

REPORT OF THE SAMPLE HOUSEHOLD SURVEY OF KOROR/AIRAI*
- REPUBLIC OF PALAU -
June 1990

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* The Survey was undertaken as part of the Government of Palau - ILO/LAPTAP Project on Comprehensive Study on Population, Human Resources and Employment, Republic of Palau.

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PREFACE

As part of its activities in the field of Population, Human Resources and Development Planning (PHRDP) the Labour and Population Team for Asia and the Pacific (LAPTAP) has been assisting the countries in the region in obtaining a clearer understanding of the interrelationship between population, human resources and development planning through advisory assistance, training workshops and research studies. These activities are undertaken under UNFPA/ILO projects in the region and are co-ordinated and supported by the activities of the Employment Planning and Population Branch of the Employment and Development Department at the ILO Headquarters in Geneva.

Under the PHRDP component of its programme, LAPTAP agreed to assist the Government of the Republic of Palau in undertaking a comprehensive study on Population, Human Resources and Employment in that country. The main objectives of this study were to promote understanding among national planners and decision makers of the current employment and unemployment situation in the country and to increase their awareness of the need for integrating population and human resources development into overall development planning. As part of the comprehensive study, it was also required to assist the Government in building up its data base through a survey of population, employment and human resource.

The household survey, on which this report is based, sought to explore the demographic, educational and labour force characteristics of the population in Koror and Airai which together accounted for three-fourths of the Palauan population. Despite limitations on the

sample size imposed by resource constraints, the Survey has offered valuable insights. The survey shows evidence of a genuine increase in employment opportunities and some decline in unemployment. It also shows a concentration of the unemployed among the youth and a coexistence of unemployment with shortages of specific skills necessitating importation.

We hope that the policy-makers in Palau would absorb, and wherever necessary examine further, these and other interesting results generated by the survey as part of a continuing process of data upgradation, analysis and policy formulation.

ACKNOWLEDGEMENTS

In February 1990, the Director, ILO/LAPTAP (Bangkok) contracted my services as a short-term consultant to advise and assist the Office of Planning and Statistics (OPS), Government of the Republic of Palau in conducting a comprehensive survey of population, employment and human resources in that country. Specifically, my responsibilities were, inter alia, to finalise the drafts of the various questionnaires prepared by OPS; assist the OPS in carrying out the survey, including the training of the enumerators; and to analyse the data and prepare the report of the survey.

In carrying out the various tasks, I have been very fortunate to receive the willing assistance and cooperation of numerous officials both in Palau and Bangkok. While it is not possible to acknowledge the contribution of everyone of them individually, I wish, however, to express my special thanks to the following:

Mr. Koichi Wong, National Planner, Office of Planning and Statistics for extending his full support and making efficient administrative arrangements for undertaking the survey and for the many courtesies extended during my stay in Palau.

Mr. Francis Matsutaro, President, Micronesian Occupational College (MOC) for his wholehearted collaboration and cooperation and for making available his staff and office as well as secretarial facilities for conducting the survey and computer processing of the data collected.

Mrs. Margaret Verato, External Data Studies Specialist, MOC, for efficiently co-ordinating the activities relating to the household survey and cheerfully attending to and smoothing out various administrative matters.

Ms. Ayano Boules, Director, Institutional Research, MOC for her invaluable cooperation and assistance in conducting the training classes and in the computer processing of the data.

Mr. Vincent Ito, Job Development Specialist, for his advice and able assistance in editing the questionnaires.

Mr. D. L. Khanna, Director, ILO/LAPTAP, Bangkok for his constant encouragement and advice and for smoothening out various administrative problems.

Mr. J. Krishnamurty, the then Regional Advisor on Population and Human Resource Planning (PHRP), ILO/LAPTAP, for his technical advice in regard to various aspects of the survey.

Mr. K. Sundram, Advisor on Population and Human Resource Planning (PHRP), ILO/LAPTAP for his detailed critical comments on the original draft of the survey report which helped to enhance considerably the quality of the present report. Needless to say, I assume sole responsibility for the views expressed in the report as well as any errors of analysis and interpretation.

Ms. Amornrat Attanatho ILO/LAPTAP for her valuable assistance in analysing the survey data and preparation of statistical tables.

