little over 32 percent had continuously resided in their municipality of residence for less than 1 year. This shows that of the total number of movers, 481 (39 percent) previously resided in the municipality they were residing at the time of the census, 194 (17 percent) previously resided in the other FSM states. Of all movers, migrants who previously resided in Asia and elsewhere made up 26 percent and 16 percent, respectively. In looking at the 2000 data, of the total number of movers, 629 previously resided in the municipality that they currently resided during the Census period, 516 previously resided in the other FSM states. Movers resided in Asia and elsewhere made up 2 percent and 32 percent, respectively.

Table 6.8: Movers by Place of Residence, Kosrae State: 1994 and 2000

Duration of residence	1994 Census					2000 Census				
	Pervious residence					Pervious residence				
	Total	In this State	In other FSM state	In Asia	Elsewhere	Total	In this State	In other FSM state	In Asia	Elsewhere
Total	1,150	481	194	294	181	1,749	597	515	47	590
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 6 months	20.3	7.5	17.0	46.6	15.5	13.0	13.9	9.9	2.1	15.6
6 months to 1 year	11.9	5.4	3.6	33.0	3.9	7.4	6.7	5.4	12.8	9.5
1 to 2 years	5.9	6.2	6.7	1.0	12.2	8.8	6.4	8.0	21.3	11.0
2 to 5 years	8.8	11.2	7.7	3.1	12.7	19.7	13.2	23.7	36.2	21.5
5 years or more	53.0	69.6	64.9	16.3	55.8	51.1	59.8	53.0	27.7	42.4

Source: 1994 & 2000 FSM Census, Table P19

Note: Duration of residence refers to continuous residence at the municipality of usual residence.

Residence in 1995 (Five Years Prior to the Census)

More specific time-bound migration information was collected based on usual residence exactly five years before the Census. For many purposes, such as in estimating migration levels for population projections, this kind of information is very useful.

Table 6.9 presents data on Kosrae residents in the five years previous to 1994 and 2000 Censuses, necessarily excluding persons less than 5 years old. Interstate migrants increased from 830 (for the period 1989-1994) to 1,015 (for the period 1995-2000).

Table 6.9 could be interpreted in a similar way to Table 6.3, which dealt with lifetime migration. Thus of the 6,156 persons born in Kosrae, above 5 years of age, and enumerated in the 2000 Census, 150 or less than 2 percent resided in a different municipality in 1994. Since the period covered is shorter than for lifetime migrants, the number of migrants is reduced. Over 40 percent of interstate migrants in the 5 years before the census moved to Tafunsak.

Table 6.9: Residence 5 Years Ago by Usual Residence for Persons Aged 5 Years and Over, Kosrae State: 1994 and 2000

Residence 5 years ago	Place of Current Residence									
	1994 Census					2000 Census				
	Total	Lelu	Malem	Utwe	Tafunsak	Total	Lelu	Malem	Utwe	Tafunsak
Total	6,395	2,077	1,238	944	2,136	6,660	2,247	1,362	921	2,130
In FSM	6,007	2,029	1,220	939	1,819	6,381	2,146	1,275	883	2,077
Kosrae	5,916	2,005	1,201	934	1,776	6,156	2,074	1,227	854	2,001
Lelu	2,005	1,973	12	3	17	2,060	2,018	8	10	24
Malem	1,198	10	1,175	-	13	1,234	8	1,206	12	8
Utwe	961	16	3	929	13	860	17	9	824	10
Tafunsak	1,752	6	11	2	1,733	2,002	31	4	8	1,959
Yap	2	1	1	-	-	4	-	-	1	3
Chuuk	12	2	6	-	4	27	3	1	-	23
Pohnpei	77	21	12	5	39	194	69	47	28	50
Outside FSM	388	48	18	5	317	279	101	87	38	53
USA	62	25	9	4	24	178	52	71	29	26
Asia	289	9	2	-	278	28	14	1	7	6
Elsewhere	37	14	7	1	15	73	35	15	2	21

Source: 1994 FSM Census, Table P20; 2000 FSM Census, Table P2-8

Table 6.10 summarizes the migration pattern presented in Table 6.9 and shows its effects on state populations for the two Census periods. An advantage of specific 5-year migration is that it permits the calculation of an annual migration rate, which measures the impact that migration has on population growth. Between 1996 and 2000, Lelu Municipality gained 47 persons but lost 43 persons to yield net gains of 4 persons. Malem on the other hand, gained 38 persons but lost 28 to yield net gains of 10 persons. A positive annual migration rate of 1 per thousand of the population was found in all municipalities. In other words, 1 out of every thousand people migrated to all four municipalities from the other states annually.

Table 6.10: Internal Migration Rate by Municipality, Kosrae State: 1994 and 2000

Municipality	1994 Census, Rate for period 1989 to 1994					2000 Census, Rate for period 1996 to 2000				
	Non-Movers	In-Migrants	Out-Migrants	Net-Migrants	Migration Rate (Percent)	Non-Movers	In-Migrants	Out-Migrants	Net-Migrants	Migration Rate (Percent)
Total										
Lelu	1,973	31	32	-1	-0.1	2,018	47	43	4	0.2
Malem	1,175	22	23	-1	-0.1	1,206	38	28	10	0.8
Utwe	929	31	32	-1	-0.1	824	39	36	3	0.4
Tafunsak	1,733	19	19	-	-	1,959	44	43	1	0.1
Males										
Lelu	991	12	12	-	-	998	20	18	2	0.2
Malem	610	6	6	-	-	635	18	10	8	1.3
Utwe	444	12	12	-	-	401	16	13	3	0.7
Tafunsak	1,248	4	4	-	-	978	19	18	1	0.1
Females										
Lelu	982	19	20	-1	-0.1	1,020	27	25	2	0.2
Malem	565	16	17	-1	-0.2	571	20	18	2	0.4
Utwe	485	19	20	-1	-0.2	423	23	23	-	-
Tafunsak	867	15	15	-	-	981	25	25	-	-

Source: 1994 & 2000 FSM Censuses, Table P20 & unpublished

Note: Annual migration rate is defined as (logeP2/P1)/N, where P2 is the sum of non-movers and in-migrants, P1 is the sum of non-movers And out-migrants, and N is the number of years between the defined periods.

Table 6.11 presents the educational attainment of the internal migrants 5 years prior to 1994 and 2000 Censuses. In the former period (1989-1994), a total of 103 migrated internally compared to 168 persons for the latter period (1995-2000). More than 36 percent of the migrants graduated from high school in 1995-2000 periods, a decreased of 5 percent from the previous period. The corresponding percentages for males and females in 1994 were 32 and 45, respectively, showing that male migrants tended to be better educated than female migrants. However in 2000, the corresponding percentage for both males and females was 41 and 32 percent, indicating that both sexes were better educated than before.

Table 6.11: Educational Attainment of Internal Migrants by Sex, Kosrae State: 1989-1994 and 1994-2000

Educational Attainment	1989-1994, Number			1989-1994, Cumulative Percent			1995-2000, Number			1995-2000, Cumulative Percent		
	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females
Total	103	34	69	---	---	---	168	73	95	---	---	---
No education	1	-	1	100.0	100.0	100.0	3	1	2	100.0	100.0	100.0
Elementary	32	15	17	99.0	100.0	98.6	75	31	44	98.2	98.6	97.9
High School, no diploma	28	8	20	68.0	55.9	73.9	30	11	19	53.6	56.2	51.6
High School Graduate	38	9	29	40.8	32.4	44.9	55	25	30	35.7	41.1	31.6
College	4	2	2	3.9	5.9	2.9	5	5	-	3.0	6.8	-

Source: 1994 & 2000 FSM Censuses, unpublished

While employment is often considered as an important motivating factor for migration, table 6.12 illustrates that the majority of the internal migrants (71 persons) in 2000 were not in the labor force. Unemployment was also high among the migrants, particularly among the youngest working age group. On the other hand, for all migrants the unemployment rate was 16.7 percent, well below the national average of 58.6 percent. For the 15 to 29 age group, the unemployment rate rose to 29.2 percent. The unemployment rate would have been much higher if those who said they were not looking for work, but who claimed they were available to work, were included in the labor force.

Table 6.12: Labor Force Participation of Internal Migrant, Kosrae State: 1994 and 2000

Labor force characteristics	1989-1994					1995-2000				
	Total	15-29	30-44	45-59	60+	Total	15-29	30-44	45-59	60+
Persons 15+ years	88	56	20	8	4	131	71	40	12	8
In the labor force	39	21	13	5	-	60	24	26	8	2
Employed	33	16	12	5	-	50	17	23	8	2
Percent in LF	84.6	76.2	92.3	100.0	-	83.3	70.8	88.5	100.0	100.0
Unemployed	6	5	1	-	-	10	7	3	-	-
Percent in LF	15.4	23.8	7.7	-	-	16.7	29.2	11.5	-	-
Not in the labor force	49	35	7	3	4	71	47	14	4	6
Could have taken a job	24	20	3	1	-	24	17	5	1	1
Percent of not in LF	49.0	57.1	42.9	33.3	-	33.8	36.2	35.7	25.0	16.7
Not available for work	25	15	4	2	4	47	30	9	3	5
Percent of not in LF	51.0	42.9	57.1	66.7	100.0	66.2	63.8	64.3	75.0	83.3

Source: 1994 & 2000 FSM Census, Unpublished

Significant gender differences were observed. In the period 1989-1994, approximately 34 percent of female migrants were economically active compared to more than 67 percent of male migrants. In the period 1995-2000, the percentage of female and male migrants in the labor force increased to about 29 and 73 percent, respectively as shown in Table 6.13.

Among those in the labor force, females were more likely to be unemployed than males, however, the rate of unemployment between the years for both sexes were changed. The unemployment rates for female and male migrants were 14 percent and 17 percents, respectively, in 1994 and 22 percent and 14 percent respectively in 2000. Among those not in the labor force, about 64 percent of males and 67 percent of females were not available for work in 2000. These individuals included students and housewive's who accompanied the migrants, or students migrating by themselves.

Table 6.13: Labor Force (LF) Participation of Internal Migrants by Sex, Kosrae State: 1989-1994 and 1994-2000

Labor force characteristics	1989-1994					1995-2000				
	Total	15-29	30-44	45-59	60+	Total	15-29	30-44	45-59	60+
Males 15+ years	27	13	8	4	2	51	16	24	9	2
In the labor force	18	8	7	3	-	37	10	18	7	2
Employed	15	6	6	3	-	32	7	16	7	2
Percent in LF	83.3	75.0	85.7	100.0	-	86.5	70.0	88.9	100.0	100.0
Unemployed	3	2	1	-	-	5	3	2	-	-
Percent in LF	16.7	25.0	14.3	-	-	13.5	30.0	11.1	-	-
Not in the labor force	9	5	1	1	2	14	6	6	2	-
Could have taken a job	4	3	1	-	-	5	1	3	1	-
Percent of not in LF	44.4	60.0	100.0	-	-	35.7	16.7	50.0	50.0	-
Not available for work	5	2	-	1	2	9	5	3	1	-
Percent of not in LF	55.6	40.0	-	100.0	100.0	64.3	83.3	50.0	50.0	-
Females 15+ years	61	43	12	4	2	80	55	16	3	6
In the labor force	21	13	6	2	-	23	14	8	1	-
Employed	18	10	6	2	-	18	10	7	1	-
Percent in LF	85.7	76.9	100.0	100.0	-	78.3	71.4	87.5	100.0	-
Unemployed	3	3	-	-	-	5	4	1	-	-
Percent in LF	14.3	23.1	-	-	-	21.7	28.6	12.5	-	-
Not in the labor force	40	30	6	2	2	57	41	8	2	6
Could have taken a job	20	17	2	1	-	19	16	2	-	1
Percent of not in LF	50.0	56.7	33.3	50.0	-	33.3	39.0	25.0	-	16.7
Not available for work	20	13	4	1	2	38	25	6	2	5
Percent of not in LF	50.0	43.3	66.7	50.0	100.0	66.7	61.0	75.0	100.0	83.3

Source: 1994 & 2000 FSM Census, unpublished

Conclusion

For internal migration, the 1994 and 2000 data shows the direction of migration flows was principally towards Tafunsak. Tafunsak and Malem were the net receiving municipalities, gaining migrants from the other municipalities. Utwe and Lelu lost people.

For interstate migration, the number Kosraeans moving out to the other FSM states outnumbered those persons moving in from these states, resulting in a net out-migration. This is reflected in the annual interstate migration rate of Kosrae: -3.1 per thousand.

For international migration, Asians were the largest group among the non-Kosrae migrants, accounting for 4 percent. Over the 8 years before the census, the Asian-born group increased by 148 percent (an additional of 191 persons), while the Kosrae-born population increased by 11 percent (an additional of 637). Asian is also the dominating group among the non-Kosrae born immigrants in state. Similar to internal and interstate migration, the main destination of non-FSM immigrants in 1994 was Tafunsak. The 2000 data showed that Lelu was the main destination for non-FSM immigrants.

CHAPTER 7
RELIGION, ETHNICITY AND LANGUAGE

Introduction

In Kosrae religion-related organizations, like youth programs, play an important role in the community, making data on religion necessary for planning purposes. The data provided in this chapter show one major religious affiliation: Protestant. Protestants have several sects and Congregational was the largest group. The Protestant first came to Micronesia in 1852, beginning work on Pohnpei and Kosrae, and soon afterwards expanding to Chuuk. Although the mission sending organization was interdenominational, most of the missionaries represented the Congregational Church. The Roman Catholics arrived later, beginning their work in Yap in 1886 and Pohnpei, a year later. In the early 20th century, a German Liebenzell missionary began work in the area, eventually moving to Yap. From the 1960's on, other religions entered the area—SDA, Assembly of God, Baptist, Jehovah's Witnesses, and Bahai (Hezel, 1983).

Data on ethnicity are useful in planning policy. The largest foreign (non-local) ethnic group in Kosrae was the Asians, which include Filipinos and Chinese. The second largest non-local ethnic group was the category termed as white. This group encompassed persons from Europe, U.S., Australia, and New Zealand.

In the history of Kosrae, different second languages were taught in school depending on the administering country. During the Japanese Administration (from 1914 to 1945) Japanese was used as the common language in schools, offices, etc. And when the U.S took over at the end of the World War II, English became the main language for the government. At present, the medium of official communication at the government offices and even in the private sector is English.

Definitions

Religion
For census purposes, religion was defined as a religious or spiritual belief or preference, regardless of whether or not this belief was represented by an organized group. Information regarding religious affiliation for all persons in the 2000 Census was collected questionnaire item 7. The TTPI Census in 1973 and the 1994 and 2000 FSM Censuses included a question on religion and the data are compared in this chapter.

Ethnicity
Data on different ethnicities in Kosrae were collected in 2000 Census by questionnaire item 6. Ethnic identity of a person is traced through his or her tribal origin. Respondents had an option of reporting up to two ethnic groups that they belonged to. Some of the common ethnicities were Chuukese/Mortlockese, Yapese, Outer Island Yapese, Pohnpeian, or Kosraean.

Language
Data on language spoken and on language spoken at home came from answers to questionnaire items 15a and 15b. The questions were asked only of persons 5 years old and over. For those persons that spoke more than 3 languages, they were only to provide the three most common ones in question 15a while in question 15b they were to provide the language that they usually spoke at home.

Analysis of Data on Religion, Ethnicity, and Language

Religion

The first 3 tables in this chapter provide data on religion. Only three censuses (1973, 1994 and 2000) asked about religion, and the results are compared in Table 7.1. Although new religions were introduced after the 1973 Census, the majority of the population remained either Roman Catholic or Protestant.

The proportion of Roman Catholics increased slightly for each sex while the proportion Protestant decreased over the decades. In absolute numbers, both religions increased. In 2000, over 9 percent of the population claimed to have “other religion”, was increased from 1 percent in 1994. Since 1973, more or less of a percent of the total population either refused to claim their religion or had no religion.

Table 7.1: Religion by Sex, Kosrae State: 1973 to 2000

Religion	1973			1994			2000		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	3,989	2,025	1,964	7,317	3,806	3,511	7,686	3,859	3,827
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Protestant	97.6	97.0	98.3	88.8	84.8	93.2	89.1	88.6	89.7
Roman Catholic	1.2	1.7	0.7	1.9	2.4	1.3	1.8	2.2	1.5
Other religion	0.9	1.0	0.8	6.9	8.3	5.3	8.9	9.0	8.7
Refused/no religion	0.2	0.2	0.2	2.4	4.5	0.2	0.2	0.2	0.1

Source: 1973 (TTPI) Census; 1994 & 2000 FSM Censuses

Table 7.2 further shows that the distribution pattern of the religion data slightly changed between 1994 and 2000. More Protestants than Roman Catholics were in all the municipalities. The results from the 2000 FSM Census indicated that Utwe continued to have the largest percentage of Congregational Protestant (nearly 97 percents) as compared to about 86 percent in Lelu, about 84 percents in Malem and about 91 percents in Tafunsak. About 4 percent of the Malem residents were Baptist and about 7 percent of resident in Malem were other religion.

Table 7.2: Religion by Municipality, Kosrae State: 1994 and 2000

Municipality	Religion									
	Total	Percent	Roman Catholic	Congregational	Other Protestant	Baptist	SDA	Mormon	Other Religion.	Refused/ No Religion
1994 CENSUS										
Total	7,317	100.0	1.9	88.8	2.1	2.9	-	1.1	0.7	2.4
Lelu	2,404	100.0	2.9	92.4	2.0	1.4	-	1.2	-	0.2
Malem	1,430	100.0	0.6	89.5	1.8	3.9	0.1	3.1	0.3	0.5
Utwe	1,056	100.0	0.3	94.9	4.5	0.2	-	-	-	0.1
Tafunsak	2,427	100.0	2.3	82.2	1.4	5.1	-	0.2	2.0	6.8
2000 CENSUS										
Total	7,686	100.0	1.8	89.1	-	1.6	1.5	2.2	3.6	0.2
Lelu	2,591	100.0	2.7	87.5	-	2.3	0.3	2.2	4.8	0.2
Malem	1,571	100.0	0.8	83.5	-	3.6	2.5	2.4	7.0	0.2
Utwe	1,067	100.0	0.3	96.7	-	-	-	2.8	-	0.2
Tafunsak	2,457	100.0	2.2	91.2	-	0.2	2.7	1.8	1.8	-

Source: 1994 & 2000 FSM Censuses

Table 7.3, indicates that the distribution of religion across the age group was almost even except for age group 15 to 64, while the distribution by type of religion was uneven between 1994 and 2000. As would be expected, most age group was Congregation Protestant during both census years. Both Censuses showed that the religion in Kosrae was mostly Protestant Congregational (about 89 percent) followed by more than 2 percent Morman, and about 4 percent for 'others'.

Table 7.3: Religion by Age Group, Kosrae State: 1994 and 2000

Religion	1994 Census					2000 Census				
		Age groups					Age groups			
	Total	0-14	15-35	36-64	65+	Total	0-14	15-35	36-64	65+
Total	7,317	3,066	2,413	1,606	232	7,686	3,058	2,513	1,836	279
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Roman Catholic	1.9	1.0	1.9	3.6	0.9	1.8	1.4	1.6	2.9	1.4
Protestant	88.8	93.5	84.7	85.2	94.4	89.1	88.9	89.7	88.4	91.8
Congregational	88.8	93.5	84.7	85.2	94.4	89.1	88.9	89.7	88.4	91.8
Other Protestant	-	-	-	0.1	-	-	-	-	-	-
Baptist	1.1	0.8	1.5	0.9	2.2	1.6	1.5	1.8	1.4	1.4
SDA	0.7	0.8	0.7	0.7	0.4	1.5	1.8	1.2	1.3	1.1
Morman	2.1	2.2	2.4	1.7	0.9	2.2	2.4	1.9	2.3	1.8
Other religion	2.9	1.6	4.6	3.2	0.9	3.6	3.9	3.6	3.4	2.2
Refused/no religion	2.4	-	4.2	4.7	0.4	0.2	-	0.2	0.3	0.4

Source: 1994 & 2000 FSM Censuses

Ethnicity

Table 7.4 shows the ethnicity of Kosrae residents by municipality of usual residence in 1994 and 2000. In the 2000 Census, more than half of the Kosrae residents were Kosraean ethnic background, followed by Pohnpeians and all other ethnic group were relatively low at less than 1 percent. The Asians ethnic group includes the Philipinos (working for government department and agencies) and also private sector including Black Micronesia Construction and other businesses.

Table 7.4: Ethnic Origin of Kosrae Residents by Municipality: 1994 and 2000

Ethnicity	Horizontal Percent						Vertical Percent				
			Usual residence					Usual residence			
	Total	Percent	Lelu	Malem	Utwe	Tafunsak	Total	Lelu	Malem	Utwe	Tafunsak
1994 Census	7,317	100.0	32.9	19.5	14.4	33.2	7,317	2,404	1,430	1,056	2,427
Percent	…	…	…	…	…	…	100.0	100.0	100.0	100.0	100.0
Kosraean	6,732	100.0	34.2	20.4	15.3	30.2	92.0	95.7	95.9	97.3	83.7
Yapese/Yap Outer Islands	5	100.0	80.0	20.0	-	-	0.1	0.2	0.1	-	-
Chuukese/Mortlockese	19	100.0	31.6	26.3	21.1	21.1	0.3	0.2	0.3	0.4	0.2
Pohnpeian	114	100.0	14.0	24.6	16.7	44.7	1.6	0.7	2.0	1.8	2.1
Polynesian	4	100.0	25.0	-	-	75.0	0.1	-	-	-	0.1
Asian	338	100.0	10.7	1.2	-	88.2	4.6	1.5	0.3	-	12.3
White	64	100.0	46.9	6.3	4.7	42.2	0.9	1.2	0.3	0.3	1.1
Others	41	100.0	26.8	39.0	4.9	29.3	0.6	0.5	1.1	0.2	0.5
2000 Census	7,686	100.0	33.7	20.4	13.9	32.0	7,686	2,591	1,571	1,067	2,457
Percent	…	…	…	…	…	…	100.0	100.0	100.0	100.0	100.0
Kosraean	7,281	100.0	33.4	20.5	14.3	31.8	94.7	93.9	94.8	97.8	94.2
Yapese/Yap Outer Islands	29	100.0	27.6	41.4	6.9	24.1	0.4	0.3	0.8	0.2	0.3
Chuukese/Mortlockese	66	100.0	16.7	13.6	3.0	66.7	0.9	0.4	0.6	0.2	1.8
Pohnpeian	126	100.0	34.1	15.1	13.5	37.3	1.6	1.7	1.2	1.6	1.9
Polynesian	10	100.0	-	10.0	-	90.0	0.1	-	0.1	-	0.4
Asian	53	100.0	54.7	13.2	3.8	28.3	0.7	1.1	0.4	0.2	0.6
White	43	100.0	74.4	14.0	-	11.6	0.6	1.2	0.4	-	0.2
Others	78	100.0	43.6	35.9	1.3	19.2	1.0	1.3	1.8	0.1	0.6

Source: 1994 & 2000 FSM Censuses

Table 7.5 shows that data on ethnicity and place of birth in Kosrae during 1994 and 2000. The 2000 Census data showed that more than 94 percent of the Kosraeans were born in Kosrae. From the results, about 135 Pohnpeians were residing in Kosrae during the census and 26 percent were Kosrae born. Similarly, over 55 percent were Yapese, 18 percent of the Chuukese, 42 percent were white and 10 percent of the other ethnic groups were born in Kosrae. The foreign ethnicities like Asian and White were born mostly in U.S. and Asia. The other born possibility could be the intermarriages whereby the ethnicity of their children became a foreign one based on the preference of the father's or the mother. The 2000 data showed little change among indigenous people born within Kosrae.

Table 7.5: Ethnicity by Place of Birth, Kosrae State: 1994 and 2000

Ethnicity			Place of Birth									
				Yap						USA Guam		
	Total	Percent	Yap	O. Is.	Chuuk	Pohnpei	Nukuoro	Kapinaga.	Kosrae	CNMI	Asia	Others
1994 CENSUS												
Total	7,317	100.0	0.1	-	0.3	2.1	-	-	90.7	1.0	4.4	1.4
Kosraean	6,732	100.0	-	-	0.1	1.2	-	-	97.2	0.4	0.1	0.9
Yapese/Y. Outer Islands	5	100.0	60.0	20.0	-	-	-	-	20.0	-	-	-
Chuukese/Mortlockese	13	100.0	-	-	84.6	-	-	-	15.4	-	-	-
Pohnpeian	114	100.0	-	-	1.8	60.5	-	1.8	35.1	0.9	-	-
Polynesian	3	100.0	-	-	-	33.3	33.3	33.3	-	-	-	-
Asian	345	100.0	-	-	-	-	-	-	7.2	0.6	91.0	1.2
White	56	100.0	-	-	-	1.8	-	-	10.7	73.2	-	14.3
Others	49	100.0	-	-	-	2.0	-	-	26.5	4.1	4.1	63.3
2000 CENSUS												
Total	7,686	100.0	0.2	-	1.0	3.7	0.2	-	90.1	1.8	0.5	2.4
Kosraean	7,281	100.0	0.1	-	0.3	2.5	-	-	93.8	1.6	0.1	1.6
Yapese/Y. Outer Islands	29	100.0	10.3	-	-	3.4	27.6	-	55.2	-	-	3.4
Chuukese/Mortlockese	66	100.0	-	1.5	63.6	12.1	-	-	18.2	4.5	-	-
Pohnpeian	135	100.0	-	-	-	66.7	3.0	2.2	25.9	1.5	-	0.7
Polynesian	1	100.0	-	-	-	-	-	-	-	-	-	100.0
Asian	53	100.0	-	-	9.4	7.5	-	-	15.1	-	67.9	-
White	43	100.0	2.3	-	14.0	-	-	-	41.9	34.9	-	7.0
Others	78	100.0	1.3	-	7.7	1.3	-	-	10.3	3.8	-	75.6

Source: 1994 & 2000 FSM Censuses

Language

Data on language are used to identify languages (commonly used at homes) spoken most in Kosrae as shown in Table 7.6. Even though English is the medium of instruction and the official language in Kosrae, both the 1994 and 2000 Censuses results showed that the indigenous language of Kosraean remained as the usual spoken language at home. Surprisingly, 71 percent of the English speakers were Kosrae and they used English as a second language, mainly used in government offices and sometimes in the private sector.

Table 7.6: Languages Spoken at Home by Ethnicity, Kosrae State: 1994 and 2000

Language spoken			Ethnicity								
	Total	Percent	Yap	Yap Outer Is.	Chuuk	Pohnpei	Polyne-sian	Kosraean	Asian	White	Others
1994 CENSUS											
Persons 5+ yrs	6,395	100.0	0.1	-	0.2	1.0	0.6	91.0	5.5	0.8	0.8
Kosraean	5,926	100.0	0.1	-	0.1	1.1	-	98.0	0.1	0.1	0.7
Yapese/Y. Outer Islands	2	100.0	50.0	-	-	-	-	50.0	-	-	-
Chuukese/Mortlockese	11	100.0	-	-	45.5	9.1	-	45.5	-	-	-
Pohnpeian	52	100.0	-	-	-	-	75.0	1.9	21.2	-	1.9
English	66	100.0	1.5	-	4.5	-	-	7.6	13.6	69.7	3.0
Japanese	4	100.0	-	-	-	-	-	-	100.0	-	-
Filipino	69	100.0	-	-	-	-	-	-	100.0	-	-
Chinese/Taiwanese	236	100.0	-	-	-	-	-	-	99.6	0.0	0.4
Others	29	100.0	-	-	-	-	-	6.9	72.4	3.4	17.2
2000 CENSUS											
Persons 5+ yrs	6,660	100.0	0.4	-	0.9	1.8	-	94.5	0.6	0.5	1.3
Kosraean	6,269	100.0	0.4	-	0.3	0.9	-	97.8	0.1	-	0.6
Yapese/Y. Outer Islands	14	100.0	21.4	-	-	7.1	-	71.4	-	-	-
Chuukese/Mortlockese	41	100.0	-	-	85.4	-	-	14.6	-	-	-
Pohnpeian	67	100.0	-	-	-	79.1	-	20.9	-	-	-
English	163	100.0	0.6	-	-	1.2	-	71.2	3.7	17.2	6.1
Japanese	4	100.0	-	-	-	-	-	-	100.0	-	-
Filipino	29	100.0	-	-	-	-	-	3.4	96.6	-	-
Chinese/Taiwanese	-	-	-	-	-	-	-	-	-	-	-
Others	73	100.0	-	-	6.8	16.4	-	21.9	-	-	54.8

Source: 1994 & 2000 FSM Censuses

Table 7.7 shows the languages commonly spoken at home by place of birth during the 1994 and 2000 Censuses. Most people in Kosrae used the local language. So again, Kosraean language had the highest proportion. Other languages spoken in Kosrae included Filipino, English, and Pohnpeian, in that order.

Table 7.7: Languages Spoken at Home by Place of Birth, Kosrae State: 1994 and 2000

Language spoken			Place of Birth									
	Total	Percent	Yap	Yap Outer. Is.	Chuuk	Pohnpei	Nukuoro	Kapinaga.	Kosrae	USA Guam CNMI	Asia	Others
1994 CENSUS												
Persons 5+ yrs	6,395	100.0	0.1	-	0.3	2.2	-	-	89.8	1.0	5.0	1.5
Kosraean	5,926	100.0	0.1	-	0.1	1.8	-	-	96.1	0.4	0.1	1.4
Yapese/Y. Outer Islands	2	100.0	50.0	-	-	-	-	-	50.0	-	-	-
Chuukese/Mortlockese	11	100.0	-	-	72.7	-	-	-	27.3	-	-	-
Pohnpeian	52	100.0	-	-	1.9	71.2	-	3.8	23.1	-	-	-
English	66	100.0	1.5	-	4.5	-	-	-	10.6	60.6	3.0	19.7
Japanese	4	100.0	-	-	-	-	-	-	-	-	100.0	-
Filipino	69	100.0	-	-	-	-	-	-	1.4	-	98.6	-
Chinese/Taiwanese	236	100.0	-	-	-	-	-	-	8.5	-	91.5	-
Others	29	100.0	-	-	-	-	-	-	10.3	3.4	72.4	13.8
2000 CENSUS												
Persons 5+ yrs	6,660	100.0	0.2	-	1.1	3.9	0.2	-	90.3	1.3	0.6	2.5
Kosraean	6,444	100.0	0.1	-	0.3	3.3	0.1	-	92.5	1.1	0.2	2.3
Yapese/Y. Outer Islands	16	100.0	12.5	-	-	-	-	-	87.5	-	-	-
Chuukese/Mortlockese	37	100.0	-	2.7	86.5	2.7	-	-	5.4	2.7	-	-
Pohnpeian	39	100.0	-	-	-	87.2	-	-	10.3	-	2.6	-
English	57	100.0	-	-	12.3	3.5	-	-	43.9	26.3	3.5	10.5
Japanese	4	100.0	-	-	-	-	-	-	-	-	100.0	-
Filipino	29	100.0	-	-	17.2	6.9	-	-	13.8	-	62.1	-
Chinese/Taiwanese	-	-	-	-	-	-	-	-	-	-	-	-
Others	34	100.0	-	-	14.7	14.7	11.8	5.9	11.8	-	8.8	32.4

Source: 1994 & 2000 FSM Censuses

Table 7.8 shows the frequency of English language usage in Kosrae. Over 52 percent of the population in Kosrae spoke English whereas in the 2000 Census data about 63 percent of the population in Kosrae spoke English. In the 2000 Census, among all English speakers, nearly 1 percent reported English was the only language that were being used at home and at work. Less than 4 percent reported English as their first language and about 90 percent as their second language. The pattern was similar for all municipalities.

Table 7.8: Frequency of English Use by Municipality, Kosrae State: 1994 and 2000

Municipality	Five Years & Over Total	Total Spoke English	Percent Spoke English	Spoken English				
				Total Percent	English Only	1st Language	2nd Language.	3rd Language
1994 CENSUS								
Total	6,395	3,659	57.2	100.0	1.0	1.5	93.0	4.5
Lelu	2,077	1,324	63.7	100.0	1.6	1.8	92.9	3.7
Malem	1,238	774	62.5	100.0	-	0.6	92.5	6.8
Utwe	944	510	54.0	100.0	-	0.8	96.5	2.7
Tafunsak	2,136	1,051	49.2	100.0	1.4	2.1	91.9	4.6
2000 CENSUS								
Total	6,660	4,175	62.7	100.0	0.5	3.9	89.5	6.1
Lelu	2,247	1,457	64.8	100.0	1.1	9.1	83.3	6.5
Malem	1,362	1,019	74.8	100.0	0.2	1.0	92.4	6.4
Utwe	921	398	43.2	100.0	0.0	0.3	93.2	6.5
Tafunsak	2,130	1,301	61.1	100.0	0.2	1.5	93.0	5.2

Source: 1994 & 2000 FSM Censuses

Table 7.9 presents English speakers at home for each age group and by municipality. For Kosrae, only about 2 percent of the population used English as their language at home. In 1994, the highest proportion was in age group 20 to 39 years whereas in the 2000 Census the highest proportion was in age group 25 to 54 years. These could be the age groups of the White families living in Kosrae as well as those intermarriage couples and their families using English as their main language.

The 2000 Census showed that the highest percentages of English speakers (67 percent) were in Lelu. The number of English speakers was highest among the younger generation from ages 20 and over which also indicates that English was commonly used both inside and outside of the classroom as well as in the government and private sector.

Table 7.9: English Speakers at Home by Age Group, Kosrae State: 1994 and 2000

Age group	Five Years & Over Total	Total English Speakers at home	Percent Speak English	Spoken English at Home			
				Total Percent	Lelu	Malem	Utwe	Tafunsak
1994 CENSUS								
Total	6,395	66	1.0	100.0	51.5	7.6	7.6	33.3
5 to 9 years	1,078	8	0.7	100.0	25.0	-	-	75.0
10 to 14 years	1,066	3	0.3	100.0	33.3	-	-	66.7
15 to 19 years	780	1	0.1	100.0	-	-	100.0	-
20 to 24 years	535	10	1.9	100.0	70.0	10.0	10.0	10.0
25 to 29 years	524	8	1.5	100.0	37.5	25.0	12.5	25.0
30 to 34 years	483	10	2.1	100.0	80.0	-	-	20.0
35 to 39 years	471	10	2.1	100.0	40.0	10.0	10.0	40.0
40 to 44 years	376	5	1.3	100.0	40.0	-	-	60.0
45 to 49 years	318	6	1.9	100.0	50.0	-	16.7	33.3
50 to 54 years	204	1	0.5	100.0	100.0	-	-	-
55 to 59 years	179	3	1.7	100.0	100.0	-	-	-
60 yrs & over	381	1	0.3	100.0	-	100.0	-	-
2000 CENSUS								
Total	6,660	57	0.9	100.0	66.7	22.8	1.8	-
5 to 9 years	953	9	0.9	100.0	66.7	33.3	-	-
10 to 14 years	1079	5	0.5	100.0	80.0	20.0	-	-
15 to 19 years	939	1	0.1	100.0	100.0	-	-	-
20 to 24 years	604	1	0.2	100.0	100.0	-	-	-
25 to 29 years	497	4	0.8	100.0	75.0	25.0	-	-
30 to 34 years	474	9	1.9	100.0	33.3	33.3	11.1	22.2
35 to 39 years	445	6	1.3	100.0	50.0	50.0	-	-
40 to 44 years	435	6	1.4	100.0	66.7	33.3	-	-
45 to 49 years	365	4	1.1	100.0	75.0	-	-	25.0
50 to 54 years	265	4	1.5	100.0	75.0	-	-	25.0
55 to 59 years	181	3	1.7	100.0	66.7	-	-	33.3
60 to 64 years	423	5	1.2	100.0	100.0	-	-	-

Source: 1994 & 2000 FSM Censuses

Conclusion

Most persons enumerated in both the 1994 and 2000 Censuses had a religion. The results of the 1973, 1994 and 2000 Censuses showed that Protestant Congregational remained as the major religions in Kosrae. While some new religions were being introduced, the 2000 data showed that Protestant Congregation still remained as the largest religious category with about 89 percent of the population being members.

Kosraean was the universal ethnic group. Other than the local group, there were foreign ethnic groups such as Asians and Whites. The Asians were the largest non-Kosraean ethnic group, consisting mostly of fisherman working in the locally based fishing company, while the Whites included the Americans, Australians, Europeans, and the New Zealanders working or married in Kosrae.

Language patterns in Kosrae were also similar to those of ethnicity. English was the second most common language. Lelu and Tafunsak had the highest proportion of English speakers, possibly because these were the urban centers in Kosrae.

CHAPTER 8
EDUCATION AND LITERACY

Introduction

A population's level of formal schooling is considered a good indicator of both social conditions and potential for economic success. For the State of Kosrae, which is moving from a more traditional economic system to a more Westernized system, data on education serve to provide a means to evaluate cultural change. Moreover, given the important role that education has come to play in various sectors of Kosraean's economy, results on this subject should provide insights on the direction of development and on the changing economic potential of the state.

The 2000 FSM Census had two items for education: school enrollment and level of educational attainment. The Kosrae Department of Education collects statistical data annually to obtain information about school enrollment and to assess needs for special programs in bilingual education and special education. The census allows more in-depth analysis of schooling as well as educational attainment of the entire population to compare with the socio-economic characteristics of the population.

Data Description

School Enrollment and Type of School
The 2000 Census obtained data on school enrollment from answers to questionnaire item 12. Persons were classified as enrolled in school if they reported attending a "regular" public or private school or college at any time between April 1, 2000 and the date 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 regular school.

Public and Private School
A public school was defined as any school or college controlled and supported by the state or national government. The census defined schools supported and controlled primarily by religious organizations or other private groups as private.

Level of School Enrolled
The 2000 Census classified persons enrolled in school at the time of the census as enrolled in pre-primary school, elementary school, high school, or college according to their response to question 13 (years of school completed or highest degree received) in combination with the response to status of school attendance. Persons who were enrolled and reported completing pre-kindergarten school or less were classified as enrolled in pre-primary school, which included kindergarten. Similarly, enrolled persons who had completed at least kindergarten, but not eighth grade, were classified as enrolled in elementary school. Enrolled persons who completed at least the eighth 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.

Educational Attainment
The 2000 Census of the FSM obtained data on educational attainment from answers to questionnaire item 13. Persons were classified according to the highest grade of school completed or the highest degree received. For person's currently enrolled in school, the question included instructions to report the level of the previous grade attended or the highest degree received.

Enumerators were instructed that an estimated equivalent level in the regular American system should report grade level completed in foreign school systems. The vocational, trade, or business schools or colleges were not to be reported unless they were college-level degrees; and that honorary degrees were not to be reported. The instructions excluded "barber school, cosmetology, or other training for a specific trade" from the professional school degree category.

Literacy
The 2000 Census of the FSM obtained data on literacy — ability to read and write in any language — from responses to questionnaire item 14, asked of persons 3 years and over. In published reports based on the current census data, results generally are shown only for person's 10 years old and over. Respondents were asked if they could read and write a paragraph, in any language. A person was not literate if he or she could read but not write, or if the writing ability was limited to writing the person's own name.

Vocational Training. The 2000 Census obtained data on vocational training for all persons aged 15 years and over from responses to questionnaire item 18. "Vocational training" denotes a school program designed to prepare a person for work in

a specific occupational field. Persons were counted as having completed vocational training if they completed the requirements for a vocational training program at a trade school, business school, hospital, some other kind of school for occupational training, or place of work.

Vocational training included training in vocational fields such as carpentry, electronics, nursing, or accounting if a bachelor's degree would not be granted for the training. Training at place of work-included programs designed to teach new skills. Individual courses for personal enrichment, such as a single typing course, were not considered vocational training. Job Corps training and correspondence courses were included. Also, among training that was not included were college courses applicable towards a bachelor's degree, single courses not part of an organized program, on-the-job training, and Armed Forces basic training.

Limitations and Comparability. School enrollment and educational attainment questions have been included in all censuses conducted in Kosrae since 1973, except for the 1986 Census of Kosrae. The pertinent question in each census referred to the status of school attendance during a specific reference period and to the highest grade completed. All reference periods coincided to schooling seasons, but not to the same months. The age range for which enrollment data were obtained and published also varied between censuses. For 1973 census, information on enrollment was recorded for persons aged 4 years and over while in the 1980, 1994 and 2000 Censuses it was recorded for persons aged 3 years and over. Because of these and differences in reference period, comparison of school enrollment has to be considered cautiously.

There are no obvious limitations of the school enrollment and educational attainment data collected in the 2000 FSM Census. Information on type of school was collected in FSM during the 1980, 1994 and 2000 Censuses. Also, vocational training questions were asked in the same years. The 1980 Census had one additional question on specific type of school while the 1994 and 2000 Censuses provided additional information on whether the training was in the FSM or outside the FSM.

Analysis of Education Data

School Attendance by Level of Enrollment

As the population of Kosrae increased, the number of persons attending school also increased. The number of persons enrolled in school generally increased from about 1,302 in 1973 to about 2,480 in 1994 and 2,560 in 2000 (Table 8.1). The increase was highest for college enrollment (increase by about 10 fold) followed by high school attendance (an increase by nearly 3 fold). The primary school enrollment level was increased by about 48 percent during 1973 to 1994. In part these contrasting trends were due to expansion in educational services and an increase in the school age population. Although the minimum age requirement for school enrollment is 6 years, some children enrolled in school at 4 or 5 years old. Much of the initial increase in enrollment was probably due to historical circumstances such as increased fertility and continued expansion of educational facilities. The percentages of students in public schools, at the elementary school decreased from almost 80 percent in 1973 to-about 62 percent in 1994 and 2000. On the other hand, high school enrollment increased in the two decades from 20 percent in 1973 to almost 33 percents in 1994 and further decline to 27 percent in 2000.

Table 8.1: School Attendance for Age 3 Years and Over by Level and Type, Kosrae State: 1973 to 2000

Level and Type	Number				Percent change			Percent			
	1973*	1980	1994	2000	'73*-'80	'80-'94	94-'2000	1973*	1980	1994	2000
Total enrollment	1,302	1,740	2,476	2,546	25.2	29.7	2.7	100.0	100.0	100.0	100.0
Pre-school/kindergarten	...	30	135	166	...	77.8	18.7	...	1.7	5.5	6.5
Public	...	30	128	156	...	76.6	17.9	...	1.7	5.2	6.1
Private	...	-	7	10	...	100.0	30.0	...	-	0.3	0.4
Elementary	1,036	1,281	1,538	1,579	19.1	16.7	2.6	79.6	73.6	62.1	62.0
Public	...	1,273	1,512	1,543	...	15.8	2.0	...	73.2	61.1	60.6
Private	...	8	26	36	...	69.2	27.8	...	0.5	1.1	1.4
High school	260	394	744	688	34.0	47.0	-8.1	20.0	22.6	30.0	27.0
Public	...	394	742	683	...	46.9	-8.6	...	22.6	30.0	26.8
Private	...	-	2	5	...	100.0	60.0	...	-	0.1	0.2
College	6	35	59	113	82.9	40.7	47.8	0.5	2.0	2.4	4.4

Source: 1973 TTPI Census, Table T12A; 1980 TTPI Census, Table T34; 1994 & 2000 FSM Censuses, Table P24

Note: 1. *No breakdown by type for 1973 and covered ages 4 to 30 years.

The percentage of students in private schools, at the elementary school levels, increased between 1994 and 2000, particularly at the pre-school level. The percentage of private high school students increased from 5 percent to about 6 percent during the six year period.

Almost all school attendance in Kosrae was at public school. In both 1994 and 2000 the private school in Kosrae was less than 6 percent for elementary, less than 1 percent for high school and less than half of a percent at the high school level.

In both years, male students outnumbered female students, both in total and for most levels of education. The surplus of males over females was minimal at elementary and high school level but more at the college level of education (Table 8.2).

Table 8.2: School Attendance for Age 3 Years and Over by Level and Type, Kosrae State: 1994 and 2000

Level and Type	Number			Percent	Males per	Percent		
	Total	Males	Females	Females	100 females	Total	Males	Females
1994 CENSUS								
Total enrollment	2,476	1,332	1144	46.2	116	…	…	…
Pre-school/kindergarten	135	71	64	47.4	111	100.0	100.0	100.0
Public	128	67	61	47.7	110	94.8	94.4	95.3
Private	7	4	3	42.9	133	5.2	5.6	4.7
Elementary	1,538	822	716	46.6	115	100.0	100.0	100.0
Public	1,512	808	704	46.6	115	98.3	98.3	98.3
Private	26	14	12	46.2	117	1.7	1.7	1.7
High school	744	406	338	45.4	120	100.0	100.0	100.0
Public	742	405	337	45.4	120	99.7	99.8	99.7
Private	2	1	1	50.0	100	0.3	0.2	0.3
College	59	33	26	44.1	127	…	…	…
2000 CENSUS								
Total enrollment	2,546	1,315	1,231	48.4	107	…	…	…
Pre-school/kindergarten	166	93	73	44.0	127	100.0	100.0	100.0
Public	156	88	68	43.6	129	94.0	94.6	93.2
Private	10	5	5	50.0	100	6.0	5.4	6.8
Elementary	1,579	806	773	49.0	104	100.0	100.0	100.0
Public	1,543	792	751	48.7	105	97.7	98.3	97.2
Private	36	14	22	61.1	64	2.3	1.7	2.8
High school	688	353	335	48.7	105	100.0	100.0	100.0
Public	683	351	332	48.6	106	99.3	99.4	99.1
Private	5	2	3	60.0	67	0.7	0.6	0.9
College	113	63	50	44.2	126	…	…	…

Source: 1994 & 2000 FSM Censuses, Table P24

School Attendance by Age and Sex

One way to analyze the coverage of the school system and the extent of dropouts is to look at the proportion enrolled (or enrollment rates) at each age (ASER), among the school age population. Enrollment rate was defined as the number of students enrolled at a given age per 100 population of that age.

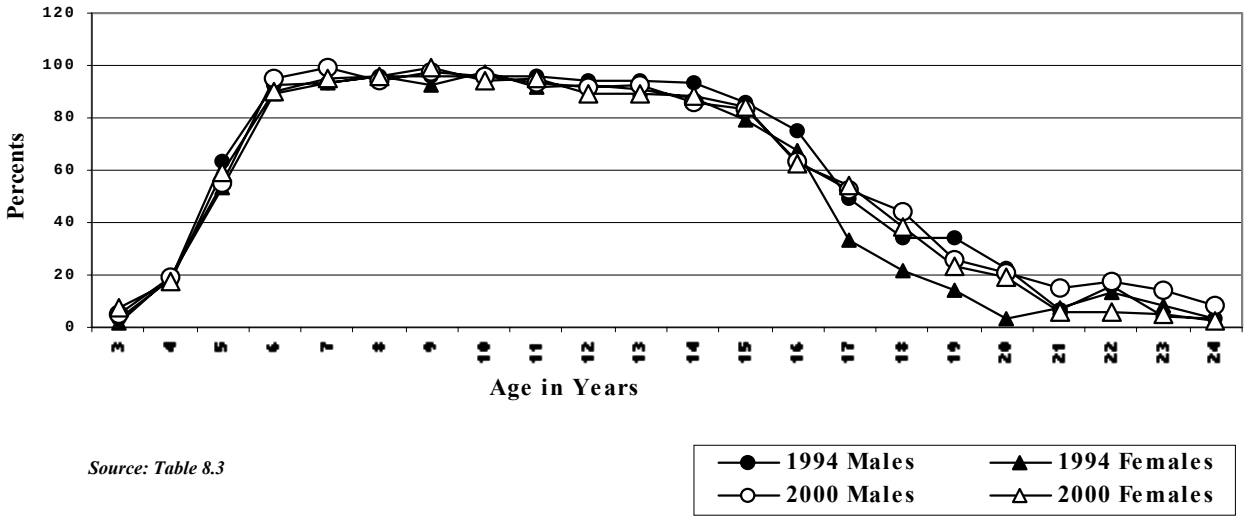
The analysis of the 1994 and 2000 Censuses data on age specific enrollment rates for the state of Kosrae is summarized in Table 8.3 and Figure 8.1. As can be seen from the table and figure, enrollment reached a maximum between the ages of 6 and 15 years, the peak for enrollment being at the ages of 8 and 10. Enrollment started to decline at the age of 16 years. This was in part due to the large number of dropouts beyond the primary level of education and the lack of access to university education. Even at ages where school attendance was highest, 5 to 10 percent of the school age population remained outside the school system. The overall enrollment of the school age population was about 64 percent.