Ms. Rungnapa Chiewchalerm Sri, Population Division, ESCAP and Mr. Rangsiman Khantiya-Usaha for their assistance in typing of the report.

I. INTRODUCTION

A. THE COUNTRY

The Republic of Palau (also known as Belau) is composed of a group of 8 principal and over 200 smaller islands forming an archipelago extending about 650 km in the western Carolines. The total land area of the Republic is about 500 km² of which about 397 km² or 79 per cent is occupied by the single island of Babeladaop which is the largest island in Micronesia apart from Guam. The administrative centre, Koror, is situated just south of Babeladaop; the two islands are connected by a concrete bridge. Kayangal, a classic atoll, is located about 22 km north of Babeladaop. South of Koror are Peleliu and Anguar, while Hatohobel (formerly known as Tobi) and Sonsorol lie about 500 km southwest of Koror and are the most isolated states.

It is believed that the original settlers came to Palau from South East Asia about three thousand years ago. Ethnically, Palauans have very close affinity with the people of the Federated States of Micronesia (FSM), although within Palau itself there are apparent ethnic and linguistic distinctions. For example, the people of the extreme south islands speak a language different from that of the rest of the Palauans.

Like other Micronesian countries, Palau has been subjected to waves of colonialism, first by the Spanish, followed by the

Germans, Japanese and finally by Americans. Although each wave has left its imprint, the last one appears to have been the most far-reaching; Palauans are considered to be the most Americanized of all Micronesians. Because of the American presence, English is widely spoken; many of the older people can also converse in Japanese¹.

The results of the population census conducted in April 1990 was not available at the time of writing this report. But according to the earlier census carried out in March 1986², the population of Palau was 13,873, or 1,400 persons more than the population of 12,473 enumerated in the 1973 census which is regarded as the first reliable post-war census of the Trust Territory of the Pacific Islands³. The average annual growth rate of 0.7 per cent during the sixteen year period 1973-1984 is low by Pacific standards. This is partly due to emigration; at least 5,000 Palauans are estimated to be living abroad, most of them in Guam⁴. On the basis of an estimated crude birth rate of 26 per thousand and a death rate of 5 per thousand, the rate of natural increase is about 2.1 per cent per annum in 1989.

¹Norman and Ngaire Douglas (eds.), Pacific Islands Year Book 16th Edition, Angus and Robertson Publishers, p. 419.

²Office of Planning and Statistics, 1986 Census of Population and Housing of the Republic of Palau (Belau), April 1987.

³Palau was then administered as one of the four districts of the Caroline Islands component of the Trust Territory of the Pacific Islands (TTPI), the other three districts being Yap, Truk and Pohnpei, which together today constitute a Federated States of Micronesia.

⁴Norman and Ngaire Douglas, op. cit., p. 420

The 1986 census also showed that as many as 9,442 persons or 68 per cent of the enumerated population lived in the capital island of Koror which contained only 4 per cent of the total land area. With about 950 persons per km², Koror has the highest population density in Micronesia apart from Ebeye in Marshall Islands⁵. Another 3,469 persons or 25 per cent of the total population lived in Babeldaop, the largest island in the group. Within Babeldaop, the largest concentration (1,021 persons or 29.4 per cent of Babeldaop's population) was in the state of Airai which is located in very close proximity to Koror. Only nine of the Republic's islands are permanently inhabited, and fewer than 100 people live in the southern most islands.

Because of adequate availability of land, particularly in Babeldaop, in the past and of marine resources, farming and fishing have traditionally been the main economic activity of the people, and supplied their year round requirements of food and nutrition. The main agricultural products consisted of coconuts, breadfruit, bananas, papayas and root crops such as taro, yams and sweet potatoes. Since the Second World War, there has been a significant decline in agricultural production and agricultural acreage due to migration as well as changes in the dietary preferences of the people particularly in the urban areas⁶.

tapioca?

⁵Ibid., p. 420

⁶John Connell, Migration, Employment and Development in the South Pacific, Country Report No. 13 Palau, South Pacific Commission, Noumea, New Caledonia, 1983.

Although attempts are being made to reverse the current agricultural trends, the main constraint appears to be the availability of labour. It has been reported that attitudes towards agricultural employment have changed and that agriculture occupies a low status in the minds of the new job seekers⁷.

Although Palau is blessed with rich marine resources, these, like the country's agricultural potential, are largely untapped. A small fishing industry exports fresh fish to Saipan, Guam and Honolulu and there are facilities for fish storage at Malakal. Lack of manpower is the major constraint to the development of fisheries.

For various reasons such as the small size of the domestic market, high wage levels, lack of natural resources, and proximity to major Asian exporters, industrial development has very limited prospects in the country⁸. The few small scale industries include handicrafts, fish processing and boat-building. The tourism industry is an important source of foreign exchange, although the difficulty of gaining access to the islands and a lack of suitable facilities have hindered its development.

B. PERCEIVED MANPOWER PROBLEMS

The absence in the past of any production based strategies had resulted in a virtual neglect of the two vital economic sectors,

⁷Palau Legislation, Palau Indicative Development Plan, Koror, 1977.

⁸John Connell, op. cit.

viz, agriculture and fisheries. The comparatively low agricultural income and the unattractiveness of agricultural employment have resulted in a large number of workers, particularly the young and able bodied, emigrating from the traditional agricultural regions or states to Koror and adjoining Airai states, and even overseas, in search of more rewarding non-agricultural wage employment. Based on available information, Connell concluded that "there has been a substantial life time migration from almost all parts of Palau, almost entirely to Koror", and that "between 1963 and 1973 the only state in Babeldaop that significantly gained population was Airai which has effectively shared in the growth of Koror"⁹. This pattern appears to have continued since 1973 and in 1986 Koror and Airai together accounted for 75 percent of the total population of Palau.

The pattern of internal migration as had taken place in Palau over the years has had far-reaching consequences both for the areas of origin as well as the areas of destination. At the places of origin or sending areas, emigration of the abled-bodied workers has resulted in a population structure weighted in favour of the relatively less productive younger (0-14 years) and older (60 years and over) age groups. Conversely, at the place of destination or receiving areas, the age-structure of the population has been biased towards the working ages, 15-59 years. Thus, according to the 1986 population census, the combined share in total population of children and old persons was 39.4 per cent in Koror, and 39.9 per

⁹Ibid. p. 18

cent in Airai, the two main receiving areas, compared to 53.4 per cent in "all other states" which together are considered as the sending areas. The proportionate share of the population of working ages was 60.6 per cent in Koror, 60.1 per cent in Airai, and only 44.6 per cent in "all other states" (Table 1).

The outward migration of labour from traditional agricultural areas combined with changing attitudes towards agricultural employment has resulted in a decline in the number of persons employed in the agricultural sector (including livestock and fishing). The 1986 population census data showed that of the 4,467 persons aged 15 years and over who were employed in monetary activities¹⁰. Only 194 (of whom 50 were non-Palauans) or a mere 4.3 per cent were engaged in the agricultural sector (including fishing and livestock). The Republic of Palau, like most other Pacific islands, is facing a significant labour shortage in commercial agriculture and fishing, the development of which is "essential to maintaining and regenerating a productive and potentially export-oriented sector in the economy"¹¹

¹⁰The 1986 census also enumerated another category of persons as being engaged in non-monetary activities, i.e., subsistence activity in which a person mainly produces for his/her own family's use and needs, such as growing food, fishing, making copra for house use, raising livestock, making handicrafts for own use, etc. Of the 603 persons enumerated under this category 492 were engaged in growing food, 83 in fishing, 17 in livestock, and 6 in producing copra. Nearly 70 per cent of those engaged in non-monetary activities has worked for less than 20 hours each during the seven days preceding the census.

¹¹John Connell, *op. cit.* p. 8

Table 1. Numerical and percentage distribution of population by broad age groups: Koror, Airai, All other states, and Palau, 1986

Age group	Koror		Airai		All other states		Total	
	Number	%	Number	%	Number	%	Number	%
0-14	3,134	33.2	322	31.5	1,393	40.9	4,849	35.0
15-29	2,976	31.5	321	31.5	813	23.8	4,110	29.6
30-44	1,834	19.4	185	18.1	464	13.6	2,483	17.9
45-59	913	9.7	107	10.5	313	9.2	1,333	9.6
60+	585	6.2	86	8.4	427	12.5	1,098	7.9
Total	9,442	100.0	1,021	100.0	3,410	100.0	13,873	100.0

Source: Office of Planning and Statistics, 1986 Census of Population and Housing of the Republic of Palau (Belau), April 1987, Table A9, p. 28.