Table 8.3: Age-specific Enrollment Ratio per 100 by Age and Sex, Kosrae State: 1994 and 2000

Age	1994 Census						2000 Census					
	Enrollment by age			Enrollment by sex			Enrollment by age			Enrollment by sex		
	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females
Total	63.9	66.6	61.1	100.0	53.5	46.5	61.9	62.8	61.0	100.0	52.4	47.6
3	2.4	3.4	1.3	100.0	75.0	25.0	6.0	5.1	7.1	100.0	45.5	54.5
4	18.8	18.4	19.1	100.0	50.0	50.0	18.6	19.2	17.9	100.0	60.5	39.5
5	58.0	63.0	53.3	100.0	52.5	47.5	57.1	55.3	59.4	100.0	54.4	45.6
6	90.5	92.1	88.9	100.0	51.4	48.6	92.3	94.6	89.9	100.0	52.4	47.6
7	93.6	93.6	93.5	100.0	53.7	46.3	96.9	98.9	95.3	100.0	46.0	54.0
8	95.9	95.9	96.0	100.0	55.4	44.6	95.0	94.4	95.5	100.0	50.0	50.0
9	94.4	95.9	92.5	100.0	57.8	42.2	98.3	97.8	98.8	100.0	51.4	48.6
10	96.4	95.5	97.2	100.0	44.2	55.8	95.1	96.2	93.9	100.0	51.8	48.2
11	93.9	96.2	91.4	100.0	54.3	45.7	94.1	93.5	94.8	100.0	48.6	51.4
12	93.5	94.4	92.7	100.0	50.0	50.0	90.2	91.3	88.8	100.0	57.1	42.9
13	92.7	94.5	90.9	100.0	50.7	49.3	91.0	92.4	89.5	100.0	54.3	45.7
14	90.7	93.1	87.6	100.0	57.0	43.0	87.2	86.1	88.3	100.0	52.1	47.9
15	82.1	85.7	78.8	100.0	50.0	50.0	83.6	83.3	83.8	100.0	53.4	46.6
16	71.4	74.8	67.1	100.0	58.3	41.7	63.1	63.5	62.6	100.0	51.6	48.4
17	41.1	48.9	33.7	100.0	57.9	42.1	53.4	52.2	54.5	100.0	47.1	52.9
18	26.9	34.0	21.3	100.0	55.2	44.8	41.6	44.3	38.3	100.0	58.1	41.9
19	24.1	34.5	14.0	100.0	70.4	29.6	24.7	25.6	23.5	100.0	57.9	42.1
20	13.5	22.8	3.7	100.0	86.7	13.3	19.8	20.5	19.0	100.0	50.0	50.0
21	6.9	6.5	7.3	100.0	42.9	57.1	10.5	14.8	5.9	100.0	72.7	27.3
22	14.6	15.5	13.3	100.0	60.0	40.0	11.0	17.4	5.6	100.0	72.7	27.3
23	5.9	3.8	8.0	100.0	33.3	66.7	9.3	14.0	4.9	100.0	72.7	27.3
24	3.4	3.3	3.5	100.0	50.0	50.0	5.0	8.7	2.7	100.0	66.7	33.3

Source: 1994 & 2000 FSM Censuses, unpublished data

Figure 8.1 Age-Specific Enrollment Rates by Age and Sex, Kosrae State: 1994 and 2000



Source: Table 8.3

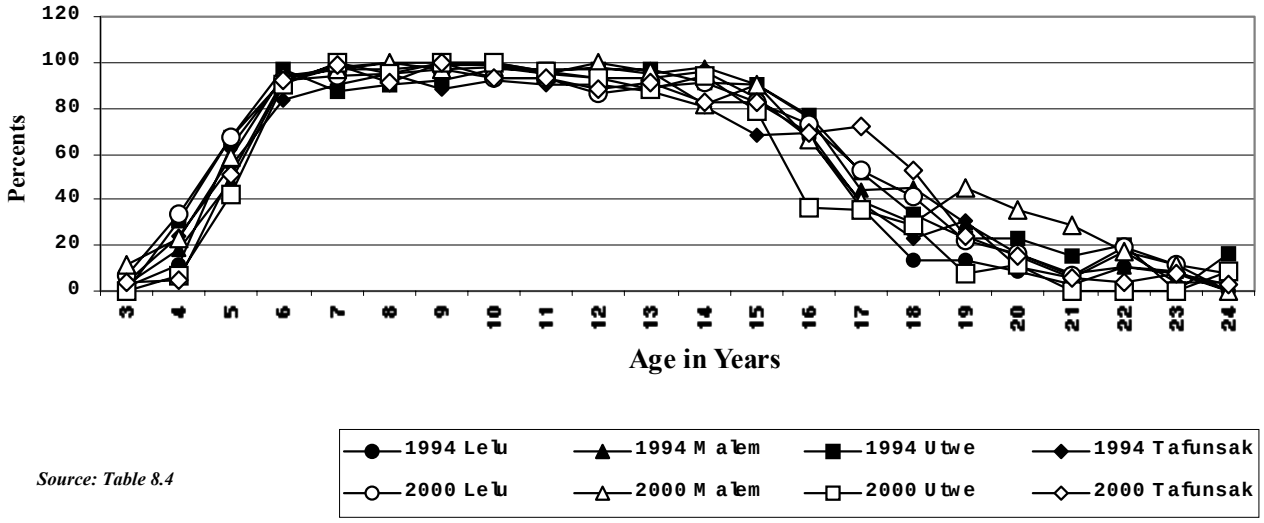
Age-specific enrollment rates in the four municipalities followed similar patterns and levels (Table 8.4 and Figure 8.2). Enrollment at age of 3 and 4 years referred to head start and kindergarten. The 2000 data showed that among the four municipalities, enrollment was a bit earlier in Malem but reached 100 percent at the ages of 8 and 12 in the municipality of Malem, 7, 9 and 10 in Utwe while Tafunsak reached 100 percent at the age of 9. Enrollment was quite universal for all states between the ages of 7 to 15 years, except for Tafunsak. In Tafunsak for most ages enrollment remained below 90 percent, meaning 1 in every 10 children in Tafunsak remained outside the school system even at ages where enrollment was highest.

Table 8.4: Age-specific Enrollment Ratio by Age, Kosrae State: 1994 and 2000

Age	1994 Census					2000 Census				
		Municipality					Municipality			
	Kosrae	Lelu	Malem	Utwe	Tafunsak	Kosrae	Lelu	Malem	Utwe	Tafunsak
Total	63.9	64.8	66.4	68.9	59.0	61.9	63.3	64.7	53.4	62.4
3	2.4	1.9	3.0	-	3.4	6.0	6.5	11.9	-	3.6
4	18.8	11.1	18.6	30.4	24.1	18.6	33.3	23.3	6.9	4.8
5	58.0	62.9	47.9	67.5	54.4	57.1	67.1	58.7	42.3	50.7
6	90.5	93.2	91.2	96.8	83.9	92.3	92.1	94.1	90.5	92.2
7	93.6	97.4	97.7	87.8	90.1	96.9	94.0	97.4	100.0	98.6
8	95.9	97.4	100.0	90.3	94.9	95.0	94.7	100.0	94.7	91.5
9	94.4	98.4	100.0	92.1	88.2	98.3	97.2	97.3	100.0	100.0
10	96.4	98.4	100.0	97.4	91.8	95.1	93.2	97.7	100.0	93.3
11	93.9	94.9	95.7	96.7	90.5	94.1	93.5	94.9	96.0	93.5
12	93.5	93.1	97.6	97.1	89.9	90.2	86.3	100.0	93.1	88.1
13	92.7	93.4	95.1	97.3	87.7	91.0	89.0	96.0	88.6	91.0
14	90.7	96.4	97.5	90.9	81.0	87.2	91.5	81.6	93.9	82.9
15	82.1	84.6	90.2	90.3	67.9	83.6	82.7	90.7	78.6	82.1
16	71.4	67.6	76.1	76.9	69.2	63.1	72.7	65.9	36.6	69.1
17	41.1	36.4	43.8	51.9	38.2	53.4	53.1	38.9	35.5	71.7
18	26.9	13.9	45.5	33.3	23.1	41.6	41.0	30.0	29.2	52.4
19	24.1	13.3	30.0	23.1	30.6	24.7	21.8	45.2	7.4	24.4
20	13.5	8.8	16.7	22.7	10.8	19.8	16.1	35.1	11.1	15.6
21	6.9	2.9	7.7	15.0	6.1	10.5	6.5	29.2	-	6.1
22	14.6	10.3	10.5	20.0	17.5	11.0	18.8	17.4	-	3.4
23	5.9	8.0	9.1	-	4.3	9.3	11.9	12.0	-	7.7
24	3.4	-	-	16.7	3.7	5.0	7.7	-	8.3	2.6

Source: 1994 & 2000 FSM Censuses, unpublished data

Figure 8.2 Age-Specific Enrollment Rates by Age and Municipality, Kosrae State: 1994 and 2000



Source: Table 8.4

One way to measure the progress achieved over the years in regard to the proportion of eligible population entering the school system is to compare (or consider the rate of) enrollment in primary and high schools with the corresponding potential primary and high school age population. The result is usually referred as "Gross Enrollment Ratio" (Shryock, et al., 1976). This approach could also be considered as an indirect method to assess the potential of the present educational facilities in the nation.

For Kosrae State, the age-level relationship was established as follows: for elementary level, enrollment in grades 1 to 8 is expected for the population aged 6 to 13 years, and for high school, enrollment in grades 9 to 12 is expected for the population aged 14 to 17 years. The results for Kosrae in 1994 and 2000 are summarized in Table 8.5. As can be seen from this table, gross enrollment ratio at primary and secondary level was about 72 to 83 percent in 2000. That is, in the State of Kosrae, pupils at primary and secondary level of education constituted 72 to 83 percent of the eligible population in 2000. According to this analysis, the coverage of the school system was better for high school than primary level education. It can also be seen from the table that the coverage of the eligible population at the primary level education was higher for females than males. This shows that in 2000 females tended to stay in school longer to complete a high school level education compared to the male counterparts.

Table 8.5: Gross Enrollment Ratio by Sex, Kosrae State: 1994 and 2000

Level	1994 Census			2000 Census		
	Total	Males	Females	Total	Males	Females
Elementary	90.4	93.3	87.3	71.8	69.6	74.2
High School	93.5	97.8	88.7	83.4	83.1	83.8

Source: 1994 & 2000 FSM Censuses, unpublished data

Educational Attainment by Age and Sex

Table 8.6 summarizes data on educational attainment for the population age 25 years and over. The absolute numbers of the population completing some level of education increased, while the proportion completing no schooling decreased significantly, over the years. The proportion for persons with no schooling declined from about 13 percent in 1980, 6 percent in 1994 and to about 2 percent in 2000. Also, the proportion of the population completing higher levels of education (high school and higher) increased from around 39 percent in 1980 to nearly 61 percent in-1994 and to about 68 percent in 2000.

In general, educational attainment for males also increased consistently from 1980 to 2000. The proportion of males with no schooling decreased from over 11 percent in 1980 to less than 5 percent in 1994 and further decline to 2 percent in 2000. The proportion with only elementary level attainment declined significantly while that of high school and college levels increased significantly. The decline in the proportion of males with only elementary level education from 1980 to 2000 could have resulted from, among other things, the out migration of working age males during the second half of the 1980s and 1990s. Many of people emigrated to take jobs as laborers and may not have had higher-level education.

The improvement in educational attainment for females in the State of Kosrae was more pronounced. The proportion of females with no school dropped from about 15 percent in 1980 to about 7 percent in 1994 and to 2 percent in 2000. In other words, in 1980 nearly 1 women in every 7 had no grade completed compared to 1 in 14 in 1994. This improvement held true for higher education level, as well. The proportion of females with at least high school education increased from just 25 percent in 1980 to about 45 percent in 1994 and increased to about 56 percent in 2000. On the other hand, the proportion of females with some college level education increased by about 8 percentage points (from about 6 to about 14 percent) from 1980 to 1994 and 2000.

Table 8.6: Educational Attainment for Age 25 Years and Over by Sex, Kosrae State: 1980, 1994 and 2000

Educational attainment	Number			Percent		
	1980	1994	2000	1980	1994	2000
Total	1,773	2,936	3,085	100.0	100.0	100.0
No school	229	169	59	12.9	5.8	1.9
Pre-school/kindergarten	...	117	7	...	4.0	0.2
Elementary	846	869	928	47.7	29.6	30.1
High school	384	988	1,070	21.7	33.7	34.7
College	314	793	1,021	17.7	27.0	33.1
Males	922	1,572	1,502	100.0	100.0	100.0
No school	104	72	23	11.3	4.6	1.5
Pre-school/kindergarten	...	43	4	...	2.7	0.3
Elementary	333	289	273	36.1	18.4	18.2
High school	218	559	471	23.6	35.6	31.4
College	267	609	731	29.0	38.7	48.7
Females	851	1,364	1,583	100.0	100.0	100.0
No School	125	97	36	14.7	7.1	2.3
Pre-School/Kindergarten	...	74	3	...	5.4	0.2
Elementary	513	580	655	60.3	42.5	41.4
High School	166	429	599	19.5	31.5	37.8
College	47	184	290	5.5	13.5	18.3

Source: 1980 TTPI Census, Table T35; 1994 & 2000 FSM Censuses, Table P24

Table 8.7 further presents the cumulative percentage distribution of the population aged 25 years and over by the highest grade completed. Cumulative percentage provides the proportion of the population with at least a given level of educational attainment. As can be seen from the table, over 90 percent of the population aged 25 years and over had some level of education in 1994 while the 2000 Census showed an increased to 98 percent. The population with at least elementary level education constituted nearly 72 percent in 1994 and about 77 percent in 2000. Likewise, the proportion of the population with high school or higher-level education was about 48 percent in 1994 and 52 percent in 2000. In general the attainment at lower levels of education could be considered satisfactory, while that of the higher-level educational attainment in the Kosrae could be improved.

Furthermore, males tended to have higher education levels than females. The differences were more pronounced at the highest levels. About 4 in ever 5 males attained at least an elementary level of education compared to 3 in 5 females. The corresponding proportion of completing at least a high school level of education was over 3 in 5 for males and less than 3 in 10 for females. Also, 3 in 200 males aged 25 years and over had a masters or doctorate degree, compared to 4 in 1000 females.

Table 8.7: Educational Attainment for Age 25 Years and Over by Sex, Kosrae State: 1994 and 2000

Educational attainment	1994 Census						2000 Census					
	Number			Cumulative percent			Number			Cumulative percent		
	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females
Total	2,936	1,572	1,364	…	…	…	3,085	1,502	1,583	…	…	…
No school	169	72	97	100.0	100.0	100.0	59	23	36	100.0	100.0	100.0
Pre-school/kindergarten	117	43	74	94.2	95.4	92.9	7	4	3	98.1	98.5	97.7
Elementary	869	289	580	90.3	92.7	87.5	928	273	655	97.9	98.2	97.5
Grade one	19	16	3	90.3	92.7	87.5	4	1	3	97.9	98.2	97.5
Grade two	15	8	7	89.6	91.7	87.2	17	3	14	97.7	98.1	97.3
Grade three	193	63	130	89.1	91.2	86.7	221	65	156	97.2	97.9	96.5
Grade four	48	19	29	82.5	87.2	77.2	69	25	44	90.0	93.6	86.6
Grade five	45	13	32	80.9	85.9	75.1	66	19	47	87.8	91.9	83.8
Grade six	163	50	113	79.4	85.1	72.7	187	56	131	85.6	90.7	80.9
Grade seven	66	12	54	73.8	81.9	64.4	69	18	51	79.6	87.0	72.6
Grade eight	320	108	212	71.6	81.2	60.5	295	86	209	77.3	85.8	69.4
High school	988	559	429	60.7	74.3	44.9	1,070	471	599	67.8	80.0	56.2
Grade nine	127	47	80	60.7	74.3	44.9	179	54	125	67.8	80.0	56.2
Grade ten	142	60	82	56.3	71.3	39.1	175	61	114	62.0	76.4	48.3
Grade eleven	105	58	47	51.5	67.5	33.1	156	62	94	56.3	72.4	41.1
Grade Twelve	614	394	220	47.9	63.8	29.6	560	294	266	51.2	68.2	35.1
College	793	609	184	27.0	38.7	13.5	1,021	731	290	33.1	48.7	18.3
Some college	308	233	75	27.0	38.7	13.5	424	300	124	33.1	48.7	18.3
A.S. or A.A.	317	231	86	16.5	23.9	8.0	417	285	132	19.4	28.7	10.5
B.S. or B.A.	138	120	18	5.7	9.2	1.7	141	115	26	5.8	9.7	2.1
Masters and PhD	30	25	5	1.0	1.6	0.4	39	31	8	1.3	2.1	0.5

Source: 1994 & 2000 FSM Censuses, unpublished data

Educational attainment of the population aged 25 years and over varied moderately among the four municipalities of the state (Table 8.8). In the 2000 Census, the proportion of higher-level educated persons (the population with educational attainment of high school or higher) was highest in Malem (about 60 percent), followed by Lelu (about 50 percent) and Tafunsak reported (about 44 percent). The corresponding proportion among residents of Utwe was about 37 percent. The proportion of college graduates was also highest in Malem (more than 26 percent), followed by Lelu (nearly 28 percent), Tafunsak (15 percent) and Utwe (about 16 percent). These patterns could have resulted from differences in educational facilities and attendance in the past as well as differences in inter-municipality and international migration patterns.

Table 8.8: Educational Attainment for Aged 25 Years and Over by Municipality, Kosrae State: 1994 and 2000

Municipality	1994 Census							
	Educational attainment							
	Total	Percent	Less than Elementary	Elem-Entary	Some High.School	High School Graduates	Some College	College Graduates
1994 Census	2,650	100.0	20.7	12.1	21.6	15.7	11.6	18.3
Lelu	888	100.0	20.7	11.9	15.2	16.7	11.8	23.6
Malem	537	100.0	21.2	9.1	18.8	15.8	14.0	21.0
Utwe	322	100.0	26.4	14.3	24.8	10.2	8.7	15.5
Tafunsak	903	100.0	18.4	13.2	28.5	16.5	11.1	12.4
2000 Census	3,019	100.0	21.0	9.8	21.3	14.1	14.0	19.8
Lelu	1,006	100.0	23.0	8.2	19.8	13.7	13.7	21.7
Malem	634	100.0	17.5	5.0	18.1	17.2	15.6	26.5
Utwe	425	100.0	24.5	13.6	24.7	10.8	10.4	16.0
Tafunsak	954	100.0	19.6	12.9	23.5	14.0	15.0	15.0

Source: 1994 & 2000 FSM Censuses, Table P24

Educational attainment varied considerably with age (Table 8.9). In both 1994 and 2000, the proportion of the population with only an elementary level education was longer for the older age groups, while that with a high school and some college level of education was smaller as age increased, showing an improvement in educational attainment for the younger generations. The percentage of college educated persons reached its peak among the population aged 35 to 54 years old in both 1994 and 2000. This pattern may have been influenced both by persons being away at school, taking longer than in the past to finish schooling, and the effects of net out migration on the education statistics.

Also in 2000, educational attainment for males in the State of Kosrae exceeded the attainment of females at all levels of schooling (See the middle section of Table 8.9). The patterns for all persons aged 25 years and over held for males as well. The decline in the proportion of males with bachelor's degrees for age groups 25 to 29 and 30 to 34 was particularly noticeable during the 1994 and 2000.

Higher level educational attainment was slightly lower among females aged 25 years and over in the Kosrae compared to their male counterparts (See bottom panel of Table 8.9). The male and female pattern was similar, but the level was different. Nevertheless, the improvement of female educational attainment by age was much more pronounced. For example, among female with some educational attainment, 87 and 92 percent of females in the age group 55-64 and 65 and over had elementary level while this was true for only 23 percent among females in the age group 25 - 29 years during the 1994 Census. As for the 2000 Census, the data showed that female with some educational attainment, 81 and 97 percent of females in the age group of 55-64 and 65 and over had elementary level while this was true for the 12 percent among females in the age group 25-29 years. These data confirm that males used to be more privileged for school enrollment than females, differential has decreased in recent years.

Table 8.9: Educational Attainment for Age 25 Years and Over by Age Group and Sex, Kosrae State: 1994 and 2000

Educational attainment	1994 Census							2000 Census						
		Age Groups							Age Groups					
	Total	25-29	30-34	35-44	45-54	55-64	65+	Total	25-29	30-34	35-44	45-54	55-64	65+
Total	2,650	490	460	786	487	274	153	3,019	487	466	871	620	315	260
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Elementary School	32.8	20.0	22.0	24.0	35.5	64.2	86.3	30.7	10.7	18.0	21.7	30.5	60.6	85.8
High School, no diploma	21.6	27.8	28.3	23.7	16.0	11.7	7.2	21.3	27.9	29.4	23.4	19.5	10.5	4.6
High School Graduates	15.7	19.6	15.0	15.6	19.5	9.5	3.9	14.1	17.7	14.8	15.3	14.4	11.1	5.8
Some College	11.6	18.4	14.3	13.1	7.8	3.6	0.7	14.0	26.9	15.0	16.1	10.0	4.8	2.3
Associate Degree	12.0	11.8	14.3	14.4	12.7	6.2	0.7	13.8	14.2	18.0	15.6	16.0	8.9	0.4
Bachelors Degree	5.2	2.2	5.0	8.0	6.4	3.6	-	4.7	2.5	3.2	6.5	7.6	2.9	0.4
Higher Degree	1.1	0.2	1.1	1.1	2.1	1.1	1.3	1.3	0.2	1.5	1.4	2.1	1.3	0.8
Males	1,457	261	268	421	280	149	78	1,475	234	201	446	329	146	119
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Elementary School	19.8	17.6	13.4	9.3	13.6	45.0	80.8	18.5	9.0	12.4	9.0	13.7	37.7	73.1
High School, no diploma	21.3	24.5	26.1	22.6	17.1	18.1	7.7	16.8	20.5	19.4	16.8	16.7	13.7	9.2
High School Graduates	17.1	17.6	14.6	15.2	26.1	14.8	6.4	15.1	20.1	14.9	14.3	14.0	15.8	10.9
Some College	16.0	22.2	20.9	18.1	12.1	5.4	1.3	20.3	33.8	21.9	24.0	15.5	9.6	4.2
Associate Degree	15.9	14.6	16.4	19.5	18.2	10.1	1.3	19.3	13.2	22.9	22.9	25.2	15.1	0.8
Bachelors Degree	8.2	3.1	7.1	13.8	9.3	6.0	-	7.8	3.0	6.0	11.2	11.6	5.5	-
Higher Degree	1.7	0.4	1.5	1.7	3.6	0.7	2.6	2.1	0.4	2.5	1.8	3.3	2.7	1.7
Females	1,193	229	192	365	207	125	75	1,544	253	265	425	291	169	141
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Elementary School	48.6	22.7	33.9	41.1	65.2	87.2	92.0	42.4	12.3	22.3	35.1	49.5	80.5	96.5
High School, no diploma	22.0	31.4	31.3	24.9	14.5	4.0	6.7	25.6	34.8	37.0	30.4	22.7	7.7	0.7
High School Graduates	13.9	21.8	15.6	16.2	10.6	3.2	1.3	13.2	15.4	14.7	16.2	14.8	7.1	1.4
Some College	6.3	14.0	5.2	7.4	1.9	1.6	-	8.0	20.6	9.8	7.8	3.8	0.6	0.7
Associate Degree	7.2	8.7	11.5	8.5	5.3	1.6	-	8.5	15.0	14.3	8.0	5.5	3.6	-
Bachelors Degree	1.5	1.3	2.1	1.4	2.4	0.8	-	1.7	2.0	1.1	1.6	3.1	0.6	0.7
Higher Degree	0.4	-	0.5	0.5	-	1.6	-	0.5	-	0.8	0.9	0.7	-	-

Source: 1994 & 2000 FSM Censuses, Table P101

Educational Attainment by Place of Birth

Another process causing perceived improvement in educational attainment in the state was the immigration of educated persons. The difference emerges in the comparison of educational attainment of persons born in Kosrae and those born abroad. Among the population aged 25 years and over who had attended some school in 2000, over 4 in every 5 of the non-FSM born population had high school or higher-level educational attainment compared to 3 in 5 among the Kosrae born.

The 1994 data showed that nearly 31 percent of Kosrae born population had educational attainment of college or above compared to less than about 26 percent of the non-FSM (See Table 8.10). In general, the tendency to migrate is higher for people with some education, resulting in an improved educational attainment for the country of destination.

The results of the 2000 Census showed that about 87 percent of Kosrae born population had educational attainment of college or above compared to less than 11 percent of the non-FSM.

Table 8.10: Educational Attainment for Age 25 Years and Over by Place of Birth (POB), Kosrae State: 1994 and 2000

Educational attainment	Percent by Level				Percent by Place of Birth			
	Total	Kosrae Born	Other FSM	Outside FSM	Total	Kosrae Born	Other FSM	Outside FSM
1994 Census	2,650	2,249	74	327	100.0	84.9	2.8	12.3
Percent	100.0	100.0	100.0	100.0	…	…	…	…
Elementary	32.8	35.0	35.1	16.8	100.0	90.7	3.0	6.3
Some	20.7	22.5	14.9	10.1	100.0	92.0	2.0	6.0
Graduates	12.1	12.6	20.3	6.7	100.0	88.4	4.7	6.9
High school	37.3	34.4	35.1	57.5	100.0	78.3	2.6	19.0
Some	21.6	19.3	21.6	37.6	100.0	75.7	2.8	21.5
Graduates	15.7	15.1	13.5	19.9	100.0	81.9	2.4	15.7
College	29.9	30.5	29.7	25.7	100.0	86.6	2.8	10.6
Some credits	11.6	12.4	12.2	6.1	100.0	90.6	2.9	6.5
Associate degree	12.0	12.7	13.5	6.7	100.0	89.9	3.2	6.9
Occupational	7.3	7.6	9.5	4.6	100.0	88.7	3.6	7.7
Academic	4.6	5.0	4.1	2.1	100.0	91.9	2.4	5.7
Bachelor degree	5.2	4.8	2.7	8.3	100.0	79.0	1.4	19.6
Grads or Prof.	1.1	0.6	1.4	4.6	100.0	46.7	3.3	50.0
2000 Census	3,019	2,711	196	112	100.0	89.8	6.5	3.7
Percent	100.0	100.0	100.0	100.0	…	…	…	…
Elementary	30.7	31.8	20.9	22.3	100.0	92.9	4.4	2.7
Some	21.0	21.8	11.7	16.1	100.0	93.5	3.6	2.8
Graduates	9.8	10.0	9.2	6.3	100.0	91.5	6.1	2.4
High school	35.4	35.6	38.3	26.8	100.0	90.2	7.0	2.8
Some	21.3	21.7	20.9	11.6	100.0	91.6	6.4	2.0
Graduates	14.1	13.9	17.3	15.2	100.0	88.1	8.0	4.0
College	33.8	32.6	40.8	50.9	100.0	86.6	7.8	5.6
Some credits	14.0	13.7	18.9	14.3	100.0	87.5	8.7	3.8
Associate degree	13.8	13.9	14.8	10.7	100.0	90.2	7.0	2.9
Occupational	7.1	7.1	7.7	4.5	100.0	90.6	7.0	2.3
Academic	6.8	6.8	7.1	6.3	100.0	89.7	6.9	3.4
Bachelor degree	4.7	4.1	5.6	17.0	100.0	78.7	7.8	13.5
Grads or Prof.	1.3	1.0	1.5	8.9	100.0	66.7	7.7	25.6

Source: 1994 & 2000 FSM Censuses, Table P104

Literacy Status by Age and Sex

About 99 percent of the population aged 10 years and over was reported literate in 1994 and 2000 (the corresponding percentage in 1980 was even higher, nearly 100 percent were reported literate). The 1994 and 2000 data showed an inverse relationship between literacy and age. The proportion of literate population decreased as age increased, showing better education for the younger generation. The differential in literacy status between the two sexes was noticeable only for the older generations. This differential was less for the younger generation, to the extent that hardly any difference existed in literacy status of males and females, among the population under the age of 30. This, once again, suggests an improvement in female education in the recent past (see Table 8.11 and Figure 8.3).

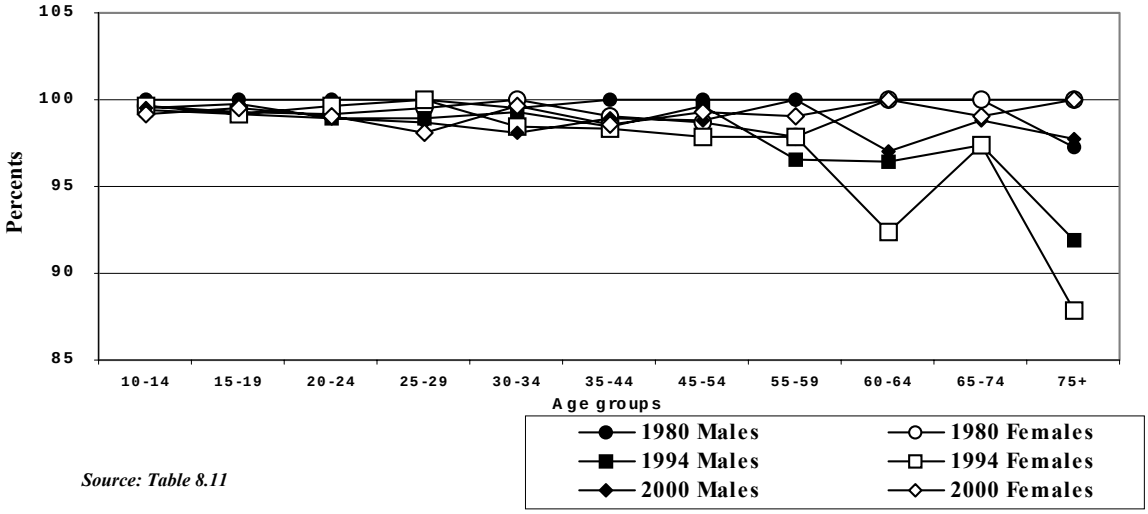
The reported literacy rates increased by 1.6 percentage points between 1994 and 2000 across all age groups. It is possible that the population enrolled into both elementary, high school and college increased.

Table 8.11: Literate Population for Age 10 Years and Over by Age Group and Sex, Kosrae State: 1980, 1994 and 2000

Age groups	1980			1994			2000		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
Total 10+ yrs	3,607	1,831	1,776	5,317	2,772	2,545	5,707	2,845	2,862
Percent Literate	99.6	99.9	99.4	98.7	98.8	98.6	99.1	99.1	99.1
10 to 14 years	99.9	100.0	99.7	99.5	99.4	99.6	99.4	99.5	99.2
15 to 19 years	99.7	100.0	99.3	99.2	99.2	99.2	99.7	99.8	99.6
20 to 24 years	99.6	100.0	99.2	99.3	98.9	99.6	99.0	98.9	99.1
25 to 29 years	99.7	100.0	99.5	99.4	98.9	100.0	98.4	98.7	98.1
30 to 34 years	99.7	99.5	100.0	99.0	99.3	98.5	98.9	98.1	99.6
35 to 44 years	99.5	100.0	99.0	98.3	98.4	98.3	98.8	98.9	98.6
45 to 54 years	99.4	100.0	98.7	98.9	99.7	97.8	99.0	98.8	99.3
55 to 59 years	98.9	100.0	97.8	97.2	96.5	97.8	99.4	100.0	99.0
60 to 64 years	100.0	100.0	100.0	94.6	96.4	92.4	98.6	97.0	100.0
65 to 74 years	100.0	100.0	100.0	97.4	97.4	97.4	98.9	98.8	99.0
75 yrs & over	98.3	97.3	100.0	89.7	91.9	87.8	99.0	97.8	100.0

Source: 1980 TTPI Census, Table T29; 1994 & 2000 FSM Censuses, Table P42

Figure 8.3 Literate Population by Age and Sex, Kosrae State: 1980, 1994 and 2000



Source: Table 8.11

Likewise, the proportion and distribution by age of illiterate residents of Kosrae state remained low (Table 8.12). At the time of the 2000 Census, nearly 1 in every 200 persons aged 10 years and over was illiterate. The few illiterate persons in Kosrae in 1994 and 2000 were aged 35 years and over. In 1994 most of the illerate persons were presumably the migrant workers for the Ting Hong Fishing Company. Other illiterate persons in Kosrae in both 1994 and 2000 were persons aged 60 years and older who had never learned to read and write. The decline in the proportion of illiterate was similar for males and females, except for a slightly higher rate of reduction for illiterate females at younger age groups.

Table 8.12: Illiterate Population for Aged 10 Years and Over by Age Group and Sex, Kosrae State: 1980, 1994 and 2000

Age groups	1980			1994			2000		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
Total 10+ yrs	3,607	1,831	1,776	5,317	2,772	2,545	22	14	9
Percent Illiterate	0.4	0.1	0.6	1.3	1.2	1.4	0.9	0.9	0.9
10 to 14 years	0.1	-	0.3	0.5	0.6	0.4	0.6	0.5	0.8
15 to 19 years	0.3	-	0.7	0.8	0.8	0.8	0.3	0.2	0.4
20 to 24 years	0.4	-	0.8	0.7	1.1	0.4	1.0	1.1	0.9
25 to 29 years	0.3	-	0.5	0.6	1.1	-	1.6	1.3	1.9
30 to 34 years	0.3	0.5	-	1.0	0.7	1.5	1.1	1.9	0.4
35 to 44 years	0.5	-	1.0	1.7	1.6	1.7	1.3	1.1	1.4
45 to 54 years	0.6	-	1.3	1.1	0.3	2.2	1.0	1.2	0.7
55 to 59 years	1.1	-	2.2	2.8	3.5	2.2	0.6	-	1.0
60 to 64 years	-	-	-	5.4	3.6	7.6	1.4	3.0	-
65 to 74 years	-	-	-	2.6	2.6	2.6	1.1	1.2	1.0
75 yrs & over	1.7	2.7	-	10.3	8.1	12.2	1.0	2.2	-

Source: 1980 TTPI Census, Table T29; 1994 & 2000 FSM Censuses, Table P42

Vocational Training

Data on vocational training provide an insight to the potential skilled manpower, trained outside of the formal education system and determine the need for job training programs. The vocational training persons include those who completed the requirements for vocational training at trade school, business school, or other kind of institution for the purpose of occupation. Table 8.13 summarizes data on vocationally trained persons in the State of Kosrae in 1980,1994 and 2000. The 2000 data showed that about 20 percent of all adults aged 15 years and over completed vocational training. The peak of vocational training persons was about 26 for the age group 55-64. The late peak shows, among other things, the population in the older age groups had more opportunity to pursue vocational training and skill development.

Table 8.13: Vocational Training by Age Group, Kosrae State: 1980, 1994 and 2000

Census year	Age group						
	Total	15-24	25-34	35-44	45-54	55-64	65+
1980							
Total 16 to 64 years	2,556	957	713	400	311	175	...
Percent Completed	15.1	11.2	22.3	19.8	11.6	3.4	...
1994							
Total 15+ years	4,251	1,315	1,007	847	522	328	232
Percent Completed	23.7	11.5	26.1	33.2	37.0	26.8	13.4
2000							
Total 15+ years	4,628	1,543	971	880	630	325	279
Percent Completed	20.1	6.3	23.1	31.8	31.3	26.2	16.8

Source: 1980 TTPI Census, Table 22; 1994 & 2000 FSM Censuses, Table P42

Conclusion

School attendance as well as educational attainment in Kosrae has been improving for some time. School attendance continuously increased from about 1,300 in 1973, 1, 740 in 1980, 2,400 in 1994 to about 2,546 in 2000. Over 99 percent of the population aged 10 years and over in Kosrae were literate. Among the population 25 years and over, the proportion of the population with no schooling decreased from about 13 percent in 1980, to less than 6 percent in 1994 to about 2 percent in 2000. The proportion of the population with at least a high school education increased from about 34 percent in 1980 to over 60 percent in 1994 and increased to about 68 percent in 2000. The difference between males and females in educational attainment, though significant for the older generation, became negligible for the younger generations.

On the other hand it has also been shown that the proportion dropping out was quite high in all municipalities, starting from the age of 16 years. The dropout rate was also slightly higher for females. This was in part due to dropouts beyond the primary level of education and lack of access to high school and education.

CHAPTER 9
ECONOMIC ACTIVITY

Introduction

The changing economy of the State of Kosrae creates a demand for data on labor force characteristics and job activities. The following chapters provide insight into the adjustment that Kosrae State is making as it moves from subsistence to a cash-oriented economy. Information on economic activity, industries and occupations, and income are presented in the next three chapters.

The potential labor force in the State of Kosrae conventionally defined as the population of working age 15 years and above, accounted for 4,251 persons, or 58 percent of Kosrae's population, at the time of the Census in 1994 while in the 2000 Census results potential labor force in the state of Kosrae accounted for 4,628 persons, or 60 percent of Kosrae's population. However, many of these potential contributors to domestic production were not in the labor force because they were students, or housewives and looking after children, sick or retired. On the other hand, a large proportion of the population were working, or were seeking work, in the major sectors of economic activity, namely the government, the private sector, and subsistence, involving mainly agriculture and fishing.

Definitions

In order to determine the current labor force status, all respondents aged 15 to 64 years and over were asked whether they did any 'work' in the week before the census, including full-time or part-time work. Work also included full-time and part-time work in a family farm or business, with or without pay. Work did not include unpaid volunteer work. Series of questions on employment status were designed to identify several types of individuals in the FSM: persons who worked at a job or business or farm at any time during the reference week. Other questions were asked of persons who did not do such work during the reference week, but who had jobs or businesses from which they were temporarily absent; and persons who did not work during the reference week, but who were looking for work during the reference week.

The *labor force* included the employed work force as well as the unemployed. The total *employed labor force* was made up of a number of constituent groups, including persons who worked full-time or part-time at a job or business, and persons who worked mainly in farming or fishing during the reference week regardless of whether any of their produce was sold or not. The latter group has been classified in *agriculture and fishing* and further sub-classified as market oriented and subsistence.

A person was described as a *subsistence* worker if he/she mainly farmed or fished in the week before the census without selling, or intending to sell, any produce. Persons who did only some subsistence, but mainly worked at another job in the week before the census were not included as doing subsistence. Persons who farmed or fished and sold their produce were also in the agricultural/fishing group but were categorized as *market oriented.*

Unemployed persons included persons who were looking and available for work in the four weeks preceding the census.

The economically inactive working age population, those *not in the labor force,* were working age persons not classified as being employed or unemployed. A special group of inactive persons were not those who were employed nor looking for work but who said they could have taken a job if one had been offered to them. These persons were categorized as "could have taken a job".

Labor force participation rates (LFPR) were calculated by dividing the number of persons in the labor force by the potential labor force of the group. For example a LFPR for women aged 15 to 19 would be calculated by dividing the number of women both employed and unemployed by the total number of women aged 15 to 19 and multiplied by 100 to make it a percentage.

Unemployment rates, on the other hand, are calculated by dividing the number of persons defined as unemployed and by the number of persons in the labor force, and again multiplying by 100 to make it a percentage calculated.

The current work force includes both formal workers and agricultural and fishing workers. The formal work force includes all persons at a paid job. Current workers are only those persons who responded about their jobs in the week before the census. Persons sick or temporarily absent from a job were not included in the experienced work force.

Limitation and comparability. The above definitions follow the recommendations of the Conference of Labor Statisticians and the global and regional recommendations of the United Nations International Labor Organization (ILO). The definitions differ from the U.S. Bureau of Census labor force definitions in two ways. First the U.S. definition of labor force does not include subsistence, while the ILO definition does; the second difference is that the age limit in the U.S. is usually for persons aged 16 and over, while ILO uses ages 15 and over. The two methods result in different labor force participation rates and unemployment rates. Although the ILO method is presented in this chapter, a table based on the U.S. definitions is presented in the basic tables section of this report (Table B15).

The question for classifying persons in subsistence agriculture and fishing activities into the 'subsistence' and 'market oriented' subgroups differed slightly between 1994 and 2000. The 1994 Census classified persons according to the primary purpose (pure subsistence or market oriented) of the main type of subsistence activity (fishing, gardening, etc.), allowing for only the main activity to the captured. In 2000, the question allowed for multiple answer, but did not distinguish between main and secondary activities and classified persons who 'sold any' as market oriented. Thus, a subsistence worker mainly engaged in gardening for home consumption who sometimes fished to sell would be classified as a pure subsistence worker according to 1994 definitions. Zen 2000 however, he/she would be classified as a market-oriented workers.

Analysis of Economic Activity Data

Labor Force Participation

Table 9.1 reports that the total population of working age in the State of Kosrae in 1994 was 4,251, of whom 2,079, or nearly 49 percent, were in the labor force and 2,172, or about 51 percent, were not in the labor force. Of the 1,766 in the working age population, four-fifths were engaged in a job or business outside of the agricultural sector. The remaining one-fifth of the employed labor force were engaged in farming and fishing, the great majority of whom (74 percent) were involved in 'market oriented' agriculture/fishing activities while the remaining 26 percent were in subsistence activity, not selling or intending to sell any of their produce. This result illustrates the importance of the market oriented agricultural/fishing sector in Kosrae State. The subsistence sector was also quite significant and it would be appropriate to include such workers in the definition of the labor force to fully reflect their contribution to the domestic production of the country. The 2000 data showed that total population 15 years and over in Kosrae was 4,628 of whom 1,962 were in the labor force and 2, 666 were not in the labor force.

The number of unemployed persons was 313 in 1994 and 54 in 2000, which results in unemployment rate of about 15 percent in 1994 and about 2 percent in 2000. In 1994 about one in every three persons aged 15 years and over and who were not in the labor force were actively looking for a job in the week before the census. A group commonly considered when discussing labor force is the discouraged unemployed, or those persons who could have worked the week before the census but who were not actually looking for a job. In many of the communities of Kosrae, the jobs available are widely known among the population, and if these are filled, persons available for work might not actually be looking for work. The category "could have taken a job" included these persons and constituted nearly 18 percent in 1994 and 31 percent in 2000 of the working age population.

A comparison of labor force participation by municipalities of work status shows variations among the municipalities. In the 2000 Census, Tafunsak had again the largest portion of working age population in the labor force (53 percent) while Utwe continue to be the lowest. Tafunsak had a larger proportion of employed persons as well, for both formal and fishermen workers (49 percent) in 1994 and Malem with 52 percent in 2000. Accounting for this larger portion employed are those of the Ting Hong workers and the Black Micro Construction located in Tafunsak (see Table B14). In 1994, almost 28 percent of Utwe's working age population were not looking for a job the week before the census, but could have taken one if it had been offered. As for Malem small portions of working age persons who could have taken a job but were not looking (about 11 percent). The 2000 data showed that 36 percent of Lelu's working age population were not looking for a job the week before the census, but could have taken one if it has been offered. As for Tafunsak small portions of working age persons who could have taken a job but were not looking (24 percent). Unemployment rates, labor force participation rates and subsistence are compared among the municipalities later in this chapter.

Table 9.1: Distribution of Working Age Population for Aged 15 Years and Over by Municipality, Kosrae State: 1994 and 2000

Labor Force	1994 Census					2000 Census				
	Municipal of Usual Residence					Municipal of Usual Residence				
	Total	Lelu	Malem	Utwe	Tafunsak	Total	Lelu	Malem	Utwe	Tafunsak
1994 CENSUS										
Persons 15 years & over	4,251	1,371	828	590	1,462	4,628	1,550	954	666	1,458
Labor Force	2,079	637	394	253	795	2,232	683	493	291	765
Employed	1,766	571	298	183	714	1,864	615	435	227	587
Formal work	1,386	567	281	140	398	1,468	570	322	143	433
Agriculture/fishing	380	4	17	43	316	396	45	113	84	154
Subsistence	98	4	15	23	56	198	30	82	17	69
Market oriented	282	-	2	20	260	198	15	31	67	85
Unemployed	313	66	96	70	81	368	68	58	64	178
Not in labor force	2,172	734	434	337	667	2,396	867	461	375	693
Could have taken a job	754	203	88	163	300	520	150	48	121	201
Not available for work	1,418	531	346	174	367	1,876	717	413	254	492
Percent of 15 years & over	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Labor Force	48.9	46.5	47.6	42.9	54.4	48.2	44.1	51.7	43.7	52.5
Employed	41.5	41.6	36.0	31.0	48.8	40.3	39.7	45.6	34.1	40.3
Formal work	32.6	41.4	33.9	23.7	27.2	31.7	36.8	33.8	21.5	29.7
Agriculture/fishing	8.9	0.3	2.1	7.3	21.6	8.6	2.9	11.8	12.6	10.6
Subsistence	2.3	0.3	1.8	3.9	3.8	4.3	1.9	8.6	2.6	4.7
Market oriented	6.6	-	0.2	3.4	17.8	4.3	1.0	3.2	10.1	5.8
Unemployed	7.4	4.8	11.6	11.9	5.5	8.0	4.4	6.1	9.6	12.2
Not in labor force	51.1	53.5	52.4	57.1	45.6	51.8	55.9	48.3	56.3	47.5
Could have taken a job	17.7	14.8	10.6	27.6	20.5	11.2	9.7	5.0	18.2	13.8
Not available for work	33.4	38.7	41.8	29.5	25.1	40.5	46.3	43.3	38.1	33.7

Source: 1994 & 2000 FSM Censuses, Table P26

The participation of females in the labor force differed from the proportion of males in the labor force. In 1994, almost 69 percent of the females in the State of Kosrae were not in the labor force while only 35 percent of the males were not in the labor force. The 2000 data showed that about 64 percent of the females in Kosrae State were not in the labor force while 40 percent of the males were not in the labor force. Among all employed males and females, just over 15 and less than 2 percent, respectively, were working in agriculture and fishing in 1994 while in the 2000, all employed males and females, more than 9 and about 10 percent, were working in agriculture and fishing. A majority of those person's unemployed and not in the labor force were female. The representation of women in the labor force remain at 48 percent between 1994 and 2000 while the representation of women in the formal work decreased from 32 percent in 1994 to 31 percent in 2000.

Table 9.2: Distribution of Working Age Population for Aged 15 Years and Over by Sex, Kosrae State: 1994 and 2000

Labor force	Number			Percent			Proportion
	Total	Males	Females	Total	Males	Females	Females
1994 Census	4,251	2,232	2,019	100.0	100.0	100.0	47.5
Labor force	2,079	1,457	622	48.9	65.3	30.8	1.5
Employed	1,766	1,344	422	41.5	60.2	20.9	1.2
Formal work	1,386	1,000	386	32.6	44.8	19.1	1.4
Agriculture/fishing	380	344	36	8.9	15.4	1.8	0.5
Subsistence	98	76	22	2.3	3.4	1.1	1.1
Market oriented	282	268	14	6.6	12.0	0.7	0.2
Unemployed	313	113	200	7.4	5.1	9.9	3.2
Not in labor force	2,172	775	1,397	51.1	34.7	69.2	3.2
Could have taken a job	754	157	597	17.7	7.0	29.6	3.9
Not available for work	1,418	618	800	33.4	27.7	39.6	2.8
2000 Census	4,628	2,276	2,352	100.0	100.0	100.0	50.8
Labor force	2,232	1,377	855	48.2	60.5	36.4	1.6
Employed	1,864	1,186	678	40.3	52.1	28.8	1.5
Formal work	1,468	978	490	31.7	43.0	20.8	1.4
Agriculture/fishing	396	208	188	8.6	9.1	8.0	2.0
Subsistence	198	110	88	4.3	4.8	3.7	1.9
Market oriented	198	98	100	4.3	4.3	4.3	2.1
Unemployed	368	191	177	8.0	8.4	7.5	2.0
Not in labor force	2,396	899	1,497	51.8	39.5	63.6	2.7
Could have taken a job	520	175	345	11.2	7.7	14.7	2.8
Not available for work	1,876	724	1,152	40.5	31.8	49.0	2.6

Source: 1994 & 2000 FSM Censuses, Table P26

Table 9.3 portrays the distribution of the labor force by sex across the four municipalities in Kosrae. In 1994, Tafunsak municipality had over 38 percent of the Kosrae State labor force, followed by Lelu with over 31 percent of the work forces and Malem with 19 percent and Utwe with 12 percent. The 2000 data showed that Tafunsak municipality have about 37 percent of the Kosrae State labor force, followed by Lelu with 33 percent of the work forces and Malem with over 24 percent

and Utwe with 14 percent. About 7 in every 10 of the total labor force were males. In 1994 and 2000, women's largest contribution to the state labor force occurred in Utwe where 38 percent of the work force was females. Women's smallest contribution occurred in Tafunsak in both 1994 and 2000 where only about 21 and 34 percent and of the work force were females.