Table 2. Economically active population of Palau, 1986

Category	Palau		Koror		Airai		All other states	
	Number	%	Number	%	Number	%	Number	%
Employed	5,070	81.1	3,775	84.9	366	73.8	929	70.9
Unemployed	1,180	18.9	670	15.1	130	26.2	388	29.0
Total	6,250	100.0	4,445	100.0	496	100.0	1,309	100.0

Source: Office of Planning and Statistics, 1986 Census of Population and Housing of the Republic of Palau (Belau), April 1987, table D1, p. 49.

The paradox of the manpower situations in Palau is that while a shortage of labour is considered a major constraint to the development of agriculture, fishing and other resources, there appears to be a surplus of labour or unemployment in other sectors of the economy. Reliable time series data on the employment and unemployment situation in the country is not available. The 1973 census indicated an unemployment rate of 16.2 per cent, but this estimate was considered to be high "since enumerators generally did not understand the question and included people who were not looking for work"¹². The 1980 Palau Community Action Survey reported an unemployment rate of 15 per cent for Koror and 18 per cent for the country as a whole. This estimate too has been considered as high since "it would appear that many of those listed as unemployed are engaged in subsistence agriculture and fishing and many others have some form of part-time occupations"¹³. Estimates based on the 1986 census data¹⁴ give an unemployment rate of 15.1 per cent for Koror, 26.9 per cent for Airai and 29.1 per cent in "all other states".

The 1986 census data also revealed that unemployment is a much more serious problem affecting the educated youth. For the country as a whole, 66.4 per cent of the unemployed were aged 15-29 years,

¹²John Connell, Ibid., p. 11.

¹³F. Udui, Republic of Palau Country Paper to SPC/ILO Conference on Migration, Employment and Development in the South Pacific, 1982 (unpublished), p. 12.

¹⁴The 1986 census defined unemployed as persons older than 14 who did not have a job and were actively seeking employment and/or were available for work. Individuals who were laid off for a period of more than four weeks and who were either looking for work or available for work, were regarded as unemployed. The same applies for students who indicated that they were seeking work or were available for work.

the corresponding proportions being 68.5 per cent for Koror; 72.3 per cent for Airai; and 60.8 per cent for "all other states" (Table 3). Of the 1,180 unemployed, 825 persons or 69.9 per cent had completed one or the other grade of high school or college education, and this proportion was as high as 73.2 per cent among the unemployed in the age group 15-29 years. Those unemployed completing the high school 12th grade or higher education constituted 51.4 per cent for those aged 15-29 years compared to 47.6 per cent for all unemployed (Table 4).

An interesting aspect of the employment situation as disclosed by the 1986 census data is that while about 1,130 Palauan citizens aged 15 years and over were unemployed, an almost equal number (1,011 persons) of non-Palauans were among the 4,467 persons enumerated as employed in the country's monetary sector. Nearly 83 per cent of the non-Palauans were engaged in private sector wage employment and another 11 per cent in the public or government sector. In terms of broad occupational categories, the single largest group of the non-Palauans (21 per cent) were in service occupations such as domestic servants; another 18 per cent worked as handlers, equipment cleaners, helpers and labourers; and another about 14 per cent in construction and extractive occupations (Table 5). It would appear that a substantial proportion of non-Palauans are employed in low-paid, low-status jobs which are not sought after by the educated Palauans.

A proper understanding of the demographic and manpower situation in the country is to a large extent handicapped by a lack

Table 3. Numerical and percentage distribution of the unemployed by five year age groups: Koror, Airai, All other states, and Palau, 1986