Table 9.3: Labor Force Distribution by Sex and Municipality, Kosrae State: 1994 and 2000

Municipality		Percent in	Number		Percent	
	Number	LF	Males	Females	Males	Females
1994 Census	2,079	100.0	1,457	622	70.1	29.9
Lelu	637	30.6	416	221	65.3	34.7
Malem	394	19.0	253	141	64.2	35.8
Utwe	253	12.2	156	97	61.7	38.3
Tafunsak	795	38.2	632	163	79.5	20.5
2000 Census	2,232	107.4	1,377	855	61.7	38.3
Lelu	683	32.9	423	260	61.9	38.1
Malem	493	23.7	301	192	61.1	38.9
Utwe	291	14.0	172	119	59.1	40.9
Tafunsak	765	36.8	481	284	62.9	37.1

Source: 1994 & 2000 FSM Censuses, Table P26

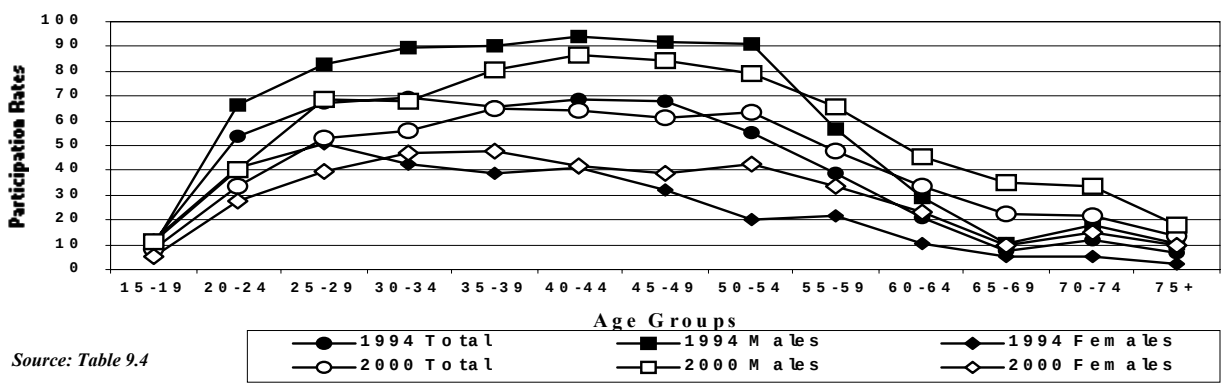
Table 9.4 and Figure 9.1 report labor force participation rates (LFPR) by age and sex. For the State of Kosrae in 1994, the LFPR was almost 49 percent, and was significantly higher for males (65 percent) than for females (31 percent). The 2000 data showed that the LFPR was more than 48 percent, and was significantly higher for males (61 percent) than for females (36 percent). The labor force participation rates followed a standard pattern in 1994, low for the youngest age group (ages 15 to 20) who were likely to be at school, and rising to peak at ages 25 to 54 for men and 25 to 44 for women. The female's peak was at a much lower level, reflecting the female participation at younger ages and falling away with increasing years, as they are involved in child bearing and other household formation activities. The LFPRs in both 1994 and 2000 remained reasonably high until age 59 and then dropped.

Table 9.4: Labor Force Participation Rates (Percent Aged 15 Years and Over in the Labor Force by Age Group and Sex, Kosrae State: 1994 and 2000

Age groups	1994 Census			2000 Census		
	Total	Males	Females	Total	Males	Females
Total	48.9	65.3	30.8	48.2	60.5	36.4
15 to 19 years	10.9	9.6	12.2	13.0	16.6	9.0
20 to 24 years	53.8	66.1	41.0	45.2	51.6	39.6
25 to 29 years	67.4	82.6	50.4	59.4	74.4	45.6
30 to 34 years	69.8	89.6	42.6	64.1	78.3	53.2
35 to 39 years	65.4	90.2	38.8	70.1	87.3	51.9
40 to 44 years	68.9	93.9	41.0	70.1	89.5	50.2
45 to 49 years	68.2	92.1	32.3	65.5	86.8	44.3
50 to 54 years	54.9	91.0	20.2	68.3	83.6	47.8
55 to 59 years	38.5	57.0	21.5	80.7	111.0	55.6
60 to 64 years	20.8	28.9	10.6	29.2	45.5	15.4
65 to 69 years	7.6	10.3	5.0	11.0	14.0	8.2
70 to 74 years	12.0	17.9	5.6	-	-	-
75 yrs & over	6.4	10.8	2.4	-	-	-

Source: 1994 & 2000 FSM Censuses, Table P132

Figure 9.1 Labor Force Participation Rates by Age and Sex, Kosrae State: 1994 and 2000



Source: Table 9.4

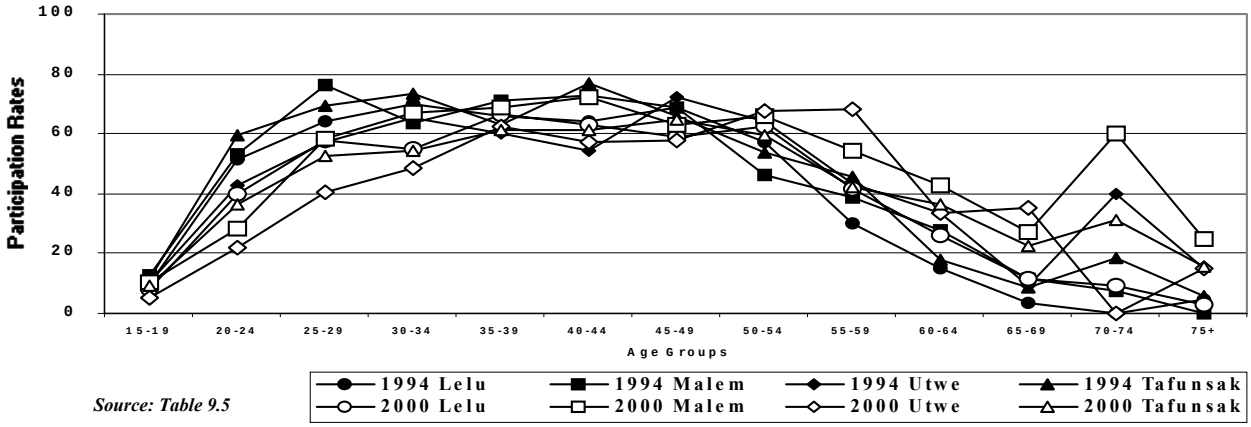
The municipality patterns of LFPRs followed the state trends with minor variations (Table 9.5 and Figure 9.2). What were notable in 1994, however, were the relatively low levels of labor force participation of both men and women in Utwe, perhaps suggesting fewer jobs in that municipality. Tafunsak had higher rates of participation than the state average at all ages. Lelu and Malem had rates about the state average at all ages except for the 20-39 age groups in Lelu and the 35-44 age groups in Malem. As for the 2000 data, Malem and Tafunsak had higher rates of participation than the state average of about 48 percent.

Table 9.5: Labor Force Participation Rates (Percent Aged 15 Years and Over in the Labor Force by Age Group and Municipality, Kosrae State: 1994 and 2000

Age groups	1994 Census					2000 Census				
		Municipality					Municipality			
	Total	Lelu	Malem	Utwe	Tafunsak	Total	Lelu	Malem	Utwe	Tafunsak
Total	48.9	46.5	47.6	42.9	54.4	48.2	44.1	51.7	43.7	52.5
15 to 19 years	10.9	9.6	12.4	10.4	11.5	13.0	11.2	13.8	11.3	15.4
20 to 24 years	53.8	51.6	53.3	42.9	59.7	45.2	43.7	38.6	40.2	53.8
25 to 29 years	67.4	64.1	76.1	57.4	69.1	59.4	58.3	57.7	53.2	64.1
30 to 34 years	69.8	70.1	63.8	65.3	73.2	64.1	60.1	71.3	56.5	66.5
35 to 39 years	65.4	66.0	71.3	60.0	63.2	70.1	70.8	71.1	66.1	70.3
40 to 44 years	68.9	64.2	73.0	54.2	76.6	70.1	66.3	80.7	57.1	70.2
45 to 49 years	68.2	68.6	68.5	72.3	66.1	65.5	59.8	64.5	63.2	73.7
50 to 54 years	54.9	57.1	46.2	64.3	53.7	68.3	62.5	72.6	67.4	71.4
55 to 59 years	38.5	30.2	38.9	43.5	45.6	50.8	41.7	54.1	68.0	50.8
60 to 64 years	20.8	14.8	27.6	33.3	17.8	37.5	25.9	53.6	44.4	38.6
65 to 69 years	7.6	3.6	11.8	9.1	8.7	24.6	11.4	30.8	35.3	27.5
70 to 74 years	12.0	-	7.7	40.0	18.8	20.0	9.1	60.0	-	25.0
75 yrs & over	6.4	4.3	-	15.0	5.9	13.5	3.0	25.0	15.0	15.8

Source: 1994 & 2000 FSM Censuses, Table P132

Figure 9.2 Labor Force Participation Rates by Age and Municipality, Kosrae State: 1994 and 2000



Source: Table 9.5

Unemployment

The measurement of unemployment is problematic in Kosrae as well as the whole FSM, partly because the way in which unemployment is defined has a significant impact. In line with the presentation of this chapter using the ILO labor force definitions, this section presents unemployment using the ILO definition. However, there are issues that should be carefully considered in Kosrae situation. For example, people will not be classified as unemployed if they want paid work but are not actively looking for work. Also, people who are involved in subsistence work are defined as working and are not counted as unemployed, even if they are actively looking for paid work. Under U.S. definitions people in subsistence work are classified as 'not in the labor force', which results in higher unemployment rates. People involved in 'market oriented' subsistence are classified as working and therefore cannot be unemployed under both definitions.

Using the ILO definition, the unemployment rate is calculated as the number of persons who were not working and were actively looking for work, divided by the number of persons in the labor force, multiplied by 100. Rates of unemployment by age and sex are reported in Table 9.6. According to the 1994 FSM Census, Kosrae State's unemployment rate was 15 percent while the 2000 Census showed that the state unemployment rate was about 17 percent. In 1994, the male unemployment rate in Kosrae was just about 8 percent while the female rate was just over 32 percent. The 2000 Census results showed that the unemployment rate for males was reported at 14 percent while the female unemployment rate was at 21 percent. The problem of youth (ages 15 to 19) unemployment in Kosrae was confirmed: youth had the highest rates, in

excess of 41 percent unemployed for males and 48 percent for females. Unemployment was above the state average for all ages below 30. Unemployment in general was age related, with the rates declining as age rose. Female unemployment was higher than male: more than 15 percentage points higher at every age group except for the 65 and above age group. At almost every age group, female unemployment was more than 20 percent.

Table 9.6: Unemployment Rates (Percent of Labor Force Unemployed) by Age Group and Sex, Kosrae State: 1994 and 2000

Age groups	1994 Census			2000 Census		
	Total	Males	Females	Total	Males	Females
Total	15.1	7.8	32.2	16.5	13.9	20.7
15 to 19 years	54.1	40.5	64.6	45.1	43.9	47.5
20 to 24 years	30.2	20.4	46.7	31.9	29.0	35.2
25 to 29 years	17.8	9.6	32.8	14.9	11.9	19.5
30 to 34 years	10.7	5.6	25.3	15.8	16.7	14.8
35 to 39 years	6.5	0.9	20.5	12.5	11.0	15.2
40 to 44 years	8.9	4.3	20.5	10.8	6.6	18.5
45 to 49 years	6.5	1.7	26.8	7.9	4.4	14.8
50 to 54 years	4.5	1.1	19.0	12.7	10.2	18.5
55 to 59 years	11.6	6.1	25.0	8.7	6.9	11.8
60 to 64 years	16.1	12.5	28.6	14.8	12.1	19.0
65 to 69 years	50.0	50.0	50.0	13.8	9.1	28.6
70 to 74 years	22.2	28.6	-	-	-	-
75 yrs & over	20.0	25.0	-	-	-	-

Source: 1994 & 2000 FSM Censuses, Table P132

Table 9.7 illustrates the widely reported differences in unemployment rates among the four municipalities, with Utwe having higher unemployment than the other three municipalities (28 percent) in 1994. The second highest unemployment was reported in Malem (24 percent). Together with their already observed low LFPRs, this result is indicative of fewer jobs available in Utwe, followed by Malem. Tafunsak and Lelu had the lowest unemployment rates in Kosrae (about 10 percent each) because of their location as urban centers and the foreign contractors. The 2000 data showed that Tafunsak had the highest unemployment rate of almost 24 percent. The second highest was reported at 22 percent for Utwe. Nearly 12 percent was reported for Malem while Lelu reported the lowest unemployment rate of about 10 percent.

Table 9.7: Unemployment Rates (Percent of Labor Force Unemployed) by Age Group and Municipality, Kosrae State: 1994 and 2000

Age groups	1994 Census					2000 Census				
		Municipality					Municipality			
	Total	Lelu	Malem	Utwe	Tafunsak	Total	Lelu	Malem	Utwe	Tafunsak
Total	15.1	10.4	24.4	27.7	10.2	16.5	10.0	11.8	22.0	23.3
15 to 19 years	54.1	32.0	72.7	85.7	41.7	45.1	38.9	32.0	58.8	52.3
20 to 24 years	30.2	21.3	44.9	63.6	21.4	31.9	17.8	30.6	51.4	38.4
25 to 29 years	17.8	16.8	32.9	34.3	7.1	14.9	6.0	3.3	31.0	22.0
30 to 34 years	10.7	7.0	13.7	21.9	10.1	15.8	13.5	6.0	17.1	23.0
35 to 39 years	6.5	4.0	11.9	10.0	4.5	12.5	10.8	6.3	13.5	17.4
40 to 44 years	8.9	5.9	16.7	18.8	3.8	10.8	4.7	14.8	12.5	13.8
45 to 49 years	6.5	4.2	2.7	14.7	6.8	7.9	2.5	5.0	11.1	13.1
50 to 54 years	4.5	2.5	11.1	5.6	2.8	12.7	6.0	13.3	6.5	21.8
55 to 59 years	11.6	5.3	28.6	10.0	7.7	8.7	-	-	11.8	20.0
60 to 64 years	16.1	-	12.5	28.6	25.0	14.8	-	20.0	12.5	23.5
65 to 69 years	50.0	100.0	100.0	-	-	13.8	-	12.5	-	27.3
70 to 74 years	22.2	-	50.0	-	33.3	-	-	-	-	-
75 yrs & over	20.0	100.0	-	-	-	-	-	-	-	-

Source: 1994 & 2000 FSM Censuses, Table P132

Table 9.8 shows data on the last work experience of the 313 unemployed persons in the State of Kosrae, according to their age and sex while the 2000 data showed about 36 unemployed persons in the state. These respondents were asked for the year in which they last worked at a job, business or farm, even for a few days. Over 82 percent of the unemployed had not previously worked in 1994 while about 75 percent of the unemployed had not previously worked in 2000. No pattern was noticeable by age; however, in general the female unemployed was more likely to have no work experience.

Table 9.8: Unemployed Persons by Age Group and Previous Work Experience, Kosrae State: 1994 and 2000

Age group				Proportion who worked in 1994 or earlier			Proportion who have never worked		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1994 Census	313	113	200	17.6	23.9	14.0	82.4	76.1	86.0
15 to 19 years	46	15	31	6.5	13.3	3.2	93.5	86.7	96.8
20 to 24 years	87	37	50	13.8	13.5	14.0	86.2	86.5	86.0
25 to 29 years	63	22	41	20.6	22.7	19.5	79.4	77.3	80.5
30 to 34 years	36	14	22	11.1	14.3	9.1	88.9	85.7	90.9
35 to 39 years	20	2	18	25.0	50.0	22.2	75.0	50.0	77.8
40 to 44 years	23	8	15	17.4	25.0	13.3	82.6	75.0	86.7
45 to 49 years	14	3	11	28.6	100.0	9.1	71.4	-	90.9
50 to 54 years	5	1	4	40.0	-	50.0	60.0	100.0	50.0
55 to 59 years	8	3	5	37.5	66.7	20.0	62.5	33.3	80.0
60 to 64 years	5	3	2	40.0	66.7	-	60.0	33.3	100.0
65 to 69 years	3	2	1	33.3	50.0	-	66.7	50.0	100.0
70 to 74 years	2	2	-	100.0	100.0	-	-	-	-
75 yrs & over	1	1	-	-	-	-	100.0	100.0	-
2000 Census	368	191	177	25.0	30.4	19.2	75.0	69.6	80.8
15 to 19 years	55	36	19	-	-	-	100.0	100.0	100.0
20 to 24 years	87	42	45	17.2	19.0	15.6	82.8	81.0	84.4
25 to 29 years	44	21	23	20.5	33.3	8.7	79.5	66.7	91.3
30 to 34 years	48	27	21	31.3	33.3	28.6	68.8	66.7	71.4
35 to 39 years	39	22	17	35.9	40.9	29.4	64.1	59.1	70.6
40 to 44 years	33	13	20	39.4	69.2	20.0	60.6	30.8	80.0
45 to 49 years	19	7	12	36.8	42.9	33.3	63.2	57.1	66.7
50 to 54 years	23	13	10	52.2	69.2	30.0	47.8	30.8	70.0
55 to 59 years	8	4	4	37.5	50.0	25.0	62.5	50.0	75.0
60 to 64 years	8	4	4	25.0	25.0	25.0	75.0	75.0	75.0
65 to 69 years	4	2	2	50.0	50.0	50.0	50.0	50.0	50.0
70 to 74 years	-	-	-	-	-	-	-	-	-
75 yrs & over	-	-	-	-	-	-	-	-	-

Source: 1994 & 2000 FSM Censuses, unpublished data

Persons who were unemployed for a year or more are sometimes referred to as the long-term unemployed. They often find job search success difficult because their work-skills have depreciated. Of course, it is not appropriate to label all of these persons as the long-term unemployed since, although they are currently unemployed, we do not know for how much of the time since they last worked have they been seeking work.

Under-employment

Table 9.9 gives a more comprehensive indication of the extent of underemployment rates among the four municipalities of Kosrae. As shown in the 2000 Census data, of the 4,628 persons 15 years and over, 1,468 were reported in the formal work force. The total number of persons looking for work was reported at 351 in 1994 compare to a slight increased to 435 in 2000. The number of persons reported could have taken a job was decreased from 812 in 1994 to 623 in 2000. The number of unemployed persons was reported at 313 in 1994 while the 2000 Census reported an increased to 368. Tafunsak municipality in particular showed a strong shift towards actively looking for work.

Table 9.9. Unemployment by Municipality, Kosrae State: 1994 and 2000

Labor force status	1994 Census					2000 Census				
		Municipality					Municipality			
	Total	Lelu	Malem	Utwe	Tafunsak	Total	Lelu	Malem	Utwe	Tafunsak
Persons 15 years & over	4,251	1,371	828	590	1,462	4,628	1,550	954	666	1,458
In formal work	1,386	567	281	140	398	1,468	570	322	143	433
Looking for work	351	66	102	82	101	435	72	82	68	213
Unemployed	313	66	96	70	81	368	68	58	64	178
Subsistence agriculture and fishing	22	-	5	7	10	60	3	24	3	30
Market Oriented agriculture and fishing	16	-	1	5	10	7	1	-	1	5
Could have taken a job	812	203	92	183	334	623	158	64	152	249
Subsistence agriculture and fishing	46	-	4	12	30	22	5	9	5	3
Market Oriented agriculture and fishing	12	-	-	8	4	81	3	7	26	45
Not in the labor force	754	203	88	163	300	520	150	48	121	201
Total available for work	2,900	902	577	487	934	2,961	872	550	431	1,108
Not in labor force and not available for work	1,702	535	353	185	629	2,102	750	486	303	563

Source: 1994 & 2000 FSM Censuses, unpublished data

Labor Force Status by Citizenship

Table 9.10 examines the distribution of the working age population by labor force status and citizenship. About 9 percent of the working age population and almost 17 percent of the labor force were not citizens of Kosrae in 1994 while about 1 percent of the working age population and less than 3 percent of the labor force were not citizens of Kosrae in 2000. The number of foreigners (385) in the state's labor force, making up 8 percent of the male labor force and 2 percent of female labor force were reported in 2000. Citizens of other FSM states accounted for only about 1 percent of the total labor force. The largest group of foreign workers hailed from Asian countries (76 percent), particularly the Philippines and China, followed by the U.S. (9 percent). The unemployment rate for non-Kosraean-citizens was lower than the state average; the majority of the unemployed non-Kosraean citizens were Asian women who probably arrived in Kosrae with their husbands.

Table 9.10: Labor Force Status for Age 15 Years and Over by Citizenship, Kosrae State: 1994 and 2000

Citizenship	Persons 15+ years	Persons in LF	In labor force (LF)				Not in LF	
			Employed		Unemployed			
			Number	Percent of LF	Number	Percent of LF	Number	Percent
1994 Census	4,251	2,079	1,766	41.5	313	7.4	2,141	50.4
FSM	3,866	1,726	1,414	36.6	312	8.1	2,140	55.4
Kosrae	3,825	1,716	1,405	36.7	311	8.1	2,109	55.1
Male	1,853	1,118	1,005	54.2	113	6.1	735	39.7
Female	1,972	598	400	20.3	198	10.0	1,374	69.7
Other FSM States	41	10	9	22.0	1	2.4	31	75.6
Male	28	6	6	21.4	-	-	22	78.6
Female	13	4	3	23.1	1	7.7	9	69.2
NON-FSM	385	353	352	91.4	1	0.3	32	8.3
MALES	351	333	333	94.9	-	-	18	5.1
USA	25	20	20	80.0	-	-	5	20.0
Asia	315	307	307	97.5	-	-	8	2.5
Elsewhere	11	6	6	54.5	-	-	5	45.5
FEMALES	34	20	19	55.9	1	2.9	14	41.2
USA	12	7	6	50.0	1	8.3	5	41.7
Asia	12	10	10	83.3	-	-	2	16.7
Elsewhere	10	3	3	30.0	-	-	7	70.0
2000 Census	4,628	2,232	1,864	40.3	368	8.0	2,396	51.8
FSM	4,559	2,196	1,829	40.1	347	7.6	2,363	51.8
Kosrae	4,478	2,168	1,806	40.3	327	7.3	2,310	51.6
Male	2,178	1,328	1,140	52.3	170	7.8	850	39.0
Female	2,300	840	666	29.0	157	6.8	1,460	63.5
Other FSM States	81	28	23	28.4	20	24.7	53	65.4
Male	55	20	18	32.7	12	21.8	35	63.6
Female	26	8	5	19.2	8	30.8	18	69.2
NON-FSM	69	36	35	50.7	21	30.4	33	47.8
MALES	43	29	28	65.1	9	20.9	14	32.6
USA	10	7	7	70.0	-	-	3	30.0
Asia	20	16	16	80.0	-	-	4	20.0
Elsewhere	13	6	5	38.5	9	69.2	7	53.8
FEMALES	26	7	7	26.9	12	46.2	19	73.1
USA	6	1	1	16.7	1	16.7	5	83.3
Asia	10	4	4	40.0	-	-	6	60.0
Elsewhere	10	2	2	20.0	11	110.0	8	80.0

Source: 1994 & 2000 FSM Censuses, Table P95

Note: The number of unemployed as a percent of the labor force is also the unemployed rate.

Labor Force Status by English Language Ability

English is the language commonly used in the public sector as well as much of the private sector, making it an important skill for employment. In 1994, less than 85 percent of those people with no English language skills were employed while over 86 percent of those with English skills were employed (Table 9.11). The 2000 data showed that none of the people responded to the census had no English language skills employed while almost 86 percent of those with English skills were employed. The 2000 data further illustrates that the unemployment rate for those with English skills was reported at 14 percent, slightly lower than the state average of 15 percent in 1994 while the unemployment rate for those with English skills was 3 percent, which is lower than the state average of 100 percent. Fully 60 percent of the non-English speakers were not in the labor force. The employed non-English speaking persons may be those working in the fishing company or jobs that do not require English skills.

Table 9.11: Labor Force Status for Age 15 Years & Over by Language Ability, Kosrae State: 1994 and 2000

Language and Ability	In the labor force (LF)						Not in LF	
			Employed		Unemployed			
	Persons 15+ years	Persons in LF	Number	Percent of LF	Number	Percent of LF	Number	Percent
1994 Census	4,251	2,161	1,850	85.6	311	14.4	2,090	49.2
English only	27	21	21	100.0	-	-	6	22.2
English with others	2,819	1,565	1,342	85.8	223	14.2	1,254	44.5
English as first	48	32	31	96.9	1	3.1	16	33.3
English as second	2,628	1,461	1,247	85.4	214	14.6	1,167	44.4
English as third	143	72	64	88.9	8	11.1	71	49.7
No English	1,405	575	487	84.7	88	15.3	830	59.1
2000 Census	4,628	2,232	1,864	83.5	368	16.5	2,396	51.8
English only	43	27	25	92.6	2	7.4	16	37.2
English with others	3,409	1,796	1,545	86.0	251	14.0	1,613	47.3
English as first	133	67	61	91.0	6	9.0	66	49.6
English as second	3,042	1,609	1385	86.1	224	13.9	1,433	47.1
English as third	234	120	99	82.5	21	17.5	114	48.7
No English	1,176	409	294	71.9	115	28.1	767	65.2

Source: 1994 & 2000 FSM Censuses, Table P139

Note: The number of unemployed as a percent of the labor force is also the unemployed rate.

Labor Force Status by Educational Attainment

Table 9.12 examines the significance of educational attainment in determining labor force status in the State of Kosrae. Those with high school education or higher had a greater probability of being in the labor force and employed. The level of participation had decreased, especially for employed from an average of 85 to 83 percent.

In the year 2000, persons with high school or higher education were less likely to be unemployed, especially those with a bachelor's degree or above who had a 1 percent unemployment rate. Some evidence also exists of an emerging unemployment problem among school drop-outs as both elementary and high school non-graduates reported above average levels of unemployment (about 23 to 25 percent). This was especially true for female dropouts. Male and female education levels showed similar trends but at different levels. For lower educational levels (less than high school) women had higher unemployment rates than their male counterparts.

Table 9.12: Educational Attainment for Aged 15 Years & Over by Labor Force Status, Kosrae State: 1994 and 2000

Educational attainment	Persons 15+ years	In the labor force (LF)					Not in LF	
		Persons in LF	Employed		Unemployed			
			Number	Percent of LF	Number	Percent of LF	Number	Percent
1994 Census	4,251	2,079	1,766	84.9	313	15.1	2,172	51.1
No school completed	382	101	79	78.2	22	21.8	281	73.6
Elementary school	1,029	308	233	75.6	75	24.4	721	70.1
High school	1,294	477	367	76.9	110	23.1	817	63.1
High school graduates	590	392	331	84.4	61	15.6	198	33.6
Some college	434	320	281	87.8	39	12.2	114	26.3
A.S. occupational	213	196	193	98.5	3	1.5	17	8.0
A.S. academic	136	122	121	99.2	1	0.8	14	10.3
Bachelor degree	144	138	136	98.6	2	1.4	6	4.2
Higher degree	29	25	25	100.0	-	-	4	13.8
MALE	2,232	1,457	1,344	92.2	113	7.8	775	34.7
No school completed	167	74	63	85.1	11	14.9	93	55.7
Elementary school	340	174	161	92.5	13	7.5	166	48.8
High school	693	344	305	88.7	39	11.3	349	50.4
High school graduates	335	259	238	91.9	21	8.1	76	22.7
Some college	301	240	216	90.0	24	10.0	61	20.3
A.S. occupational	151	139	136	97.8	3	2.2	12	7.9
A.S. academic	97	87	86	98.9	1	1.1	10	10.3
Bachelor degree	123	118	117	99.2	1	0.8	5	4.1
Higher degree	25	22	22	100.0	-	-	3	12.0
FEMALE	2,019	622	422	67.8	200	32.2	1,397	69.2
No school completed	215	27	16	59.3	11	40.7	188	87.4
Elementary school	689	134	72	53.7	62	46.3	555	80.6
High school	601	133	62	46.6	71	53.4	468	77.9
High school graduates	255	133	93	69.9	40	30.1	122	47.8
Some college	133	80	65	81.3	15	18.8	53	39.8
A.S. occupational	62	57	57	100.0	-	-	5	8.1
A.S. academic	39	35	35	100.0	-	-	4	10.3
Bachelor degree	21	20	19	95.0	1	5.0	1	4.8
Higher degree	4	3	3	100.0	-	-	1	25.0
2000 Census	4,628	2,232	1,864	83.5	368	16.5	2,396	51.8
No school completed	77	15	12	80.0	3	20.0	62	80.5
Elementary school	1,175	386	298	77.2	88	22.8	789	67.1
High school	1,434	472	348	73.7	124	26.3	962	67.1
High school graduates	621	359	293	81.6	66	18.4	262	42.2
Some college	667	414	358	86.5	56	13.5	253	37.9
A.S. occupational	232	206	191	92.7	15	7.3	26	11.2
A.S. academic	238	208	195	93.8	13	6.3	30	12.6
Bachelor degree	144	135	133	98.5	2	1.5	9	6.3
Higher degree	40	37	36	97.3	1	2.7	3	7.5
MALE	2,276	1,377	1,186	86.1	191	13.9	899	39.5
No school completed	33	8	6	75.0	2	25.0	25	75.8
Elementary school	381	169	136	80.5	33	19.5	212	55.6
High school	652	258	195	75.6	63	24.4	394	60.4
High school graduates	309	214	174	81.3	40	18.7	95	30.7
Some college	440	303	272	89.8	31	10.2	137	31.1
A.S. occupational	167	151	138	91.4	13	8.6	16	9.6
A.S. academic	147	130	122	93.8	8	6.2	17	11.6
Bachelor degree	116	114	113	99.1	1	0.9	2	1.7
Higher degree	31	30	30	100.0	-	-	1	3.2
FEMALE	2,352	855	678	79.3	177	20.7	1,497	63.6
No school completed	44	7	6	85.7	1	14.3	37	84.1
Elementary school	794	217	162	74.7	55	25.3	577	72.7
High school	782	214	153	71.5	61	28.5	568	72.6
High school graduates	312	145	119	82.1	26	17.9	167	53.5
Some college	227	111	86	77.5	25	22.5	116	51.1
A.S. occupational	65	55	53	96.4	2	3.6	10	15.4
A.S. academic	91	78	73	93.6	5	6.4	13	14.3
Bachelor degree	28	21	20	95.2	1	4.8	7	25.0
Higher degree	9	7	6	85.7	1	14.3	2	22.2

Source: 1994 & 2000 FSM Censuses, Table P140

Note: The number of unemployed as a percent of the labor force is also the unemployed rate.

Work Experience

Table 9.13 provides information on those persons not in the formal work force and not currently in the labor force during the 2000 Census. Nearly 58 percent of the working age population had never previously worked in the formal sector. For males, 40 percent had never previously worked, while for females as high as 60 percent had never previously worked. Slightly over 9 percent of the working age not currently in the formal labor force worked in the 5 years prior to the Census in 1994 while 2000 data showed an increased to more than 16 percent.

Table 9.13: Year of Last Work for Aged 15 Years and Over Not in the Labor Force, Kosrae State: 1994 and 2000

Year of Last Worked	Number			Percent		
	Total	Males	Females	Total	Males	Females
1994 Census	4,251	2,232	2,019	100.0	100.0	100.0
Worked in 5 yrs prior to census	201	102	99	9.2	9.6	8.8
1994	60	31	29	1.4	1.4	1.4
1993	72	41	31	1.7	1.8	1.5
1992	27	13	14	0.6	0.6	0.7
1990 and 1991	42	17	25	1.0	0.8	1.2
1989 or earlier	191	112	79	4.5	5.0	3.9
Never previously worked	1,780	561	1,219	41.9	25.1	60.4
Currently in the labor force	2,079	1,457	622	48.9	65.3	30.8
2000 Census	4,628	2,276	2,352	108.9	102.0	116.5
Worked in 5 yrs prior to census	708	410	298	16.7	18.4	14.8
2000	66	41	25	1.6	1.8	1.2
1999	375	208	167	8.8	9.3	8.3
1995 to 1998	108	64	44	2.5	2.9	2.2
1990 and 1994	159	97	62	3.7	4.3	3.1
Never previously worked	2,452	888	1,564	57.7	39.8	77.5
Currently in the labor force	1,468	978	490	34.5	43.8	24.3

Source: 1994 & 2000 FSM Censuses, unpublished data.

Subsistence Activities

Subsistence workers describe persons whose sole economic work is to provide food for their own family or sometimes give away to friends or relatives free, but not to sell. The following section provides a more focused look at the group of persons engaged in subsistence activities in the Kosrae. The number of persons in subsistence almost doubled between 1994 and 2000. This increased rate of participation in subsistence activities participation confirms the importance of such activities for the livelihood of Kosrae population.

There are some difficulties in separating subsistence from 'market oriented' farming and fishing activities. The 2000 Census questions classified persons who 'sold any' of their produce as 'market oriented'. Thus subsistence workers who mainly fished or farmed for home consumption but who sold some of their produce will be classified as 'market oriented' in the 2000 Census. On the other hand, the question applied only to one week before the census, so people who fished and farmed for market purposes but did not sell in that week will probably be counted as subsistence. Persons who engage in significant but occasional market oriented activities such as selling pigs or seasonal crops will tend to be underestimated as a result.

The subsistence economy also varied between the four municipalities. Numbers reveal that Tafunsak had the highest proportion working in market oriented (about 18 percent) as well as pure subsistence (4 percent) of the working age population in 1994 (Table 9.14). The 2000 Census showed that Utwe had the highest proportion of the working in market oriented (more than 10 percent) while Malem was highest in pure subsistence (8 percent) of the working age population.

Table 9.14: Percent of Population in Subsistence Work by Municipality, Kosrae State: 1994 and 2000

Municipality	1994 Census					2000 Census				
	Population	Market oriented		Subsistence		Population	Market oriented		Subsistence	
	15+ years	Number	Percent	Number	Percent	15+ years	Number	Percent	Number	Percent
Total	4,251	282	6.6	98	2.3	4,628	198	4.3	198	4.3
Lelu	1,371	-	-	4	0.3	1,550	15	1.0	30	1.9
Malem	828	2	0.2	15	1.8	954	31	3.2	82	8.6
Utwe	590	20	3.4	23	3.9	666	67	10.1	17	2.6
Tafunsak	1,462	260	17.8	56	3.8	1,458	85	5.8	69	4.7

Source: 1994 & 2000 FSM Censuses, Table P146

Table 9.15 shows subsistence work in relation to age, sex and municipalities. The numbers in 2000 reveal that the peak ages of subsistence activity occurred with males at older ages (60 years and over) and females ages 35 to 59, although there was significant fluctuation by age group overall. There were only few cases reported of people engaged in subsistence activity in Kosrae. So the distribution by age for the municipalities was erratic and lacked a consistent pattern.

Table 9.15: Percent of Population in Subsistence Work by Age Group, Sex and Municipality, Kosrae State: 1994 and 2000

Age groups	1994 Census					2000 Census				
		Municipality					Municipality			
	Total	Lelu	Malem	Utwe	Tafunsak	Total	Lelu	Malem	Utwe	Tafunsak
Total	2.3	0.3	1.8	3.9	3.8	4.3	1.9	8.6	2.6	4.7
15 to 19 years	1.2	-	-	-	4.3	2.7	0.9	7.2	0.7	2.8
20 to 24 years	2.4	0.6	2.2	5.2	2.8	5.1	1.9	5.5	2.3	9.8
25 to 29 years	3.4	1.2	5.4	3.3	4.4	2.6	0.7	3.8	3.8	2.9
30 to 34 years	1.7	-	2.5	2.0	2.6	3.2	-	11.7	-	2.4
35 to 39 years	2.5	-	1.1	6.0	4.6	4.3	4.2	6.7	1.8	3.9
40 to 44 years	1.3	-	-	1.7	2.9	3.9	1.3	7.3	4.8	4.0
45 to 49 years	2.8	-	1.9	6.4	4.5	3.0	0.8	8.1	1.8	3.5
50 to 54 years	1.5	-	-	7.1	1.5	6.4	3.8	8.1	8.7	6.5
55 to 59 years	7.3	1.6	5.6	13.0	12.3	7.2	3.3	13.5	4.0	8.5
60 to 64 years	2.0	-	3.4	4.8	2.2	9.0	9.3	17.9	5.6	4.5
65 to 69 years	1.3	-	-	9.1	-	10.2	5.7	15.4	5.9	12.5
70 yrs & over	2.6	-	2.3	6.7	3.0	7.5	1.5	26.5	-	5.7
Males	3.4	0.6	3.1	5.1	5.2	4.8	2.4	9.1	4.6	4.5
15 to 19 years	1.8	-	-	-	6.8	4.1	1.9	12.0	1.2	2.6
20 to 24 years	4.4	1.4	4.5	9.1	4.8	6.4	1.1	9.5	4.2	11.4
25 to 29 years	6.5	2.7	10.9	8.3	6.9	3.8	1.4	2.2	8.1	4.7
30 to 34 years	2.9	-	4.4	4.3	4.2	2.4	-	12.2	-	-
35 to 39 years	3.7	-	-	9.1	6.9	3.5	2.7	4.1	4.0	3.7
40 to 44 years	1.0	-	-	-	2.2	2.7	1.2	4.8	6.3	1.6
45 to 49 years	1.6	-	-	-	4.2	2.2	-	6.3	-	3.1
50 to 54 years	3.0	-	-	12.5	2.7	5.3	2.1	2.9	16.0	4.5
55 to 59 years	8.1	3.7	12.5	8.3	9.7	7.3	7.1	13.3	7.7	3.8
60 to 64 years	3.6	-	5.3	11.1	4.2	13.6	16.7	23.1	11.1	5.0
65 to 69 years	2.6	-	-	12.5	-	17.5	14.3	18.2	12.5	20.8
70 yrs & over	3.9	-	4.5	6.7	6.3	10.1	4.0	29.4	-	7.1
Females	1.1	-	0.5	2.9	1.8	3.7	1.5	8.1	0.6	4.9
15 to 19 years	0.5	-	-	-	1.9	1.1	-	1.2	-	3.0
20 to 24 years	0.4	-	-	2.3	-	4.0	2.6	1.6	-	8.6
25 to 29 years	-	-	-	-	-	1.5	-	5.2	-	1.2
30 to 34 years	-	-	-	-	-	3.7	-	11.3	-	4.3
35 to 39 years	1.3	-	2.2	3.6	1.4	5.1	5.6	9.8	-	4.1
40 to 44 years	1.7	-	-	2.7	4.2	5.1	1.3	10.6	3.8	6.3
45 to 49 years	4.7	-	4.5	12.5	4.9	3.8	1.5	10.0	2.8	4.1
50 to 54 years	-	-	-	-	-	8.0	6.3	14.8	-	9.1
55 to 59 years	6.5	-	-	18.2	15.4	7.1	-	13.6	-	12.1
60 to 64 years	-	-	-	-	-	5.1	3.3	13.3	-	4.2
65 to 69 years	-	-	-	-	-	3.3	-	13.3	-	-
70 yrs & over	1.3	-	-	6.7	-	5.4	-	23.5	-	4.8

Source: 1994 & 2000 FSM Censuses, Table P146

Table 9.16 shows that for most subsistence workers educational attainment was elementary level or below. Furthermore, those educational attainment at or below high school level accounted for 61 percent of the subsistence labor force, and only 6 percent had college or higher education.

Table 9.16: Type of Subsistence Activities by Municipality, Kosrae State: 2000

Type of subsistence activity	Municipality				
	Total	Lelu	Malem	Utwe	Tafunsak
Total, subsistence for home use	701	68	213	119	301
Gardening	430	42	142	82	164
Fishing	346	15	78	63	190
Animal raising	245	10	81	20	134
Other	114	28	37	14	35
Total, subsistence and sold	371	34	60	102	175
Gardening	148	11	25	59	53
Fishing	167	9	19	42	97
Animal raising	58	1	9	4	44
Other	89	17	21	22	29
Total, subsistence and gave	214	10	21	4	179
Gardening	68	3	7	3	55
Fishing	100	5	7	-	88
Animal raising	36	-	3	1	32
Other	23	3	4	-	16

Source: 2000 FSM Censuses, Table P2-14

Of those persons engaged in subsistence in 2000, almost 38 percent of the subsistence workers had educational attainment at or below the elementary level (Table 9.17). In 1994, about 9 percent of all persons in the subsistence activity were high school graduates while the 2000 Census results showed almost 11 percent. A small portion of college-educated persons was in the subsistence labor force. Only 2 persons in subsistence had occupational or academic qualifications in 1994 while the 2000 Census data showed an increased of 4 percent.

Table 9.17: Subsistence Activities by Educational Attainment, Kosrae State: 1994 and 2000

Educational attainment	1994 Census			2000 Census		
	Total	Males	Females	Total	Males	Females
Total	98	76	22	198	110	88
Not school	8	5	3	-	-	-
Elementary	40	26	14	73	27	46
High school	30	27	3	71	41	30
High school graduates	9	7	2	22	14	8
Some college	9	9	-	22	19	3
A. A. occupational	1	1	-	3	3	0
A.S. academic	1	1	-	4	3	1
Bachelor degree	-	-	-	2	2	-
Professional degree	-	-	-	1	1	-

Source: 1994 & 2000 FSM Censuses, Table P113

Market-oriented workers are persons engaged in home-production activities and who occasionally or regularly sell their produce for cash. The next tables provide a more focused look at this group of persons in Kosrae. In 2000, about 8 percent of the potential labor force was a market-oriented subsistence worker, an increase of 1-percentage points since 1994. The results showed that in 2000, almost 21 percent of the subsistence workers said they could have taken a job if it was offered while more than 42 percent reported not look for job.

Table 9.18: Subsistence Activities by Search for Cash Employment, Kosrae State: 1994 and 2000

Employment status	1994 Census		2000 Census	
	Number	Percent of Total subsistence	Number	Percent of Total subsistence
Total	5,730	100.0	6,320	100.0
Looking for work	367	6.4	494	7.8
Not looking	2,498	43.6	2,666	42.2
Could have taken a job	1,228	21.4	1,061	16.8
Could not have taken a job	1,637	28.6	2,099	33.2
Already has job	291	5.1	60	0.9
Temporarily ill	367	6.4	110	1.7
Other reason	979	17.1	1,929	30.5

Source: 1994 & 2000 FSM Censuses, unpublished data

Other Labor Force Characteristics

Commuting

The 2000 FSM Census, as that of 1994, collected information on commuting (travel time, car-pooling, type of transport and hour of commute) (See Appendix A, Table B18). The average (mean) duration of commute to work in Kosrae was 18 minutes. Lelu and Tafunsak had the shortest average commute of 14, and 17 minutes, respectively while Utwe and Malem

had the longest commute of 34 and 22 minutes, respectively. The majority (about 83 percent) of employed persons commuted in a car, truck, van or bus while about 17 percent walked to work in Kosrae in 1994.

Most people in Kosrae worked in the same municipality as where they resided (about 67 percent) and same village (62 percent). Table 9.19 presents location of work by municipality. Utwe had the fewest persons working in the same municipality and also in the same village. Lelu had the largest portion of persons working in the same village and municipality. These data suggest more urbanization in Lelu than the other municipalities. Urbanization occurs when people move to business centers for jobs.

Table 9.19: Location of Work Last Week by Municipality, Kosrae State: 1994 and 2000

Municipality	1994 Census			2000 Census		
	Total in Formal work force	Percent working in same municipality	Percent working in same village	Total in Formal work force	Percent working in same municipality	Percent working in same village
Total	1,386	66.5	62.1	1,468	66.9	0.2
Lelu	567	94.7	84.1	570	92.3	0.2
Malem	281	26.3	26.3	322	62.1	-
Utwe	140	39.3	39.3	143	55.9	-
Tafunsak	398	64.1	64.1	433	40.6	0.5

Source: 1994 & 2000 FSM Censuses, Table B15

Armed forces

Only 8 persons claimed to be on active duty during the 1994 Census and 37 persons were previously on duty for the U.S. armed forces (see appendix Table B13). Many of those persons on active duty were U.S. citizens from the Civil Action Teams assigned in the State of Kosrae. The number of persons enrolled in the armed forces dependents was reported at 19 in 2000.

Conclusion

We looked at economic activities in Kosrae in this chapter. Insights about Kosrae's economy from census data are inherently limited by the relatively long periods between Censuses. The labor force in Kosrae State increased slowly between 1994 and 2000. This was partly because the working age population increased from 4,251 persons to 4,628.

In 1994, Kosrae State had an unemployment rate of (15 percent, or 313 person) while the 2000 result showed that almost 17 percent or 368 persons were unemployed who were looking for and available to take a job. Furthermore, additional 754 persons who were not actively seeking a job the week before the census were available to take a job in 1994 while about 520 persons who were not actively seeking a job the week before the census were available to take a job in 2000. The labor force participation rate was about 49 percent, 2- percentage points of which was due to the inclusion of subsistence workers in the labor force. The 2000 data further presents data on unemployment varing from about 10 percent in Lelu and Tafunsak to 23 and 12 percent in Malem and Utwe with 22 percent respectively. Unemployment was also reported low for males (8 percent) compare to that of females (over 32 percent).

About 42 percent of unemployed persons had no previous work experience, suggesting that unemployment was a long-term difficulty for many persons. Persons with higher education were more likely to be employed and in the labor force than those with little or no schooling. Female unemployment rates were more than twice those of males.

CHAPTER 10
INDUSTRY AND OCCUPATION

Introduction

Industry and occupation chapter provides information on the changes occurring in the economy and how industries change employment patterns over the years. Different occupational groups classified against other characteristics show what persons hold which occupations in Kosrae State population. This chapter presents information collected from persons in the formal work force (not agricultural or fishing) who were currently working as well as persons who were currently not employed but worked in the five years previous to the census. Also reviewed in this chapter is the difference in employment between the private and public sectors.

In both 1994 and 2000 FSM Censuses question number 28 was for industry and question 29 for occupation for all individuals aged 15 years and over. The type of business or industry was asked along with the name of the employer in order to check the information. Industry refers to the activity of the establishment in which an economically active person worked during the reference period established for data on economic characteristics (or last worked, if unemployed). The activity of the establishment refers to the kinds of goods or services produced. Occupation refers to the kind of work done during the reference period irrespective of the industry or the status (employer/employee). The occupation groups were derived from the level of skill and experience needed for the position. Examples include manager, sales person, typist, or factory worker.

The data collected from previous censuses are not directly comparable for these classifications because of changes in definitions. The 1980 Census used definitions of industries and occupations from the U.S. standard industry and occupation classifications. The 1994 and 2000 Censuses used classifications defined by the International Labor Organization (ILO). Although the differences are minor, ILO classifications are used by a majority of Pacific Island nations and are an international standard. The 1980 Census tabulated information for individuals ages 16 and over which makes a difference when comparing to the 1994 and data which are tabulated for individuals ages 15 and over.

Data Description

Industry
Industries within the state of Kosrae have been broken down into 14 categories by the Division of Statistics and are based on the International Labor Organization's International Standard Industrial Classification (ISIC). Some of the categories have been grouped together in order to accommodate the different economic activities of Kosrae State.

1. The first group contains *agriculture, forestry, fishing, and mining* (quarrying) enterprises. This group includes all agricultural production, subsistence activities, commercial fishing, mining, and quarrying.

2. *Construction* contains all enterprises relating to heavy construction and special building trade contractors. Construction includes additions, alterations, reconstruction, installations, and repairs.

3. *Transportation, communication, electric, gas, and sanitation* services all fall in one category in the ILO breakdown; however, for Kosrae State this group has been broken into two groups, one group for transportation and communication and one group for electricity, gas, and sanitation services. The transportation and communication group includes all establishments, which provide the general public with passenger or freight transportation services and post and telecommunication services. The other group contains the major utilities of electricity, gas, and water supply.

4. *Manufacturing* of durable and non-durable goods is the third category. Manufacturing is the mechanical or chemical transformation of materials or substances into new products. The category ranges in industries from fish packaging to publishing.

5. *Wholesale and retail trade* is combined in one group. Both groups encompass establishments involved with selling of merchandise; wholesale implies trade to other businesses, while retail implies merchandise for personal or household consumption.

6. *Financial intermediation and real estate* include establishments such as depository institutions, credit institutions, investment companies, commodity brokers, and insurance agents and brokers. Real estate includes owners, lessors, lessees, buyers, sellers, agents, and developers.

7. *Hotels, restaurants and bars* include enterprises that provide lodging, food, and beverages. This group contains establishments that provide short-term accommodations as well as bars, canteens, and restaurants.

8. *Business and computer activities* include the renting of machinery and equipment, research and development, legal activities, architect and engineering services, computer activities, and other business related activities.

9. *Health* and social work industries include hospitals, medical and dental facilities, veterinary activities and social work facilities.

10. *Education* contains all establishments, which provide educational opportunities for the population.

11. *Public administration* consists of all government agencies and organizations, local, state, national, and international. It also includes defense establishments and compulsory social security.

12. *Other community and social services* includes sewage and refuse disposal, membership organizations, recreational activities, libraries, and other service activities. Private household services are also included in this final category.

Occupation
The International Standard Classification of Occupations (ISCO) breaks occupations into 10 basic categories. ISCO further aggregates occupations into 3 additional levels of detail. Responses on occupation in the 1994 FSM Census were classified down to three digits in the ISCO categories. The major groups are organized by the degree of skill and experience necessary for the occupation.

The ten major groups are broken down as follows:

1. *Executives and managers:* this group contains occupations whose main tasks include formulating government policy, laws, and regulations, planning directing and coordinating policies and activities of enterprises or organizations. Examples are judges, government department chiefs, traditional chiefs, legislators, and senior management of organizations.

2. *Professionals:* this group includes occupations whose tasks require a high level of professional knowledge and experience. Tasks include increasing knowledge, applying scientific and artistic concepts and theories to the solution of problems, and teaching about the foregoing in a systematic manner. Examples include mathematicians, statisticians, geologists, computer programmers, architects, engineers, nurses, doctors, teachers for secondary level and above, accountants, lawyers, judges, and economists.

3. *Technicians and associate professionals:* this group requires technical knowledge and experience and conducts tasks carrying out technical work connected with the application of concepts and operational methods. This group includes teachers at primary level, computer troubleshooters, ships' engineer, air traffic controller, building inspectors, medical health assistants, nutritionists, and business service agents.