Age group	Koror		Airai		All other states		Palau	
	Number	%	Number	%	Number	%	Number	%
15-19	148	22.1	23	17.7	57	15.0	228	19.3
20-24	193	28.8	42	32.3	105	27.6	340	28.8
25-29	118	17.4	29	22.3	69	18.2	216	18.3
30-34	71	10.6	15	11.5	47	12.4	133	11.3
35-39	41	6.1	8	6.2	29	7.6	78	6.6
40-44	35	5.2	7	5.4	30	7.9	72	6.1
45-49	26	3.9	2	1.5	12	3.2	40	3.4
50-54	13	1.9	1	0.8	16	4.2	30	2.5
55-59	16	2.4	2	1.5	10	2.6	28	2.4
60-64	7	1.0	1	0.8	3	0.8	11	0.9
65+	2	0.3	-	-	2	0.5	4	0.3
Total	670	100.0	130	100.0	380	100.0	1,180	100.0

Source: Office of Planning and Statistics, 1986 Census of Population and Housing of the Republic of Palau (Belau), April 1987, Table D1, p. 49.

Table 4. Distribution of the unemployed persons by educational attainment and five-year age groups: Palau, 1986

Education	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
No education	-	1	-	-	-	1	-	-	-	-	-
Elem. Sch. Gr. 1-4	10	2	1	-	2	1	2	7	11	2	1
Elem. Sch. Gr. 5-8	94	66	37	21	20	23	15	14	13	8	3
High School Gr. 9	20	20	15	10	8	24	14	4	3	-	-
High School Gr. 10	28	26	15	10	4	4	1	-	-	-	-
High School Gr. 11	15	15	16	7	3	-	-	-	-	-	-
High School Gr. 12	56	154	93	49	31	9	4	1	1	1	-
College Year 1	4	19	7	2	1	-	-	-	-	-	-
College Year 2	1	27	27	26	5	7	1	2	-	-	-
College Year 3	-	6	2	2	2	1	3	-	-	-	-
College Year 4	-	4	2	4	1	2	-	2	-	-	-
College Year 5	-	-	-	-	-	-	-	-	-	-	-
College more than 5 yrs.	-	-	1	1	1	1	-	-	-	-	-
Not Stated	-	-	-	1	-	-	-	-	-	-	-
Total	228	340	216	133	78	72	40	30	28	11	4

Source: Office of Planning and Statistics, 1986 Census of Population and Housing of the Republic of Palau (Belau), April 1987, Table D.16, p. 69.

Table 5. Classification of the population aged 15 years and over employed in the monetary sector by broad occupation groups and citizenship, 1986

Occupation	Total	Palanan's only	Non-Palanan's
1. Executive, administrative and management	354	298	56
2. Engineers, surveys and architects	48	26	22
3. Natural scientists and mathematicians	7	3	4
4. Social scientists, social workers, lawyers	84	45	39
5. Teachers, librarians, counsellors	469	398	71
6. Health diagnosis and treating practitioners	11	11	-
7. Registered nurses, pharmacists, therapists, etc.	67	66	1
8. Writers, artists, entertainers, athletes	52	41	11
9. Health technologists and technicians	28	28	-
10. Technologists and technicians (except health)	59	53	6
11. Marketing and sales	349	331	18
12. Administrative support (including clerical)	650	562	88
13. Services	782	569	213
14. Agriculture, forestry and fishing	241	188	53
15. Mechanics and repairers	153	114	42
16. Construction and extractive	318	180	138
17. Precision production	78	59	19
18. Production working	84	71	13
19. Transport and material moving	236	223	13
20. Handlers, equipment cleaners, helpers, labourers	340	157	183
21. Military	13	-	-
22. Not stated	44	33	11
Total	4,467	3,456	1,011

Source: Office of Planning and Statistics, 1986 Census of Population and Housing of the Republic of Palau (Belau), April 1987, Tables

of adequate and up-to-date data and information. The Government considers the inadequacy of recent data, both quantitative and qualitative, as a major constraint in proper assessment of specific population issues and related socio-economic variables, and consequently in the formulation and implementation of appropriate policies and programmes in the field of population and human resource development.

C. ORIGIN OF SURVEY

It was against the background of the situation described in the preceding section that the ILO/LAPTAP agreed to assist the Government of the Republic of Palau in undertaking a comprehensive study on population, human resources and employment in that country. The long-term objective of the study was to develop an updated and integrated information system on population and related social and economic variables so as to promote national development objectives, particularly those relating to population and human resource development.