4. *Administrative support:* also called clerks, this group includes occupations whose main tasks are to organize, store, compute, and retrieve information. This group includes office clerks (such as secretaries and word processors, transport clerks, filing clerks) and customer service clerks (such as tellers, cashiers, client information, travel agents).

5. *Service workers:* this group includes occupations with tasks of provide services related to travel, housekeeping, catering, personal care, protection, maintaining law and order, selling goods at shops or markets. This group includes travel stewards, waiters, cooks, child-care workers, barbers, police officers, fire fighters and stall or market sales persons.

6. *Agriculture and fishing workers:* these occupations include skilled workers who grow crops, breed or hunt animals, catch or cultivate fish and conserve or exploit forests.

7. *Craft and related trades:* tasks include extracting raw materials, constructing buildings, and other structures and making various products and handicraft goods.

8. *Machine operators:* includes tasks, which require the knowledge and experience necessary to operate and monitor large-scale industrial machinery and equipment.

9. *Elementary occupations and laborers:* includes persons doing simple and routine tasks involving the use of hand-held tools and physical effort. Examples are selling goods in the street, door-keeping, cleaning and working as laborers.
10. The final group is *armed forces*.

Class of Worker

Question 30 of the 1994 and 2000 FSM Censuses asked for information on class of worker for every individual over 15 who had worked in the 5 years prior to the census. Class of worker refers to the type of ownership of the employing organization and is based on the U.S. Bureau of Census definitions. The private sector was classified into private for-profit employer, non-profit employer, self-employed, and working without pay for a family business or farm. Likewise, the public sector was classified into municipal government, state government, national government, and foreign or federal government (federal government refers to the U.S. federal government).

Analysis of Industry and Occupation Data

Industry

The number of employed persons 15 years and over nearly tripled between 1980 and 2000. Table 10.1 displays the breakdown of selected industries for the State of Kosrae in 1980 and 2000. In 1980 the definitions of industries were slightly different than in 1994 and 2000 Censuses. We can, however, use the proportion of persons in the large groupings to see trends in industry size. The 1994 data on industry and occupation refer to persons who were currently in the formal work force (1,766) as well as persons who worked in the 5 years prior to the census (128).

The distribution of employment changed during the 20-year time span between 1980 and 2000. In 1980 the three largest (in terms of employees) industries were public administration, education, and the construction sector. In 1994, the largest portions of the economically active worked in public administration (about 30 percent) followed by agriculture, forestry, fishing and quarrying (about 18 percent), education (about 15 percent), and other service activities (about 10 percent). As for the 2000 data, the largest portions of the economically active worked in Public Administration (more than 21 percent), followed by Education (almost 18 percent) and wholesale and retail (nearly 17 percent). A significant increase occurred in the proportion of persons employed in agriculture and fishery (which include forestry and quarrying), financial intermediation and real estate and in other service activities. In 1980–about 64 percent (32 percent each) of the working population was employed in education and public administration compared to about 44 percent in 1994. Much of this increase in agriculture and fishery can be explained by the existence of the Ting Hong fishing company as well as the Black Micro Construction Company in 1994. The other major increases occurred in the "other service activities" group, which includes membership organizations and household services.

The total number of employees declined between 1994 and 2000. Much of this came from decline in the agriculture, forestry, fishing and quarrying, financial intermediation, education and public administration and other activities. On the other hand, real estate & computer services, wholesale and retail trade, contruction and transportation and communication increased.

Table 10.1: Industry of Employment for Aged 15 Years and Over, Kosrae State: 1980, 1994 and 2000

Industry	Number			Percent change		Percent		
	1980*	1994	2000	1980-'94	1994-2000	1980*	1994	2000
Current formal work force	658	1,894	1,468	187.8	-22.5	100.0	100.0	100.0
Agriculture, forestry, fishing and quarrying	15	348	34	2,220.0	-90.2	2.3	18.4	2.3
Construction	89	95	122	6.7	28.4	13.5	5.0	8.3
Gas, electricity and water supply	-	20	33	-	65.0	-	1.1	2.2
Transportation and communication	20	52	68	160.0	30.8	3.0	2.7	4.6
Manufacturing	-	46	48	-	4.3	-	2.4	3.3
Wholesale and retail trade	39	112	242	187.2	116.1	5.9	5.9	16.5
Hotels, restaurants, and bars*	-	74	79	-	6.8	-	3.9	5.4
Financial intermediation and real estate	3	36	20	1,100.0	-44.4	0.5	1.9	1.4
Business and computer activities	4	14	119	250.0	750.0	0.6	0.7	8.1
Health	47	74	100	57.4	35.1	7.1	3.9	6.8
Education	209	276	255	32.1	-7.6	31.8	14.6	17.4
Public administration	211	560	313	165.4	-44.1	32.1	29.6	21.3
Other service activities	21	187	35	790.5	-81.3	3.2	9.9	2.4

Source: 1980 TTPI Census, Table P29; 1994 & 2000 FSM Census, Table T23

Note: *Data from 1980 & 1994 are not comparable for the other service activities and hotels, restaurants, and bars categories. 1980 data refer to persons aged 16 years and over.

Table 10.2 presents a more detailed industrial breakdown of industries in Kosrae. The 1994 data showed that of the 560 persons employed in public administration, more than 81 percent were males. The category "agriculture, forestry, fishing and quarrying" was second largest industry in Kosrae. As for the 2000 data, Public Administration continued to be the largest industry with about 81 percent being male and 18 percent female. Education was the second largest industry and the third largest being the wholesale and retail trade industry.

The table also provides data on the sex distribution for each of the industries. Overall, 67 percent of the current work force was males in 2000, a slight decline from the 73 percent in 1994. Of the 313 persons employed in public administration in 2000, about 80 percent were males. Women dominated the industries of manufacturing retail trade, hotels and restaurants, financial intermediation, health and social work, and private household activities.

Table 10.2: Detailed Breakdown of Industry by Sex, Kosrae State: 1994 and 2000

Industry	1994 Census						2000 Census					
	Number			Percent			Number			Percent		
	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females
Current formal work force, 15+ years	1,894	1,386	508	100.0	73.2	26.8	1,468	978	490	100.0	66.6	33.4
Agriculture, forestry, fishing and quarrying	348	329	19	100.0	94.5	5.5	34	**28**	**6**	100.0	82.4	17.6
Agriculture and livestock	48	41	7	100.0	85.4	14.6	11	8	3	100.0	72.7	27.3
Forestry	-	-	-	-	-	-	2	2	-	100.0	100.0	-
Fishing	291	280	11	100.0	96.2	3.8	16	14	2	100.0	87.5	12.5
Mining	9	8	1	100.0	88.9	11.1	4	3	1	100.0	75.0	25.0
Quarrying	-	-	-	-	-	-	1	1	-	100.0	100.0	-
Manufacturing	46	32	14	100.0	69.6	30.4	**48**	**37**	**11**	100.0	77.1	22.9
Manufacturing of no durables	23	15	8	100.0	65.2	34.8	1	-	1	100.0	-	100.0
Manufacturing of durables	23	17	6	100.0	73.9	26.1	47	37	10	100.0	78.7	21.3
Electricity, gas and water supply	20	17	3	100.0	85.0	15.0	33	24	9	100.0	72.7	27.3
Construction	95	91	4	100.0	95.8	4.2	122	120	2	100.0	98.4	1.6
Wholesale and retail trade	112	47	65	100.0	42.0	58.0	242	**101**	**141**	100.0	41.7	58.3
Wholesale trade	10	5	5	100.0	50.0	50.0	11	11	-	100.0	100.0	-
Retail trade	86	29	57	100.0	33.7	66.3	203	67	136	100.0	33.0	67.0
Trade relating to automotives	16	13	3	100.0	81.3	18.8	28	23	5	100.0	82.1	17.9
Hotels, restaurants, and bars*	74	21	53	100.0	28.4	71.6	**79**	**25**	**54**	100.0	31.6	68.4
Transportation and communication	52	40	12	100.0	76.9	23.1	**68**	**58**	**10**	100.0	85.3	14.7
Land transport	1	1	-	100.0	100.0	-	21	20	1	100.0	95.2	4.8
Water transport	2	1	1	100.0	50.0	50.0	5	5	-	100.0	100.0	-
Air transport	20	19	1	100.0	95.0	5.0	18	16	2	100.0	88.9	11.1
Other transport activities	9	7	2	100.0	77.8	22.2	-	-	-	-	-	-
Post and telecommunications	20	12	8	100.0	60.0	40.0	24	17	7	100.0	70.8	29.2
Financial intermediation and real estate	30	13	17	100.0	43.3	56.7	**20**	**10**	**10**	100.0	50.0	50.0
Financial intermediation	19	7	12	100.0	36.8	63.2	17	8	9	100.0	47.1	52.9
Insurance and pensions	-	-	-	-	-	-	2	1	1	100.0	50.0	50.0
Other financial activities	11	6	5	100.0	54.5	45.5	1	1	-	100.0	100.0	-
Business and computer activities	20	17	3	100.0	85.0	15.0	**119**	**85**	**34**	100.0	71.4	28.6
Computer activities	2	1	1	100.0	50.0	50.0	-	-	-	-	-	-
Research and development	1	1	-	100.0	100.0	-	6	3	3	100.0	50.0	50.0
Real estate	6	5	1	100.0	83.3	16.7	14	10	4	100.0	71.4	28.6
Renting	-	-	-	-	-	-	4	2	2	100.0	50.0	50.0
Other business activities	11	10	1	100.0	90.9	9.1	95	70	25	100.0	73.7	26.3
Public administration	560	454	106	100.0	81.1	18.9	**313**	**254**	**59**	100.0	81.2	18.8
Education*	276	193	83	100.0	69.9	30.1	**255**	**174**	**81**	100.0	68.2	31.8
Primary education	-	-	-	-	-	-	223	151	72	100.0	67.7	32.3
Secondary education	-	-	-	-	-	-	18	12	6	100.0	66.7	33.3
Higher education	-	-	-	-	-	-	10	9	1	100.0	90.0	10.0
Adult and other education	-	-	-	-	-	-	4	2	2	100.0	50.0	50.0
Health and social work	74	35	39	100.0	47.3	52.7	**100**	**41**	**59**	100.0	41.0	59.0
Other service activities	187	97	90	100.0	51.9	48.1	**35**	**21**	**14**	100.0	60.0	40.0
Sewage and refuse disposal	1	1	-	100.0	100.0	-	2	2	-	100.0	100.0	-
Activities of membership organization	68	27	41	100.0	39.7	60.3	-	-	-	-	-	-
Community service activities	22	16	6	100.0	72.7	27.3	30	18	12	100.0	60.0	40.0
Private household activities	96	53	43	100.0	55.2	44.8	3	1	2	100.0	33.3	66.7
Other establishments	-	-	-	-	-	-	-	-	-	-	-	-

Source: 1994 & 2000 FSM Census, unpublished data

Table 10.3 shows data on different educational backgrounds of people employed in different industries. For definitions on vocational and high school education, see Chapter 8 on Education. About 61 percent of employed person 15 years and over had high school diplomas or higher level of education. In the health and education nearly 9 in every 10 personnel were at least a high school graduates. The percent of high school graduates in different industries was not uniformly higher for males or females. In the agriculture forestry, fishing, and quarrying; gas, electricity and water supply; transportation and communication; health; education: and in the public administration females had more proportion with high school diplomas than males school diplomas.

The proportion of employed persons with some vocational training was around 46 percent in 2000. However, vocational training varied by sector, for example, about 99 percent of the individuals employed in the wholesale and retail trade sector had vocational training, while less than 7 percent of those in the manufacturing sector had vocational training. Data on high school diplomas follow this trend as wells with the health industry having the highest portion of employees with high school diplomas and the agriculture and fishery the lowest. Males were more likely to receive vocational training than females in all industries except for health.

Table 10.3: Industry by Percent of Persons with High School Diploma and Vocational Training, Kosrae State: 1994 and 2000

Industry	H.S. graduates & above			Vocational training		
	Total	Males	Females	Total	Males	Females
1994 CENSUS						
Experienced formal work force	18.8	17.9	21.5	38.8	40.5	34.3
Agriculture, forestry, fishing and quarrying	20.4	20.7	15.8	10.9	10.6	15.8
Construction	25.5	26.4	-	35.1	36.3	-
Gas, electricity and water supply	5.0	5.9	-	45.0	47.1	33.3
Transportation and communication	23.1	17.5	41.7	51.9	57.5	33.3
Manufacturing	15.2	18.8	7.1	37.0	37.5	35.7
Wholesale and retail trade	29.2	21.3	34.8	26.5	34.0	21.2
Hotels, restaurants, and bars*	17.6	4.8	22.6	14.9	28.6	9.4
Financial intermediation and real estate	19.4	11.1	27.8	41.7	50.0	33.3
Business and computer activities	14.3	16.7	-	50.0	58.3	-
Health	16.2	14.3	17.9	67.6	71.4	64.1
Education	7.6	7.3	8.4	55.1	57.5	49.4
Public administration	19.5	18.7	22.6	50.5	52.4	42.5
Other service activities	24.1	23.7	24.4	33.7	39.2	27.8
2000 CENSUS						
Experienced formal work force	21.2	18.2	27.1	46.4	49.8	42.0
Agriculture, forestry, fishing and quarrying	35.3	39.3	16.7	82.4	100.0	-
Construction	68.8	89.2	-	72.9	100.0	-
Gas, electricity and water supply	15.2	12.5	-	45.5	45.8	44.4
Transportation and communication	18.0	15.0	200.0	22.1	18.3	250.0
Manufacturing	3.3	4.0	2.8	6.6	12.9	2.8
Wholesale and retail trade	122.8	152.0	109.3	98.7	148.0	79.6
Hotels, restaurants, and bars*	35.3	3.4	220.0	32.4	13.8	140.0
Financial intermediation and real estate	15.0	10.0	20.0	55.0	60.0	50.0
Business and computer activities	11.8	9.4	-	42.9	42.4	44.1
Health	5.1	2.0	18.6	23.6	12.2	74.6
Education	3.1	2.9	3.7	54.1	58.0	46.9
Public administration	63.0	117.1	25.4	171.0	358.5	47.5
Other service activities	17.1	9.5	28.6	42.9	47.6	42.9

Source: 1994 & 2000 FSM Census, Table P115

Certain industries naturally have certain occupations such as the agriculture industry, which had a majority of agriculture and fishing workers. The construction and utilities fields had the highest portion of machine operators and laborers. The 2000 data showed that about 91 percent of construction industry and more than 79 percent of manufacturing was comprised of craft, repair operator and laborers. About 91 percent of education industry and nearly 87 percent of the health industry was comprised of technician, associate professional and administrative supporters. Executive managers and professionals were reported highest in the health sector.

Table 10.4: Industry by Occupation, Kosrae State: 1994 and 2000

Industry	Total	Percent	Occupation: Executive Managers and prof.	Technical. Assoc. prof. Admin. sup.	Serv-ices	Agric. and Fishing	Craft repair Operators. Laborers	Armed Forces
1994 CENSUS								
Experience formal work force 15+ years	1,894	100.0	14.1	31.6	10.5	14.3	29.5	0.1
Agri., forest. & fish. & mining	348	100.0	3.2	10.6	1.7	75.9	8.3	0.3
Construction	95	100.0	10.5	3.2	2.1	1.1	83.2	-
Gas, elect. & water supply	20	100.0	15.0	20.0	-	-	65.0	-
Transp. & comm.	52	100.0	15.4	30.8	13.5	-	40.4	-
Manufacturing	46	100.0	8.7	19.6	19.6	6.5	45.7	-
Wholesale & retail trade	112	100.0	6.3	44.6	15.2	-	33.9	-
Hotels, rest. & bars	74	100.0	4.1	16.2	37.8	-	41.9	-
Financial intermed. & real estate	36	100.0	19.4	66.7	5.6	-	8.3	-
Bus. & comp. Active	14	100.0	21.4	28.6	14.3	-	28.6	7.1
Health	74	100.0	32.4	54.1	8.1	-	5.4	-
Education	276	100.0	25.4	60.1	5.8	-	8.7	-
Public administration	560	100.0	19.1	30.7	11.4	0.4	38.4	-
Other serv. Activ	187	100.0	5.3	32.6	20.9	0.5	40.6	-
2000 CENSUS								
Experience formal work force 15+ years	1,468	100.0	9.3	48.6	6.3	1.5	34.3	-
Agri., forest. & fish. & mining	34	100.0	11.8	38.2	5.9	29.4	14.7	-
Construction	122	100.0	6.6	1.6	0.8	-	91.0	-
Gas, elect. & water supply	33	100.0	6.1	24.2	3.0	-	66.7	-
Transp. & comm.	68	100.0	5.9	27.9	4.4	1.5	60.3	-
Manufacturing	48	100.0	4.2	10.4	2.1	4.2	79.2	-
Wholesale & retail trade	242	100.0	9.9	50.0	5.8	-	34.3	-
Hotels, rest. & bars	79	100.0	8.9	10.1	44.3	-	36.7	-
Financial intermed. & real estate	20	100.0	10.0	80.0	-	-	10.0	-
Bus. & comp. Active	119	100.0	16.8	52.9	5.0	0.8	24.4	-
Health	100	100.0	3.0	87.0	2.0	1.0	7.0	-
Education	255	100.0	3.9	91.0	0.8	-	4.3	-
Public administration	313	100.0	15.3	39.6	7.7	2.2	35.1	-
Other serv. Active	35	100.0	5.7	45.7	2.9	-	45.7	-

Source: 1994 & 2000 FSM Census, Table P170

Occupation

Table 10.5 provides the breakdown of occupations for 1994 and 2000 and the change in proportions of the working age in the occupation groups. The largest occupation group of those persons aged 15 and over who were currently employed or who worked in the 5 years previous to the census was the technician and associate professionals, administrative support and elementary occupation and laborers (each about 17 percent). Professionals occupation group was the second largest with (more than 14 percent) and the Craft and related workers group being the third largest (about 10 percent).

Between 1994 and 2000 Censuses the increased were seen in three occupations – elementary occupation (about 40 percent), professionals (more than 32 percent) and executive managers (nearly 25 percent). All other occupation groups decreased.

Table 10.5: Occupations of Experienced Work Force, Kosrae State: 1980, 1994 and 2000

Occupation	Number 1980	Number 1994	Number 2000	Percent change 1980-1994	Percent change 1994-2000	Number 1980	Number 1994	Number 2000
Experience formal Work force 15+ years	580	1,894	1,468	226.6	-22.5	100.0	100.0	100.0
Executive and managers	65	109	136	67.7	24.8	11.2	5.8	9.3
Professionals	180	158	210	-12.2	32.9	31.0	8.3	14.3
Technical and associate professionals	61	323	251	429.5	-22.3	10.5	17.1	17.1
Administrative support	77	275	253	257.1	-8.0	13.3	14.5	17.2
Service workers	90	198	92	120.0	-53.5	15.5	10.5	6.3
Agric. And fishing workers	16	271	22	1,593.8	-91.9	2.8	14.3	1.5
Craft and related workers	39	266	149	582.1	-44.0	6.7	14.0	10.1
Machine operators	26	111	102	326.9	-8.1	4.5	5.9	6.9
Elementary occupations and laborers	26	181	253	596.2	39.8	4.5	9.6	17.2
Armed Forces	...	2	-	-	-	...	0.1	-

Source: 1980 TTPI Census, Table T123; 1994 & 2000 FSM Census, Table P28
Note: 1980 data are for individuals 16 years and over.

Of all employed persons who replied to their occupation in the 1994 Census, about 73 percent were males and about 27 percent were females compare to that of the 2000 Census wherein, more than 66 percent were males and almost 34 percent

were females (Table 10.6). Most of the industries had male and female representation similar to the overall representation of employed persons. In both 1994 and 2000 Census, the only occupation that females were in the majority was the administrative support group where about 74 percent of the employees were female in 1994 and more than 83 percent in 2000. Machine operators had a strong male bias with about 96 percent of the work force male. The 2000 data showed that of the employed persons, who replied to their occupation, about 64 percent were males and 36 percent were females.

Table 10.6: Occupations of Experienced Work Force for Aged 15 Years and Over Who Worked in 5 Years Previous to Census by Sex, Kosrae State: 1994 and 2000

Occupation	Number			Percent		
	Total	Males	Females	Total	Males	Females
1994 Census	1,894	1,386	508	100.0	73.2	26.8
Executive and managers	109	104	5	100.0	95.4	4.6
Professionals	158	120	38	100.0	75.9	24.1
Technical and associate professionals	323	244	79	100.0	75.5	24.5
Administrative support	275	73	202	100.0	26.5	73.5
Service workers	198	102	96	100.0	51.5	48.5
Agric. and fishing workers	271	263	8	100.0	97.0	3.0
Craft and related workers	266	218	48	100.0	82.0	18.0
Machine operators	111	107	4	100.0	96.4	3.6
Elementary occupations and laborers	181	153	28	100.0	84.5	15.5
Armed Forces	2	2	-	100.0	100.0	-
2000 Census	1,468	978	490	100.0	66.6	33.4
Executive and managers	136	121	15	100.0	89.0	11.0
Professionals	210	150	60	100.0	71.4	28.6
Technical and associate professionals	251	178	73	100.0	70.9	29.1
Administrative support	253	42	211	100.0	16.6	83.4
Service workers	92	47	45	100.0	51.1	48.9
Agric. and fishing workers	22	21	1	100.0	95.5	4.5
Craft and related workers	149	109	40	100.0	73.2	26.8
Machine operators	102	97	5	100.0	95.1	4.9
Elementary occupations and laborers	253	213	40	100.0	84.2	15.8
Armed Forces	-	-	-	-	-	-

Source: 1994 & 2000 FSM Census, Table P28

As shown in Table 10.7, the three occupations with highest skill levels -- technical and associate professionals, agriculture and fishery workers, craft and related workers -- had the most individuals in the 35 to 44 age categories. The other occupations all had the largest portions in the 25 to 34 age groups (Table 10.7). Less than 14 percent of the executives and managers were under the age of 34. This corresponds with the expectation for more experience and perhaps education in the executives and managers and professional's occupations. In the administrative support category there was an under-representation of 45 to 64 year old persons, while the person ages 25 to 34 were over-represented.

Table 10.7: Age Groups for Aged 15 Years and Over by Occupation, Kosrae State: 1994 and 2000

Occupation			Age groups				
	Total	Percent	15-24	25-34	35-44	45-64	65+
1994 Census	1,894	100.0	14.8	32.7	28.7	23.0	0.8
Executive and managers	109	100.0	1.8	17.4	37.6	43.1	-
Professionals	158	100.0	7.0	36.7	26.6	29.7	-
Technical and associate professionals	323	100.0	7.4	29.1	31.9	30.3	1.2
Administrative support	275	100.0	24.0	40.7	29.8	5.5	-
Service workers	198	100.0	20.7	26.3	28.8	23.2	1.0
Agric. And fishing workers	271	100.0	14.4	39.5	28.0	17.7	0.4
Craft and related workers	266	100.0	13.5	29.7	28.9	26.3	1.5
Machine operators	111	100.0	13.5	41.4	25.2	19.8	-
Elementary occupations and laborers	181	100.0	24.3	28.7	21.0	23.8	2.2
Armed Forces	2	100.0	100.0	-	-	-	-
2000 Census	1,468	100.0	11.9	30.0	31.7	25.6	0.8
Executive and managers	136	100.0	2.2	18.4	33.1	44.9	1.5
Professionals	210	100.0	4.8	26.2	32.4	36.2	0.5
Technical and associate professionals	251	100.0	5.2	25.1	38.2	31.5	-
Administrative support	253	100.0	21.3	43.1	28.1	7.5	-
Service workers	92	100.0	17.4	35.9	25.0	20.7	1.1
Agric. And fishing workers	22	100.0	4.5	27.3	54.5	13.6	-
Craft and related workers	149	100.0	4.0	25.5	34.2	32.2	4.0
Machine operators	102	100.0	19.6	28.4	30.4	20.6	1.0
Elementary occupations and laborers	253	100.0	20.2	32.4	27.3	19.8	0.4
Armed Forces	-	-	-	-	-	-	-

Source: 1994 & 2000 FSM Census, Table P45

Table 10.8 presents occupation by age. The 2000 Census data showed that of the persons 15 to 24 years and 25 to 34 years, the largest portion worked in the machine operator's occupation. Almost 46 percent of the population aged 65 years and over were in craft and related occupations. For those persons aged 45 to 64 years, technical and associate professionals and

professionals were the second largest occupation group. The highest percentage of the oldest age group, 65 years and over, were in craft and related workers (about 46 percent) and machine operators (18 percent) occupation in 2000.

Table 10.8: Occupation for Aged 15 Years and Over by Age Group, Kosrae State: 1994 and 2000

Occupation	Total	Age groups 15-24	25-34	35-44	45-64	65+
1994 Census	1,894	280	619	544	436	15
Percent	100.0	100.0	100.0	100.0	100.0	100.0
Executive and managers	5.8	0.7	3.1	7.5	10.8	-
Professionals	8.3	3.9	9.4	7.7	10.8	-
Technical and associate professionals	17.1	8.6	15.2	18.9	22.5	26.7
Administrative support	14.5	23.6	18.1	15.1	3.4	-
Service workers	10.5	14.6	8.4	10.5	10.6	13.3
Agric. And fishing workers	14.3	13.9	17.3	14.0	11.0	6.7
Craft and related workers	14.0	12.9	12.8	14.2	16.1	26.7
Machine operators	5.9	5.4	7.4	5.1	5.0	-
Elementary occupations and laborers	9.6	15.7	8.4	7.0	9.9	26.7
Armed Forces	0.1	0.7	-	-	-	-
2000 Census	2,017	446	526	537	486	22
Percent	100.0	100.0	100.0	100.0	100.0	100.0
Executive and managers	7.8	0.7	5.5	9.1	15.2	9.1
Professionals	11.9	2.9	11.4	12.8	19.5	13.6
Technical and associate professionals	13.8	4.0	12.5	18.2	19.8	4.5
Administrative support	18.2	29.6	24.0	15.5	5.1	4.5
Service workers	6.7	7.6	8.2	5.2	6.0	4.5
Agric. And fishing workers	2.3	0.7	3.2	4.1	0.8	-
Craft and related workers	11.4	7.2	9.5	13.4	13.6	45.5
Machine operators	27.9	47.3	25.7	21.6	20.0	18.2
Elementary occupations and laborers	-	-	-	-	-	-
Armed Forces	-	-	-	-	-	-

Source: 1994 & 2000 FSM Census, Table P45

Occupations varied between persons born in the State of Kosrae and those persons born elsewhere in 1994 and 2000. Table 10.9 presents the breakdown of these Kosrae born and foreign-born groups by occupation. As can be seen in the 2000 Census, Kosrae-born persons had the largest portions of their employed personnel in the technical and associate professional, administrative support and services and elementary occupation (each with more than 17 percent). On the other hand, non-Kosrae born persons had the highest portion of their employed personnel in the professionals (about 21 percent) and elementary occupations (almost 20 percent). This corresponds with the large numbers of foreign workers in government departments and agencies who are present in Kosrae State.

Table 10.9: Occupation for Aged 15 Years and Over by Place of Birth, Kosrae State: 1994 and 2000

Place of Birth	Total	Executive & managers	Professionals	Technical & Ass. Professionals	Admin. Support	Service workers	Agric. & fishing workers	Craft & related workers	Machine operators	Elemen. Occup. & laborers	Armed Forces
1994											
Kosrae-born											
Number	1,488	92	135	294	253	186	47	210	98	172	1
Percent	100.0	6.2	9.1	19.8	17.0	12.5	3.2	14.1	6.6	11.6	0.1
Foreign-born											
Number	406	17	23	29	22	12	224	56	13	9	1
Percent	100.0	4.2	5.7	7.1	5.4	3.0	55.2	13.8	3.2	2.2	0.2
2000											
Kosrae-born											
Number	1,318	121	178	231	235	89	18	126	96	224	-
Percent	100.0	9.2	13.5	17.5	17.8	6.8	1.4	9.6	7.3	17.0	-
Foreign-born											
Number	150	15	32	20	18	3	4	23	6	29	-
Percent	100.0	10.0	21.3	13.3	12.0	2.0	2.7	15.3	4.0	19.3	-

Source: 1994 & 2000 FSM Census, Table P79

Table 10.10 further examines occupations for the municipalities in the State of Kosrae. As can be seen from the table, the most common occupations varied among the four municipalities in the 2000 Census. The most common occupation in Tafunsak was elementary occupation (about 24 percent). Administrative support was the most common occupation in Lelu (almost 19 percent). The most common occupation in Malem was technical and associate professionals (more than 19 percent) while professionals was reported the most common in Utwe (about 30 percent). The 1994 data show that technical and associate professional was the most common occupation in Malem and Utwe while agriculture and fishery was reported highest in Tafunsak and Lelu with administrative support occupations.

Table 10.10: Occupation for Aged 15 Years and Over by Municipality, Kosrae State: 1994 and 2000

Occupation	Municipality				
	Total	Lelu	Malem	Utwe	Tafunsak
1994 Census	1,894	628	348	156	762
Percent	100.0	100.0	100.0	100.0	100.0
Executive and managers	5.8	8.4	5.7	5.8	3.5
Professionals	8.3	11.1	10.9	7.7	5.0
Technical and associate professionals	17.1	14.6	22.1	33.3	13.4
Administrative support	14.5	19.6	15.2	11.5	10.6
Service workers	10.5	14.0	13.5	9.0	6.4
Agric. And fishing workers	14.3	0.8	2.0	4.5	33.1
Craft and related workers	14.0	14.2	17.5	15.4	12.1
Machine operators	5.9	5.6	5.5	5.8	6.3
Elementary occupations and laborers	9.6	11.6	7.5	7.1	9.3
Armed Forces	0.1	-	-	-	0.3
2000 Census	1,468	570	322	143	433
Percent	100.0	100.0	100.0	100.0	100.0
Executive and managers	9.3	12.5	6.5	4.2	8.8
Professionals	14.3	13.3	19.3	30.1	6.7
Technical and associate professionals	17.1	13.5	19.3	9.8	22.6
Administrative support	17.2	18.6	14.6	21.0	16.2
Service workers	6.3	5.6	10.6	5.6	4.2
Agric. And fishing workers	1.5	1.4	1.9	2.1	1.2
Craft and related workers	10.1	12.5	8.4	12.6	7.6
Machine operators	6.9	6.3	5.3	7.0	9.0
Elementary occupations and laborers	17.2	16.3	14.3	7.7	23.8
Armed Forces	-	-	-	-	-

Source: 1994 & 2000 FSM Census, Table P45

In the 2000 Census, about 63 percent of the formal work force aged 25 years and over had graduated high school. About 13 percent had at least a bachelor's degree while almost 24 percent had not completed high school. Levels of educational attainment varied among occupations. In 1994 for instance, nearly 88 percent of individuals with managerial and professional occupations had at least a high school education. Also, about 35 percent had either a bachelor's degree or higher education. As for the 2000 Census, more than 87 percent of individuals with managerial and professional occupations had high school education. The results further indicate that about 29 percent of the work force had either bachelor's degree or higher education.

Educational attainment of employed males tended to have similar patterns to that of the females. Nevertheless, for certain occupation categories, employed males were more likely to have either a high school education or a bachelor's degree. For example, more males in managerial or in professional categories had bachelor's degrees and above, compared to the entire population.

The proportion of high school graduates was higher for females in professional, managerial and service occupations than males. Little college educated females were technicians, sales, and administrative support workers or laborers or farmers compared to males.

Table 10.11: Educational Attainment of the Experienced Work Force for Aged 25 Years and Over by Occupation and Sex, Kosrae State: 1994 and 2000

Educational attainment	Occupation								
	Total	Execs. and Mana-gerial	Profes-sional	Tech., Sales, Admin. Support	Ser-vices	Agric. and Fishing Workers	Craft and Related Workers	Machine Operator and Laborer	Armed Forces
1994 Census	1,614	107	147	508	157	232	230	233	-
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	-
Below H. school grads.	37.9	12.1	6.8	16.1	50.3	76.7	45.7	62.2	-
H.S. grads & some coll.	52.2	53.3	67.3	70.9	45.2	22.8	52.2	35.6	-
BA/BS degree & above	9.9	34.6	25.9	13.0	4.5	0.4	2.2	2.1	-
Males	1,211	103	115	286	85	224	189	209	-
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	-
Below H. school grads.	36.8	11.7	7.8	11.9	29.4	76.3	36.5	60.3	-
H.S. grads & some coll.	51.7	53.4	66.1	68.2	62.4	23.2	61.4	37.8	-
BA/BS degree & above	11.5	35.0	26.1	19.9	8.2	0.4	2.1	1.9	-
Females	403	4	32	222	72	8	41	24	-
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	-
Below H. school grads.	41.2	25.0	3.1	21.6	75.0	87.5	87.8	79.2	-
H.S. grads & some coll.	53.8	50.0	71.9	74.3	25.0	12.5	9.8	16.7	-
BA/BS degree & above	5.0	25.0	25.0	4.1	-	-	2.4	4.2	-
2000 Census	1,294	133	200	437	97	143	82	202	-
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	-
Below H. school grads.	24.1	12.8	6.0	12.1	34.0	44.8	42.7	48.5	-
H.S. grads & some coll.	63.2	57.9	66.0	75.5	60.8	50.3	56.1	50.5	-
BA/BS degree & above	12.7	29.3	28.0	12.4	5.2	4.9	1.2	1.0	-
Males	885	118	145	204	62	107	78	171	-
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	-
Below H. school grads.	19.8	9.3	5.5	2.5	17.7	33.6	43.6	40.9	-
H.S. grads & some coll.	64.5	58.5	62.8	77.5	74.2	60.7	55.1	57.9	-
BA/BS degree & above	15.7	32.2	31.7	20.1	8.1	5.6	1.3	1.2	-
Females	409	15	55	233	35	36	4	31	-
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	-
Below H. school grads.	33.5	40.0	7.3	20.6	62.9	77.8	25.0	90.3	-
H.S. grads & some coll.	60.4	53.3	74.5	73.8	37.1	19.4	75.0	9.7	-
BA/BS degree & above	6.1	6.7	18.2	5.6	-	2.8	-	-	-

Source: 1994 & 2000 FSM Census, Table P45

Note: This table excludes persons with no formal educational attainment.

Class of Worker

Table 10.12 presents data on class of worker. The number of persons in the State of Kosrae working in the public sector in 2000 was significantly higher than the number of persons working in the private sector. The largest portion in the private sector was in for-profit organizations (39 percent of all working persons). In the public sector the largest employer was the state government (47 percent of all working persons). These figures show the large dependency Kosrae has on government employment.

The 2000 data further showed that Tafunsak had the highest number of persons working in the private (about 49 percent) while Lelu reported (more than 46 percent), Utwe with (about 20 percent) and Malem (more than 34 percent). As for the public sector, Utwe had the highest number of persons working (more than 78 percent) while Tafunsak and Lelu reported being the lowest (each with about 51 percent). In each municipality the vast majority of the private sector was for-profit organizations. The public sector in each municipality was mostly state government. Just below 5 percent of Kosrae's employed persons were in the national government in 2000.

The 2000 Census data showed that employed females were represented more in the private sector (over 49 percent) as compared to males (about 38 percent). The trends between municipalities and within the sectors were very similar for males and females.

Table 10.12: Type of Work for Aged 15 Years and Over by Municipality and Sex, Kosrae State: 1994 and 2000

Municipality	Total	Percent	Private					Public				
			Total	For Profit	Non-Profit	Self-Employed	Work no pay	Total	Municipal govt	State govt	National govt	Foreign/ Federal
1994	1,894	100.0	46.9	42.3	1.9	2.6	0.1	53.1	2.2	46.3	3.7	0.8
Lelu	628	100.0	36.3	35.0	1.0	0.2	0.2	63.7	2.2	55.1	5.1	1.3
Malem	348	100.0	36.8	25.9	3.2	7.5	0.3	63.2	2.3	57.5	3.2	0.3
Utwe	156	100.0	23.1	17.3	-	5.8	-	76.9	2.6	71.8	2.6	-
Tafunsak	762	100.0	65.2	60.9	2.5	1.8	-	34.8	2.1	28.7	3.0	0.9
Males	1,386	100.0	44.9	41.6	1.2	2.2	-	55.1	2.5	47.8	3.8	0.9
Lelu	422	100.0	28.9	28.2	0.5	0.2	-	71.1	2.6	61.1	5.9	1.4
Malem	240	100.0	30.0	22.5	2.5	5.0	-	70.0	2.5	64.2	3.3	-
Utwe	113	100.0	22.1	15.9	-	6.2	-	77.9	2.7	73.5	1.8	-
Tafunsak	611	100.0	66.1	63.0	1.3	1.8	-	33.9	2.5	27.5	2.8	1.1
Females	508	100.0	52.4	44.3	3.9	3.7	0.4	47.6	1.4	42.1	3.5	0.6
Lelu	206	100.0	51.5	49.0	1.9	-	0.5	48.5	1.5	42.7	3.4	1.0
Malem	108	100.0	51.9	33.3	4.6	13.0	0.9	48.1	1.9	42.6	2.8	0.9
Utwe	43	100.0	25.6	20.9	-	4.7	-	74.4	2.3	67.4	4.7	-
Tafunsak	151	100.0	61.6	52.3	7.3	2.0	-	38.4	0.7	33.8	4.0	-
2000	1,468	100.0	43.5	38.6	1.8	1.8	1.3	56.5	2.2	47.1	5.3	1.8
Lelu	570	100.0	48.9	42.5	2.8	2.1	1.6	51.1	1.9	43.7	3.9	1.6
Malem	322	100.0	35.7	31.4	1.6	0.9	1.9	64.3	2.2	51.6	9.3	1.2
Utwe	143	100.0	21.7	18.9	1.4	1.4	-	78.3	5.6	68.5	2.1	2.1
Tafunsak	433	100.0	49.4	45.5	0.9	2.1	0.9	50.6	1.6	41.3	5.3	2.3
Males	978	100.0	39.4	35.6	1.5	1.8	0.4	60.6	2.5	51.1	5.6	1.4
Lelu	366	100.0	41.5	36.3	2.2	2.5	0.5	58.5	2.5	50.0	4.4	1.6
Malem	215	100.0	32.1	30.7	0.9	-	0.5	67.9	1.9	55.8	9.3	0.9
Utwe	95	100.0	21.1	17.9	2.1	1.1	-	78.9	6.3	70.5	1.1	1.1
Tafunsak	302	100.0	47.7	43.7	1.0	2.6	0.3	52.3	1.7	43.0	6.0	1.7
Females	490	100.0	51.8	44.7	2.4	1.6	3.1	48.2	1.8	39.2	4.7	2.4
Lelu	204	100.0	62.3	53.4	3.9	1.5	3.4	37.7	1.0	32.4	2.9	1.5
Malem	107	100.0	43.0	32.7	2.8	2.8	4.7	57.0	2.8	43.0	9.3	1.9
Utwe	48	100.0	22.9	20.8	-	2.1	-	77.1	4.2	64.6	4.2	4.2
Tafunsak	131	100.0	53.4	49.6	0.8	0.8	2.3	46.6	1.5	37.4	3.8	3.8

Source: 1994 & 2000 FSM Census, Table P30

Table 10.13 shows that in the 2000 Census, the largest portion of the private sector workers was reported between the ages 25 and 34 (nearly 37 percent) while the largest portion of the public sector workers was between the ages 35 to 64 (31 to 39 percent). Almost 53 percent of the private sectors workers were working for no pay and they were between the ages of 15 and 24.

Table 10.13: Type of Work for Aged 15 Years and Over by Age Groups, Kosrae State: 1994 and 2000

Age group	Total	Private					Public				
		Total	For Profit	Non-Profit	Self-Employed	Work no pay	Total	Municipal govt	State govt	National govt	Foreign/ Federal
1994	1,894	889	801	36	50	2	1,005	42	877	70	16
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
15-24	14.8	21.4	21.5	27.8	12.0	100.0	9.0	11.9	8.3	12.9	18.8
25-34	32.7	39.6	40.1	38.9	34.0	-	26.6	26.2	26.1	30.0	37.5
35-44	28.7	24.1	23.5	25.0	34.0	-	32.8	16.7	33.8	31.4	31.3
45-64	23.0	14.2	14.4	8.3	16.0	-	30.8	45.2	30.9	25.7	12.5
65+	0.8	0.8	0.6	-	4.0	-	0.8	-	0.9	-	-
2000	1,468	639	567	27	26	19	829	33	692	78	26
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
15-24	11.9	20.7	21.0	22.2	7.7	26.3	5.1	12.1	4.3	6.4	11.5
25-34	30.0	36.3	36.9	29.6	19.2	52.6	25.1	18.2	25.4	24.4	26.9
35-44	31.7	27.9	28.2	18.5	50.0	-	34.7	39.4	34.5	35.9	30.8
45-64	25.6	14.7	13.6	25.9	23.1	21.1	34.0	27.3	34.8	30.8	30.8
65+	0.8	0.5	0.4	3.7	-	-	1.1	3.0	0.9	2.6	-

Source: 1994 & 2000 FSM Census, Table P30

Table 10.14 shows data on the educational attainment by class of workers. The majority of the employees in the non-profit private sector were high school graduates or above. Over 59 percent of the for-profit private sector employees had less than high school education whereas the 2000 data showed that more 38 percent of the for-profit private sector employees. The public sector had fewer persons with high school or below educational attainment than the public sector. The 1994 data showed that only 22 percent of the state government employees had less than high school level of education while in 2000,

almost 15 percent of the state government employees had less than high school level of education. The national government and foreign/federal employees had the smallest portion of persons with no high school diploma.

Gender differences in educational attainment by class of work were also apparent in the State of Kosrae. In the private sector, the gender differentials were quite minor, however, in the public sector (excluding municipal government) women were less likely to have bachelor's degrees than males.

Also, in 2000 about 28 percent of the males in the national government had bachelor's degree, whereas in 1994, over 23 percent of the males in the national government had bachelor's degrees.

Table 10.14: Educational Attainment for Aged 25 Years and Over by Class of Worker, Kosrae State: 1994 and 2000

Educational attainment	Class of worker								
		Private				Public			
	Total	For Profit	Non-Profit	Self-Employed	Work No pay	Municipal	State Govt.	National	Foreign/ Federal
1994 Census	1,894	801	36	50	2	42	877	70	16
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Below H. school grads.	39.0	59.1	30.6	70.0	100.0	38.1	21.7	14.3	12.5
H.S. grads & some coll.	52.3	39.0	63.9	30.0	-	54.8	63.6	67.1	81.3
BA/BS degree & above	8.7	2.0	5.6	-	-	7.1	14.7	18.6	6.3
Males	1,386	576	16	31	-	35	663	52	13
Percent	100.0	100.0	100.0	100.0	-	100.0	100.0	100.0	100.0
Below H. school grads.	38.5	59.5	6.3	64.5	-	40.0	22.3	9.6	15.4
H.S. grads & some coll.	51.3	38.0	87.5	35.5	-	54.3	60.8	67.3	76.9
BA/BS degree & above	10.2	2.4	6.3	-	-	5.7	16.9	23.1	7.7
Females	508	225	20	19	2	7	214	18	3
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Below H. school grads.	40.6	57.8	50.0	78.9	100.0	28.6	19.6	27.8	-
H.S. grads & some coll.	55.1	41.3	45.0	21.1	-	57.1	72.4	66.7	100.0
BA/BS degree & above	4.3	0.9	5.0	-	-	14.3	7.9	5.6	-
2000 Census	1,294	448	21	24	14	29	662	73	23
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Below H. school grads.	24.1	37.5	33.3	41.7	28.6	37.9	14.5	12.3	30.4
H.S. grads & some coll.	63.2	57.6	52.4	50.0	71.4	62.1	67.8	67.1	47.8
BA/BS degree & above	12.7	4.9	14.3	8.3	-	0.0	17.7	20.5	21.7
Males	885	288	13	16	2	21	479	53	13
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Below H. school grads.	19.8	30.6	7.7	31.3	-	38.1	13.4	11.3	23.1
H.S. grads & some coll.	64.5	62.2	69.2	68.8	100.0	61.9	66.2	60.4	61.5
BA/BS degree & above	15.7	7.3	23.1	-	-	-	20.5	28.3	15.4
Females	409	160	8	8	12	8	183	20	10
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Below H. school grads.	33.5	50.0	75.0	62.5	33.3	37.5	17.5	15.0	40.0
H.S. grads & some coll.	60.4	49.4	25.0	12.5	66.7	62.5	72.1	85.0	30.0
BA/BS degree & above	6.1	0.6	-	25.0	-	-	10.4	-	30.0

Source: 1994 & 2000 FSM Census, Table P114

Conclusion

The 1994 Census data showed that over 53 percent of all employees in the state of Kosrae were working in the public sector while 47 percent of all employees were reported working in the private sector wherein the 2000 Census data indicated that more than 56 percent of all employees in the state of Kosrae were working in the public sector while 42 percent were reported working in the private sector. The most common occupations were technical and associate professionals, administrative support, agriculture and fishery, and craft and related workers in that order. These occupations suggest that the state economy is based largely on government activity and government remains the major employer. Nevertheless, a clear trend shows the private sector has also been growing steadily over the years.

During 1980 and 1994, occupation groups increased by over 226 percent, with the largest change occurring in agriculture and fishery, elementary occupation and laborers, craft and related workers and technical and associate professionals. As for the 2000 Census result, the percentage change in number of persons in each occupation group shows that on average, the occupation groups decreased drastically to about negative 22 percent. The increase in agriculture and fishery workers was partly because of the foreign fishing companies operating in Kosrae at the time of the 1994 Census. Otherwise, the smallest increase could have been among the agricultural and fishing workers.

CHAPTER 11
INCOME

Introduction

The 1994 FSM Census asked for cash income earned in 1993 from all persons 15 years and older while the 2000 FSM Census asked for cash income earned in 1999 from all persons 15 years and older. Income provides a measure of how well cash resources are distributed within the country as well as an insight into the sources of cash in Kosrae. Cash income is the amount of money received during a fixed period of time. For the 1994 FSM Census, the time period referred to be calendar year 1993 while the 2000 Census referred to calendar year 2000. Income includes wages or salaries, cash income from farm or non-farm business, interest on dividends or net rentals, estates or trusts, social security or retirement, and remittances.

Income was tabulated by household, by family and by individual during both Census years. Household income included all cash income earned by each member living in a housing unit who was age 15 years and over. Family income included the cash income from those members of a household with two or more related members. Individual income was based on what an individual earned during 1993 and 1999 during the two current censuses. Household and family income did not include those person's enumerated in-group quarters on census day. However, individual income did include those person's in-group quarters.

Fully 48 percent of the population aged 15 years and over reported receiving cash income in 1993. These 2,051 income recipients represented about half of the 4,251 persons in the working age population. The only persons used in the measures of income were those who reported an income for 1993. Thus measures of income were considered only for those persons who received money through salaries, wages, social security or other sources. About 52 (more than half) of the population reported no income.

Definitions

Wage or salary income is the total amount of money earned by a person working as an employee for a private enterprise (business or farm) or a branch of government. Wage or salary income includes take-home pay plus all deductions for withholding tax, social security, union dues, bonds, uniforms, etc. Also included are piece-rate payments, commissions, tips, bonuses, and sick leave pay. Own business income includes money receipts as well as business expenses. Interest and dividends are money earned from savings or shares. Social security and government benefits include payments from retirement, or disability payments. Remittances include money received from relatives within and outside of FSM who are not living with the individual.

Two statistics were used to analyze income: *median* and *mean*. The median income is that income value that divides income recipients into two equal halves. The mean income is the sum of all income in a region or characteristic divided by the number of income recipients. (Similarly, the aggregate of all incomes in a region can be found by multiplying the mean by the number of persons earning income.) The median is a better estimate of average income because it places less emphasis on extreme values and is less susceptible to the effects of under reporting and processing errors. In this chapter both median and mean are used in most tables.

Limitations and Comparability. Income is a self-reported number and is easily misreported due to self-inflation or deflation or to poor recollection. In the case of the FSM 1994 Census, the income was received at least 9 months prior to the time of reporting, making it easier to forget small or irregular income. Other errors occurred because of misunderstandings such as reporting net rather than gross earnings. The 1980 TTPI Census collected similar information on income and these data are used here with an inflation factor to compare against the 1994 Census data. Furthermore, the data collected during both 1980 and 1994 Censuses refer to cash income only.

Income data may not fully explain the economy in Kosrae because of the significant share of subsistence activities in the economy. It does, however, give an indicator of the access of the Kosrae population to material possessions and changes in the cash economy.

Analysis of Income Data

Cash Income

Income earning population in Kosrae increased significantly between 1994 and 2000. In the 2000 Census, 50 percent of persons aged over 15 reported a cash income, significantly higher than the 48 percent who reported a cash income in 1994. In 1994, median household income in Kosrae was $6,739 and the mean household income was higher at $9,686 while the 2000 data showed slight increase in median household income of 7,528 and the mean household income at 12,407. The mean income was higher than the median due to a few large incomes, which raised the sum of the incomes. The results further indicate that a median of $7,528 means that of the 1,059 households, half of the households had incomes below $7,528 and half of the households had incomes above this level.

This increase in the number of people reporting an income should be remembered when examining the statistics in this chapter. For example, many individuals reported a small income in 2000, but no income in 1994. This resulted in lower mean and median incomes in 2000. Under these circumstance mean and median can be misleading, so it is important to look also at income distributions and sources of income.

The four municipalities had large variations in their median household incomes. In 1994, Lelu had the highest median income of $8,657; Tafunsak had the next highest at $6,128; Malem median income was $6,042; and Utwe was lowest at $4,789. As for the 2000 data, Lelu continued to be the highest in median income of $9,155 while Utwe remained the lowest with $5,833. Mean household incomes showed similar trends but at a higher level. Family incomes were slightly less than household incomes in almost all the municipalities. This finding is expected because households of unrelated persons were likely to be persons of working age, and thus more likely to be earning income.

The individual median income in 1994 for Kosrae was $3,253 while the 2000 data indicates that median individual income for Kosrae was $3,446. Among the municipalities, individual income had a slightly different trend than household and family income. The 1994 data showed that individual income in Lelu was still the highest with a median of $4,218 followed by Utwe with a median income of $3,411, Malem had the third highest with an individual income median of $3,087, and Tafunsak had the lowest at $2,529. As for the 2000 data Lelu continued to the highest with the median individual income of $4,073 while Utwe remain the lowest with $2,217. Mean individual income once again showed similar results. The largest gap between median and mean occurred in Lelu suggesting that a few very large incomes skewed the data.

Table 11.1: Household, Family and Individual Income in 1993 and 1999, Kosrae State: 1994 and 2000

Type of Income	1994					2000				
	Total	Lelu	Malem	Utwe	Tafunsak	Total	Lelu	Malem	Utwe	Tafunsak
HOUSEHOLD	964	345	212	147	260	1,087	357	248	156	326
Number with income	907	330	208	128	241	1,059	353	239	146	321
Percent with cash income	94.1	95.7	98.1	87.1	92.7	97.4	98.9	96.4	93.6	98.5
Median	$6,739	$8,657	$6,042	$4,789	$6,128	$7,528	$9,155	$7,156	$5,833	$7,626
Mean	$9,686	$11,824	$9,356	$6,741	$8,607	$12,407	$14,065	$11,745	$7,832	$13,159
FAMILY	932	331	203	142	256	1,055	345	242	151	317
Number with income	875	317	198	123	237	1,021	334	234	144	309
Percent with cash income	93.9	95.8	97.5	86.6	92.6	96.8	96.8	96.7	95.4	97.5
Median	$6,574	$8,250	$5,929	$4,833	$5,994	$7,565	$9,236	$7,250	$5,833	$7,620
Mean	$9,167	$11,238	$8,813	$6,684	$7,982	$12,358	$14,083	$11,916	$7,877	$12,917
INDIVIDUAL	4,251	1,371	828	590	1,462	4,628	1,550	954	666	1,458
Number with income	2,052	659	410	213	770	2,336	779	496	311	750
Percent with cash income	48.3	48.1	49.5	36.1	52.7	50.5	50.3	52.0	46.7	51.4
Median	$3,253	$4,218	$3,087	$3,411	$2,529	$3,446	$4,073	$3,360	$2,217	$3,537
Mean	$4,753	$6,287	$4,747	$4,051	$3,637	$4,753	$6,287	$4,747	$4,051	$3,637

Source: 1994 FSM Census, Table P31 and 2000 FSM Census, Table P2-19

Table 11.2 shows the change in household income between 1994 and 2000, adjusted for inflation, twenty-six years preceding the latest census. This factor takes into account the inflation that occurred over the years prior to the census. Similarly, an inflation factor raises the 1980 dollars to the equivalent in 1994 dollars and 2000. This factor takes into account the inflation that occurred over a period of 14 years. Over the period, Kosrae's household median income increased by 17 percent.

Table 11.2: Median Household Income Change by Municipality, Kosrae State: 1980 and 1994 & 1995 and 2000

Municipality	1994			2000		
	Number of Households	Median	Adjusted in 2000 dollars	Number of Households	Median	Percent Change
Total	907	$6,739	$7,255	1,059	$7,528	3.8
Lelu	330	$8,657	$9,319	353	$9,155	(1.8)
Malem	208	$6,042	$6,504	239	$7,156	10.0
Utwe	128	$4,789	$5,155	146	$5,833	13.1
Tafunsak	241	$6,128	$6,597	321	$7,620	15.5

Source: 1994 FSM Census, Table P31; 2000 FSM Census, Table 2-19

Note: 1994 dollars were multiplied by a factor of 1.0765 to estimate 2000 equivalent purchasing power. This is based on the U.S. inflation rate from 1994 to 1997 and the Pohnpei inflation rate from 1997 to 2000.

Table 11.3 contains the percentage breakdown of individual incomes by municipality and income range. The income peaked at different levels in the municipalities (see also Figure 11.1), probably due to government salaries. The 1994 census showed that Lelu income level peaked at the $5,000 to $7,499 range; Tafunsak peaked at the $1,000 to $1,999 range; and Malem and Utwe peaked at the less than $1,000 range. As for the 2000 data, Lelu income level peaked at $5,000 to $7,499 while Tafunsak, Malem and Utwe peaked at less than $1,000 range. About 24 percent of the incomes in Utwe were below $1,000 in 1994 while the 2000 data showed more than 34 percent of the income in Utwe were below $1,000. The corresponding value for Lelu was 5 percent. Once again, this may be attributed to the availability of the job market.

Table 11.3: Percent Distribution of Individual Income in 1993 and 1999 by Municipality, Kosrae State: 1994 and 2000

Annual income	1994					2000				
	Total	Lelu	Malem	Utwe	Tafunsak	Total	Lelu	Malem	Utwe	Tafunsak
1994 CENSUS										
Persons with income	2,052	659	410	213	770	2,336	779	496	311	750
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than $ 1,000	13.6	5.0	20.2	23.5	14.7	21.3	13.7	24.8	34.1	21.5
$ 1,000 to $ 1,999	17.2	10.9	16.1	11.3	24.8	11.5	10.8	11.7	13.2	11.5
$ 2,000 to $ 2,999	15.8	15.0	12.7	9.9	19.9	12.6	13.6	12.7	8.0	13.5
$ 3,000 to $ 3,999	13.3	16.7	11.2	13.1	11.6	12.9	13.2	10.1	11.6	14.9
$ 4,000 to $ 4,999	9.7	10.8	10.7	14.1	7.0	9.0	9.0	7.3	10.9	9.3
$ 5,000 to $ 7,499	14.3	19.0	13.2	16.9	10.3	13.8	15.9	11.9	11.3	14.0
$ 5,500 to $ 9,999	7.4	9.0	7.6	5.2	6.5	7.0	7.6	7.1	5.5	7.1
$10,000 to $12,499	3.0	4.1	2.9	2.8	2.1	4.1	5.5	4.6	1.3	3.5
$12,500 to $14,999	1.9	3.3	1.5	0.9	1.2	2.3	2.6	3.6	1.3	1.5
$15,000 to $19,999	1.9	3.6	1.0	0.9	1.0	2.3	3.3	3.0	1.0	1.3
$20,000 to $24,999	0.3	0.3	0.5	0.5	0.3	1.0	1.7	1.2	-	0.7
$25,000 to $34,999	0.9	1.2	1.5	0.5	0.5	0.9	1.2	0.8	1.0	0.5
$35,000 to $49,999	0.3	0.2	0.5	0.5	0.3	0.6	1.2	0.6	0.6	0.1
$50,000 or more	0.4	0.9	0.5	-	-	0.6	0.8	0.6	0.3	0.7
Median (dollars)	$3,253	$4,218	$3,087	$3,411	$2,529	$3,355	$3,898	$3,080	$2,340	$3,241
Mean (dollars)	$4,753	$6,287	$4,747	$4,051	$3,637	$5,625	$6,374	$5,659	$3,677	$5,632

Source: 1994 FSM Census, Table P31; 2000 FSM Census, Table 2-19

Figure 11.1a: Individual Income by Municipality, Kosrae State: 1994

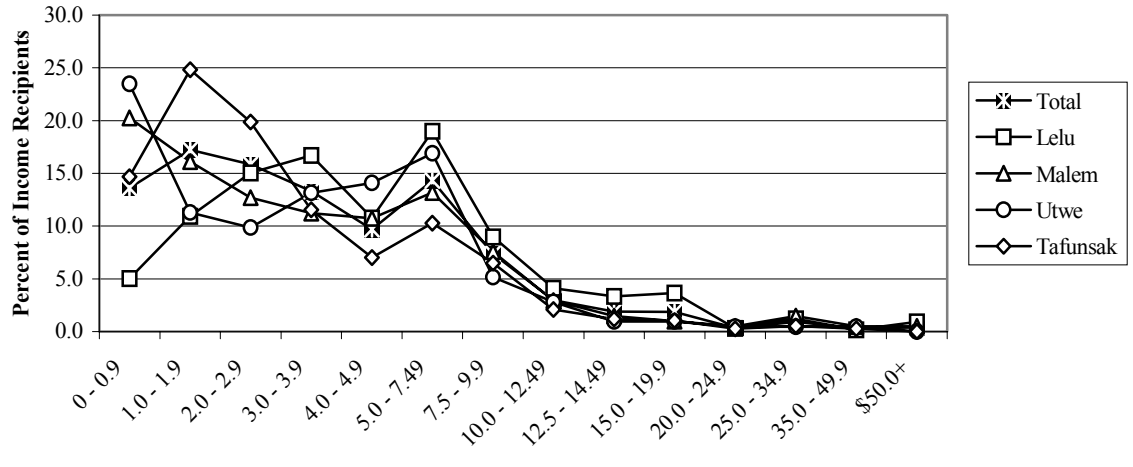


Figure 11.1b: Individual Income by Municipality, Kosrae State: 2000

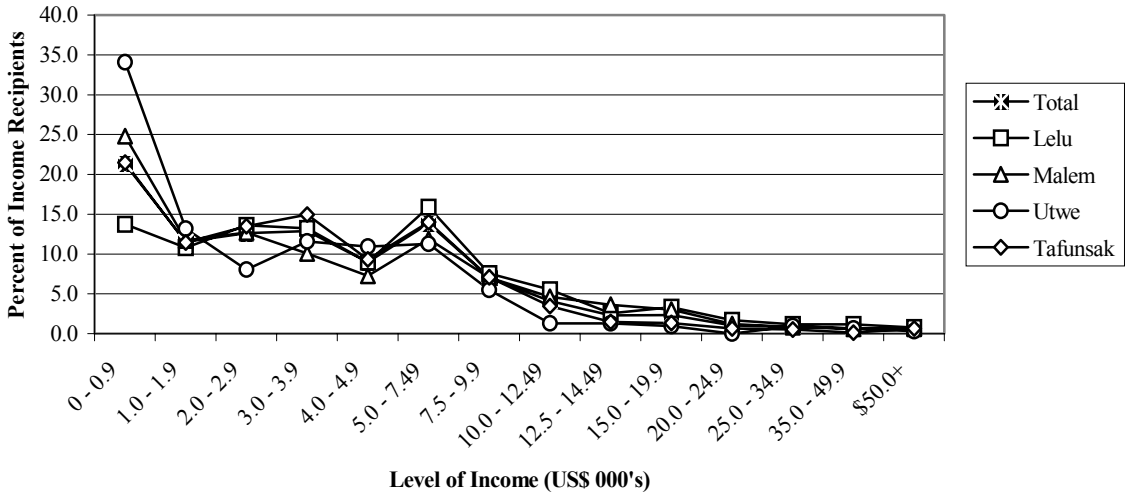


Table 11.4 shows the individual income in Kosrae by sex and age in 1993 and 1999. The number of people reporting an income increased across all age groups and both sexes, but particularly for females, hence median income generally decreased. The median income for ' both sexes' steadily increased with age until a peak at age groups 45 to 49 in 1994 and continued to remain at 45 to 49 in 2000.

By gender, males were more likely than females to report income and males reported higher median incomes than females in all age groups. For males, median income increased steadily with age and older males reported the highest median incomes. Males tended to follow the same pattern mentioned above but at a higher level, and males in the 50 to 54 had maintained relatively higher income. In 1994, females, however, reached their income peak at ages 35 to 39 and median income of older women was much lower while the 2000 data indicated that females reached their income peak at ages 40 to 44. This pattern is perhaps, in part, due to fewer education opportunities available to the older generation of women resulting in lower earning capacity.

Mean incomes by age and sex showed some unusual patterns but these results have been distorted by the reporting of a small number of very high incomes, which raised the sum of the incomes.

Table 11.4: Individual Income in 1993 and 1999 by Age and Sex, Kosrae State: 1994 and 2000

Age group	Total			Males			Females		
	Total	Median	Mean	Total	Median	Mean	Total	Median	Mean
1994 CENSUS									
Total	2,052	$3,253	$4,753	1,458	$3,533	$5,336	594	$2,655	$3,322
15 to 19 years	56	$903	$1,072	31	$775	$921	25	$1,250	$1,260
20 to 24 years	188	$2,306	$3,424	122	$2,378	$3,902	66	$2,083	$2,542
25 to 29 years	282	$2,826	$3,437	185	$2,602	$3,224	97	$3,396	$3,842
30 to 34 years	310	$3,742	$4,790	224	$3,872	$5,102	86	$3,421	$3,977
35 to 39 years	293	$4,109	$5,342	215	$4,420	$5,792	78	$3,611	$4,101
40 to 44 years	245	$4,689	$5,936	177	$4,982	$6,501	68	$3,500	$4,466
45 to 49 years	220	$5,417	$7,467	175	$6,128	$8,392	45	$3,313	$3,873
50 to 54 years	123	$4,808	$6,521	91	$6,118	$7,778	32	$1,750	$2,947
55 to 59 years	103	$2,650	$6,082	71	$3,250	$7,488	32	$1,750	$2,964
60 to 64 years	99	$2,370	$3,062	73	$2,794	$3,664	26	$1,286	$1,373
65 yrs & over	133	$1,266	$1,511	94	$1,500	$1,748	39	$750	$942
2000 CENSUS									
Total	2,336	$3,446	$5,626	1,413	$4,266	$6,525	923	$2,055	$4,248
15 to 19 years	80	$400	$1,800	51	$469	$2,438	29	$297	$676
20 to 24 years	195	$2,038	$2,844	106	$2,306	$3,107	89	$1,750	$2,532
25 to 29 years	276	$3,420	$3,640	165	$3,676	$4,003	111	$2,896	$3,099
30 to 34 years	286	$3,711	$4,566	149	$4,282	$5,262	137	$2,994	$3,808
35 to 39 years	315	$4,028	$5,585	195	$4,558	$6,553	120	$3,015	$4,011
40 to 44 years	296	$5,385	$9,579	196	$6,327	$7,877	100	$3,095	$12,916
45 to 49 years	262	$5,389	$8,684	163	$7,169	$11,228	99	$2,107	$4,496
50 to 54 years	194	$4,659	$7,997	134	$6,111	$10,149	60	$2,100	$3,192
55 to 59 years	127	$3,371	$6,428	75	$4,531	$8,947	52	$1,500	$2,794
60 to 64 years	99	$3,090	$4,253	62	$4,018	$5,169	37	$966	$2,717
65 yrs & over	206	$1,717	$2,302	117	$2,113	$2,724	89	$988	$1,746

Source: 1994 FSM Census, P48; 2000 FSM Census Table P3-17

Individual incomes varied considerably between males and females. Table 11.5 provides the percentage of males and females in each income range. The 2000 Census results showed that more than 62 percent of the working age males reported an income compared to 39 percent of the working age females. Furthermore, the data show fewer females have high incomes. Of those persons earning $10,000 or more per year, only 12 percent were women in 1994. If income distribution were equal in Kosrae, the percent of females at each income level would be similar to the representation of females who recorded an income. Thus we would expect to see the proportion of women at each income range similar to the distribution of all income earners. Instead we find that women were over-represented at the lowest income levels, and in the $5,000 and higher ranges they were under-represented.

Given the median yearly income of $2,352 for income earning females, the average monthly income would be 196. For males, however, with a median yearly income of $4,370, the average monthly income would be $364.

Table 11.5: Individual Income in 1993 and 1999 by Sex, Kosrae State: 1994 and 2000

Annual Income	1994						2000					
	Number			Percent			Number			Percent		
	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females
Persons 15+ years	4,251	2,232	2,019	100.0	52.5	47.5	4,628	2,276	2,352	100.0	49.2	50.8
Persons with income	2,052	1,458	594	100.0	71.1	28.9	2,336	1,413	923	100.0	60.5	39.5
Less than $ 1,000	279	124	155	100.0	44.4	55.6	497	174	323	100.0	35.0	65.0
$ 1,000 to $ 1,999	353	266	87	100.0	75.4	24.6	269	145	124	100.0	53.9	46.1
$ 2,000 to $ 2,999	325	241	84	100.0	74.2	25.8	295	175	120	100.0	59.3	40.7
$ 3,000 to $ 3,999	273	184	89	100.0	67.4	32.6	301	198	103	100.0	65.8	34.2
$ 4,000 to $ 4,999	199	136	63	100.0	68.3	31.7	210	141	69	100.0	67.1	32.9
$ 5,000 to $ 7,499	294	226	68	100.0	76.9	23.1	323	233	90	100.0	72.1	27.9
$ 5,500 to $ 9,999	151	124	27	100.0	82.1	17.9	164	122	42	100.0	74.4	25.6
$10,000 to $12,499	61	53	8	100.0	86.9	13.1	96	75	21	100.0	78.1	21.9
$12,500 to $14,999	39	35	4	100.0	89.7	10.3	53	43	10	100.0	81.1	18.9
$15,000 to $19,999	38	34	4	100.0	89.5	10.5	54	46	8	100.0	85.2	14.8
$20,000 to $24,999	7	7	-	100.0	100.0	-	24	21	3	100.0	87.5	12.5
$25,000 to $34,999	19	16	3	100.0	84.2	15.8	20	18	2	100.0	90.0	10.0
$35,000 to $49,999	6	4	2	100.0	66.7	33.3	15	10	5	100.0	66.7	33.3
$50,000 or more	8	8	-	100.0	100.0	-	15	12	3	100.0	80.0	20.0
Median (dollars)	$3,253	$3,533	$2,655	...	...	...	$3,708	$4,370	$2,352	...	...	...
Mean (dollars)	$4,753	$5,336	$3,322	...	...	...	$5,933	$6,645	$4,666	...	...	...

Source: 1994 FSM Census, Table P173; 2000 FSM Census, Table P11-1

Table 11.6 compares data on income levels of female headed households (no husband present) to married-couple families and to all families. The median income in most municipalities was considerably smaller for female-headed households than for married-couple families. In 1994, Malem had the largest disparity between median incomes of married couples

compared to female-headed households, with a difference of $3,455 while the 2000 data showed that Lelu had the largest disparity between median incomes of married couples compared to female-headed households, with a difference of $7,944. Also the female-headed households in Tafunsak had higher income compared to married couples. This suggests that married-couple families were more likely to have higher incomes (probably because there were more workers within the household).

Table 11.6: Median Family Income in 1993 and 1999 by Type of Family and Municipality, Kosrae State: 1994 and 2000

	Number of Families			Median Income		
Municipality	Total	Married Couple	Female Householder, No Husband Present	Total	Married Couple	Female Householder, No Husband Present
1994	875	766	84	$6,574	$6,839	$4,818
Lelu	317	284	27	$8,250	$8,462	$5,208
Malem	198	174	15	$5,929	$6,288	$2,833
Utwe	123	109	10	$4,833	$5,054	$4,333
Tafunsak	237	199	32	$5,994	$6,055	$6,429
2000	1,021	810	60	$8,017	$8,039	$7,500
Lelu	334	265	17	$9,844	$9,556	$17,500
Malem	234	188	15	$7,750	$7,800	$7,083
Utwe	144	117	10	$6,157	$6,450	$2,000
Tafunsak	309	240	18	$7,889	$7,927	$7,500

Source: 1994 & 2000 FSM Censuses, unpublished data

As would be expected, income increased with educational attainment (Table 11.7). Median income for persons who attended college was double the median income of persons who stopped studying after high school. High school graduates had a median income of $3,206 and persons with some college had a median income of $6,039. Persons with a bachelor's degree earned more than twice the number of the person with only high school diploma. Those with only an elementary education had only half the median income of persons with high school education. Median income of elementary school educated persons was $1,878, lower than those with no education (median income of $2,142), probably due to the small numbers of persons. At every educational level median income for women was less than that of men. The most significant differences (of over $2,000 per year) occurred with the higher educated income groups. The 2000 data showed that high school graduates had a median income of $3,718 and persons with some college; no degree had a median income of $4,713. Median income of elementary school educated persons was $1,987, much higher than those with no education (median income of $1,667. An interesting finding is that at the highest educational level (Masters or higher), females had a far higher income level than their male counterparts.

Table 11.7: Individual Income in 1993 and 1999 by Educational Attainment, Kosrae State: 1994 and 2000

Educational attainment	Total			Males			Females		
	Total	Median	Mean	Total	Median	Mean	Total	Median	Mean
1994									
Persons 25+ years with income	1,985	$3,309	$4,758	1,410	$3,581	$5,317	575	$2,741	$3,386
No education	60	$2,143	$2,641	44	$2,273	$2,682	16	$1,750	$2,528
Elementary									
1-3 grades	122	$1,941	$1,920	70	$2,364	$2,327	52	$897	$1,371
4-7 grades	130	$1,800	$2,219	76	$2,471	$2,907	54	$844	$1,252
Elem. Grads.	148	$1,878	$2,119	82	$1,862	$2,251	66	$1,917	$1,955
High school									
9-11 grades	248	$2,273	$2,640	168	$2,500	$3,008	80	$1,813	$1,868
12, no diploma	170	$2,158	$2,591	151	$2,194	$2,644	19	$1,750	$2,173
HS graduates	347	$3,206	$3,820	241	$3,339	$4,100	106	$3,000	$3,186
College	760	$6,039	$7,932	578	$6,413	$8,508	182	$5,048	$6,101
Some, no degree	274	$4,588	$5,224	205	$4,740	$5,373	69	$4,167	$4,780
Assoc. academic	197	$5,558	$6,237	139	$5,750	$6,506	58	$5,238	$5,591
Assoc. vocational	125	$6,469	$7,717	92	$6,810	$8,090	33	$5,568	$6,676
Bachelors	136	$8,984	$13,310	117	$9,306	$13,950	19	$7,083	$9,368
Masters or higher	28	$20,000	$21,199	25	$19,375	$21,425	3	$27,500	$19,312
2000									
Persons 25+ years with income	2,061	$3,742	$6,037	1,256	$4,562	$6,980	805	$2,210	$4,567
No education	26	$1,667	$4,294	14	$2,071	$2,387	12	$850	$6,519
Elementary									
1-3 grades	160	$1,523	$1,878	61	$1,921	$2,104	99	$1,073	$1,739
4-7 grades	214	$1,714	$2,322	94	$2,406	$3,285	120	$1,000	$1,569
Elem. Grads.	154	$1,987	$2,682	70	$3,167	$4,013	84	$1,130	$1,572
High school									
9-11 grades	248	$2,160	$2,512	125	$3,326	$3,320	123	$949	$1,690
12, no diploma	80	$3,203	$4,595	51	$3,631	$5,553	29	$2,375	$2,912
HS graduates	291	$3,718	$4,703	181	$3,898	$4,689	110	$3,375	$4,725
College	888	$6,323	$9,867	660	$6,711	$9,801	228	$5,307	$10,060
Some, no degree	330	$4,713	$9,114	252	$5,000	$7,126	78	$3,833	$15,535
Assoc. academic	196	$5,667	$6,422	144	$5,682	$6,516	52	$5,625	$6,161
Assoc. vocational	191	$6,462	$8,229	121	$6,914	$9,085	70	$5,926	$6,750
Bachelors	134	$11,389	$16,409	112	$12,069	$18,056	22	$9,000	$8,025
Masters or higher	37	$17,083	$19,604	31	$17,083	$19,769	6	$17,500	$18,755

Source: 1994 FSM Census, Table P183; 2000 FSM Census, Table P11-12

A person's economic activity naturally has a bearing on their income. Table 11.8 shows data on the median income of each of the economic activity categories by sex in 1994 and 2000. Although the data on income refer to a different time period rather than economic status, a majority of these persons' economic status did not change. In 1994, those persons employed in the formal sector had the highest median income at $4,547 while the 2000 Census showed an increased of persons employed in the formal sector with median income was reported at $4,783. The results of the 1994 Census showed that those persons who could have taken a job but were not looking had the lowest income at $888 compare to $1,699 in 2000. Females had consistently lower median incomes than males at every economic status, except in the subsistence category.

Table 11.8: Individual Median Income in 1993 and 1999 by Economic Status the Week Before the Census, Kosrae State: 1994 and 2000

Economic status	1994 CENSUS					2000 CENSUS				
	Percent of 1994 workforce claiming income in 1993	Number	Median income			Percent of 2000 workforce claiming income in 1999	Number	Median income		
			Total	Males	Females			Total	Males	Females
Persons 15+ years with income	48.3	2,052	$3,253	$3,533	$2,655	50.5	2,336	$3,446	$4,266	$2,055
In labor force	78.4	1,629	$3,801	$3,895	$3,590	87.0	1,706	$4,172	$4,782	$2,894
Employed	89.2	1,576	$3,891	$3,953	$3,750	89.2	1,701	$4,181	$4,789	$2,904
Formal work	93.2	1,292	$4,547	$4,935	$3,793	95.8	1,406	$4,783	$5,438	$3,783
Agriculture/fishing	74.7	284	$1,941	$1,954	$1,600	67.0	295	$822	$1,547	$415
Subsistence	25.5	25	$2,083	$2,000	$4,500	42.9	84	$2,026	$2,688	$563
Market oriented	91.8	259	$1,936	$1,953	$1,500	86.5	211	$658	$934	$389
Unemployed	16.9	53	$946	$1,357	$750	9.3	5	$2,125	$1,375	$2,125
Not in labor force	19.5	423	$1,388	$1,831	$891	23.6	630	$1,681	$2,413	$940
Could have taken a job	13.7	103	$888	$1,250	$834	21.1	304	$1,699	$2,427	$1,064
Not available for work	22.6	320	$1,606	$1,896	$933	26.6	326	$1,660	$2,400	$835

Source: 1994 & 2000 FSM Censuses

Note: Economic status refers to the week before the census, while the income data refer to the 1993 and 1999 income.

Table 11.9 shows data on median income for different occupations. Not all persons who had income in 1993 and 1999 reported an occupation because some persons with income were not working. As was explained in the chapter on occupations, the occupation categories are in accordance with how much skill and experience are needed for a job. Median income in 1993 and 1994 followed the type of skills required for the job. The 1994 Census data showed that executives and

managers were the highest paid occupations (median income of $10,357) and continued to be highest paid occupations in 2000 with a median income of $9,125. Professionals, technicians and associate professionals also had higher than the average median income.

Similar to findings on education and income, women had lower median income in every occupation group (except in the machine operations category) than men, with the largest differences occurring in the executive and manager occupations.

Table 11.9: Median Individual Income in 1993 and 1999 by Occupation, Kosrae State: 1994 and 2000

Occupation	1994 CENSUS						2000 CENSUS					
	Total		Males		Females		Total		Males		Females	
	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median
Current workforce												
Persons 15+ years	1,718	$3,748	1,290	$3,888	428	$3,434	1,406	$4,783	950	$5,438	456	$3,783
Executive and managers	104	$10,357	100	$10,714	4	$4,000	132	$9,861	118	$11,087	14	$4,375
Professionals	152	$5,972	116	$6,371	36	$4,769	206	$7,200	149	$8,170	57	$5,893
Technicians and assoc. prof.	303	$5,931	229	$6,147	74	$5,300	245	$6,719	175	$7,132	70	$5,714
Administrative support	235	$3,745	63	$5,625	172	$3,500	243	$3,992	42	$5,250	201	$3,750
Service workers	158	$3,656	90	$4,500	68	$2,625	86	$3,571	46	$4,531	40	$2,763
Agriculture and fishing workers	260	$1,926	253	$1,950	7	$1,417	20	$5,000	19	$5,250	1	$1,750
Subsistence workers	9	$3,875	8	$4,000	1	$2,500	-	-	-	-	-	-
Craft and related workers	243	$3,279	204	$3,667	39	$2,382	137	$3,994	104	$4,730	33	$1,589
Machine operators	106	$3,500	102	$3,471	4	$6,250	100	$3,611	96	$3,556	4	$11,667
Elementary Occup. and labor	147	$2,813	124	$2,941	23	$2,083	237	$3,298	201	$3,535	36	$1,964
Armed Forces	1	$3,500	1	$3,500	-	-	-	-	-	-	-	-

Source: 1994 FSM Census, Table P187; 2000 FSM Census, Table, P11-16

Overall income levels in the public sector were much higher than in the private sector. All but the municipal government positions had median incomes higher than the overall median income (Table 11.10). In 1994, national government incomes had a median of $8,269 whereas in 2000, national government incomes increased to a median of $9,632, which was more than double the median income in the private sector in both years. Little difference in median income occurred between 'For-profit' and 'non-profit' enterprise employees. With few exceptions, female median incomes were lower in every category compared to their counterparts.

Table 11.10: Individual Income in 1993 and 1999 by Class of Work, Kosrae State: 1994 and 2000

Class of work	Total			Males			Females		
	Number	Median	Mean	Number	Median	Mean	Number	Median	Mean
1994 CENSUS									
Current workforce									
persons 15+ years	1,718	3,748	5,370	1,290	3,888	5,776	428	3,434	4,149
Private wage/salary:									
For profit	719	2,497	3,438	533	2,482	3,633	186	2,543	2,882
Not for profit	28	3,000	4,044	14	4,500	5,116	14	2,667	2,971
Government:									
Municipal govt.	38	3,556	3,880	31	3,786	4,136	7	2,833	2,746
State	816	5,066	6,772	628	5,437	7,233	188	4,474	5,232
National	60	8,269	11,829	45	9,129	12,953	15	6,875	8,459
Federal/foreign	14	7,500	10,012	11	6,563	9,565	3	11,250	11,651
Self-employed	42	2,091	2,809	28	2,333	3,023	14	1,000	2,382
Unpaid family worker	1	501	50	-	-	-	1	501	50
2000 CENSUS									
Current workforce									
persons 15+ years	1,406	$4,783	$7,724	950	$5,438	$8,268	456	$3,783	$6,591
Private wage/salary:									
For profit	560	$3,539	$5,188	347	$4,006	$6,181	213	$2,797	$3,570
Not for profit	-	-	-	-	-	-	-	-	-
Government:									
Municipal govt.	33	$3,583	$5,152	24	$4,000	$6,074	9	$2,750	$2,694
State	680	$5,900	$9,041	494	$6,435	$8,592	186	$4,877	$10,231
National	77	$9,922	$15,965	54	$10,455	$18,829	23	$9,375	$9,241
Federal/foreign	24	$7,500	$8,195	13	$8,125	$10,119	11	$4,583	$5,923
Self-employed	24	$5,357	$8,303	17	$5,313	$10,001	7	$5,417	$4,180
Unpaid family worker	8	$813	$1,492	1	$625	$963	7	$875	$1,567

Source: 1994 FSM Census, Table P189; 2000 FSM Census, Table P11-18
Note: Class of work refers to the most recent job, while the income data refers to 1993 & 1999 income.

Table 11.11 presents data on median income by source and municipality. The majority of persons who reported income in 1993 received their income from wages or salaries. Many of these individuals also received income from other sources, giving them multiple income sources. In 1994, wages and salaries made the largest contribution to income with the largest number of recipients and the highest median amount ($3,719) whereas the 2000 Census showed that the largest number of recipients and highest median amount ($6,346). Social security and remittances were the second largest contribution of

about 300 persons in these categories receiving some form of government assistance with a median amount of $1,321 in 1994 and increased to $2,725 in 2000.

As shown in the 2000 data, the median income from wages and salaries was highest in Tafunsak ($7,026) and lowest in Utwe ($4,804). Remittances was the second most important source of income in Tafunsak while social security and pensions was the second most important in Lelu. In Tafunsak, about 9 percent of the income recipients were from remittances. In Lelu, 16 percent of the income was earned through social security and pensions.

Remittances from within Kosrae had about the same median as remittances from outside of Kosrae, both having an average $565 in 1994 and increased to $963 in 2000. More persons received remittances from outside the FSM than from inside.

Table 11.11: Median Income by Source and Municipality, Kosrae State: 1994 and 2000

	1994 CENSUS					2000 CENSUS				
		Municipality					Municipality			
Source of Income	Total	Lelu	Malem	Utwe	Tafunsak	Total	Lelu	Malem	Utwe	Tafunsak
Persons earning income	2,052	659	410	213	770	2,336	779	496	311	750
Median total income	$3,253	$4,218	$3,087	$3,411	$2,529	$5,625	$6,374	$5,659	$3,677	$5,632
Wages and salary	1,656	553	302	139	662	1,648	595	369	166	518
Median	$3,719	$4,737	$3,975	$4,250	$2,697	$6,346	$6,752	$5,431	$4,804	$7,026
Profit from business or farm	203	35	78	44	46	478	63	104	126	185
Median	$825	$673	$697	$1,818	$822	$1,797	$1,800	$3,780	$1,494	$888
Interest, dividends, trusts, royalty	63	22	23	10	8	139	56	29	21	33
Median	$808	$1,750	$575	$556	$2,000	$3,516	$6,108	$1,520	$1,146	$2,378
Social security, pension, retirement	280	108	90	20	62	340	122	82	46	90
Median	$1,321	$1,576	$1,000	$1,500	$1,231	$2,725	$2,875	$2,967	$1,607	$2,874
Remittances from within FSM	131	22	36	44	29	129	28	30	13	58
Median	$565	$579	$600	$565	$518	$963	$3,082	$697	$212	$246
Remittances from outside FSM	161	31	50	37	43	300	91	74	65	70
Median	$615	$674	$658	$545	$598	$618	$440	$642	$849	$609
Others	10	1	4	2	3	65	6	19	5	35
Median	$715	$501	$1,000	$501	$750	$1,534	$2,648	$2,872	$439	$774

Source: 1994 & 2000 FSM Censuses, unpublished data

Table 11.12 compares gender differentials of sources of income. As expected, most incomes were from wages and salaries. The median wage or salary was $3,836 for males and $3,456 for females in 1994 whereas the 2000 Census data showed that the median wages or salary was $$4,997 for males and $3,516 for females. The 1994 data indicate that the next largest median income component was social security, pension and retirement: $1,321 was the average income for those 280 persons who claimed this source of income. Males had a higher average income for every source of income. As for the 2000 Census results, the largest median income component was from interest, dividends, trusts and royalty ($6,513).

Table 11.12: Income Source in 1993 and 1999 by Sex, Kosrae State: 1994 and 2000

Source of income	Number of recipients			Median income		
	Total	Males	Females	Total	Males	Females
1994 CENSUS						
Total with income 15+ years	2,052	1,458	594	$3,253	$3,533	$2,655
Wages and salary	1,656	1,244	412	$3,719	$3,836	$3,456
Profit from business or farm	203	169	34	$825	$854	$709
Interest, dividends, trusts, royalty	63	47	16	$808	$839	$728
Social security, pension, retirement	280	196	84	$1,321	$1,355	$1,211
Remittances from within FSM	131	65	66	$565	$561	$569
Remittances from outside FSM	161	86	75	$615	$642	$586
Other income	10	5	5	$715	$1,500	$501
2000 CENSUS						
Total with income 15+ years	2,336	1,413	923	$3,446	$4,266	$2,055
Wages and salary	1,648	1,097	551	$4,519	$4,997	$3,516
Profit from business or farm	478	301	177	$1,811	$3,552	$540
Interest, dividends, trusts, royalty	139	103	36	$6,513	$8,375	$2,500
Social security, pension, retirement	340	188	152	$2,429	$2,857	$2,071
Remittances from within FSM	129	59	70	$1,359	$3,229	$738
Remittances from outside FSM	300	147	153	$2,279	$4,049	$938
Other income	65	42	23	$3,162	$4,423	$938

Source: 1994 & 2000 FSM Censuses, unpublished data
Note: The sum of recipients does not equal the total because some individuals had more than one source of income.

Conclusions

The median income for individuals in Kosrae was $3,253 in 1993, and median household income was $6,739, an increase of approximately 20 percent since 1980 (after adjusting for inflation). The 2000 Census data showed that median income for individuals in Kosrae was $3,446, and median household income was $7, 528.

Higher educated persons had higher incomes, government employees had higher incomes than private sector employees, and two-parent families did had higher incomes than female-headed families, and males had higher incomes than females. A majority of this income came from wages and salaries while remittances and profit from businesses and farms also contributed. As Kosrae becomes more reliant on the cash economy for well being instead of subsistence, income levels become a measuring stick for the quality of life and the distribution of resources.

CHAPTER 12
HOUSING CHARACTERISTICS

Introduction

The information about housing characteristics in the State of Kosrae, have been organized in this chapter into four major sections: (1) general housing characteristics, (2) structural characteristics, (3) utilities, and (4) equipment. Some tables in this chapter include data from the 1980 census to examine the change in housing in the Kosrae over time.

The date presented in this chapter includes the total and different types of housing units found in the 2000 Census. The 2000 Census questionnaire contains the similar set of Census questionnaires used in the 1994 FSM Census, so the comparison of housing data for these two years was consistent.

Data Description

General Housing Characteristics
A *housing unit* is a house, apartment, group of rooms, or single room occupied as separate living quarters or, if vacant, intended for occupancy as separate living quarters. Separate living quarters are those in which the occupants live and eat apart from other persons in the building and which have direct access from outside the building or through a common hall. Housing units built not for household occupancy but for group of unrelated persons were defined as group quarter. Group quarters include institutionalized and non-institutionalized quarters such as prisons/local jails, hospitals, school/college dormitories, etc. This chapter deals exclusively with housing units.

The 2000 FSM Census included both occupied and vacant housing units as part of the housing inventory. Recreational boats, tents, etc were also included in the questionnaire to enumerate people using them, as they're usual residences. The census classified a housing unit as occupied if it was the usual residence of the person or group of persons inhabiting it at the time of enumeration or if the occupants were only temporarily absent.

A vacant housing unit was one, which contained no residents at the time of enumeration, unless its occupants were only temporarily absent. The census also considered vacant units that were temporarily occupied at the time of enumeration by persons who usually resided elsewhere. A new unit not yet occupied was classified as vacant if construction had reached the point where all exterior windows and doors, and final usable floors, were in place. The census did not consider unoccupied units open to the elements as vacant; these were excluded. Also excluded from vacant units were quarters used entirely for non-residential purposes, such as store, office, or storage facility.

The 2000 Census distinguished between owner-occupied and renter-occupied housing units, a characteristic referred to as tenure. Questionnaire item H22, asked of all occupied housing units, dealt with tenure.

The Census classified a housing unit as owner-occupied if the owner or co-owner resided in the unit on Census day, even if the unit was mortgaged or not fully paid for. The remaining occupied housing units were classified as renter-occupied, regardless of whether cash or some other means of payment was used. The Census recorded a housing unit as "rented for cash" if any money rent was paid or contracted for; this rent could come from individuals either living in the unit or elsewhere, or from an organization. Rental units classified under "occupied without payment of cash rent" generally were those provided free by friends or relatives, or in exchange for services such as those provided by a resident manager or tenant worker of on communal land.

Questionnaire item H6 concerned the year a structure was built. Data on year of construction was collected for both occupied and vacant housing units. Data on the year the structure was built referred to when the building was first constructed, not when it was remodeled, added to, or converted. Recently built structures that met the housing unit definition requirements (all exterior windows, doors, and final usable floors installed) were assigned to the "1999-2000" category.

The 2000 Census obtained information on the number of housing units in a structure from questionnaire item H1, which it recorded for all housing units. A structure comprised a separate building that either had open space on all four sides or was separated from other structures by dividing walls that extended from ground to roof. The statistics presented in this report refer to the number of housing units in separate structures of specified type and size. The following categories applied:

.One-unit, detached -- a single-unit structure detached from any other structure (except a shed or garage). A one-family house, which contained a business, was considered detached as long as the building had open space on all four sides.

.One-unit, attached -- a one-unit structure, which had one or more walls extending from, ground to roof separating it from adjoining structures. In double houses and houses attached to non-residential structures, each housing unit was an individual attached structure if the dividing or common wall extended from ground or roof.

.Two or more units -- housing units in structures containing two or more housing units, further categorized as units in structures with 2, 3 or 4, 5 to 9, 10 to 19, 20 or more units.

.Other -- housing unit that did not fit the previous categories, such as abandoned cars, campers, vans, and shacks.

The 1994 and 2000 Censuses obtained information on the number of rooms per housing unit from questionnaire item H7, with resulting information recorded both for occupied and vacant housing units. The intent of this question was to count the number of whole rooms used for living purposes. For each unit, whole rooms included living rooms, dining rooms, kitchens, bedrooms, finished recreation rooms, enclosed porches suitable for year-round use, and lodger's rooms. Excluded were kitchenettes, bathrooms, open porches, balconies, halls for foyers, utility rooms, unfinished attics or basements, and other unfinished space used for storage.

Data on bedrooms were obtained from questionnaire item H8, with resulting information recorded for both occupied and vacant housing units. The number of bedrooms refers to the count of rooms that were used as bedrooms and the number of rooms that one would count as bedrooms when listing a housing unit for sale or for rent. The 1994 and 2000 FSM Censuses included as bedrooms all rooms intended for use as bedrooms even if residents were using them for some other purpose on Census Day. Housing units comprising a single room, such as an efficiency apartment, by definition were classified as having no bedroom.

Data on material used for the outside walls of housing units were obtained from questionnaire item H3, for both occupied and vacant housing units. The census classified each unit according to the type of material used most in the construction of its outside walls and included as separate categories "Poured concrete", "Concrete blocks", "Metal/Tin", "Plywood", "Thatch", "Local wood or bamboo", "Other", and "No walls".

The census collected data on the material used for the roofs of housing units with questionnaire item H4; the results recorded both for occupied and vacant housing units. The census classified each housing unit according to the type of material used most in the construction of its roof. The material categories employed were "Poured concrete", "Metal/Tin", "Wood", "Thatch", "Bamboo", and "Other".

The 1994 and 2000 Censuses collected data on type of material used for the foundation of housing units with questionnaire item H5, both for occupied and vacant housing units. Census personnel classified each housing unit according to the type of material used most in its foundation. The categories employed were "Concrete", "Wood pier or piling", "Coral", "Stone", and "Other" for those other than the first four categories.

Utilities

The 1994 and 2000 Censuses collected data on electric power with questionnaire items H10, recorded for both occupied and vacant housing units. Even if the power had been shut off for some reasons, the census considered the unit to have electric power.

The Census data on source of water were obtained from questionnaire item H15, also recorded for occupied and vacant housing units. Categories 1 to 9 on question H15 dealt with the sources of drinking water to the household.

.A public (government) system only -- referred to when running water comes through water pipes from any common source supplying 5 or more houses or apartments and it was the only source of water for the entire household or apartment.

.A community water system only -- referred to when running water came through water pipes supplied by a village or community water system or obtained from a well that was maintained by the community.

.A public and catchments -- referred to when running water came from a public system and there was also catchment in which rainwater was collected.

.An individual well -- referred to when the water came from a well on the property or on neighboring property serving fewer than 5 houses or apartments. Well water hand drawn, wind drawn, or engine drawn whether piped or not piped and stored in tanks or used directly from the well were included.

.A catchments, tanks, or drums only -- referred to when the source of water was a catchments, tanks, or drums in which rainwater was collected. Such sources usually serve only one structure.

.A public standpipe or street hydrant -- referred to when there was an elevated tank or vertical storage cylinder connected to a public system from which nearby residents draw water.

.Purchased bottled water -- referred to when the household depended only on water purchased from businesses.

.Some other sources such as a spring, river, creek, etc. -- referred to other sources being used by the household as the main source of drinking water.

Data on "Piped water" were obtained from questionnaire items H9a to H9d, recorded for both occupied and vacant housing units. Piped water signified a housing unit where water was available at a sink, washbasin, bathtub, or shower. The piped water may have been located within a housing unit, in a hallway associated with the unit, or in a room used by several other households in the building containing the unit (even if occupants had to go outdoors to reach that part of the building). If both hot and cold water were available, the census recorded the type of energy used by the water heater: "electricity", "gas", "solar power", or "other fuels".

Data on sewage disposal were obtained from questionnaire item H16, recorded both for occupied and vacant housing units. Housing units were classified as connected to a "public sewer", or a "septic tank or cesspool", or disposing of sewage by "other means". In the State of Kosrae, a public sewer system may be operated by a government or semi-government body or by a private organization where sewer pipes were connected to a processing plant. The septic tank or cesspool is an underground tank or pit for sewage disposal and limited to one or two toilets. The "other" category included housing units, which disposed of sewage in any manner not covered by the other specific categories.

Equipment

The 2000 Census obtained information on plumbing facilities from questionnaire items H9a, H9c, and H9d for occupied and vacant housing units. Following the 1980 U.S. Census in the territories, a unit was considered to have complete plumbing facilities when it had piped water, a flush toilet, and a bathtub or shower, regardless of whether these facilities were located in the unit being enumerated or inside the building which contained that unit.

Data on sinks with piped water were obtained from questionnaire item H17e, recorded for both occupied and vacant housing units. For classification as a housing unit possessing a sink with piped water, such a sink had to be in the unit itself or inside the building containing the housing unit enumerated.

Questionnaire item H9d addressed the type of toilet facilities both in occupied and vacant housing units. A flush toilet consisted of any toilet connected to piped water and emptying into a public sewer, septic tank or cesspool. If the unit did not have a flush toilet, the toilet could be an outhouse, privy, or banjo; otherwise, the last category, "Other", was used.

The 1994 and 2000 FSM Censuses collected data on bathtub and shower with questionnaire item H9c both for occupied and vacant housing units. A bathtub or shower was counted only if connected permanently to piped running water, thus excluding equipment such as portable bathtubs.

Questionnaire items H17a and H17b concerned cooking facilities and were asked at both occupied and vacant housing units. Main cooking facilities were those that were used most often for the preparation of meals, located either outside or inside the housing unit enumerated or in the building containing that housing unit. A housing unit with "No cooking facilities" comprised a unit with no cooking facilities available inside or outside the building.

Questionnaire items H18 and H19 asked for the number of vehicles used for land transportation as well as boats used by the household for water transportation.

Finally, the Census collected data on household appliances such as refrigerator, deep freezer, air-conditioning, television and VCR, telephone or CB radio, and any other battery operated radio.

Analysis of Housing Data

The following analysis provides a brief description of the data on housing units as compiled from the 1994 and 2000 FSM Population and Housing Censuses. The 1980 Census results are used for comparative purposes. However, as the two Censuses differed in concepts and definitions of certain items, comparison was limited only to aggregate statistics.

General Housing Characteristics

Table 12.1, 12.2, and 12.3 compare the total and type of housing units in 2000 with previous Censuses, and the type and age of occupied housing units in each state. The total housing units enumerated in Kosrae during the 1994 FSM census were 1,018 while 1,087 housing unit enumerated in 2000. The two types of units (occupied and vacant) were also growing at a similar rate over the period observed. The number of occupied housing unit increased from 964 units in 1994 to 1,087 in 2000.

Table 12.1: Total Housing Units, Occupied Housing Units, and Others, Kosrae State: 1980, 1994 and 2000

	Number			Percent change		Percent		
Tenure	1980	1994	2000	1980-1994	1994-2000	1980	1994	2000
Total Housing Units	615	1,018	1,087	65.5	6.8	100.0	100.0	100.0
Occupied Housing Units	580	964	1,087	66.2	12.8	94.3	94.7	100.0
Vacant	35	54	-	54.3	-	5.7	5.3	-

Source: 1980 TTPI Census; 1994 & 2000 FSM Censuses

Government and planning agencies use information on renter occupied units in combination with income and other characteristics to develop housing programs designed to meet the housing needs of people at different economic levels and different situations as temporary workers.

Table 12.2 shows data on the total occupied units and tenure by Municipality in 1994 and 2000. In 1994, the most housing units in Kosrae were located in Lelu (35.8 percent of all housing units) followed by Tafunsak (27.2 percent), Malem (21.8 percent) and Utwe (15.2 percent). The distribution of housing unit occupancy and tenure status also shows slight variation between the municipalities. The proportion for owner occupied varied form about 98 percent in Utwe to about 86 percent in Lelu and Tafunsak (see Table 12.2). The 2000 Census data showed that the number of housing units in Lelu were largest (32.8 percent) followed by Tafunsak (30.0), Malem (22.8 percent) and Utwe (14.4) The proportion for owner occupied varied from about 94 percent in Utwe and Malem being the lowest with 46 percent.

Between 1994 and 2000, the proportion of housing units occupied units occupied rent-free declined from 6 percent to 2 percent. A similar level of decline is seen in all the state except for Kosrae. In the same period, the proportion of housing units that were owners occupied decreased from 90 percent to 62 percent. The population of housing units that were owners occupied decreased in all 4 municipalities.

Table 12..2: Total Housing Units, Occupied Housing Units and Tenure by Municipality, Kosrae State: 1994 and 2000

Municipality	Total Housing Units	Occupied					Percent				
				Renter					Renter		
		Total	Owner	Cash	No Cash	Others	Total	Owner	Cash	No Cash	Others
1994 CENSUS											
Total	1,018	964	865	14	54	31	100.0	89.7	1.5	5.6	3.2
Lelu	364	345	296	10	15	24	100.0	85.8	2.9	4.3	7.0
Malem	222	212	201	1	9	1	100.0	94.8	0.5	4.2	0.5
Utwe	155	147	144	-	3	-	100.0	98.0	-	2.0	-
Tafunsak	277	260	224	3	27	6	100.0	86.2	1.2	10.4	2.3
2000 CENSUS											
Total	1,087	1,087	677	8	24	378	100.0	62.3	0.7	2.2	34.8
Lelu	357	357	200	5	10	142	100.0	56.0	1.4	2.8	39.8
Malem	248	248	114	1	4	129	100.0	46.0	0.4	1.6	52.0
Utwe	156	156	146	-	5	5	100.0	93.6	0.0	3.2	3.2
Tafunsak	326	326	217	2	5	102	100.0	66.6	0.6	1.5	31.3

Source: 1994 & 2000 FSM Censuses

The year of construction indicated the amount of new housing constructed during the decade and provided age of housing units in Kosrae. It also measured, when used in combination with data from previous Censuses, the disappearance of old housing from the inventory. One in every three housing units in Kosrae was built in 1990 or later (Table 12.3). That is, one third of all the housing units in Kosrae were built during the five years before the 1994 and 2000 Censuses. In every municipality, most houses were constructed before 1980. Lelu had the highest portion of houses built in that particular period.

Table 12. 3: Year of Construction of All Housing Units by Municipality, Kosrae State: 1994 and 2000

Year of Construction	Municipality					Percent				
	Total	Lelu	Malem	Utwe	Tafunsak	Total	Lelu	Malem	Utwe	Tafunsak
1994 CENSUS										
Total	1,018	364	222	155	277	100.0	100.0	100.0	100.0	100.0
1990-1994	336	112	66	58	100	33.0	30.8	29.7	37.4	36.1
1985-1989	239	81	44	58	56	23.5	22.3	19.8	37.4	20.2
1980-1984	198	72	49	22	55	19.4	19.8	22.1	14.2	19.9
1970-1979	142	59	38	11	34	13.9	16.2	17.1	7.1	12.3
Before 1970	103	40	25	6	32	10.1	11.0	11.3	3.9	11.6
2000 CENSUS										
Total	1,087	357	248	156	326	100.0	100.0	100.0	100.0	100.0
1999-2000	69	22	16	5	26	6.3	6.2	6.5	3.2	8.0
1996-1998	162	37	39	26	60	14.9	10.4	15.7	16.7	18.4
1993-1995	179	49	43	33	54	16.5	13.7	17.3	21.2	16.6
1988-1992	223	73	52	35	63	20.5	20.4	21.0	22.4	19.3
Before 1980	454	176	98	57	123	41.8	49.3	39.5	36.5	37.7

Source: 1994 & 2000 FSM Censuses

Structural Characteristics

Description of building distinguishes between single-family homes and small or large apartment buildings. The data collected could be used as an aid in planning for extension of utility lines, schools and playgrounds and environmental needs.

Table 12.4 presents data on the number of occupied housing units by number of unit within each structure. The majority of the occupied housing units were single detached housing units. In 2000, housing units attached to one or more other units were 3.5 percent or about 92.5 percentage points lower than the one-detached structures. There were a total of 5 structures with multiple apartment units reported.

Table 12.4: Occupied Housing Units by Number of Units per Structure, Kosrae State: 1994 and 2000

Units in structure	1994 Census		2000 Census	
	Number	Percent	Number	Percent
Occupied Housing	964	100.0	1,087	100.0
One detached	903	93.7	1,044	96.0
1 or more attached	56	5.8	38	3.5
Bldg. W/ 2 apt.	2	0.2	3	0.3
Bldg. W/ 3 or 4 apt.	-	-	-	-
Bldg. W/ 5+	-	-	-	-
Others	3	0.3	2	0.2

Source: 1994 & 2000 FSM Censuses

In both Census years, the single detached housing unit was most commonly found in all the states (Table 12.5). In 1994, the housing unit structure is uniform throughout Kosrae, excepting for Utwe municipality, where almost all-housing units (99 percent) are detached, and one unit structure. For the other three municipalities, detached or one unit structure accounted for 92 to 94 percent of all housing units. As for the 2000 Census, about 99 percent of the housing units structure in Kosrae was also detached, and one unit structure. Housing unit structure in Lelu and Utwe were accounted for 94 percent while Tafunsak was accounted for 97 percent.

Table 12.5: Occupied Housing Units by Number of Units per Structure and Municipality, Kosrae State: 1994 and 2000

Municipality	Occupied housing units						
	Occupied Housing Units	One Detached	One Or more Attached	Bldg. with 2 Apartment	Bldg. with 3 or 4 Apartment	Bldg. with 5 or more	Others
1994 CENSUS							
Total	964	903	56	2	-	-	3
Lelu	345	318	24	1	-	-	2
Malem	212	194	17	1	-	-	-
Utwe	147	146	1	-	-	-	-
Tafunsak	260	245	14	-	-	-	1
2000 CENSUS							
Total	1,087	1,044	38	3	-	-	2
Lelu	357	335	19	1	-	-	2
Malem	248	246	2	-	-	-	-
Utwe	156	146	10	-	-	-	-
Tafunsak	326	317	7	2	-	-	-

Source: 1994 & 2000 FSM Censuses

The number of rooms provides the basis for estimating the amount of living and sleeping space in the housing unit. Table 12.6 presents the percentage change in the number of rooms per occupied housing units and the percent of units with 1 to 8 or more rooms in 1980 to 2000. The increases in the number of rooms in 1994 and 2000 implied that people were getting wealthier. The availability of housing loan package provided by the federal and local housing programs could have also caused this increase. Over the 2 decades observed, the average number of rooms per units increased by about 1 room. Western influence on the way of life in Kosrae State also contributed to the increasing number of rooms within a unit. For convenience, rooms for kitchens, bathrooms, shower, etc. were built inside the unit. For privacy purpose, separate rooms were built for the parents and the children as well.

Table 12.6: Rooms per Occupied Housing Units, Kosrae State: 1980, 1994 and 2000

Rooms	Number			Percent change		Percent		
	1980	1994	2000	1980-1994	1994-2000	1980	1994	2000
Occupied Housing	615	964	1,087	56.7	12.8	100.0	100.0	100.0
1 room	127	69	129	-45.7	87.0	20.7	7.2	11.9
2 rooms	184	202	199	9.8	-1.5	29.9	21.0	18.3
3 rooms	127	242	261	90.6	7.9	20.7	25.1	24.0
4 rooms	103	168	196	63.1	16.7	16.7	17.4	18.0
5 rooms	48	160	167	233.3	4.4	7.8	16.6	15.4
6 rooms	14	76	74	442.9	-2.6	2.3	7.9	6.8
7 rooms	7	27	37	285.7	37.0	1.1	2.8	3.4
8+ rooms	5	20	24	300.0	20.0	0.8	2.1	2.2
Median	2.5	3.9	3.8	...	...	...	...	...

Source: 1980 TTPI Census; 1994 & 2000 FSM Censuses

On the average, housing units in Utwe and Tafunsak had slightly lower numbers of rooms than those in Lelu and Malem (Table 12.7). This difference suggested that housing unit in Lelu and Malem were more likely to have kitchen, bathrooms and living rooms than the municipality of Utwe and Tafunsak. In Lelu, Malem, Utwe and Tafunsak, houses with three rooms were the most common.

Table 12.7: Number of Rooms per Occupied Housing Unit by Municipality, Kosrae State: 1994 and 2000

Municipality	Number of rooms per occupied units									
	Total	1	2	3	4	5	6	7	8+	Median
1994 CENSUS										
Total	964	69	202	242	168	160	76	27	20	3.9
Lelu	345	19	71	86	67	65	21	9	7	4.0
Malem	212	7	27	47	38	47	31	9	6	4.7
Utwe	147	11	27	50	21	18	12	4	4	3.7
Tafunsak	260	32	77	59	42	30	12	5	3	3.4
2000 CENSUS										
Total	1,087	129	199	261	196	167	74	37	24	3.8
Lelu	357	30	72	80	70	62	21	9	13	4.0
Malem	248	32	34	47	41	45	29	13	7	4.3
Utwe	156	9	23	58	27	23	10	5	1	3.8
Tafunsak	326	58	70	76	58	37	14	10	3	3.5

Source: 1994 & 2000 FSM Censuses

The number of bedrooms was used in combination with number of occupants to provide a measure of crowding. Builders and planners use this information to find out how much additional housing is needed to relieve housing conditions.

Table 12.8 compares the bedrooms reported for units in 1980 to 2000 FSM Censuses and the percentage change overtime. Over the 20 years period, the total number of housing units in Kosrae State increased by more than 65 percent. While the proportion of housing units with 1 bedroom showed a relatively low increase change, multiple bedrooms increased by over 100 percent. These changes show that people tend to build units with multiple bedrooms even though the average household and family size decline (see chapter 3).

Table 12.8: Number of Bedrooms per Housing Units of All Units, Kosrae State: 1980, 1994 and 2000

Bedrooms	Number			Percent change		Percent		
	1980	1994	2000	1980-1994	1994-2000	1980	1994	2000
Total HUs	615	1,018	1,087	65.5	6.8	100.0	100.0	100.0
1 bedroom	324	243	259	-25.0	6.6	52.7	23.9	23.8
2 bedrooms	148	382	353	158.1	-7.6	24.1	37.5	32.5
3 bedrooms	86	182	236	111.6	29.7	14.0	17.9	21.7
4 bedrooms	41	148	155	261.0	4.7	6.7	14.5	14.3
5+ bedrooms	16	63	84	293.8	33.3	2.6	6.2	7.7
Median	1.0	2.7	2.8	...	...	...	...	...

Source: 1980 TTPI Census; 1994 & 2000 FSM Censuses

Table 12.9 shows the number of units with 1 bedroom to 5 or more bedrooms in each municipality. In the 2000 Census, two-bedroom housing units were most common in all four municipalities of Kosrae. The number of units with 1 and 2 bedrooms were about the same in Malem. Lelu and Tafunsak had the most units with 5 or more bedrooms reported. Utwe had the least number and proportion of units with five or more bedrooms

Table 12.9: Number of Bedrooms of All Housing Units by Municipality, Kosrae State: 1994 and 2000

Municipality	Number of bedrooms					
	Total	1	2	3	4	5+
1994 CENSUS						
Total	1,018	243	382	182	148	63
Lelu	364	78	148	64	53	21
Malem	222	49	64	47	39	23
Utwe	155	41	66	17	23	8
Tafunsak	277	75	104	54	33	11
2000 CENSUS						
Total	1,087	259	353	236	155	84
Lelu	357	77	117	79	55	29
Malem	248	73	74	44	40	17
Utwe	156	31	69	27	22	7
Tafunsak	326	78	93	86	38	31

Source: 1994 & 2000 FSM Censuses

Types of material used for roofs, walls, and foundation are used to determine the structural composition of housing and as an indicator of housing that might endanger the health and safety of the occupants (Table 12.10). The main materials used for the roofs of the housing units in all Census years were metal roofing. About 4 in every 5 housing units in all census years used metal roofing. While metal roofs, wood, and thatch roofs generally declined overtime, concrete roofs increased. The 2000 data showed that the proportion for housing unit with metal roofing decreased to about 79 percent while the poured concrete increased to more than 17 percent. In other words, people are turning away from using local materials but using imported materials. Among other reasons, concrete structure last longer and are better for Kosrae for safety purposes.

Table 12.10: Material Used for Roof of All Housing Units, Kosrae State: 1980, 1994 and 2000

Type of materials	Number			Percent change		Number		
	1980	1994	2000	1980-1994	1994-2000	1980	1994	2000
Housing units	615	1,018	1,087	65.5	6.8	100.0	100.0	100.0
Poured concrete	7	131	192	1771.4	46.6	1.1	12.9	17.7
Metal	482	854	853	77.2	-0.1	78.4	83.9	78.5
Wood	-	1	3	-	200.0	-	0.1	0.3
Thatch	126	26	39	-79.4	50.0	20.5	2.6	3.6
Others	-	6	-	-	-100.0	-	0.6	-
Unknown	-	-	-	-	-	-	-	-

Source: 1980 TTPI Census; 1994 & 2000 FSM Censuses

Over 78 percent of housing units in Kosrae State had metal or tin roofing (a decrease of 6 percentage points compared to 1994). The preference to use metal/tin for roofing may be due to its usefulness in catching rainwater, especially for drinking. Poured concrete was the second most commonly used material for roofing in all four municipalities. Other types of roofing (which includes thatched, wooden, etc) had a much higher figure in Tafunsak compare to other municipalities.

Table 12.11: Materials Used for Roof of All Housing Units by Municipality, Kosrae State: 1994 and 2000

Municipality	Materials used for roofing				Percent			
	Total	Poured Concrete	Metal	Others	Total	Poured Concrete	Metal	Others
1994 CENSUS								
Total	1,018	131	854	33	100.0	12.9	83.9	3.2
Lelu	364	34	323	7	100.0	9.3	88.7	1.9
Malem	222	33	186	3	100.0	14.9	83.8	1.4
Utwe	155	19	129	7	100.0	12.3	83.2	4.5
Tafunsak	277	45	216	16	100.0	16.2	78.0	5.8
2000 CENSUS								
Total	1,087	192	853	42	100.0	17.7	78.5	3.9
Lelu	357	55	297	5	100.0	15.4	83.2	1.4
Malem	248	51	192	5	100.0	20.6	77.4	2.0
Utwe	156	34	113	9	100.0	21.8	72.4	5.8
Tafunsak	326	52	251	23	100.0	16.0	77.0	7.1

Source: 1994 & 2000 FSM Censuses

Table 12.12 presents data on the type of materials used for outside walls in housing units among the four municipalities in 1980, 1994 and 2000 FSM Censuses. The proportion of housing units with poured concrete walls increased in 2000 Census

while the others continue to decrease. The increase in concrete implies the quality and value of houses improved over the period.

Table 12.12: Materials Used for Walls of All Housing Units, Kosrae State: 1980, 1994 and 2000

Type of materials	Number			Percent change		Percent		
	1980	1994	2000	1980-1994	1994-2000	1980	1994	2000
Housing units	615	1,018	1,087	65.5	6.8	100.0	100.0	100.0
Concrete	106	619	734	484.0	18.6	17.2	60.8	67.5
Poured concrete	50	432	536	764.0	24.1	8.1	42.4	49.3
Concrete blocks	56	187	198	233.9	5.9	9.1	18.4	18.2
Metal	49	27	16	-44.9	-40.7	8.0	2.7	1.5
Wood	451	363	330	-19.5	-9.1	73.3	35.7	30.4
No walls	2	-	1	-100.0	-	0.3	-	0.1
Others	7	9	6	28.6	-33.3	1.1	0.9	0.6

Source: 1980 TTPI Census; 1994 & 2000 FSM Censuses

Table 12.13 further compares materials used for walls in housing units among the four municipalities in 1994 and 2000 FSM Censuses. The 2000 Census data showed that more than 75 percent of housing units in Malem had concrete walls compared to less than 68 percent in the other municipalities. Housing unit in Tafunsak used more wood and other material than the other three municipalities suggesting that more local housing conditions in Tafunsak.

Table 12.13: Materials Used for Outside Walls of All Housing Units by Municipality, Kosrae State: 1994 and 2000

Municipality	Number				Percent			
	Total housing units	Concrete	Metal	Wood & others	Total housing units	Concrete	Metal	Wood & others
1994 CENSUS								
Total	1,018	619	27	372	100.0	60.8	2.7	36.5
Lelu	364	238	8	118	100.0	65.4	2.2	32.4
Malem	222	161	3	58	100.0	72.5	1.4	26.1
Utwe	155	83	3	69	100.0	53.5	1.9	44.5
Tafunsak	277	137	13	127	100.0	49.5	4.7	45.8
2000 CENSUS								
Total	1,087	734	16	337	100.0	67.5	1.5	31.0
Lelu	357	266	4	87	100.0	74.5	1.1	24.4
Malem	248	187	2	59	100.0	75.4	0.8	23.8
Utwe	156	110	2	44	100.0	70.5	1.3	28.2
Tafunsak	326	171	8	147	100.0	52.5	2.5	45.1

Source: 1994 & 2000 FSM Censuses

Table 12.14 presents type of material used for foundations of housing units in the municipalities. The majority of the housing units in the municipalities had concrete foundation. Almost all the housing units in all four municipalities of Kosrae had concrete foundation. More than 5 percent of the housing in Kosrae had wood/pier/piling foundation in the 2000 Census. Housing units with stone or coral accounted for only 1 percent. .

Table 12.14: Materials Used for Foundation of All Housing Units by Municipality, Kosrae State: 1994 and 2000

Municipality	Materials used for foundation				Materials used for foundation			
	Total housing units	Concrete	Wood pier or piling	Stone/coral	Total housing units	Concrete	Wood pier or piling	Stone/coral
1994 CENSUS								
Total	1,018	962	44	12	100.0	94.5	4.3	1.2
Lelu	364	356	5	3	100.0	97.8	1.4	0.8
Malem	222	212	10	-	100.0	95.5	4.5	-
Utwe	155	143	11	1	100.0	92.3	7.1	0.6
Tafunsak	277	251	18	8	100.0	90.6	6.5	2.9
2000 CENSUS								
Total	1,087	1,019	56	12	100.0	93.7	5.2	1.1
Lelu	357	342	13	2	100.0	95.8	3.6	0.6
Malem	248	238	8	2	100.0	96.0	3.2	0.8
Utwe	156	150	4	2	100.0	96.2	2.6	1.3
Tafunsak	326	289	31	6	100.0	88.7	9.5	1.8

Source: 1994 & 2000 FSM Censuses

Utilities

Data on electric power and air conditioning are useful in planning and assessing power consumption, living conditions, and housing quality. Data are also useful in planning the rural electrification programs and seeking alternative economical power sources.

Table 12.15 presents the distribution of housing unit by availability of electric power in the unit, during the 1980, 1994 and 2000 Censuses. In 1980, only 34 percent of housing units had electricity, no units had solar power and the majority had no

electricity. But in 2000, 100 percent of housing units had electricity. Housing units using generators power decreased from 6 percent in 1980 to about 2 percent in 2000. Furthermore, in 1980 about 28 percent of the electric power were provided by public utility.

Table 12.15: Electric Power of All Housing Units, Kosrae State: 1980, 1994 and 2000

Electric power	Number			Percent change		Percent		
	1980	1994	2000	1980-1994	1994-2000	1980	1994	2000
Housing units	615	1,018	1,087	65.5	6.8	100.0	100.0	100.0
With electricity	210	953	1,087	353.8	14.1	34.1	93.6	100.0
Public utility	171	943	1,063	451.5	12.7	27.8	92.6	97.8
Generator	39	10	24	-74.4	140.0	6.3	1.0	2.2
No electricity	405	65	-	-84.0	-100.0	65.9	6.4	-

Source: 1980 TTPI Census; 1994 & 2000 FSM Censuses

Table 12.16 compares housing units in the four municipalities by the availability of electricity and air conditioner in 1994 and 2000. In 2000, all housing units in Kosrae had access to electricity. Lelu had the highest proportion of housing units with electricity and air conditions while the proportion of housing units with electricity was lowest in Tafunsak and the proportion of housing unit with air conditioner was also high in Lelu and low in Utwe.

Table 12.16: Electricity and Air Condition of All Housing Units by Municipality, Kosrae State: 1994 and 2000

Municipality	Electricity and air conditioning used			Percent	
	Total housing units	Electricity	Air conditioning	Electricity	Air conditioning
1994 CENSUS					
Total	1,018	953	70	93.6	6.9
Lelu	364	358	33	98.4	9.1
Malem	222	210	12	94.6	5.4
Utwe	155	144	1	92.9	0.6
Tafunsak	277	241	24	87.0	8.7
2000 CENSUS					
Total	1,087	1,063	58	97.8	5.3
Lelu	357	357	29	100.0	8.1
Malem	248	247	15	99.6	6.0
Utwe	156	156	4	100.0	2.6
Tafunsak	326	303	10	92.9	3.1

Source: 1994 & 2000 FSM Censuses

Lack of water supply and flush toilet has been connected with diseases and morbidity in the past. For instance, the social problems of urbanization were well documented in 1982 when sewage disposal in Chuuk lagoon contaminated seafood and resulted in a severe cholera outbreak. Subsequent studies revealed that only 6 percent of households in Weno during that time had adequate sanitation — central water supply and flush toilet (Connell 1983:7/8).

Table 12.17 summarizes the availability of piped water in all housing units in 1980, 1994 and 2000. The proportion of housing units with no piped water decreased significantly from about 64 percent in 1980 to below 8 percent in 1994 and to less than 3 percent in 2000. Housing unit with hot and cold piped water supply also increased from below 1 percent in 1980 to nearly 4 percent in 1994 and to less than 4 percent in 2000.

Table 12.17: Piped Water of All Housing Units, Kosrae State: 1980, 1994 and 2000

Piped water	Number			Percent change		Percent		
	1980	1994	2000	1980-1994	1994-2000	1980	1994	2000
Total housing units	615	1,018	1,087	65.5	6.8	100.0	100.0	100.0
Piped water	224	941	1,061	320.1	12.8	36.4	92.4	97.6
Hot & cold piped water	5	38	37	660.0	-2.6	0.8	3.7	3.4
Cold water only	219	903	1,024	312.3	13.4	35.6	88.7	94.2
No piped water	391	77	26	-80.3	-66.2	63.6	7.6	2.4

Source: 1980 TTPI Census; 1994 & 2000 FSM Censuses

Table 12.18 further examines availability of water supply by municipality. In all four municipalities, more than 90 percent of the housing units had piped water. In 1994, the proportion of housing units without piped water was highest in Utwe (about 21 percent) and lowest in Lelu (about 3 percent). The proportion of housing units with no piped water in Tafunsak and Malem accounted for about 7 percent. As for the 2000 Census, the proportion of housing units without piped water was highest in Malem (about 4 percent) and lowest in Lelu (less than 1 percent).

Table 12.18: Water Supply of All Housing Units by Municipality, Kosrae State: 1994 and 2000

Municipality	Water supply				Percent			
	Total housing units	Hot and cold	Cold only	No piped water	Total housing units	Hot and cold	Cold only	No piped water
1994 CENSUS								
Total	1,018	38	903	77	100.0	3.7	88.7	7.6
Lelu	364	20	335	9	100.0	5.5	92.0	2.5
Malem	222	9	197	16	100.0	4.1	88.7	7.2
Utwe	155	-	123	32	100.0	-	79.4	20.6
Tafunsak	277	9	248	20	100.0	3.2	89.5	7.2
2000 CENSUS								
Total	1,087	37	1,024	26	100.0	3.4	94.2	2.4
Lelu	357	25	329	3	100.0	7.0	92.2	0.8
Malem	248	4	234	10	100.0	1.6	94.4	4.0
Utwe	156	2	149	5	100.0	1.3	95.5	3.2
Tafunsak	326	6	312	8	100.0	1.8	95.7	2.5

Source: 1994 & 2000 FSM Censuses

Table 12.19 presents data on the sources of drinking water of households in Kosrae from the 1980, 1994 and 2000 FSM Censuses. Between 1980 and 2000, the number of households using catchments, tanks or drums, and public and community system both increased significantly. The use of individual wells and public standpipes and others sources decreased. This may have resulted in shifting the preference on source of drinking water from piped to catchments water.

Table 12.19: Source of Drinking Water of All Housing Units, Kosrae State: 1980, 1994 and 2000

Source of drinking water	Number			Percent change		Percent		
	1980	1994	2000	1980-1994	1994-2000	1980	1994	2000
Total	615	1,018	1,087	65.5	6.8	100.0	100.0	100.0
Public & community systems	549	395	127	-28.1	-67.8	89.3	38.8	11.7
Individual well	-	11	11	-	-	-	1.1	1.0
Catchments, tank, drums	44	581	796	1220.5	37.0	7.2	57.1	73.2
Public stand pipe	-	10	3	-	-70.0	-	1.0	0.3
Others	22	21	150	-4.5	614.3	3.6	2.1	13.8

Source: 1980 TTPI Census; 1994 & 2000 FSM Censuses

Table 12.20 further examines the main sources of drinking water by municipality. In all four municipalities, main source of water was catchments tank and drums. Other sources of drinking water were from community system and catchments. The 2000 data showed that almost 80 percent of the housing units in Lelu reported water catchments, tanks and drums as their source of drinking water while Tafunsak reported 59 percent, Malem with 84 and Utwe report 71 percent. Almost 19 percent of the drinking water from Tafunsak was from the community system while Lelu reported only 3 percent of their drinking water from the community system.

Table 12.20: Source of Drinking Water of All Housing Units by Municipality, Kosrae State: 1994 and 2000

Municipality	Source of drinking water										
	Total	Percent	Pub. Sys. Only	Comm. sys. Only	Pub. Sys. & Catch.	Comm. sys. & Catch.	Individual well	Catch. tanks, drums	Pub. Stand pipe	Purchased bottled water	Others
1994 Census	1,018	100.0	3.0	16.8	11.8	7.2	1.1	57.1	1.0	0.1	2.0
Lelu	364	100.0	8.0	12.9	26.1	1.6	0.8	49.2	0.3	0.3	0.8
Malem	222	100.0	0.5	1.8	0.9	0.5	-	96.4	-	-	-
Utwe	155	100.0	0.6	-	7.7	18.7	1.9	61.3	-	-	9.7
Tafunsak	277	100.0	-	43.3	4.0	13.4	1.8	33.6	3.2	-	0.7
2000 Census	1,087	100.0	0.8	10.9	2.1	8.5	1.0	73.2	0.3	0.8	2.4
Lelu	357	100.0	1.4	3.9	4.5	5.3	-	80.1	-	1.1	3.6
Malem	248	100.0	-	12.1	0.4	0.4	-	84.3	0.4	0.4	2.0
Utwe	156	100.0	-	9.6	1.9	15.4	-	70.5	-	1.3	1.3
Tafunsak	326	100.0	1.2	18.1	0.9	14.7	3.4	58.6	0.6	0.6	1.8

Source: 1994 & 2000 FSM Censuses

Equipment

Table 12.21 presents data on the type of sewage disposal in Kosrae from the 1980, 1994 and 2000. Over the 20-year period, the proportion of public sewer recipients doubled and the proportion of Septic tanks or cesspools are more than doubled. The data show a significant improvement in sewage disposal facilities in the municipalities. In 1980, the proportion of housing units with public sewer facilities was less than 2 percent. The corresponding proportion increased to about 21 percent in 1994 and declined to about 11 percent in 2000. Similarly the proportion of housing units with septic tank and disposal facilities increased from about 14 percent in 1980 to over 55 percent in 1994 and almost 62 percent in 2000.

Table 12.21: Sewage disposal of All Housing Units, Kosrae State: 1980, 1994 and 2000

Sewage disposal	Number			Percent change		Percent		
	1980	1994	2000	1980-1994	1994-2000	1980	1994	2000
Total housing units	615	1,018	1,087	65.5	6.8	100.0	100.0	100.0
Public sewer	10	214	116	2040.0	-45.8	1.6	21.0	10.7
Septic tank - cesspool	84	562	671	569.0	19.4	13.7	55.2	61.7
Others	521	242	300	-53.6	24.0	84.7	23.8	27.6

Source: 1980 TTPI Census; 1994 & 2000 FSM Censuses

Table 12.22 further examines availability of sewage disposal facilities among the four municipalities. In the 2000 Census, almost 97 percent of all public sewer facilities were reported in Lelu while Utwe continue to have the lowest share of all kinds of sewage disposal. The overall improvement in the sewage disposal could be accounted for the U.S. Environmental Protection Agency (EPA) funded project for improvement and extension of public sewer system in the state.

Table 12.22: Sewage Disposal of All Housing Units by Municipality, Kosrae State: 1994 and 2000

Municipality	Waste disposal				Percent			
	Total	Public sewer	Septic tank or cesspool	Others	Total	Public sewer	Septic tank or cesspool	Others
1994 CENSUS								
Total	1,018	214	562	242	100.0	21.0	55.2	23.8
Lelu	364	195	124	45	100.0	53.6	34.1	12.4
Malem	222	3	154	65	100.0	1.4	69.4	29.3
Utwe	155	2	79	74	100.0	1.3	51.0	47.7
Tafunsak	277	14	205	58	100.0	5.1	74.0	20.9
2000 CENSUS								
Total	1,087	116	671	300	100.0	10.7	61.7	27.6
Lelu	357	112	208	37	100.0	31.4	58.3	10.4
Malem	248	1	158	89	100.0	0.4	63.7	35.9
Utwe	156	-	110	46	100.0	-	70.5	29.5
Tafunsak	326	3	195	128	100.0	0.9	59.8	39.3

Source: 1994 & 2000 FSM Censuses

Table 12.23 presents data on percent change on plumbing facilities and the percentage distribution of the types of plumbing facilities in 1980, 1994 and 2000. Complete plumbing units were those with piped water, bathtub or shower, toilet, and kitchen facilities inside the housing units. The number of units lacking complete plumbing increased from 67 percent in 1994 to about 83 percent in 2000. The proportion for housing units with complete cold-water plumbing increased from about 5 percent in 1980 to nearly 28 percent in 1994 and 15 percent in 2000. Similarly, the proportion for housing unit with hot and cold-water plumbing increased from below 1 percent in 1980 to about 4 percent in 1994 and less than 3 percent in 2000.

Table 12.23: Plumbing Facilities of All Housing Units, Kosrae State: 1980, 1994 and 2000

Plumbing facilities	Number			Percent change		Percent		
	1980	1994	2000	1980-1994	1994-2000	1980	1994	2000
Total housing units	615	1,018	1,087	65.5	6.8	100.0	100.0	100.0
With complete plumbing	33	321	190	872.7	-40.8	5.4	31.5	17.5
W/ hot & cold water	5	38	29	660.0	-23.7	0.8	3.7	2.7
W/ cold only	28	283	161	910.7	-43.1	4.6	27.8	14.8
Lack of complete plumbing	582	697	897	19.8	28.7	94.6	68.5	82.5

Source: 1980 TTPI Census; 1994 & 2000 FSM Censuses

Table 12.24 shows data on the number of housing units equipped with complete plumbing facilities at the time of Censuses in 1994 and 2000. In 1994 and 2000, housing units in Utwe had the lowest proportion for plumbing facilities while Lelu had the highest. Nearly 99 and about 93 percent of housing units in Utwe and Tafunsak, respectively, had no complete plumbing. The corresponding proportions for Lelu and Malem were 81 and 86 percent, respectively. The 2000 data showed that almost 93 and about 90 percent of housing units in Utwe and Tafunsak had no complete plumbing.

Table 12.24: Plumbing Facilities of Occupied Housing Units by Municipality, Kosrae State: 1994 and 2000

Municipality	Total Housing Units	Plumbing facilities: Complete plumbing: Total	Complete plumbing: Hot & Cold Water	Complete plumbing: Cold Water	Lacking complete plumbing
1994 CENSUS					
Total	1,018	121	29	92	897
Lelu	364	68	17	51	296
Malem	222	32	8	24	190
Utwe	155	2	-	2	153
Tafunsak	277	19	4	15	258
2000 CENSUS					
Total	1,087	190	29	161	897
Lelu	357	82	20	62	275
Malem	248	68	3	65	180
Utwe	156	15	2	13	141
Tafunsak	326	25	4	21	301

Source: 1994 & 2000 FSM Censuses

Table 12.25 shows that housing units with "other or none" toilet facilities (including outhouse or privy) decreased by 57 percent in 1980 to 9 percent in 2000. The proportion for housing units with flush toilet increased from a low of about 37 percent in 1980 to over 85 percent in 1994 and to almost 92 percent in 2000. During both 1980 and 1994, about 7 percent of the housing units remained without toilet facility.

Table 12.25: Toilet Facilities of All Housing Units, Kosrae State: 1980, 1994 and 2000

Toilet facilities	Number: 1980	Number: 1994	Number: 2000	Percent change: 1980-1994	Percent change: 1994-2000	Percent: 1980	Percent: 1994	Percent: 2000
Total housing units	615	1,018	1,087	65.5	6.8	100.0	100.0	100.0
Flush toilet inside	44	269	297	511.4	10.4	7.2	26.4	27.3
Flush toilet outside	181	600	700	231.5	16.7	29.4	58.9	64.4
Outhouse or privy	350	80	90	-77.1	12.5	56.9	7.9	8.3
Others or none	40	69	-	72.5	-100.0	6.5	6.8	-

Source: 1980 TTPI Census; 1994 & 2000 FSM Censuses

Table 12.26 presents data on the number of units with toilet facilities by municipalities. Similar to the overall trend, housing units reporting presence of flush toilet had increased over the Census years observed. The highest increase was in Utwe with about 21 percentage points and about 8 percentage points in Lelu.

As shown in the 2000 Census, Tafunsak reported the highest housing units, which lacked flush toilet while Malem reported the lowest with about 3 percent. About 27 percent of housing units reported flush toilet inside the unit while 64 percent had flush toilet outside the unit. About 76 percent of the housing unit in Tafunsak reported flush toilet outside the unit while 10 percent had flush toilet installed inside the unit. Lelu had the lowest proportion (52 percent) of units with flush toilet facilities outside the unit.

Table 12.26: Toilet Facilities of All Housing Units by Municipality, Kosrae State: 1994 and 2000

Municipality	Number: Total Housing Units	Number: Flush toilet: Inside	Number: Flush toilet: Outside	Number: No flush toilet	Percent: Total Housing Units	Percent: Flush toilet: Inside	Percent: Flush toilet: Outside	Percent: No flush toilet
1994 CENSUS								
Total	1,018	269	600	149	100.0	26.4	58.9	14.6
Lelu	364	154	163	47	100.0	42.3	44.8	12.9
Malem	222	62	122	38	100.0	27.9	55.0	17.1
Utwe	155	11	107	37	100.0	7.1	69.0	23.9
Tafunsak	277	42	208	27	100.0	15.2	75.1	9.7
2000 CENSUS								
Total	1,087	297	700	90	100.0	27.3	64.4	8.3
Lelu	357	153	187	17	100.0	42.9	52.4	4.8
Malem	248	82	159	7	100.0	33.1	64.1	2.8
Utwe	156	29	108	19	100.0	18.6	69.2	12.2
Tafunsak	326	33	246	47	100.0	10.1	75.5	14.4

Source: 1994 & 2000 FSM Censuses

Table 12.27 presents data on the number of housing units with and without bathtubs or shower facilities in 1980, 1994 and 2000. In addition, the table also presents the percent change over these years. Between 1980 and 2000, units with bathtub and shower increased from 8 percent in 1980 to 90 percent in 2000 while the housing units without shower/bath declined.

This significant improvement in bathing facilities was due to the availability of the Housing Renovation Loan Program and the Rural Economic and Community Development Service loan program by which most houses were able to have piped water and appropriate sewerage system installed to their housing units.

Table 12.27: Bathtub or Shower Facilities of All Housing Units, Kosrae State: 1980, 1994 and 2000

Bathtub or shower	Number			Percent change		Percent		
	1980	1994	2000	1980-1994	1994-2000	1980	1994	2000
Total housing units	615	1,018	1,087	65.5	6.8	100.0	100.0	100.0
Bathtub or shower	46	849	976	1745.7	15.0	7.5	83.4	89.8
No bathtub or shower	569	169	111	-70.3	-34.3	92.5	16.6	10.2

Source: 1980 TTPI Census; 1994 & 2000 FSM Censuses

Table 12.28 further presents data on the bathtub or shower facilities in each municipality. In 1994, Lelu had the highest proportion of housing units with complete shower facilities inside the house at around 19 percent, which further increased to 42 percent in 2000. Housing units with shower facilities inside also increased in all four municipalities between the Census years. Those categorized under "None" were using the rivers, streams, and nearby wells to shower. As for the 2000 Census results, housing units in Kosrae with bathtub or shower facility located outside the housing unit accounted for (more than 79 percent) in Lelu followed by Malem (about 62 percent).

Table 12.28: Bathtub or Shower Facilities of All Housing Units by Municipality, Kosrae State: 1994 and 2000

Municipality	Number				Percent			
		Bathtub/Shower				Bathtub/Shower		
	Total housing units	Inside	Outside	None	Total housing units	Inside	Outside	None
1994 CENSUS								
Total	1,018	121	728	169	100.0	11.9	71.5	16.6
Lelu	364	68	252	44	100.0	18.7	69.2	12.1
Malem	222	32	174	16	100.0	14.4	78.4	7.2
Utwe	155	2	124	29	100.0	1.3	80.0	18.7
Tafunsak	277	19	178	80	100.0	6.9	64.3	28.9
2000 CENSUS								
Total	1,087	292	684	111	100.0	26.9	62.9	10.2
Lelu	357	149	190	18	100.0	41.7	53.2	5.0
Malem	248	86	155	7	100.0	34.7	62.5	2.8
Utwe	156	25	82	49	100.0	16.0	52.6	31.4
Tafunsak	326	32	257	37	100.0	9.8	78.8	11.3

Source: 1994 & 2000 FSM Censuses

Table 12.29 presents the type of main cooking facility by municipality. Between 1994 and 2000, the proportion of housing units reporting cooking facilities inside the unit declined slightly (except for Malem and Utwe). In 1994, about 53 percent of the housing units had inside cooking facilities while only 52 percent of the housing units in Kosrae reported had inside cooking facilities in 2000. In all the four municipalities, the majority used kerosene stove and the main reason for that is possible for economical rather than convenience. Few housing units were reported having wood stove or open fire as their main cooking facilities. The distribution remained similar for all municipalities except for Utwe where a slightly higher proportion of housing units were using wood stove for their cooking facilities.

Table 12.29: Cooking Facilities Inside of Occupied Housing Units by Municipality, Kosrae State: 1994 and 2000

Municipality	Cooking facilities inside											
					Main cooking facilities inside unit							
	Occupied Housing Units	Total Hues w/ Cooking Facility. Inside	Percent HUs w/ Cooking Facility Inside	Percent	Electric Range	Kerosene Stove	Gas. Stove	Micro. Oven	Port. Electric Stove	Wood Stove	Open Fire	Others
1994 CENSUS												
Total	964	519	53.8	100.0	25.6	64.5	0.2	0.4	6.6	1.5	1.0	0.2
Lelu	345	223	64.6	100.0	36.8	57.0	0.4	0.9	3.6	0.9	0.4	-
Malem	212	118	55.7	100.0	18.6	61.0	-	-	18.6	-	0.8	0.8
Utwe	147	58	39.5	100.0	12.1	72.4	-	-	5.2	10.3	-	-
Tafunsak	260	120	46.2	100.0	18.3	78.3	-	-	0.8	-	2.5	-
2000 CENSUS												
Total	1,087	568	52.3	100.0	21.3	74.5	0.5	1.8	-	0.9	1.1	-
Lelu	357	208	58.3	100.0	22.1	74.5	0.5	1.4	-	0.5	1.0	-
Malem	248	160	64.5	100.0	18.1	76.3	1.3	3.1	-	1.3	-	-
Utwe	156	77	49.4	100.0	24.7	70.1	-	2.6	-	2.6	-	-
Tafunsak	326	123	37.7	100.0	22.0	74.8	-	-	-	-	3.3	-

Source: 1994 & 2000 FSM Censuses

Table 12.30 shows that almost 48 percent of the total occupied housing units in Kosrae State in 2000 cooked mainly outside the unit (more than in 1994). Malem and Tafunsak mostly used open fire outside the unit as to cook. Utwe used wood stoves as their main cooking facilities outside the unit. The most common cooking facility in Kosrae was kerosene stove.

Table 12.30: Cooking Facilities Outside of Occupied Housing Units by Municipality, Kosrae State: 1994 and 2000

Municipality	Occupied Housing Units	Total HUs w/ Cooking Facility. Outside	Percent HUs w/ Cooking Facility Outside	Percent main cooking facilities outside unit							
				Percent	Electric. Range	Kerosene Stove	Gas Stove	Micro. Oven	Port. Electric. Stove	Wood Stove	Open Fire	Others
1994 CENSUS												
Total	964	445	46.2	100.0	3.8	58.0	-	1.3	2.7	14.2	20.0	-
Lelu	345	122	35.4	100.0	5.7	67.2	-	0.8	0.8	3.3	22.1	-
Malem	212	94	44.3	100.0	5.3	55.3	-	-	10.6	1.1	27.7	-
Utwe	147	89	60.5	100.0	0.0	34.8	-	2.2	1.1	61.8	-	-
Tafunsak	260	140	53.8	100.0	3.6	66.4	-	2.1	0.0	2.1	25.7	-
2000 CENSUS												
Total	1,087	518	47.7	100.0	8.7	73.6	-	1.0	-	4.2	12.4	0.2
Lelu	357	148	41.5	100.0	5.4	83.8	-	1.4	-	5.4	3.4	0.7
Malem	248	88	35.5	100.0	12.5	61.4	-	1.1	-	3.4	21.6	-
Utwe	156	79	50.6	100.0	13.9	62.0	-	1.3	-	11.4	11.4	-
Tafunsak	326	203	62.3	100.0	7.4	75.9	-	0.5	-	1.0	15.3	-

Source: 1994 & 2000 FSM Censuses

Information on the number of vehicles and boats regularly used is helpful to officials who plan parking facilities, fuel stations, etc. Table 12.31 presents data on the availability of vehicles and boats owned by housing units and municipality in 1994 and 2000. More housing units reported vehicles and boats in 1994 than in 2000.

In 2000, Tafunsak had the highest proportion of its housing units reporting vehicles (82 percent) and Utwe had the least. Out of the 568 units with vehicle about 83 percent had at least one vehicle available for the household in 1994 while the 2000 data showed that from the 711 units with vehicle almost 79 percent had at least one vehicle available for the household. Likewise, out of the 157 units with boat nearly 87 percent had at least one boat for use by the household member in 1994 while the corresponding proportion increased to 173 units with boat about 84 percent in 2000.

Tafunsak municipality reported the most boats. About 38 percent of the occupied housing units in Utwe reported that they had a boat. In Utwe and Tafunsak, most islands used boats as their main transportation. The 2000 Census results also showed that out of the 22 housing units reported had a boat in Tafunsak, while Utwe reported 39 percent of the units had a boat.

Table 12.31: Vehicles and Boats Owned by Municipality, Kosrae State: 1994 and 2000

Municipality	Occupied Housing Units	Vehicle				Boat			
		Total HUs w/ Vehicle	Percent HUs w/ Vehicle	1	2+	Total HUs w/ Boat	Percent HUs w/ Boat	1	2+
1994 CENSUS									
Total	964	568	58.9	82.6	17.4	157	16.3	86.6	13.4
Lelu	345	243	70.4	81.1	18.9	44	12.8	93.2	6.8
Malem	212	125	59.0	80.0	20.0	5	2.4	80.0	20.0
Utwe	147	72	49.0	84.7	15.3	52	35.4	86.5	13.5
Tafunsak	260	128	49.2	86.7	13.3	56	21.5	82.1	17.9
2000 CENSUS									
Total	1,087	711	65.4	78.6	21.4	173	15.9	90.8	9.2
Lelu	357	246	68.9	79.7	20.3	35	9.8	97.1	2.9
Malem	248	177	71.4	79.1	20.9	6	2.4	100.0	-
Utwe	156	109	69.9	69.7	30.3	60	38.5	93.3	6.7
Tafunsak	326	179	54.9	82.1	17.9	72	22.1	84.7	15.3

Source: 1994 & 2000 FSM Censuses

Table 12.32 presents data on the monthly cost of electricity by municipality in 1994 and 2000. The 1994 data showed that most of the housing units were paying monthly electricity cost of $10 to $19 on the average. Recently, housing units are paying almost the same as in 1994 except for Malem reporting increased electricity usage of $20 to $29.

For the year 2000, the housing units in Lelu and Malem (about 15 percent) were paying $50 or more per month for the electricity consumption. Most housing units in Utwe and Tafunsak on the other hand, were paying $10 to $29 per month. Of all housing units with electricity in Kosrae, more than 95 percent reported using electricity in 1994 while the 2000 Census data showed a slight decreased to about 88 percent.

Table 12.32: Monthly Cost of Electricity by Municipality, Kosrae State: 1994 and 2000

Municipality	Occupied Housing Units	Total with Elect.	Percent with Elect.	Monthly cost of electricity: Percent	Electricity cost in US dollars: 1-9	10-19	20-29	30-39	40-49	50+
1994 CENSUS										
Total	964	920	95.4	100.0	30.1	37.6	15.2	8.9	2.8	5.3
Lelu	345	348	100.9	100.0	22.1	38.2	16.7	13.2	2.9	6.9
Malem	212	207	97.6	100.0	28.5	36.2	16.4	8.7	2.9	7.2
Utwe	147	135	91.8	100.0	42.2	42.2	11.9	2.2	-	1.5
Tafunsak	260	230	88.5	100.0	36.5	35.2	13.9	6.5	4.3	3.5
2000 CENSUS										
Total	1,087	960	88.3	100.0	17.5	26.1	24.9	14.0	8.0	9.5
Lelu	357	341	95.5	100.0	14.1	23.5	21.4	18.8	7.6	14.7
Malem	248	239	96.4	100.0	20.9	22.2	24.7	9.6	7.9	14.6
Utwe	156	136	87.2	100.0	17.6	31.6	30.9	11.8	7.4	0.7
Tafunsak	326	244	74.8	100.0	18.9	30.7	26.6	12.7	9.0	2.0

Source: 1994 & 2000 FSM Censuses

Housing units reporting monthly cost declined 9 percentage points since 1994. All municipalities experienced decline in housing units reporting kerosene cost, with the highest decline in Utwe (about 25.1 percentage points) and least in Yap, at 0.7 percentage point.

Most of the housing units in Kosrae (except Utwe) were paying less than $10 monthly on kerosene in 2000. Most houses in Lelu were paying about $10 to $19 per month on kerosene. Among the housing units in 1994 about 87 percent had kerosene costs while 77 percent in 2000 reported using kerosene cost per month. About 28 percent in 1994 and more than 23 percent in 2000 reported a monthly cost of 10 to 19 dollars a month. The situation was also similar for each of the municipalities.

Table 12.33: Monthly Cost of Kerosene by Municipality, Kosrae State: 1994 and 2000

Municipality	Occupied Housing Units	Total Using Kerosene	Percent Using Kerosene	Monthly cost of kerosene: Percent	Kerosene cost in US dollars: 1-9	10-19	20-29	30-39	40-49	50+
1994 CENSUS										
Total	964	834	86.5	100.0	66.7	27.5	4.4	1.1	0.2	0.1
Lelu	345	277	80.3	100.0	65.3	26.7	6.5	1.4	-	-
Malem	212	166	78.3	100.0	74.1	24.7	1.2	-	-	-
Utwe	147	135	91.8	100.0	73.3	21.5	3.0	1.5	-	0.7
Tafunsak	260	256	98.5	100.0	59.8	33.2	5.1	1.2	0.8	-
2000 CENSUS										
Total	1,087	842	77.5	100.0	74.8	22.6	2.1	0.1	0.1	0.2
Lelu	357	284	79.6	100.0	66.9	28.5	3.9	0.4	-	0.4
Malem	248	182	73.4	100.0	79.7	18.7	1.1	-	0.5	-
Utwe	156	104	66.7	100.0	93.3	6.7	-	-	-	-
Tafunsak	326	272	83.4	100.0	72.8	25.0	1.8	-	-	0.4

Source: 1994 & 2000 FSM Censuses

Housing units paying for water also decreased between the two Censuses years from about 6 percent in 1994 to less than 1 percent in 2000. Most housing units in Kosrae had no expenditures on water, mainly because the government subsidized the piped water, and therefore, only housing units with treated water supply were required to pay.

Table 12.34: Monthly Cost of Water by Municipality, Kosrae State: 1994 and 2000

Municipality	Occupied Housing Units	Total Paying Water	Total Paying Water	Water cost in US dollars: Percent	1-9	10-19	20-29	30-39	40-49	50+
1994 CENSUS										
Total	964	55	5.7	100.0	85.5	1.8	1.8	3.6	1.8	5.5
Lelu	345	29	8.4	100.0	96.6	-	-	3.4	-	-
Malem	212	5	2.4	100.0	20.0	20.0	20.0	-	-	40.0
Utwe	147	17	11.6	100.0	100.0	-	-	-	-	-
Tafunsak	260	4	1.5	100.0	25.0	-	-	25.0	25.0	25.0
2000 CENSUS										
Total	1,087	8	0.7	100.0	75.0	12.5	-	12.5	-	-
Lelu	357	4	1.1	100.0	50.0	25.0	-	25.0	-	-
Malem	248	1	0.4	100.0	100.0	-	-	-	-	-
Utwe	156	1	0.6	100.0	100.0	-	-	-	-	-
Tafunsak	326	2	0.6	100.0	100.0	-	-	-	-	-

Source: 1994 & 2000 FSM Censuses

Other fuel costs for oil, gas, wood, etc, were used to fully determine the total utility costs for the units. In 2000, the national average shows that more than 13 percent of all four municipalities paid $50 and over for other fuel cost each month. The proportion of housing units spend money buying woods or other types of fuel declined from 60 percent in 1994 to about 10 percent in 2000.

Table 12.35: Monthly Cost of Other Fuel by Municipality, Kosrae State: 1994 and 2000

Municipality	Occupied Housing Units	Total Paying Other Fuel	Percent Paying Other Fuel	Monthly cost of other fuel: Percent	Other fuel cost in US dollars: 1-9	10-19	20-29	30-39	40-49	50+
1994 CENSUS										
Total	964	580	60.2	100.0	6.0	8.8	20.7	17.6	19.3	27.6
Lelu	345	218	63.2	100.0	4.6	6.4	18.8	17.0	26.1	27.1
Malem	212	129	60.8	100.0	6.2	15.5	26.4	16.3	13.2	22.5
Utwe	147	92	62.6	100.0	13.0	7.6	16.3	15.2	14.1	33.7
Tafunsak	260	141	54.2	100.0	3.5	7.1	21.3	21.3	17.7	29.1
2000 CENSUS										
Total	1,087	110	10.1	100.0	1.8	15.5	27.3	20.0	20.0	15.5
Lelu	357	19	5.3	100.0	-	5.3	31.6	5.3	31.6	26.3
Malem	248	32	12.9	100.0	-	25.0	28.1	21.9	12.5	12.5
Utwe	156	22	14.1	100.0	-	31.8	27.3	9.1	13.6	18.2
Tafunsak	326	37	11.3	100.0	5.4	2.7	24.3	32.4	24.3	10.8

Source: 1994 & 2000 FSM Censuses

Table 12.36 presents data on the value of owner occupied housing units by municipality in 1994 and 2000. The overall median value of housing units had increased from about $6,000 in 1994 to about $7,000 in 2000.

Of the 1,087 occupied housing units in 2000, value was reported for the owner houses, which made up 96 percent, increasing from 89 percent in 1994. More than half of the housing units reported a value of less than $10,000. The highest proportion of the households in Lelu and Utwe reported to have values of $5,000 to $9,999 and high proportion of the housing units valued at $20,000 and above. Malem and Tafunsak, on the other hand, had the highest proportion of housing units valued less than $2,500

Table 12.36: Value of House by Municipality, Kosrae State: 1994 and 2000

Municipality	Total	Percent	Value of house: Less $2,000	$2,000 $4,999	$5,000 $9,999	$10,000 $14,999	$15,000 $19,999	$20,000+	Non-Response	Median Value
1994 CENSUS										
Total	964	100.0	15.8	25.2	33.3	7.9	3.8	3.7	10.3	$5,584
Lelu	345	100.0	8.7	20.9	35.4	11.3	5.2	4.3	14.2	6,885
Malem	212	100.0	14.2	32.5	31.6	6.1	2.8	7.5	5.2	5,112
Utwe	147	100.0	12.2	30.6	43.5	8.8	2.0	0.7	2.0	5,703
Tafunsak	260	100.0	28.5	21.9	26.2	4.2	3.8	1.5	13.8	3,897
2000 CENSUS										
Total	1,087	100.0	9.5	32.6	31.3	14.9	5.0	3.9	2.9	$7,074
Lelu	357	100.0	2.5	27.7	36.7	15.7	6.7	6.4	4.2	9,809
Malem	248	100.0	8.1	37.5	27.0	16.1	5.2	4.0	2.0	6,269
Utwe	156	100.0	10.9	26.9	43.6	12.8	1.3	1.3	3.2	7,426
Tafunsak	326	100.0	17.5	36.8	22.7	14.1	4.6	2.1	2.1	4,563

Source: 1994 & 2000 FSM Censuses

Conclusion

The total number of housing units increased from about 964 in 1994 to more than 1,087 in 2000. The housing conditions in Kosrae have been improving. This was evident from the improvement in housing unit facilities like electricity, lavatories, piped water, and the increased number of rooms per housing unit. Concrete walls and tin roofs are taking over the traditional wood walls and thatched roofs.

The total number of housing units increased from about 615 in 1980 to over 1,087 in 2000. More than half of all housing units were built between 1985 and 2000. In 2000, about 88 percent of the housing units had electricity compared to only 34 percent of the housing units that have electricity in 1980. Of all housing units in 2000, over 90 percent had flush toilet and bathtub/shower. About 92 percent of all housing units had piped water as compared to about 36 percent in 1980.

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APPENDIX A
BASIC TABLES

Table B1. Age by Usual Residence, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Age	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
All persons	7,686	2,591	1,571	1,067	2,457
Under 5 years	1,026	344	209	146	327
5 to 9 years	953	335	199	107	312
10 to 14 years	1,079	362	209	148	360
15 to 19 years	939	321	181	151	286
20 to 24 years	604	206	127	87	184
25 to 29 years	497	144	104	79	170
30 to 34 years	474	148	94	62	170
35 to 39 years	445	144	90	56	155
40 to 44 years	435	160	109	42	124
45 to 49 years	365	132	62	57	114
50 to 54 years	265	80	62	46	77
55 to 59 years	181	60	37	25	59
60 to 64 years	144	54	28	18	44
65 to 69 years	118	35	26	17	40
70 to 74 years	65	33	10	6	16
75 to 79 years	51	14	18	8	11
80 to 84 years	32	13	6	8	5
85 years and over	13	6	-	4	3
Median	19.2	19.0	19.7	19.4	19.0
Male	3,859	1,288	802	528	1,241
Under 5 years	528	181	97	82	168
5 to 9 years	486	170	106	50	160
10 to 14 years	569	197	115	73	184
15 to 19 years	493	160	100	81	152
20 to 24 years	281	91	63	48	79
25 to 29 years	238	70	46	37	85
30 to 34 years	207	62	41	27	77
35 to 39 years	229	73	49	25	82
40 to 44 years	220	81	62	16	61
45 to 49 years	182	64	32	21	65
50 to 54 years	152	48	35	25	44
55 to 59 years	82	28	15	13	26
60 to 64 years	66	24	13	9	20
65 to 69 years	57	14	11	8	24
70 to 74 years	24	11	3	4	6
75 to 79 years	29	8	13	2	6
80 to 84 years	13	6	1	4	2
85 years and over	3	-	-	3	-
Median	18.5	18.0	19.2	18.6	18.6
Female	3,827	1,303	769	539	1,216
Under 5 years	498	163	112	64	159
5 to 9 years	467	165	93	57	152
10 to 14 years	510	165	94	75	176
15 to 19 years	446	161	81	70	134
20 to 24 years	323	115	64	39	105
25 to 29 years	259	74	58	42	85
30 to 34 years	267	86	53	35	93
35 to 39 years	216	71	41	31	73
40 to 44 years	215	79	47	26	63
45 to 49 years	183	68	30	36	49
50 to 54 years	113	32	27	21	33
55 to 59 years	99	32	22	12	33
60 to 64 years	78	30	15	9	24
65 to 69 years	61	21	15	9	16
70 to 74 years	41	22	7	2	10
75 to 79 years	22	6	5	6	5
80 to 84 years	19	7	5	4	3
85 years and over	10	6	-	1	3
Median	19.9	19.9	20.4	20.4	19.5

Source: 2000 FSM Census

Table B2. Household and Family Characteristics by Usual Residence,
[For definitions of terms and meanings of symbols, see text]

Household Type / Relationship / Family Type	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
HOUSEHOLD TYPE AND RELATIONSHIP					
All persons	7,686	2,591	1,571	1,067	2,457
In households	7,615	2,557	1,567	1,067	2,424
Family householder: Male	900	292	210	134	264
Female	155	53	32	17	53
Nonfamily householder: Male	26	9	4	4	9
Female	6	3	2	1	-
Spouse	849	276	195	124	254
Child	3,561	1,165	798	508	1,090
Parent	56	22	12	9	13
Other relatives	1,949	682	305	256	706
Nonrelatives	113	55	9	14	35
In group quarters	71	34	4	-	33
Incorrectional institutions	-	-	-	-	-
Noninstitutionalized persons	71	34	4	-	33
School dormitories	-	-	-	-	-
Workers' quarters	8	-	-	-	8
Other noninstitutional	63	34	4	-	25
Persons per household	7.1	7.3	6.3	6.8	7.5
Persons per family	7.2	7.4	6.5	7.0	7.6
Persons under 18 years	3,665	1,246	737	501	1,181
Living with both parents	3,115	1,064	638	428	985
Householder or spouse	1	-	-	-	1
Own child	3,253	1,097	665	444	1,047
With female hhlder, no husband	441	160	86	40	155
Other relatives	219	85	34	39	61
Nonrelatives	39	13	6	5	15
Persons in group quarter	17	11	-	-	6
Persons 65 years and over	279	101	60	43	75
Family householder: Male	103	30	23	19	31
Female	47	21	12	2	12
Spouse	55	19	10	11	15
Parent	46	16	11	8	11
Other relatives	16	8	2	1	5
Nonrelatives	2	1	-	1	-
Nonfamily householder: Male	3	2	-	-	1
Female	4	1	2	1	-
Persons in group quarter	3	3	-	-	-
FAMILY TYPE BY PRESENCE OF OWN CHILDREN					
Families	1,055	345	242	151	317
With own children under 18 yrs	870	278	192	126	274
With own children under 6 yrs	558	179	117	77	185
Married-couple families	849	276	195	124	254
With own children under 18 yrs	723	230	163	109	221
With own children under 6 yrs	457	145	98	66	148
Female hhlder, no husb	145	52	32	17	44
With own children under 18 yrs	108	38	20	12	38
With own children under 6 yrs	77	28	14	9	26

Source: 2000 FSM Census

Table B3. Household Size and Fertility by Usual Residence, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Household Size Fertility	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
HOUSEHOLD SIZE					
Households	1,087	357	248	156	326
1 person	31	11	6	5	9
2 persons	39	10	13	7	9
3 persons	67	27	11	4	25
4 persons	128	42	37	19	30
5 persons	152	46	36	20	50
6 persons	148	42	45	24	37
7 persons	122	44	27	22	29
8 persons	107	34	24	19	30
9 persons	75	24	17	11	23
10 persons	69	21	16	7	25
11 persons	35	12	6	3	14
12 or more persons	114	44	10	15	45
Median	6.9	7.0	6.5	7.0	7.1
FERTILITY					
Women 15 to 19 year	446	161	81	70	134
Children ever born	24	6	6	6	6
Children still alive	23	6	6	5	6
Children born in last year	12	2	5	2	3
Women 20 to 24 year	323	115	64	39	105
Children ever born	196	61	36	20	79
Children still alive	191	59	36	20	76
Children born in last year	53	15	9	5	24
Women 25 to 29 year	259	74	58	42	85
Children ever born	463	115	116	66	166
Children still alive	433	115	102	61	155
Children born in last year	59	12	15	12	20
Women 30 to 34 year	267	86	53	35	93
Children ever born	747	217	157	102	271
Children still alive	696	205	143	95	253
Children born in last year	41	10	9	7	15
Women 35 to 39 year	216	71	41	31	73
Children ever born	823	248	166	109	300
Children still alive	788	241	156	102	289
Children born in last year	24	11	5	2	6
Women 40 to 44 year	215	79	47	26	63
Children ever born	1,070	411	240	108	311
Children still alive	1,008	380	233	92	303
Children born in last year	15	7	2	2	4
Women 45 to 49 year	183	68	30	36	49
Children ever born	981	377	151	170	283
Children still alive	904	346	140	158	260
Children born in last year	1	-	-	-	1
LAST CHILD BORN ALIVE					
Women 15 to 49 years with Last Birth	1,092	349	219	152	372
Male	573	184	110	87	192
Still alive	563	182	109	83	189
Female	519	165	109	65	180
Still alive	502	163	103	62	174
Born in last year	205	57	45	30	73
Male	111	30	24	20	37
Still alive	109	30	24	18	37
Female	94	27	21	10	36
Still alive	92	27	21	10	34

Source: 2000 FSM Census

Table B3A: Fertility by Age of Mother and Sex of Child by Usual Residence, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Fertility by Sex of Child	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
MALE CHILDREN					
Woman 15 to 19 year	446	161	81	70	134
Male children ever born	15	4	4	3	4
Male children still alive	14	4	4	2	4
Woman 20 to 24 year	323	115	64	39	105
Male children ever born	99	27	21	9	42
Male children still alive	98	26	21	9	42
Woman 25 to 29 year	259	74	58	42	85
Male children ever born	216	55	46	37	78
Male children still alive	202	55	41	34	72
Woman 30 to 34 year	267	86	53	35	93
Male children ever born	395	108	84	61	142
Male children still alive	370	105	75	57	133
Woman 35 to 39 year	216	71	41	31	73
Male children ever born	419	131	90	51	147
Male children still alive	402	128	83	50	141
Woman 40 to 44 year	215	79	47	26	63
Male children ever born	573	207	132	62	172
Male children still alive	542	188	130	54	170
Woman 45 to 49 year	183	68	30	36	49
Male children ever born	499	197	84	93	125
Male children still alive	454	177	76	83	118
FEMALE CHILDREN					
Woman 15 to 19 year	446	161	81	70	134
Female children ever born	9	2	2	3	2
Female children still alive	9	2	2	3	2
Woman 20 to 24 year	323	115	64	39	105
Female children ever born	97	34	15	11	37
Female children still alive	93	33	15	11	34
Woman 25 to 29 year	259	74	58	42	85
Female children ever born	247	60	70	29	88
Female children still alive	231	60	61	27	83
Woman 30 to 34 year	267	86	53	35	93
Female children ever born	352	109	73	41	129
Female children still alive	326	100	68	38	120
Woman 35 to 39 year	216	71	41	31	73
Female children ever born	404	117	76	58	153
Female children still alive	386	113	73	52	148
Woman 40 to 44 year	215	79	47	26	63
Female children ever born	497	204	108	46	139
Female children still alive	466	192	103	38	133
Woman 45 to 49 year	183	68	30	36	49
Female children ever born	482	180	67	77	158
Female children still alive	450	169	64	75	142

Source: 2000 FSM Census

Table B4. Single Years of Age by Usual Residence, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Age	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
All persons	7,686	2,591	1,571	1,067	2,457
Under 1 year	211	73	42	27	69
1 year	230	67	46	37	80
2 years	199	73	36	30	60
3 years	182	62	42	23	55
4 years	204	69	43	29	63
5 years	219	76	46	26	71
6 years	182	63	34	21	64
7 years	195	67	38	21	69
8 years	179	57	44	19	59
9 years	178	72	37	20	49
10 years	203	74	43	26	60
11 years	188	62	39	25	62
12 years	225	73	39	29	84
13 years	245	82	50	35	78
14 years	218	71	38	33	76
15 years	213	75	43	28	67
16 years	203	66	41	41	55
17 years	191	64	36	31	60
18 years	178	61	30	24	63
19 years	154	55	31	27	41
20 years	162	62	37	18	45
21 years	105	31	24	17	33
22 years	100	32	23	16	29
23 years	118	42	25	12	39
24 years	119	39	18	24	38
25 years	107	34	27	15	31
26 years	102	28	14	25	35
27 years	95	23	21	19	32
28 years	89	27	19	10	33
29 years	104	32	23	10	39
30 years	89	25	17	11	36
31 years	110	31	25	18	36
32 years	83	25	19	8	31
33 years	101	37	15	11	38
34 years	91	30	18	14	29
35 years	95	27	22	14	32
36 years	83	29	14	10	30
37 years	89	25	24	11	29
38 years	86	30	16	7	33
39 years	92	33	14	14	31
40 years	98	33	24	7	34
41 years	75	29	15	9	22
42 years	102	40	30	9	23
43 years	73	23	19	9	22
44 years	87	35	21	8	23
45 years	78	26	11	10	31
46 years	69	23	10	12	24
47 years	69	30	11	7	21
48 years	73	28	15	17	13
49 years	76	25	15	11	25
50 years	57	13	15	13	16
51 years	64	22	16	12	14
52 years	52	16	11	6	19
53 years	47	14	15	6	12
54 years	45	15	5	9	16
55 years	51	20	9	3	19
56 years	37	10	7	11	9
57 years	31	10	4	4	13
58 years	34	11	8	4	11
59 years	28	9	9	3	7
60 to 64 years	144	54	28	18	44
65+ years	279	101	60	43	75

Source: 2000 FSM Census

Table B4a. Female Single Years of Age by Usual Residence, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Age	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
All females	3,827	1,303	769	539	1,216
Under 1 year	96	34	21	9	32
1 year	117	34	27	11	45
2 years	117	45	23	20	29
3 years	84	24	23	12	25
4 years	84	26	18	12	28
5 years	96	36	15	13	32
6 years	89	30	18	13	28
7 years	107	36	21	13	37
8 years	89	27	23	10	29
9 years	86	36	16	8	26
10 years	99	33	23	15	28
11 years	96	35	17	14	30
12 years	98	34	16	10	38
13 years	114	36	21	19	38
14 years	103	27	17	17	42
15 years	99	40	19	12	28
16 years	99	40	17	19	23
17 years	99	31	18	15	35
18 years	81	27	13	14	27
19 years	68	23	14	10	21
20 years	84	34	18	4	28
21 years	51	14	11	9	17
22 years	54	17	13	8	16
23 years	61	25	13	5	18
24 years	73	25	9	13	26
25 years	50	11	16	8	15
26 years	58	19	8	11	20
27 years	49	10	10	10	19
28 years	46	18	9	5	14
29 years	56	16	15	8	17
30 years	45	12	9	6	18
31 years	65	19	15	8	23
32 years	43	13	10	4	16
33 years	59	25	8	8	18
34 years	55	17	11	9	18
35 years	42	9	10	9	14
36 years	42	16	4	6	16
37 years	42	13	11	5	13
38 years	44	19	10	3	12
39 years	46	14	6	8	18
40 years	39	14	7	3	15
41 years	40	13	9	6	12
42 years	52	20	13	7	12
43 years	35	12	10	4	9
44 years	49	20	8	6	15
45 years	30	11	5	6	8
46 years	33	10	5	4	14
47 years	39	20	4	4	11
48 years	39	13	7	13	6
49 years	42	14	9	9	10
50 years	25	8	8	5	4
51 years	26	7	5	6	8
52 years	25	6	5	4	10
53 years	20	6	7	4	3
54 years	17	5	2	2	8
55 years	32	11	6	1	14
56 years	20	7	4	4	5
57 years	17	6	4	2	5
58 years	18	5	4	3	6
59 years	12	3	4	2	3
60 to 64 years	78	30	15	9	24
65+ years	153	62	32	22	37

Source: 2000 FSM Census

Table B5. Place of Birth by Usual Residence, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Place of Birth	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
All persons	7,686	2,591	1,571	1,067	2,457
Federated States of Micronesia	7,282	2,416	1,475	1,023	2,368
Yap	14	1	2	1	10
Yap proper	12	-	2	1	9
Outer Islands	2	1	-	-	1
Chuuk	62	8	11	1	42
Northern Namoneas	35	3	4	-	28
Southern Namoneas	9	3	2	-	4
Faichuk	1	-	-	-	1
Mortlocks	9	2	2	-	5
Oksoritod	8	-	3	1	4
Pohnpei	296	97	73	39	87
Pohnpei Proper	271	96	64	39	72
Outer islands	25	1	9	-	15
Kosrae	6,910	2,310	1,389	982	2,229
Lelu	3,648	2,205	675	587	181
Malem	743	35	636	39	33
Utwe	460	30	42	321	67
Tafunsak	2,059	40	36	35	1,948
Guam	52	15	16	10	11
Northern Mariana Islands	11	6	3	2	-
Palau	9	2	2	1	4
Marshall Islands	155	62	38	13	42
Other Pacific Islands	19	5	10	-	4
Asia	53	31	7	1	14
China and Taiwan	1	-	-	-	1
Philippines	39	24	6	1	8
Japan	8	7	1	-	-
Other Asia	5	-	-	-	5
United States	96	50	16	16	14
Hawaii	39	18	4	10	7
Australia/New Zealand	2	-	2	-	-
Elsewhere	7	4	2	1	-
Females	3,827	1,303	769	539	1,216
Federated States of Micronesia	3,633	1,226	721	517	1,169
Yap	8	1	-	-	7
Yap proper	7	-	-	-	7
Outer Islands	1	1	-	-	-
Chuuk	21	4	6	-	11
Northern Namoneas	11	1	1	-	9
Southern Namoneas	6	2	2	-	2
Faichuk	-	-	-	-	-
Mortlocks	3	1	2	-	-
Oksoritod	1	-	1	-	-
Pohnpei	143	57	27	22	37
Pohnpei Proper	134	56	24	22	32
Outer islands	9	1	3	-	5
Kosrae	3,461	1,164	688	495	1,114
Lelu	1,838	1,088	347	295	108
Malem	374	27	290	30	27
Utwe	243	23	26	148	46
Tafunsak	1,006	26	25	22	933
Guam	31	9	8	7	7
Northern Mariana Islands	6	3	2	1	-
Palau	4	1	1	-	2
Marshall Islands	80	32	21	7	20
Other Pacific Islands	12	3	6	-	3
Asia	16	9	1	-	6
China and Taiwan	-	-	-	-	-
Philippines	9	5	1	-	3
Japan	4	4	-	-	-
Other Asia	3	-	-	-	3
United States	40	18	7	6	9
Hawaii	15	6	1	3	5
Australia/New Zealand	1	-	1	-	-
Elsewhere	4	2	1	1	-

Source: 2000 FSM Census

Table B6. Legal Residence by Usual Residence, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Legal Residence	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
All persons	7,686	2,591	1,571	1,067	2,457
Federated States of Micronesia	7,541	2,500	1,553	1,060	2,428
Yap	9	-	1	1	7
Yap proper	8	-	-	1	7
Outer Islands	1	-	1	-	-
Chuuk	40	1	1	1	37
Northern Namoneas	26	1	1	-	24
Southern Namoneas	2	-	-	-	2
Faichuk	1	-	-	-	1
Mortlocks	5	-	-	-	5
Oksoritod	6	-	-	1	5
Pohnpei	47	23	3	2	19
Pohnpei Proper	40	22	3	2	13
Outer Islands	7	1	-	-	6
Kosrae	7,445	2,476	1,548	1,056	2,365
Lelu	2,482	2,405	39	14	24
Malem	1,500	21	1,466	11	2
Utwe	1,100	29	41	1,019	11
Tafunsak	2,363	21	2	12	2,328
Elsewhere	145	91	18	7	29
Females	3,827	1,303	769	539	1,216
Federated States of Micronesia	3,768	1,267	763	536	1,202
Yap	4	-	-	-	4
Yap proper	4	-	-	-	4
Outer Islands	-	-	-	-	-
Chuuk	5	-	-	-	5
Northern Namoneas	5	-	-	-	5
Southern Namoneas	-	-	-	-	-
Faichuk	-	-	-	-	-
Mortlocks	-	-	-	-	-
Oksoritod	-	-	-	-	-
Pohnpei	23	14	1	1	7
Pohnpei Proper	21	13	1	1	6
Outer Islands	2	1	-	-	1
Kosrae	3,736	1,253	762	535	1,186
Lelu	1,247	1,210	20	6	11
Malem	742	14	719	7	2
Utwe	558	17	22	515	4
Tafunsak	1,189	12	1	7	1,169
Elsewhere	59	36	6	3	14

Source: 2000 FSM Census

Table B7. Length of Continuous Residence and Place of Previous Residence by Usual residence, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Length of Continuous Residence Place of Previous Residence	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
All persons	7,686	2,591	1,571	1,067	2,457
Lived in this muni. since birth	5,937	2,043	1,090	842	1,962
Previous residence elsewhere	1,749	548	481	225	495
In this state	597	184	91	126	196
Lived in this municipality:					
Less than 6 months	83	26	3	21	33
6 months up to 1 year	40	13	8	13	6
1 year up to 2 years	38	12	11	6	9
2 years up to 5 years	79	31	17	15	16
5 years or more	357	102	52	71	132
In other FSM State	515	148	161	42	164
Lived in this municipality:					
Less than 6 months	51	16	17	5	13
6 months up to 1 year	28	6	2	2	18
1 year up to 2 years	41	19	14	4	4
2 years up to 5 years	122	32	30	10	50
5 years or more	273	75	98	21	79
Lived in Asia	47	25	10	2	10
Lived in this municipality:					
Less than 6 months	1	-	-	1	-
6 months up to 1 year	6	2	4	-	-
1 year up to 2 years	10	3	-	1	6
2 years up to 5 years	17	13	2	-	2
5 years or more	13	7	4	-	2
Lived elsewhere	590	191	219	55	125
Lived in this municipality:					
Less than 6 months	92	26	38	12	16
6 months up to 1 year	56	36	11	6	3
1 year up to 2 years	65	21	16	10	18
2 years up to 5 years	127	37	51	10	29
5 years or more	250	71	103	17	59
All persons	7,686	2,591	1,571	1,067	2,457
Lived in this muni. since birth	5,937	2,043	1,090	842	1,962
Previous residence elsewhere	1,749	548	481	225	495
Federated States Micronesia	1,112	332	252	168	360
Yap	13	2	2	1	8
Yap proper	11	1	1	1	8
Outer Islands	2	1	1	-	-
Chuuk	54	6	9	-	39
Northern Namoneas	34	5	1	-	28
Southern Namoneas	7	-	3	-	4
Faichuk	1	-	-	-	1
Mortlocks	5	1	2	-	2
Oksoritod	7	-	3	-	4
Pohnpei	448	140	150	41	117
Pohnpei Proper	422	139	141	41	101
Outer islands	26	1	9	-	16
Kosrae	597	184	91	126	196
Lelu	196	15	38	53	90
Malem	109	39	4	34	32
Utwe	148	63	23	4	58
Tafunsak	144	67	26	35	16
Guam	125	19	55	13	38
Northern Mariana Islands	23	15	8	-	-
Palau	19	3	8	2	6
Marshall Islands	162	68	39	12	43
Other Pacific Islands	28	4	18	-	6
Asia	47	25	10	2	10
China and Taiwan	-	-	-	-	-
Philippines	28	16	7	-	5
Japan	13	8	3	2	-
Other Asia	6	1	-	-	5
United States	214	71	86	27	30
Elsewhere	19	11	5	1	2

Source: 2000 FSM Census

Table B8. Residence 5 Years Ago by Usual Residence, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Residence 5 Years Ago	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
Persons 5 years & over	6,660	2,247	1,362	921	2,130
Federated States of Micronesia	6,381	2,146	1,275	883	2,077
Yap	4	-	-	1	3
Yap proper	4	-	-	1	3
Outer Islands	-	-	-	-	-
Chuuk	27	3	1	-	23
Northern Namoneas	19	2	-	-	17
Southern Namoneas	3	1	1	-	1
Faichuk	-	-	-	-	-
Mortlocks	3	-	-	-	3
Oksoritod	2	-	-	-	2
Pohnpei	194	69	47	28	50
Pohnpei Proper	187	69	46	28	44
Outer islands	7	-	1	-	6
Kosrae	6,156	2,074	1,227	854	2,001
Lelu	2,060	2,018	8	10	24
Malem	1,234	8	1,206	12	8
Utwe	860	17	9	824	10
Tafunsak	2,002	31	4	8	1,959
Guam	61	8	28	9	16
Northern Mariana Islands	7	2	5	-	-
Palau	3	2	-	-	1
Marshall Islands	52	30	5	1	16
Other Pacific Islands	8	1	5	1	1
Asia	28	14	1	7	6
China and Taiwan	-	-	-	-	-
Philippines	13	8	1	2	2
Japan	10	5	-	5	-
Other Asia	5	1	-	-	4
United States	110	42	38	20	10
Hawaii	44	10	24	8	2
Australia/New Zealand	4	-	3	-	1
Elsewhere	6	2	2	-	2
Females 5 years & over	3,329	1,140	657	475	1,057
Federated States of Micronesia	3,177	1,084	606	459	1,028
Yap	2	-	-	-	2
Yap proper	2	-	-	-	2
Outer Islands	-	-	-	-	-
Chuuk	5	-	-	-	5
Northern Namoneas	5	-	-	-	5
Southern Namoneas	-	-	-	-	-
Faichuk	-	-	-	-	-
Mortlocks	-	-	-	-	-
Oksoritod	-	-	-	-	-
Pohnpei	84	33	21	15	15
Pohnpei Proper	82	33	21	15	13
Outer islands	2	-	-	-	2
Kosrae	3,086	1,051	585	444	1,006
Lelu	1,045	1,020	5	7	13
Malem	589	3	571	8	7
Utwe	446	12	6	423	5
Tafunsak	1,006	16	3	6	981
Guam	34	5	15	5	9
Northern Mariana Islands	5	2	3	-	-
Palau	1	1	-	-	-
Marshall Islands	31	17	4	1	9
Other Pacific Islands	5	1	3	-	1
Asia	12	7	-	1	4
China and Taiwan	-	-	-	-	-
Philippines	5	3	-	1	1
Japan	4	4	-	-	-
Other Asia	3	-	-	-	3
United States	58	21	23	9	5
Hawaii	26	7	15	3	1
Australia/New Zealand	2	-	2	-	-
Elsewhere	4	2	1	-	1

Source: 2000 FSM Census

Table B9. Ethnicity by Usual Residence, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Ethnicity	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
All persons	7,686	2,591	1,571	1,067	2,457
Single ethnic group	7,198	2,476	1,405	990	2,327
Yapese	19	8	2	2	7
Ulithian	-	-	-	-	-
Woleaian	-	-	-	-	-
Satawalese	-	-	-	-	-
Chuukese	36	5	4	1	26
Mortlockese	3	2	-	-	1
Pohnpeian/Sapwuahfikese	64	22	4	8	30
Pingelapese	5	-	2	1	2
Mwoakilloan	8	4	2	-	2
Nukuoroan	1	-	-	-	1
Kapingamarangian	8	-	1	-	7
Kosraean	6,916	2,357	1,361	976	2,222
Palauan	1	-	1	-	-
Marshallese	36	16	8	1	11
Other Pacific Islands	14	4	8	-	2
White	33	28	3	-	2
Asian	51	29	7	1	14
Filipino	39	22	6	1	10
Chinese/Taiwanese	-	-	-	-	-
Other Single	3	1	2	-	-
Multiple ethnic group	488	115	166	77	130
Yapese and other	13	1	10	1	1
Chuukese and other	70	17	11	6	36
Pohnpeian and other	218	41	69	55	53
Kosraen and other	481	114	166	76	125
Other Multiple	194	57	76	16	45
Females	3,827	1,303	769	539	1,216
Single ethnic group	3,583	1,237	690	501	1,155
Yapese	11	5	-	1	5
Ulithian	-	-	-	-	-
Woleaian	-	-	-	-	-
Satawalese	-	-	-	-	-
Chuukese	9	3	2	-	4
Mortlockese	1	1	-	-	-
Pohnpeian/Sapwuahfikese	36	15	1	6	14
Pingelapese	5	-	2	1	2
Mwoakilloan	5	2	2	-	1
Nukuoroan	1	-	-	-	1
Kapingamarangian	3	-	-	-	3
Kosraean	3,451	1,178	670	493	1,110
Palauan	1	-	1	-	-
Marshallese	21	9	6	-	6
Other Pacific Islands	7	2	3	-	2
White	13	11	1	-	1
Asian	17	10	1	-	6
Filipino	11	6	1	-	4
Chinese/Taiwanese	-	-	-	-	-
Other Single	2	1	1	-	-
Multiple ethnic group	244	66	79	38	61
Yapese and other	6	-	5	-	1
Chuukese and other	27	8	5	-	14
Pohnpeian and other	113	23	31	32	27
Kosraen and other	242	66	79	38	59
Other Multiple	100	35	38	6	21

Source: 2000 FSM Census

Table B10. Marital Status and Religion by Usual Residence, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Marital Status Religion	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
MARITAL STATUS					
Males 15 years & over	2,276	740	484	323	729
Never married	976	300	214	165	297
Now married, except separated	1,230	416	251	153	410
Separated	18	10	4	-	4
Widowed	39	10	10	3	16
Divorced	13	4	5	2	2
Females 15 years & over	2,352	810	470	343	729
Never married	882	306	157	156	263
Now married, except separated	1,258	424	267	163	404
Separated	30	12	6	-	12
Widowed	167	65	38	21	43
Divorced	15	3	2	3	7
RELIGION					
All persons	7,686	2,591	1,571	1,067	2,457
Roman Catholic	141	70	13	3	55
Congregational	6,851	2,267	1,312	1,032	2,240
Seventh Day Adventist (SDA)	113	8	39	-	66
Baptist	121	59	56	-	6
Latter Day Saints (Mormon)	169	56	38	30	45
Other religion	279	125	110	-	44
Refused	3	2	1	-	-
None	9	4	2	2	1
Females	3,827	1,303	769	539	1,216
Roman Catholic	58	33	5	2	18
Congregational	3,433	1,137	649	521	1,126
Seventh Day Adventist (SDA)	53	5	17	-	31
Baptist	62	34	26	-	2
Latter Day Saints (Mormon)	83	29	19	15	20
Other religion	135	63	53	-	19
Refused	1	1	-	-	-
None	2	1	-	1	-

Source: 2000 FSM Census

Table B11. Languages Spoken and Spoken at Home by Usual Residence, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Languages	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
ALL LANGUAGES SPOKEN					
Persons 5 years & over	6,660	2,247	1,362	921	2,130
English	4,154	1,441	1,017	398	1,298
Yapese	25	6	8	1	10
Ulithian/Woleaian/Satawalese	2	-	-	-	2
Chuukese	100	38	9	2	51
Pohnpeian/Mwoakilloan/Ping	698	227	187	106	178
Kosraean	6,562	2,214	1,349	919	2,080
Asian	182	92	30	26	34
Other language	313	132	63	23	95
FIRST LANGUAGE REPORTED					
Persons 5 years & over	6,660	2,247	1,362	921	2,130
English	163	132	10	1	20
Yapese	12	3	-	1	8
Ulithian/Woleaian/Satawalese	2	-	-	-	2
Chuukese	45	8	1	1	35
Pohnpeian/Mwoakilloan/Ping	67	29	6	4	28
Kosraean	6,269	2,026	1,330	912	2,001
Asian	44	29	3	1	11
Other language	58	20	12	1	25
SECOND LANGUAGE REPORTED					
5 years & over with 2nd lang.	4,474	1,529	1,067	456	1,422
English	3,737	1,214	942	371	1,210
Yapese	10	2	7	-	1
Ulithian/Woleaian/Satawalese	-	-	-	-	-
Chuukese	35	17	3	-	15
Pohnpeian/Mwoakilloan/Ping	278	91	62	49	76
Kosraean	217	130	15	5	67
Asian	81	36	14	19	12
Other language	116	39	24	12	41
LANGUAGE OF PERSONS SPEAKING ONLY ONE LANGUAGE Y ONE LANGUAGE					
5 years & over with 1 language	2,186	718	295	465	708
English	21	16	2	-	3
Yapese	-	-	-	-	-
Ulithian/Woleaian/Satawalese	-	-	-	-	-
Chuukese	4	-	-	-	4
Pohnpeian/Mwoakilloan/Ping	8	2	-	-	6
Kosraean	2,147	700	293	465	689
Asian	1	-	-	-	1
Other language	5	-	-	-	5
LANGUAGE USUALLY SPOKEN AT HOME					
Persons 5 years & over	6,660	2,247	1,362	921	2,130
English	57	38	13	1	5
Yapese	12	-	2	5	5
Ulithian/Woleaian/Satawalese	4	2	1	-	1
Chuukese	42	6	-	-	36
Pohnpeian/Mwoakilloan/Ping	39	17	1	3	18
Kosraean	6,444	2,149	1,339	912	2,044
Asian	36	23	4	-	9
Other language	26	12	2	-	12

Source: 2000 FSM Census

Table B12. School Enrollment and Educational Attainment by Usual Residence, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

School Enrollment Educational Attainment	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
SCHOOL ENROLLMENT AND TYPE OF SCHOOL					
Persons 3 years & over and enrolled in school	2,546	895	538	301	812
Preprimary school	167	76	40	12	39
Public school	157	73	34	11	39
Elementary school, 1st to 8th	1,579	530	319	190	540
Public school	1,543	516	314	188	525
High school, 9th to 12th grade	687	250	144	90	203
Public school	682	248	142	89	203
College	113	39	35	9	30
Public school	113	39	35	9	30
Females 3 years & over and enrolled in school	1,231	437	248	151	395
Preprimary school	74	35	14	6	19
Public school	69	33	12	5	19
Elementary school, 1st to 8th	772	257	156	98	261
Public school	750	245	152	98	255
High school, 9th to 12th grade	335	128	64	44	99
Public school	332	126	64	43	99
College	50	17	14	3	16
EDUCATIONAL ATTAINMENT					
Persons 25 years & over	3,085	1,023	646	428	988
None	66	17	12	3	34
Elementary: 1 to 4 years	311	110	68	58	75
5 and 6 years	253	95	29	39	90
7 years	69	26	14	7	22
8 years	295	82	32	58	123
High school: 1 year	179	57	25	28	69
2 years	175	49	32	31	63
3 years	156	49	27	22	58
4 years, no diploma	133	44	31	24	34
High school graduate	427	138	109	46	134
Some college, no degree	424	138	99	44	143
Associate degree, occupational	213	73	62	28	50
Associate degree, academic	204	60	62	33	49
Bachelor's degree	141	68	28	6	39
Graduate/professional degree	39	17	16	1	5
Percent high school graduate	46.9	48.3	58.2	36.9	42.5
Percent bachelor's degree	5.8	8.3	6.8	1.6	4.5
Females 25 years & over	1,583	534	325	234	490
None	39	10	6	2	21
Elementary: 1 to 4 years	217	78	49	36	54
5 and 6 years	178	66	25	29	58
7 years	51	23	10	6	12
8 years	209	63	27	40	79
High school: 1 year	125	43	17	17	48
2 years	114	31	23	19	41
3 years	94	34	18	12	30
4 years, no diploma	62	26	13	8	15
High school graduate	204	68	57	23	56
Some college, no degree	124	33	32	18	41
Associate degree, occupational	57	22	16	11	8
Associate degree, academic	75	20	23	13	19
Bachelor's degree	26	14	4	-	8
Graduate/professional degree	8	3	5	-	-
Percent high school graduate	31.2	30.0	42.2	27.8	26.9
Percent bachelor's degree	2.1	3.2	2.8	-	1.6
Persons 18 to 24 years	183	63	50	13	57
Percent high school graduate	53.6	54.0	68.0	46.2	42.1

Source: 2000 FSM Census

Table B13. Literacy, Vocational Training, Veteran Status, and Military Dependency by Usual Residence, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Literacy; Vocational Training; Veteran Status; Military Dependency	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
LITERACY					
Persons 10 years & over	5,707	1,912	1,163	814	1,818
Can read & write in any language	5,672	1,902	1,156	811	1,803
Cannot read and write	35	10	7	3	15
Females 10 years & over	2,862	975	564	418	905
Can read & write in any language	2,846	971	562	416	897
Cannot read and write	16	4	2	2	8
VOCATIONAL TRAINING					
Persons 15 to 64 years	4,349	1,449	894	623	1,383
Completed requirements	883	350	232	108	193
In FSM	502	224	132	57	89
Outside FSM	232	70	58	26	78
Both inside and outside FSM	149	56	42	25	26
Did not complete requirements	3,466	1,099	662	515	1,190
Females 15 to 64 years	2,199	748	438	321	692
Completed requirements	313	117	92	35	69
In FSM	218	90	60	21	47
Outside FSM	64	20	21	7	16
Both inside and outside FSM	31	7	11	7	6
Did not complete requirements	1,886	631	346	286	623
Persons 15 to 24 years	1,543	527	308	238	470
Completed requirements	97	33	24	20	20
In FSM	70	26	16	15	13
Outside FSM	23	7	8	2	6
Both inside and outside FSM	4	-	-	3	1
Did not complete requirements	1,446	494	284	218	450
Females 15 to 24 years	769	276	145	109	239
Completed requirements	35	12	9	6	8
In FSM	23	8	5	3	7
Outside FSM	10	4	4	1	1
Both inside and outside FSM	2	-	-	2	-
Did not complete requirements	734	264	136	103	231
Persons 25 to 34 years	971	292	198	141	340
Completed requirements	224	84	67	24	49
In FSM	127	52	48	8	19
Outside FSM	71	21	14	9	27
Both inside and outside FSM	26	11	5	7	3
Did not complete requirements	747	208	131	117	291
Females 25 to 34 years	526	160	111	77	178
Completed requirements	100	32	38	9	21
In FSM	64	20	28	3	13
Outside FSM	28	8	9	3	8
Both inside and outside FSM	8	4	1	3	-
Did not complete requirements	426	128	73	68	157
VETERAN STATUS					
Persons 15 years & over	4,628	1,550	954	666	1,458
Now on active duty	22	5	2	7	8
On active in the past, but not now	38	12	17	1	8
Never on active duty	4,568	1,533	935	658	1,442
MILITARY DEPENDENCY					
All persons	7,686	2,591	1,571	1,067	2,457
In Armed Forces	22	5	2	7	8
Military dependent	86	13	30	24	19
Of active-duty member	61	9	12	23	17
Other dependent	25	4	18	1	2
Other civilian	7,578	2,573	1,539	1,036	2,430

Source: 2000 FSM Census

Table B14. Labor Force Characteristics by Municipality of Usual Residence, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Labor Force Status Subsistence Activity	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
CURRENT LABOR FORCE STATUS					
Persons 15 years & over	4,628	1,550	954	666	1,458
In labor force	2,232	683	493	291	765
Percent	48.2	44.1	51.7	43.7	52.5
Employed	1,864	615	435	227	587
Formal work	1,468	570	322	143	433
Agriculture/Fishing	396	45	113	84	154
Subsistence	198	30	82	17	69
Market Oriented	198	15	31	67	85
Unemployed	368	68	58	64	178
Percent of labor force	16.5	10.0	11.8	22.0	23.3
Not in labor force	2,396	867	461	375	693
Could have taken job	520	150	48	121	201
Not available for work	1,876	717	413	254	492
Females 15 years & over	2,352	810	470	343	729
In labor force	855	260	192	119	284
Percent	36.4	32.1	40.9	34.7	39.0
Employed	678	227	164	86	201
Formal work	490	204	107	48	131
Agriculture/Fishing	188	23	57	38	70
Subsistence	88	12	38	2	36
Market Oriented	100	11	19	36	34
Unemployed	177	33	28	33	83
Percent of labor force	20.7	12.7	14.6	27.7	29.2
Not in labor force	1,497	550	278	224	445
Could have taken job	345	83	38	78	146
Not available for work	1,152	467	240	146	299
With own children under 6 yrs	609	200	121	85	203
In labor force	264	83	55	34	92
With own children 6-17 yrs only	794	271	157	110	256
In labor force	379	116	82	50	131
SUBSISTENCE ACTIVITY					
Total, subsistence for home	374	42	107	74	151
Gardening	238	26	70	50	92
Fishing	179	7	38	40	94
Animal raising	120	7	37	13	63
Other	85	21	30	10	24
Total, subsistence and sold	198	15	31	67	85
Gardening	75	4	10	34	27
Fishing	85	3	11	28	43
Animal raising	28	-	3	4	21
Other	59	9	14	17	19
Total, subsistence and gave	85	5	7	3	70
Gardening	40	2	3	3	32
Fishing	49	2	4	-	43
Animal raising	17	-	2	1	14
Other	14	2	1	-	11
Females, subsistence for home	170	21	53	28	68
Gardening	87	8	23	14	42
Fishing	72	3	19	11	39
Animal raising	34	1	10	2	21
Other	64	15	24	9	16
Females, subsistence and sold	100	11	19	36	34
Gardening	29	2	5	12	10
Fishing	31	2	5	12	12
Animal raising	7	-	-	1	6
Other	50	8	13	16	13
Females, subsistence and gave	31	1	3	2	25
Gardening	14	-	2	2	10
Fishing	15	1	2	-	12
Animal raising	4	-	-	-	4
Other	11	1	1	-	9

Source: 2000 FSM Census

Table B15. Labor Force Characteristics from U.S. Definition by Municipality of Usual Residence, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Labor Force Status Last Week Duration of Work in 1999	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
CURRENT LABOR FORCE STATUS					
Persons 16 years & over	4,415	1,475	911	638	1,391
In labor force	2,019	695	427	228	669
Percent 16 years & over	45.7	47.1	46.9	35.7	48.1
Civilian labor force	2,019	695	427	228	669
Employed	1,573	614	344	159	456
Work 35 or more hours	765	339	143	52	231
Unemployed	446	81	83	69	213
Percent of civilian labor	22.1	11.7	19.4	30.3	31.8
Not in labor force	2,396	780	484	410	722
Institutionalized persons	31	11	-	-	20
Females 16 years & over	2,253	770	451	331	701
In labor force	752	271	157	89	235
Percent 16 years & over	33.4	35.2	34.8	26.9	33.5
Civilian labor force	752	271	157	89	235
Employed	547	231	119	56	141
Work 35 or more hours	235	114	43	19	59
Unemployed	205	40	38	33	94
Percent of civilian labor	27.3	14.8	24.2	37.1	40.0
Not in labor force	1,501	499	294	242	466
Institutionalized persons	10	7	-	-	3
With own children under 6 year	1,239	394	245	179	421
In labor force	625	204	127	65	229
With own children 6 to 17 year	1,569	515	308	218	528
In labor force	753	246	152	77	278
DURATION OF WORK IN 1999					
Persons 16 years & over	4,415	1,475	911	638	1,391
Worked in 1999	1,526	570	315	149	492
50 to 52 weeks	1,127	465	190	84	388
40 to 49 weeks	182	24	75	50	33
27 to 39 weeks	57	27	10	3	17
14 to 26 weeks	87	30	25	8	24
1 to 13 weeks	73	24	15	4	30
Usually worked 35 + hours	830	333	147	62	288
50 to 52 weeks	633	276	95	38	224
40 to 49 weeks	81	12	34	16	19
27 to 39 weeks	37	21	2	2	12
14 to 26 weeks	42	13	12	4	13
1 to 13 weeks	37	11	4	2	20
Usually worked 15 to 34 hour	664	223	156	86	199
40 or more weeks	583	197	132	80	174
50 to 52 weeks	484	186	91	46	161
Did not work in 1999	2,889	905	596	489	899
Females 16 years & over	2,253	770	451	331	701
Worked in 1999	511	204	118	46	143
50 to 52 weeks	355	147	68	28	112
40 to 49 weeks	61	10	28	12	11
27 to 39 weeks	21	13	4	1	3
14 to 26 weeks	39	19	10	2	8
1 to 13 weeks	35	15	8	3	9
Usually worked 35 + hours	245	112	46	17	70
50 to 52 weeks	188	88	31	11	58
40 to 49 weeks	21	3	9	4	5
27 to 39 weeks	10	9	-	-	1
14 to 26 weeks	15	7	5	1	2
1 to 13 weeks	11	5	1	1	4
Usually worked 15 to 34 hours	242	80	64	28	70
40 or more weeks	200	64	53	25	58
50 to 52 weeks	162	58	34	17	53
Did not work in 1999	1,742	566	333	285	558

Source: 2000 FSM Census

Table B15A. Activity and Place of Work in Week Before Census by Municipality of Usual Residence, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Activity in Week before Census Where Worked Last Week Workers in Families in 1999	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
ACTIVITY IN WEEK BEFORE CENSUS					
Persons 15 years and over	4,628	1,550	954	666	1,458
Paid work, no subsistence	1,182	537	221	111	313
Paid work and subsistence	286	33	101	32	120
Subsistence activity only	449	46	121	98	184
No work	2,711	934	511	425	841
Females 15 years and over	2,352	810	470	343	729
Paid work, no subsistence	442	192	88	45	117
Paid work and subsistence	48	12	19	3	14
Subsistence activity only	204	23	58	45	78
No work	1,658	583	305	250	520
WHERE WORKED LAST WEEK					
Current formal workforce persons 15 years and over	1,468	570	322	143	433
Worked in same municipality	938	526	103	53	256
Worked in same village	935	526	103	53	253
Worked in other village	3	-	-	-	3
Worked in other municipality	530	44	219	90	177
Current formal workforce females 15 years and over	490	204	107	48	131
Worked in same municipality	337	197	39	21	80
Worked in same village	336	197	39	21	79
Worked in other village	1	-	-	-	1
Worked in other municipality	153	7	68	27	51
WORKERS IN FAMILIES IN 1999					
Families	1,055	345	242	151	317
No workers	255	67	68	56	64
1 worker	445	142	100	62	141
2 workers	264	100	53	26	85
3 workers	70	27	17	6	20
4 or more workers	21	9	4	1	7

Source: 2000 FSM Census

Table B16. Occupation by Usual Residence, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Occupation	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
Current formal workforce 15 years & over	1,468	570	322	143	433
Legislators, Sr. Officials, Managers	136	71	21	6	38
Professionals	210	76	62	43	29
Technicians & Assoc. Professionals	251	77	62	14	98
Clerks	253	106	47	30	70
Service & Shop Market Sales Workers	92	32	34	8	18
Skilled Agric. & Fisheries workers	22	8	6	3	5
Craft and Related Workers	149	71	27	18	33
Plant/Machine Operators & Assembly	102	36	17	10	39
Elementary Occupations	253	93	46	11	103
Armed Forces	-	-	-	-	-
Current formal workforce males 15 years & over	978	366	215	95	302
Legislators, Sr. Officials, Managers	121	60	18	6	37
Professionals	150	58	39	32	21
Technicians & Assoc. Professionals	178	54	47	10	67
Clerks	42	17	8	5	12
Service & Shop Market Sales Workers	47	13	18	7	9
Skilled Agric. & Fisheries workers	21	7	6	3	5
Craft and Related Workers	109	52	20	11	26
Plant/Machine Operators & Assembly	97	35	14	10	38
Elementary Occupations	213	70	45	11	87
Armed Forces	-	-	-	-	-
Current formal workforce females 15 years & over	490	204	107	48	131
Legislators, Sr. Officials, Managers	15	11	3	-	1
Professionals	60	18	23	11	8
Technicians & Assoc. Professionals	73	23	15	4	31
Clerks	211	89	39	25	58
Service & Shop Market Sales Workers	45	19	16	1	9
Skilled Agric. & Fisheries workers	1	1	-	-	-
Craft and Related Workers	40	19	7	7	7
Plant/Machine Operators & Assembly	5	1	3	-	1
Elementary Occupations	40	23	1	-	16
Armed Forces	-	-	-	-	-

Source: 2000 FSM Census

Table B17. Industry by Usual Residence, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Industry	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
Current formal workforce 15 years & over	1,468	570	322	143	433
Agriculture, hunting & forestry	13	3	5	2	3
Fishing	16	6	3	-	7
Mining and quarrying	5	1	1	-	3
Manufacturing	48	14	6	2	26
Electricity, gas & water supply	33	17	4	4	8
Construction	122	24	32	9	57
Wholesale & Retail Trade, Repair of Veh., etc.	242	123	42	9	68
Hotels and restaurants	79	34	20	5	20
Transport, Storage & Communication	68	45	5	4	14
Financial Intermediation	20	9	3	-	8
Real Estate, Renting & Business Act	119	19	63	10	27
Public Administr. & Defence, Compulsory	313	151	37	45	80
Education	255	77	66	39	73
Health and Social Work	100	40	31	7	22
Other Comm., Social & Personnel Service Act	32	5	3	7	17
Private Households with Employed Persons	3	2	1	-	-
Extraterritorial Organizations	-	-	-	-	-
Current formal workforce males 15 years & over	978	366	215	95	302
Agriculture, hunting & forestry	10	1	5	2	2
Fishing	14	5	3	-	6
Mining and quarrying	4	1	-	-	3
Manufacturing	37	9	4	2	22
Electricity, gas & water supply	24	11	4	3	6
Construction	120	24	32	9	55
Wholesale & Retail Trade, Repair of Veh., etc.	101	55	17	1	28
Hotels and restaurants	25	7	7	3	8
Transport, Storage & Communication	58	41	3	3	11
Financial Intermediation	10	4	2	-	4
Real Estate, Renting & Business Act	85	10	45	8	22
Public Administr. & Defence, Compulsory	254	126	33	32	63
Education	174	53	43	25	53
Health and Social Work	41	17	13	3	8
Other Comm., Social & Personnel Service Act	20	2	3	4	11
Private Households with Employed Persons	1	-	1	-	-
Extraterritorial Organizations	-	-	-	-	-
Current formal workforce females 15 years & over	490	204	107	48	131
Agriculture, hunting & forestry	3	2	-	-	1
Fishing	2	1	-	-	1
Mining and quarrying	1	-	1	-	-
Manufacturing	11	5	2	-	4
Electricity, gas & water supply	9	6	-	1	2
Construction	2	-	-	-	2
Wholesale & Retail Trade, Repair of Veh., etc.	141	68	25	8	40
Hotels and restaurants	54	27	13	2	12
Transport, Storage & Communication	10	4	2	1	3
Financial Intermediation	10	5	1	-	4
Real Estate, Renting & Business Act	34	9	18	2	5
Public Administr. & Defence, Compulsory	59	25	4	13	17
Education	81	24	23	14	20
Health and Social Work	59	23	18	4	14
Other Comm., Social & Personnel Service Act	12	3	-	3	6
Private Households with Employed Persons	2	2	-	-	-
Extraterritorial Organizations	-	-	-	-	-

Source: 2000 FSM Census

Table B18. Class of Worker and Commuting Characteristics by Usual Residence, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Class of Workers Commuting Characteristics	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
CLASS OF WORKER					
Current formal workforce 15 years & over	1,468	570	322	143	433
Private wage and salary workers	594	258	106	29	201
Municipal government workers	33	11	7	8	7
State government workers	692	249	166	98	179
National government workers	78	22	30	3	23
Foreign or United States Federal workers	26	9	4	3	10
Self-employed workers	26	12	3	2	9
Unpaid family workers	19	9	6	-	4
Current formal force females 15 years & over	490	204	107	48	131
Private wage and salary workers	231	117	38	10	66
Municipal government workers	9	2	3	2	2
State government workers	192	66	46	31	49
National government workers	23	6	10	2	5
Foreign or United States Federal workers	12	3	2	2	5
Self-employed workers	8	3	3	1	1
Unpaid family workers	15	7	5	-	3
TRANSPORTATION TO WORK AND CARPOOLING					
Current workforce 15 years & over	1,468	570	322	143	433
Car, truck, van, bus, boat or taxi	963	387	237	93	246
Car, truck, van or bus	845	336	219	85	205
Boat	8	-	-	-	8
Taxi	110	51	18	8	33
Drove alone	413	187	106	26	94
Carpooled	440	149	113	59	119
2-person carpool	263	92	66	32	73
3-person carpool	101	27	34	16	24
4-to-6-person carpool	64	24	13	11	16
7-to-9-person carpool	5	5	-	-	-
10-or-more-person carpool	7	1	-	-	6
Worked at home	79	26	18	2	33
Other method	426	157	67	48	154
TRAVEL TIME TO WORK AND DEPARTURE TIME					
Current workforce 15 years & over	1,468	570	322	143	433
Did not work at home	1,389	544	304	141	400
Less than 5 minutes	110	52	22	17	19
5 to 9 minutes	269	136	37	15	81
10 to 14 minutes	216	103	31	9	73
15 to 19 minutes	258	68	99	15	76
20 to 24 minutes	171	46	46	10	69
25 to 29 minutes	43	6	8	3	26
30 to 44 minutes	247	102	57	42	46
45 to 59 minutes	56	18	4	25	9
60 or more minutes	19	13	-	5	1
Mean (minutes)	16.9	17.5	15.9	24.3	14.6
Worked at home	79	26	18	2	33
Current workforce 15 years & over	1,468	570	322	143	433
Did not work at home	1,389	544	304	141	400
12:00 AM to 5:59 AM	15	7	4	2	2
6:00 AM to 6:59 AM	44	12	13	7	12
7:00 AM to 7:29 AM	231	85	28	38	80
7:30 AM to 7:59 AM	660	212	161	68	219
8:00 AM to 8:29 AM	280	150	62	21	47
8:30 AM to 8:59 AM	31	14	8	2	7
9:00 AM to 12:59 PM	68	41	12	2	13
1:00 PM to 3:59 PM	28	10	12	-	6
4:00 PM to 11:59 PM	32	13	4	1	14

Source: 2000 FSM Census

Table B19. Income in 1999 by Usual Residence, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Household Income Family Income Income by Type	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
HOUSEHOLD INCOME					
Total households	1,059	353	239	146	321
Less than $1,000	72	12	18	18	24
$1,000 to $1,999	62	17	12	9	24
$2,000 to $2,999	68	23	19	8	18
$3,000 to $3,999	94	21	19	18	36
$4,000 to $4,999	62	22	17	10	13
$5,000 to $7,499	170	57	40	30	43
$7,500 to $9,999	136	37	26	21	52
$10,000 to $12,499	93	36	20	12	25
$12,500 to $14,999	64	24	12	6	22
$15,000 to $19,999	88	28	29	4	27
$20,000 to $24,999	47	22	10	1	14
$25,000 to $34,999	53	30	5	6	12
$35,000 to $49,999	22	12	6	2	2
$50,000 or more	28	12	6	1	9
Median (dollars)	7,528	9,155	7,156	5,833	7,620
Mean (dollars)	12,407	14,065	11,745	7,832	13,159
FAMILY INCOME					
Total Families	1,021	334	234	144	309
Less than $1,000	64	10	15	17	22
$1,000 to $1,999	57	14	11	9	23
$2,000 to $2,999	64	21	19	8	16
$3,000 to $3,999	93	20	19	18	36
$4,000 to $4,999	61	21	17	10	13
$5,000 to $7,499	168	56	40	30	42
$7,500 to $9,999	134	36	26	20	52
$10,000 to $12,499	91	35	20	12	24
$12,500 to $14,999	63	24	12	6	21
$15,000 to $19,999	85	27	28	4	26
$20,000 to $24,999	44	19	10	1	14
$25,000 to $34,999	51	29	5	6	11
$35,000 to $49,999	21	11	6	2	2
$50,000 or more	25	11	6	1	7
Median (dollars)	7,565	9,236	7,250	5,833	7,620
Mean (dollars)	12,358	14,083	11,916	7,877	12,917
INCOME BY TYPE					
Total w/Income	2,336	779	496	311	750
Mean income (dollars)	5,625	6,374	5,659	3,677	5,632
Earnings	1,905	619	409	252	625
Mean income (dollars)	5,941	6,673	5,861	3,911	6,086
Wages and salary	1,648	595	369	166	518
Mean income (dollars)	6,346	6,752	5,431	4,804	7,026
Own business	478	63	104	126	185
Mean income (dollars)	1,797	1,800	3,780	1,494	888
Interest and dividends	139	56	29	21	33
Mean income (dollars)	3,516	6,108	1,520	1,146	2,378
Soc. security & other govt	340	122	82	46	90
Mean income (dollars)	2,725	2,875	2,967	1,607	2,874
Remittances	404	115	97	76	116
Mean income (dollars)	766	1,098	705	763	490
From inside FSM	129	28	30	13	58
Mean income (dollars)	963	3,082	697	212	246
From outside FSM	300	91	74	65	70
Mean income (dollars)	618	440	642	849	609
Other income	65	6	19	5	35
Mean income (dollars)	1,498	2,513	2,847	370	753

Source: 2000 FSM Census

Table H01. Structural Characteristics, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Characteristic	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
UNITS IN STRUCTURE					
Total	1,087	357	248	156	326
One-family house detached	1,044	335	246	146	317
One-family house attached	38	19	2	10	7
2 apartments	3	1	-	-	2
3 or 4 apartments	-	-	-	-	-
5 to 9 apartments	-	-	-	-	-
10 to 19 apartments	-	-	-	-	-
20 to 49 apartments	-	-	-	-	-
Other	2	2	-	-	-
MATERIAL OF OUTSIDE WALLS					
Total	1,087	357	248	156	326
Poured concrete	536	215	114	70	137
Concrete blocks	198	51	73	40	34
Metal/tin	16	4	2	2	8
Plywood	330	87	59	42	142
Thatch	1	-	-	-	1
Bamboo or local wood	5	-	-	2	3
No walls	1	-	-	-	1
Other	-	-	-	-	-
MATERIAL OF ROOF					
Total	1,087	357	248	156	326
Poured concrete	192	55	51	34	52
Metal/tin	853	297	192	113	251
Wood	3	1	-	-	2
Thatch	39	4	5	9	21
Bamboo	-	-	-	-	-
Other	-	-	-	-	-
MATERIAL OF FOUNDATION					
Total	1,087	357	248	156	326
Concrete	1,019	342	238	150	289
Wood pier or pilings	56	13	8	4	31
Coral	1	1	-	-	-
Other	11	1	2	2	6
WHEN BUILDING WAS FIRST BUILT					
Total	1,087	357	248	156	326
1999 or 2000	69	22	16	5	26
1996 to 1998	162	37	39	26	60
1993 to 1995	179	49	43	33	54
1988 to 1992	223	73	52	35	63
1980 to 1987	276	93	53	44	86
1970 to 1979	94	42	29	5	18
1960 to 1969	25	7	5	7	6
1959 or earlier	7	2	-	-	5
Others	52	32	11	1	8
WHEN HOUSEHOLDER MOVED IN					
Total	1,087	357	248	156	326
1999 or 2000	122	38	26	20	38
1996 to 1998	208	50	50	34	74
1993 to 1995	161	50	42	23	46
1988 to 1992	220	74	48	34	64
1987 or earlier	376	145	82	45	104

Source: 2000 FSM Census

Table H02. Utilization Characteristics, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Characteristic	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
ROOMS					
Total	1,087	357	248	156	326
1 room	129	30	32	9	58
2 rooms	199	72	34	23	70
3 rooms	261	80	47	58	76
4 rooms	196	70	41	27	58
5 rooms	167	62	45	23	37
6 rooms	74	21	29	10	14
7 rooms	37	9	13	5	10
8 rooms	16	9	6	-	1
9 or more rooms	8	4	1	1	2
Median	3.8	4.0	4.3	3.8	3.5
PERSONS IN UNIT					
Total Occupied	1,087	357	248	156	326
1 person	31	11	6	5	9
2 persons	39	10	13	7	9
3 persons	67	27	11	4	25
4 persons	128	42	37	19	30
5 persons	152	46	36	20	50
6 persons	148	42	45	24	37
7 persons	122	44	27	22	29
8 persons	107	34	24	19	30
9 or more persons	293	101	49	36	107
Median (excluding vacants)	6.9	7.0	6.5	7.0	7.1
PERSONS PER ROOM					
Total Occupied	1,087	357	248	156	326
0.50 or less	40	18	13	6	3
0.51 to 0.75	35	16	10	4	5
0.76 to 1.00	110	38	34	13	25
1.01 to 1.50	188	49	57	32	50
1.51 to 2.00	233	72	55	38	68
2.01 to 2.50	126	43	22	20	41
2.51 to 3.00	130	50	21	23	36
3.01 or more	225	71	36	20	98
With complete plumbing					
Total	29	20	3	2	4
0.50 or less	5	3	1	1	-
0.51 to 0.75	2	2	-	-	-
0.76 to 1.00	8	7	-	-	1
1.01 to 1.50	4	2	-	-	2
1.51 to 2.00	4	4	-	-	-
2.01 to 2.50	2	1	1	-	-
2.51 to 3.00	1	-	1	-	-
3.01 or more	3	1	-	1	1
BEDROOMS					
Total	1,087	357	248	156	326
1 bedroom	259	77	73	31	78
2 bedrooms	353	117	74	69	93
3 bedrooms	236	79	44	27	86
4 bedrooms	155	55	40	22	38
5 bedrooms	54	19	12	3	20
6 bedrooms	18	5	3	3	7
7 bedrooms	9	3	2	1	3
8 bedrooms	2	2	-	-	-
9 or more bedrooms	1	-	-	-	1
Median	2.8	2.9	2.7	2.7	2.9

Source: 2000 FSM Census

Table H03. Plumbing and Water Source Characteristics, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Characteristic	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
COMPLETE PLUMBING FACILITIES					
Total	1,087	357	248	156	326
Complete plumbing	190	82	68	15	25
With hot and cold water	29	20	3	2	4
With cold water only	161	62	65	13	21
Lacking complete plumbing	897	275	180	141	301
Some but not all facilities	78	46	9	12	11
No plumbing facilities	819	229	171	129	290
PIPED WATER					
Total	1,087	357	248	156	326
Hot and cold in the unit	37	25	4	2	6
Heated by electricity	35	25	4	2	4
Heated by gas	-	-	-	-	-
Heated by solar	2	-	-	-	2
Heated other way	-	-	-	-	-
Cold only in the unit	314	113	108	27	66
Cold only outside the unit	710	216	126	122	246
No piped water	26	3	10	5	8
BATHTUB OR SHOWER					
Total	1,087	357	248	156	326
Bathtub/shower in unit	239	118	73	18	30
Bathtub/shower in building	53	31	13	7	2
Bathtub/shower outside	684	190	155	82	257
None	111	18	7	49	37
FLUSH TOILET					
Total	1,087	357	248	156	326
Flush toilet	997	340	241	137	279
In the unit	244	116	72	26	30
In this building	53	37	10	3	3
Outside	700	187	159	108	246
Outhouse or privy	90	17	7	19	47
Other or none	-	-	-	-	-
SOURCE OF WATER					
Total	1,087	357	248	156	326
Public system only	9	5	-	-	4
Community system only	118	14	30	15	59
Public system and catchment	23	16	1	3	3
Community system and catchment	92	19	1	24	48
Individual well	11	-	-	-	11
Catchment, tank, drum only	796	286	209	110	191
Public standpipe or hydrant	3	-	1	-	2
Distilled water	9	4	1	2	2
Other source	26	13	5	2	6
WASTE DISPOSAL					
Total	1,087	357	248	156	326
Public sewer	116	112	1	-	3
Septic tank or cesspool	671	208	158	110	195
Use other means	300	37	89	46	128

Source: 2000 FSM Census

Table H04. Cooking Facilities and Appliances, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Characteristic	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
COMPLETE KITCHEN FACILITIES					
Total	1,087	357	248	156	326
Complete kitchen facilities	162	68	49	13	32
Incomplete kitchen facilities	925	289	199	143	294
COOKING FACILITIES					
Total	1,087	357	248	156	326
Cooking facilities inside	568	208	160	77	123
With electric stove	121	46	29	19	27
With kerosene stove	423	155	122	54	92
With gas stove	3	1	2	-	-
With microwave & burners	3	2	-	1	-
With microwave only	7	1	5	1	-
With wood stove	5	1	2	2	-
With open fire	6	2	-	-	4
Other	-	-	-	-	-
Cooking facilities outside	518	148	88	79	203
With electric stove	45	8	11	11	15
With kerosene stove	381	124	54	49	154
With gas stove	-	-	-	-	-
With microwave & burners	3	2	-	-	1
With microwave only	2	-	1	1	-
With wood stove	22	8	3	9	2
With open fire	64	5	19	9	31
Other	1	1	-	-	-
No cooking facilities	1	1	-	-	-
ELECTRICAL POWER					
Total	1,087	357	248	156	326
Public Utility	1,063	357	247	156	303
Generator	24	-	1	-	23
Solar power	-	-	-	-	-
None	-	-	-	-	-
REFRIGERATOR					
Total	1,087	357	248	156	326
Electric	314	106	87	41	80
Gas	7	5	1	-	1
Kerosene	6	4	-	-	2
No refrigerator	760	242	160	115	243
AIR CONDITIONING					
Total	1,087	357	248	156	326
Central air conditioning	7	5	-	-	2
1 individual room unit	42	17	14	4	7
2 or more individual units	9	7	1	-	1
None	1,029	328	233	152	316
TELEVISION AND VCR					
Total	1,087	357	248	156	326
Television and VCR	511	211	96	50	154
Television only	129	23	48	30	28
VCR only	9	4	-	5	-
None	438	119	104	71	144
BATTERY OPERATED RADIO	586	222	111	59	194
TELEPHONE OR CB RADIO					
Total	1,087	357	248	156	326
Telephone only	731	288	157	109	177
CB Radio only	9	-	5	4	-
Both	44	14	16	4	10
None	303	55	70	39	139

Source: 2000 FSM Census

Table H05. Vehicles and Monthly Costs, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Characteristic	Total	Kosrae			
		Lelu	Malem	Utwe	Tafunsak
AUTOMOBILES, VANS and TRUCKS					
Total	1,087	357	248	156	326
1 vehicle	559	196	140	76	147
2 vehicles	110	40	27	24	19
3 vehicles	26	6	8	5	7
4 vehicles	11	1	2	4	4
5 vehicles	3	3	-	-	-
6 vehicles	1	-	-	-	1
or more vehicles	1	-	-	-	1
None	376	111	71	47	147
BOATS OF LESS THAN 25 FEET					
Total	1,087	357	248	156	326
1 boat	157	34	6	56	61
2 boats	10	1	-	1	8
3 boats	4	-	-	2	2
4 boats	2	-	-	1	1
5 or more boats	-	-	-	-	-
None	914	322	242	96	254
MONTHLY ELECTRICAL COSTS					
Total with cost	992	341	239	145	267
Less than $10	168	48	50	24	46
$10 to $24	402	122	95	67	118
$25 to $49	297	121	59	44	73
$50 to $74	88	34	26	6	22
$75 to $99	19	7	6	3	3
$100 to $149	7	1	2	-	4
$150 to $199	3	2	-	-	1
$200 to $299	5	3	1	1	-
$300 to $399	1	1	-	-	-
$400 to $499	1	1	-	-	-
$500 or more	1	1	-	-	-
Median	22	25	21	21	21
MONTHLY KEROSENE COSTS					
Total with cost	842	284	182	104	272
Less than $10	630	190	145	97	198
$10 to $24	207	92	36	7	72
$25 to $49	3	1	1	-	1
$50 to $74	1	-	-	-	1
$75 to $99	-	-	-	-	-
$100 or more	1	1	-	-	-
Median	7	7	6	5	7
MONTHLY WATER COSTS					
Total with cost	8	4	1	1	2
Less than $10	6	2	1	1	2
$10 to $24	1	1	-	-	-
$25 to $49	1	1	-	-	-
$50 to $74	-	-	-	-	-
$75 to $99	-	-	-	-	-
$100 or more	-	-	-	-	-
Median	7	10	5	5	5
OTHER MONTHLY UTILITIES					
Total with cost	110	19	32	22	37
Less than $10	2	-	-	-	2
$10 to $24	41	7	15	9	10
$25 to $49	50	7	13	9	21
$50 to $74	14	4	3	4	3
$75 to $99	1	-	-	-	1
$100 or more	2	1	1	-	-
Median (dollar)	31	34	27	31	33

Source: 2000 FSM Census

Table H06. Tenure and Financial Characteristics, Kosrae State: 2000
[For definitions of terms and meanings of symbols, see text]

Characteristic	Total	Lelu	Malem	Utwe	Tafunsak
TENURE					
Total	1,087	357	248	156	326
Owned with a mortgage	378	142	129	5	102
Mortgage, deed of trust	336	134	108	2	92
Contract to purchase	42	8	21	3	10
Owned free and clear	677	200	114	146	217
Rented for cash rent	8	5	1	-	2
Occupied without payment	24	10	4	5	5
MONTHLY RENT PAID					
Total paying rent	8	5	1	-	2
Less than $100	-	-	-	-	-
$100 to $199	-	-	-	-	-
$200 to $299	2	1	-	-	1
$300 to $399	-	-	-	-	-
$400 to $499	5	4	-	-	1
$500 to $599	1	-	1	-	-
$600 to $699	-	-	-	-	-
$700 to $799	-	-	-	-	-
$800 to $899	-	-	-	-	-
$900 to $999	-	-	-	-	-
$1,000 or more	-	-	-	-	-
Median (dollar)	440	438	550	-	350
VALUE OF HOUSE					
Total owning	1,055	342	243	151	319
Less than $2,000	103	9	20	17	57
$2,000 to $4,999	354	99	93	42	120
$5,000 to $9,999	340	131	67	68	74
$10,000 to $19,999	162	56	40	20	46
$20,000 to $29,999	54	24	13	2	15
$30,000 to $39,999	15	5	4	-	6
$40,000 to $49,999	7	5	1	1	-
$50,000 to $59,999	8	4	2	1	1
$60,000 to $69,999	1	1	-	-	-
$70,000 to $79,999	3	1	2	-	-
$80,000 to $89,999	-	-	-	-	-
$90,000 to $99,999	-	-	-	-	-
$100,000 or more	8	7	1	-	-
Median (dollars)	6,037	7,405	5,634	6,213	4,563
MONTHLY MORTGAGE PAYMENT					
Total with mortgage	372	139	126	5	102
Less than $100	322	112	110	4	96
$100 to $199	37	19	14	1	3
$200 to $299	3	-	1	-	2
$300 to $399	5	4	-	-	1
$400 to $499	-	-	-	-	-
$500 to $599	5	4	1	-	-
$600 to $699	-	-	-	-	-
$700 to $799	-	-	-	-	-
$800 to $899	-	-	-	-	-
$900 to $999	-	-	-	-	-
$1,000 or more	-	-	-	-	-
Median (dollar)	58	62	57	63	53

Source: 2000 FSM Census

APPENDIX B
QUESTIONNAIRE

ID: ☐-☐☐☐-☐☐☐/☐-☐☐-☐
State ED Number Block Number / Split Mapspot HH

QUESTIONNAIRE

2000 CENSUS OF POPULATION AND HOUSING

FEDERATED STATES OF MICRONESIA

FORM ____ OF ____

2000 CENSUS OF POPULATION AND HOUSING
FEDERATED STATES OF MICRONESIA
DEPARTMENT OF ECONOMIC AFFAIRS
STATISTICS DIVISION

INTRODUCTION: Hello, my name is *(Your name)* and I'm working for the 2000 Population and Housing Census. This is my identification *(Pause)*. I have some questions I need to ask you. *Ask the questions on page 1. Complete a form for each household.*

COMPLETE BEFORE INTERVIEW	*COMPLETE AFTER THE INTERVIEW*
A . State |__| B. Municipality |__|__|	J. Respondent's Name:_____
C. Enumeration District |__|__|__|	K. Respondent's Telephone:_____
D. Block: |__|__|__|-|__|__|	L. Population count: M |__|__| F |__|__| Total |__|__|
E. Map-Spot: |__|__|__|	M. Type of unit: |_| Occup |_| Reg Vacant |_| UHE
F. Household No.: |__|	N. Complete after (circle): 1st 2nd 3rd Last Resort
G. Village: |__|__|	O. Total number of households in this unit: |__|__|
H. Interview Started: |__|__|:|__|__|	P . Interview completed: |__|__|:|__|__|AM / PM

The 2000 Census of Population and Housing must count every person at his or her usual residence. "Usual residence" means the place where the person lives and sleeps most of the time.

INCLUDE:

- *Everyone who usually lives here such as family members, housemates and roommates, foster children, roomers, boarders, and live-in employees.*
- *Persons who are temporarily away on a business trip, on vacation, or in a general hospital.*
- *Students who live here while attending school/college*
- *Newborn babies born on or before April 1, 2000*
- *Persons who stay here most of the weeks, even if they have a home somewhere else.*
- *Persons with no home who were staying here on April 1, 2000.*

DO NOT INCLUDE:

- *Persons who usually live somewhere else*
- *Persons who are confined to an institution*
- *Students who live somewhere else while attending school*
- *Persons in the Armed Forces who live somewhere else.*
- *Persons who stay somewhere else most of the week*

NOTICE: You are required by Public Law No. 5-77 to answer the 2000 Census. Your answers will be kept confidential by the same law. Only sworn Census employees may see your answers. Your information will only be used for statistical purposes.

1a. Please give me the name of each person living here (whose usual residence is this household) on April 1, including all persons staying here who have no other home. Begin with the household member in whose name the home is owned, being bought, or rented. If there is no such person, start with any adult household member *(If EVERYONE is staying here temporarily and usually lives somewhere else, get the name of each person and complete 1d).*

Each booklet contains one up to ten persons. If more than 10 persons live in this household, you must use more than one booklet.

	Last,	First,	M.I.	Sex (1=M, 2=F)	
1					|__|__|-|__|__|__|__|__|__|
2					|__|__|-|__|__|__|__|__|__|
3					|__|__|-|__|__|__|__|__|__|
4					|__|__|-|__|__|__|__|__|__|
5					|__|__|-|__|__|__|__|__|__|
6					|__|__|-|__|__|__|__|__|__|
7					|__|__|-|__|__|__|__|__|__|
8					|__|__|-|__|__|__|__|__|__|
9					|__|__|-|__|__|__|__|__|__|
10					|__|__|-|__|__|__|__|__|__|

1b. When you told me the names of the persons living here on April 1, did you leave anyone out because you were not sure if the persons should be listed – for example, someone temporarily away on a business trip or vacation, a newborn baby still in the hospital, or a person who stays here once in a while and has no other home?

1 Yes – *Determine if you should include the person(s) based on the instructions for question 1a, if so, include the person and circle the person's name.*

2 No

1c. When you told me the names of the persons living here on April 1, did you include anyone even though you were not sure if the persons should be listed – for example, a visitor who is staying here temporarily or a person who usually live somewhere else?

1 Yes – *Determine if you should include the person(s) based on the instructions for questions 1a, if so, circle the person's name, if not, draw a line through any entry.*

2 No

If EVERYONE listed is staying here only temporarily and usually lives somewhere else, mark (X) in this box \|__\| and ask –

1d. Where do these people usually live?

If the usual residence is within the FSM, enter the State, Municipality, and Village.

State: _____ \|__\|

Municipality: _____ \|__\|__\|

Village: _____ \|__\|__\|

If the usual residence is not within the FSM, enter the country.

Country: _____ \|__\|__\|

NOTES:

_____

_____

_____

_____

_____

HOUSING QUESTIONS

H1. Which best describes this building? Include all apartments even if vacant.

1. A one-family house detached from any other house
2. A one-family house attached to one or more houses
3. A building with 2 apartments
4. A building with 3 or 4 apartments
5. A building with 5 to 9 apartments
6. A building with 10 to 19 apartments
7. A building with 20 or more apartments
8. Other
9. Don't know

H2. When did (person 1 listed in question 1a on page 1) move to this house/apartment?

1. 1999 – 2000
2. 1995 – 1998
3. 1990 – 1994
4. 1985 – 1989
5. 1980 – 1984
6. 1970 – 1979
7. 1960 – 1969
8. 1959 or earlier
9. Don't know

H3. What is the MAIN type of material used for the outside walls of this building? *(Read each category and circle ONE item.)*

1. Poured concrete
2. Concrete blocks
3. Metal/tin
4. Plywood
5. Thatch
6. Local wood or bamboo
7. Other
8. No walls

H4. What is the MAIN type of material used for the roof of this building? *(Read each category and circle ONE item..)*

1. Poured concrete
2. Metal/tin
3. Wood
4. Thatch
5. Bamboo
6. Other

H5. What is the MAIN type of material used for the foundation of this building? *(Read each category and circle ONE item..)*

1. Concrete
2. Wood pier or piling
3. Coral
4. Stone
5. Other

H6. About when was this building first built?

1. 1999 – 2000
2. 1995 – 1998
3. 1990 – 1994
4. 1985 – 1989
5. 1980 – 1984
6. 1970 – 1979
7. 1960 – 1969
8. 1959 or earlier
9. Don't know

H7. How many rooms do you have in this house/apartment? *(Count living rooms, dining rooms, kitchens, and bedrooms; but do NOT count bathrooms, balconies, foyers, or halls).*

|___| Room(s). If 9 or more rooms, enter 9.

H8. How many rooms are designed primarily for sleeping?

|___| Room(s). If 9 or more rooms, enter 9.

H9a. Do you have piped water?

1. Yes, hot and cold in this unit.
2. Yes, cold only in this unit
3. Yes, cold only outside this unit
4. No piped water

→ SKIP TO H9c

H9b. What type of energy does your water heater use most?

1. Electricity
2. Gas
3. Solar power
4. Other fuel

H9c. Do you have a bathtub or shower?

1. Yes, in this unit
2. Yes, in this building but not in unit
3. Yes, outside this building
4. No

H9d. Do you have a flush toilet?

1. Yes, in this unit
2. Yes, in this building but not in unit
3. Yes, outside this building
4. No

H10. Does this unit have electric power?

1. Yes, public utility
2. Yes, generator
3. Yes, solar power
4. No

H11. Do you have a telephone or CB radio in this unit?

1. Yes, both
2. Yes, telephone only
3. Yes, CB radio only
4. No

H12. Do you have a battery-operated radio? Count car radios, transistors radios, and other battery operated sets in working order or needing only new batteries to operate.

1. Yes, one or more
2. No

H13. Do you have a television set or Video Cassette Recorder (VCR)?

1. Yes, both TV and VCR
2. Yes, TV only
3. Yes, VCR only
4. No

H14. Do you have air conditioning?

1. Yes, central air conditioning system
2. Yes, 1 individual room unit
3. Yes, 2 or more individual room units
4. No

H15. Where do you get most of your drinking water from? *Read list and circle ONE item.*

1. A public system only
2. A community system only
3. A public system and catchment
4. A community systems and catchment
5. An individual well
6. A catchment, tanks, or drums only
7. A public standpipe or steel hydrant
8. Purchased bottled water
9. Some other source such as spring, river, creek, etc.

H16. Is this building connected to a public sewer?

1. Yes, connected to a public sewer
2. Yes, connected to a septic tank or cesspool
3. No, use other means

H17a. Are your MAIN cooking facilities inside or outside this unit?

1. Yes, inside this unit
2. Yes, outside this unit
3. No cooking facilities –SKIP TO H18

H17b. What are your MAIN cooking facilities?

1. Electric range
2. Kerosene stove
3. Gas stove
4. Microwave oven
5. Portable electric stove
6. Wood stove
7. Open fire
8. Other

H17c. Do you have a refrigerator in this unit? *If yes, ask* what type?

1. Yes, electric
2. Yes, gas
3. Yes, kerosene
4. No refrigerator

H17d. Do you have a separate freezer in this unit?

1. Yes
2. No

H17e. Do you have a sink in this unit?

1. Yes
2. No

H18. How many automobiles, vans, and pick-up trucks are kept at home for use by members of this household?

|___| If 9 or more, enter 9

H19. How many boats/canoes are kept at home for use by members of this household?

|___| If 9 or more, enter 9

HOUSING QUESTIONS

H20a. What is the average monthly cost for electricity for this unit?

$ |___|___|___| .00 OR 1. Included in rent

2. No charge, or electricity not used

H20b. What is the average monthly cost for kerosene for this unit?

$ |___|___|___| .00 OR 1. Kerosene not used

H20c. What is the average monthly cost for water for this unit?

$ |___|___|___| .00 OR 1. Included in rent

2. No charge

H20d. What is the average monthly cost for other fuels (such as oil, gas, wood, etc.) for this unit?

$ |___|___|___| .00 OR 1. Included in rent

2. No charge, or these fuels not used.

H21. Is this unit – *Read list and circle ONE item.*

1. Owned by you or someone in this household with a mortgage or loan?
2. Owned by you or someone else in this household free and clear (without a mortgage)?
3. Rented for cash?
4. Occupied without payment of cash rent?
5. Other; Specify: _____

Ask only if RENT IS PAID for this unit --

H22. What is the monthly rent for this house/unit?

If rent is NOT PAID BY THE MONTH, see the QRB on how to figure the monthly rent..

$ |___| , |___|___|___| .00

INTERVIEWER INSTRUCTIONS: Ask questions H23 to H24c if this is a one-family house that someone in this household OWNS OR IS BUYING; otherwise go to page 4 and ask population questions for each member of the household starting with the householder

H23. What is the value of this house? *If respondent does not know the value of the house, ask* –

How much it would cost to build a house like this?

$ |___|___|___|,|___|___|___|.00

H24a. Is there a mortgage, deed of trust, contract to purchase, or similar debt on this unit?

1. Yes, mortgage, deed of trust, or similar debt
2. Yes, contract to purchase
3. No – SKIP TO FIRST PERSON

H24b. How much is the regular monthly mortgage payment on THIS UNIT? Include payments only on the first mortgage or contract to purchase.

$ |___| , |___|___|___| .00 OR

1. No regular payment required – SKIP TO FIRST PERSON

H24c. Does the regular payment include payments for fire, hazard, or flood insurance on this unit?

1. Yes, insurance included in payment
2. No, insurance paid separately or no insurance
3. No – SKIP TO FIRST PERSON

INTERVIEWER INSTRUCTIONS: Go to page 4 and ask the population questions for each member of the household starting with the person in whose name the house is owned or rented..

FOR VACANT UNITS

C1. Vacancy Status

1. For rent
2. For sale only
3. Rented or sold, not occupied
4. For seasonal/recreational/occasional
5. For migrant worker
6. Other vacant

C2. Is this unit boarded up?

1. Yes
2. No

C3. Months vacant

1. Less than 1
2. 1 or 2
3. 3 to 6
4. 7 to 12
5. 13 to 23
6. 24 or more

NOTES:

POPULATION QUESTIONS

INTERVIEWER INSTRUCTION: Questions 1 – 11b should be asked of all household members. For all questions, CIRCLE only ONE entry.

1. PERSON NUMBER |__|__| *(from question 1a on page 1)*
Last name: _____
First name: _____

2. How is . . . related to the Householder? *(Circle one entry. If "Other relative" circle 7 below, and print exact relationship, such as wife's mother, sister's son, etc.)*
1. Householder
2. Husband/wife
3. Natural born son/daughter
4. Adopted son/daughter
5. Brother/sister
6. Father/ mother
7. Other relative, specify: _____
8. Non-relative

3. Is ... 1. Male 2. Female

4a. What is . . . 's date of birth? If unknown, please give your best estimate. *(Print the date in the boxes).*
|__|__| / |__|__| / |__|__|__|__|
MM DD YYYY

4b. How old is . . . ? *(Age should be in complete years as of April 1, 2000. Print age in the boxes).*
Age in years

5. Is . . . now married, widowed, divorced, separated, or has never been married? *Circle ONE item.*
1. Now married
2. Widowed
3. Divorced
4. Separated
5. Never married

6. What is . . . 's ethnic origin? For example, Yapese, Pohnpeian, Mortlockese, Satawalese, Filipino, etc. *Print no more than two groups.*
1. _____
2. _____

7. What is . . . 's religion?
1. Roman Catholic
2. Congregation
3. Latter Day Saints (Mormon)
4. Seventh Day Adventist
5. Baptist
6. Other religion
7. Refused
8 No religion

8. Where was . . . born? *Print the name of the village/ island, municipality, FSM state, or other country in the space below. If . . .was born in a hospital, record the place of the usual residence of the mother just before she went to the hospital.*
Village/island: _____
Municipality: _____
FSM state: _____
Other country: _____

9. If . . . is a FSM citizen, what is . . .'s legal residence? *Print the name of the municipality and the FSM state in the space below. If not, record the country of citizenship.*
Municipality: _____
FSM state: _____
Country of citizenship: _____

10. Is . . . a dependent of an active-duty or retired member of the Armed Forces of the United States or of the full-time Military Reserves or National Guard? "Active duty" does NOT include training for the military Reserves or National Guard.
1. Yes, dependent of active-duty member of the Armed Forces.
2. Yes, dependent of retired member of the Armed Forces, or dependent of an active duty or retired member of the National Guard or Armed Forces Reserves
3. No

11a. Since when has . . . live continuously in this municipality?
1. Since birth - SKIP TO INTERVIEWER CHECK ITEM (ICI) AFTER 11b.
2. Since |__|__| / |__|__|__|__| (MM / YYYY)

11b. Where was the previous place of residence?
Municipality: _____
FSM state: _____
Other country: _____

INTERVIEWER CHECK ITEM (ICI). CIRCLE ONE BASED QUESTION 4.
1. Born before April 1, 1997 – Ask Q12
2. Born after April. 1, 1997 or later – GO TO NEXT PERSON

12. Since February 1, 2000, has ... attended regular school or college? Include only pre-kindergarten, pre-school, kinder-garten, elementary school, and school which leads to a high school diploma or a college.
1. No, never attended school – SKIP TO 14.
2. No, attended in the past, but not since February 1, 2000.
3. Yes, public school, public college
4. Yes, private school

13. How much school has ... COMPLETED? *Read categories if person is unsure. Circle entry for the highest grade COMPLETED or degree received. If currently enrolled, circle the previous grade attended or highest grade completed.*
30. No school completed
31. Pre-school, head-start, or kindergarten
1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th
12. 12th grade, NO DIPLOMA
13. HIGH SCHOOL GRADUATE–High school equivalent (example: GED program)
14. Some college but no degree
15. Associate degree in college-Occup. program
16. Associate degree in college-Acad. program
17. Bachelor's degree (example: BA,AB,BS)
18. Master's degree (example: MA,MS, Meng, Med, MSW, MBA)
19. Professional school degree (example: MD, DDS, DVM, LLB, JD)
20. Doctorate degree (example: PhD, EdD)

14. Does ... know how to read and write in any language?
1. Yes 2. No

15a. What languages does ... speak? *List in order of usage with the most used language first and the least used last.*
1. _____
2. _____
3. _____

15b. What is the language that ... usually speaks at home?

ICI: CIRCLE BASED ON QUESTION 4.
1. Born before April. 1, 1995 – Ask Q16a
2. Born after April 1, 1995 or later – GO TO NEXT PERSON

16a. Did ... live in this municipality 5 years ago? (April 1, 1995)
1. Yes – *SKIP TO NEXT ICI*
2. No – *Ask 16b*

16b. What is the name of the municipality, FSM state, or other country where ... lived 5 years ago?
Municipality: _____
FSM state : _____
Other country: _____

ICI: CIRCLE ITEM BASED ON QUESTION 3.
1. Females born before April 1, 1987- Ask Q17
2 All others – SKIP TO NEXT (ICI)

17a. What is the number of children ever born alive? Include all natural children even if they have been adopted by somebody or are living away from home. Do not count stepchild or children ... adopted. *Enter the information in the categories below.*

	Males	Females
Living at home	|__|__|	|__|__|
Living elsewhere	|__|__|	|__|__|
Died	|__|__|	|__|__|
Total number of children	|__|__|	|__|__|

IF NONE, ENTER ZERO (0) AND SKIP TO NEXT ICI.

17b. What is the date of birth of the last child born alive?
|__|__| / |__|__| / |__|__|__|__|
MM DD YYYY

17c. Was the last child born alive male or female?
1. Male 2. Female

17d. Is that child still alive?
1 Yes 2 No

ICI: CIRCLE based on question 4.
1. Born before April 1, 1985 – Ask Q18
2. Born April 1,1985 or later-GO TO NEXT PERSON

18. Has ... completed the requirements for a vocational training program in a trade school business school, hospital, some other kind of business school for occupational training, or "at place or work"? Do not include academic college courses. *If "Yes" – Was training received in the FSM?*
1. No
2. Yes, in FSM
3. Yes, outside FSM
4. Both in and outside FSM

POPULATION QUESTIONS

19. Has ... ever been on active duty military service in the Armed Forces of the United States? "Active duty" does NOT include training for the military Reserves or National Guard.

1. Yes, now on active duty
2. Yes, on active duty in the past, but not now
3. No

20a. Did work at any time LAST WEEK, either full-time or part-time? Work includes part-time or full-time work such as helping without pay in a family business or farm; it also includes active duty in the Armed Forces. Work does NOT include unpaid volunteer work. Subsistence activities include fishing, growing crops, etc., NOT primarily for commercial purposes. *Read each category and circle in the entry that applies.*

1. Yes, worked full-time or part-time at a job or business and did NO subsistence activity – SKIP TO 21
2. Yes, worked full-time or part-time at a job or business and did subsistence activity. – ASK 20b
3. Yes, did subsistence activity only
4. No – SKIP TO 25

20b. What kind of subsistence activity did ... do last week? *Ask the categories and mark (X) all that apply.*

	Home use	Sold any	Gave away any
1.Gardening →			
2.Fishing →			
3.Animal raising →			
4.Other:crafts,etc.→			

INTERVIEWER INSTRUCTION – If this person did subsistence activity only (20a = 3), SKIP TO 25.

21. How many hours did ... work LAST WEEK at all jobs, excluding subsistence activity? Subtract any time off and add any overtime or extra hours worked.

Number of hours →

22. Where did ... usually work LAST WEEK? *If worked at more than one location, ask –* **Where did ... work most last week?** *Print the village/island, municipality, FSM state or other country where ... worked*

Village/island: _____

Municipality: _____

FSM State: _____

Other country: _____

23a. What type of transportation did ... usually used to get to work LAST WEEK?

1. Private car, truck, or van
2. Boat
3. Taxi or public transport bus
4. Worked at home – SKIP TO 28a
5. Other means – SKIP TO 24

23b. How many people including ... usually rode together to work LAST WEEK?

24a. What time did ... leave home most days to go to work LAST WEEK?

|__|__| : |__|__| a.m |__| p.m |__|

24b. How many minutes did it usually take ... to get from home to work LAST WEEK?

Number of minutes →

INTERVIEWER INSTRUCTIONS – If this person was working for income LAST WEEK, SKIP TO 28a.

25. Was ... on vacation, sick, or temporarily absent from a job LAST WEEK for any other reason?

1. Yes, on layoff
2. Yes, on vacation, temporary illness, labor dispute, etc.
3. No

26a. Has ... been looking for work to earn money during the last 4 weeks?

1.Yes 2. No

26b. Could ... have taken a job LAST WEEK if one had been offered? ***If NO, Ask – For what reason?***

1. Yes, could have taken a job
2. No, already has a job
3. No, temporarily ill
4. No, other reasons (in school, etc.)

27. In what year did ... last work at a job, business, or farm, even for a few days?

1.2000
2.1999
3.1995-1998
4. 1990 to 1994 -- Go to 32a
5. Never worked or did subsistence only -- Go to 32a

INTERVIEWER INSTRUCTIONS FOR QUESTIONS 28 TO 30: Questions 28-30 ask about the job worked last week. If ... had more than one job, describe the one ... worked the most hours. If ... did not work, the questions refer to the most recent job or business since 1995.

28a. For whom did ... usually work? *Print the name of the business or employer.*

_____

28b. What kind of business or industry was this? *For example: hospital, garment factory, retail store, bakery, etc.*

_____

29a. What was ... job title? *For example: registered nurse, industrial machinery mechanic, cake baker, etc.*

_____

29b. What was ...'s main task? *For example: patient care, repair machines, baking cakes, etc.*

_____

30. Was ... *--Read list. Circle ONE entry*

1. Employee of PRIVATE FOR PROFIT company business or individual, for wages, salaries, or commissions.
2. Employee of PRIVATE NOT FOR PROFIT, tax exempt, or charitable organization
3. Municipal GOVERNMENT employee
4. State GOVERNMENT employee
5. National GOVERNMENT employee
6. FOREIGN/FEDERAL employee
7. SELF EMPLOYED
8. Working WITHOUT PAY in a family business/farm

31a. Last year (1999), did ... work, even for a few days, at a paid job or in a business or a farm, excluding subsistence activity?

1.Yes 2.No – SKIP TO 32a

31b. How many weeks did ... work in 1999, excluding subsistence activity? *Count paid vacation, paid sick leave, and military service.*

Number of weeks →

31c. During the weeks worked in 1999, how many hours did ... usually work each week?

Number of Hours →

The following questions are about income received in 1999.

If an exact amount is not known, accept a best estimate. If net income in 32b, 32c or question 33 was a loss, write "loss" above the dollar amount.

32a. How much did ...earn from wages, salary, commissions, bonuses, or tips? *Report amount before deductions for taxes.*

$ |__|,|__|__|__|,|__|__|__|.00
Enter ANNUAL amount in dollars

32b. How much did ... earn from (his/her) own farm or non-farm business, proprietorship, or partnership? *Report amount before deductions for taxes.*

$ |__|,|__|__|__|,|__|__|__|.00
Enter ANNUAL amount in dollars

32c. How much did ... receive in interest, dividends, net rental or royalty income, or income from estates or trusts? Include even small amounts credited to an account.

$ |__|,|__|__|__|,|__|__|__|.00
Enter ANNUAL amount in dollars

32d. How much did ... receive in social security payments or any pension payments from retirement, survivor, or disability?

$ |__|,|__|__|__|,|__|__|__|.00
Enter ANNUAL amount in dollars

32e. How much did ... receive as remittances from relatives within FSM outside this household?

$ |__|,|__|__|__|,|__|__|__|.00
Enter ANNUAL amount in dollars

32f. How much did ... receive in remittances from relatives outside FSM, including the military?

$ |__|,|__|__|__|,|__|__|__|.00
Enter ANNUAL amount in dollars

32g. How much did ... receive in income from Veterans' (VA) payments, unemployment compensation, child support, alimony, or any other regular sources of income?

$ |__|,|__|__|__|,|__|__|__|.00
Enter ANNUAL amount in dollars

Do not ask question 33 if questions 32a through 32g are complete. Instead, sum these entries and enter the amount below.

33. What was the ...'s total income in 1999?

$ |__|,|__|__|__|,|__|__|__|.00
Enter ANNUAL amount in dollars

INTERVIEWER INSTRUCTIONS:

-Before you leave this housing unit, be sure you have recorded -

1. Information in items A, B, C, D, E, F, G, and H on page 1 of the questionnaire.
2. The respondent's name in item J and the respondent's telephone number (if any) in item K on page 1 of the questionnaire.
3. Information in items L, M, N, O and P.

   Also, be sure you have –

4. Completed as many of the census questions as possible, including the last resort questions.
5. Completed the FOR VACANT UNITS section on page 3 (only if unit is vacant).
6. Entered the required information on the List of Regular Households pages in the Listing Book and the ED map.
7. Written all entries clearly.

After you complete items 1-7 above, be sure to enter your signature and date in the certification box below.

THANK THE RESPONDENT FOR HIS/HER COOPERATION

NOTES:

- CERTIFICATION -

Enumerator:

I certify that the entries I have made on this questionnaire are true and correct to the best of my knowledge.

_____ ⌊_⌋⌊_⌋
Enumerator's name (Print) **Code**

_____ _____
Enumerator's signature **Date**

Crew leader:

I have reviewed and certify that the entries made on this questionnaire are true and correct.

_____ ⌊_⌋⌊_⌋
Crew leader's name (Print) **Code**

_____ _____
Crew leader's signature **Date**