The immediate objectives of the study were to:

- a) Promote understanding among planners, policy makers and programme administrators of the current employment and unemployment situation in the country, particularly among youth, and how this situation is interrelated with migration and level and type of education, training and other family characteristics;

- b) Increase awareness among Government officials and NGOs of the need for integrating population and human resource development into overall development planning;
- c) Promote the formulation and implementation of effective population and human resource development policies at national, subnational and sectoral levels; and
- d) Improve the collection and analysis of data on population and human resource dynamics necessary for policy/programme formulation and implementation, and more specifically to (i) identify the extent and types of population movements into Koror State; and (ii) establish a clear picture of the employment and unemployment situation in the country with particular emphasis on youth, and how this situation is interrelated with migration and level and type of education/training.

The main activities proposed include:

- a) Assessment of existing data on population and human resources and identification of possible data gaps.
- b) Promotion of necessary data collection through a Survey on Population, Employment and Human Resource with special emphasis on Youth.

- c) A national seminar on the results of the Survey and possible implications for policy/programme formulation and implementation.
- d) preparation of detailed population and labour force projections.

During their mission to Palau in December 1989, the LAPTAP Adviser on Labour and Population and the Associate Expert from LAPTAP Sub-regional Office for South Pacific, Suva, Fiji, conducted extensive discussions in regard to matters relating to the survey with the National Planner, Republic of Palau. It was then decided that the Survey would consist of three components, namely, a) a survey of 250 sample households in Koror and Airai states of the Republic; b) a survey of 100 business establishments in Koror and Airai; and c) a survey of all government employees. It was also envisaged that all three components would be carried out simultaneously around April 1990. However, due to reasons of logistics, it was possible to conduct only the household survey during the visit of the Consultant in June/July 1990. The data from the household survey was computer processed in Koror and subsequently sent to Bangkok for analysis. The other two components were completed subsequently and the data relating to these two surveys is being processed in Koror. } ?

The present report contains only the results of the sample household survey.

II. THE HOUSEHOLD SURVEY

A. COVERAGE

The household survey was somewhat limited in its geographical coverage as it was confined only to Koror and Airai states of the Republic of Palau. As noted earlier, these two states together accounted for about 75 per cent of the country's population in 1986. In view of the distances involved, transportation difficulties, and time constraints it was not possible to extend the survey to cover the other states of the Republic.

B. SAMPLING PROCEDURE

The survey covered a total of 257 households in Koror and Airai states selected by systematic sampling procedure. The list of buildings and maps prepared and used for the May 1990 Census of Population and Housing provided the sampling frame for the household survey.

For purpose of the survey, those buildings which were considered as not occupied by families or persons (as for example, business establishments, churches, community halls, hotels, schools, etc) were deleted; only those buildings listed as houses, apartments and barracks, house/store, etc. were included in the list of households to be sampled. This elimination process resulted in a total number of 2,172 dwelling places of which 1,923 were located in Koror and 249 in Airai.

The distribution of sample dwelling units is shown in table 6. The 257 dwelling units selected for the survey constitute about 11.8 per cent of all dwelling units in the two states. None of these sample dwelling units reported the presence of more than one household each.

Table 6: Numerical and percentage distribution of sample dwelling units

States (1)	Listed dwelling units		Sample dwelling units		(4) as percentage of (2)
	Number (2)	Per cent (3)	Number (4)	Per cent (5)	(6)
Koror	1,923	88.5	226	87.9	11.8
Airai	249	11.5	31	12.1	12.4
Total	2,172	100.0	257	100.0	11.8

C. HOUSEHOLD QUESTIONNAIRE

The draft questionnaire prepared in Koror by the Office of Planning and Statistics (OPS) was slightly modified in Bangkok by the Consultant to obtain additional information particularly in regard to migration, educational attainment and economic activity of the people. It was also agreed to collect the relevant particulars in respect of all household members, and not from persons aged 13-59 years only as earlier proposed.

A copy of the final questionnaire used for canvassing the

D. TRAINING OF ENUMERATORS

The household survey was carried out by a team of twelve enumerators who were either staff members or senior students of the Micronesian Occupational College (MOC). At the request of MOC, these enumerators were first given a short course of training in general statistical methods (including sources and methods of collecting data; drafting of questionnaires; techniques of sampling; and data tabulation) so as to develop their capabilities to eventually be able to provide data studies and survey work for the entire Micronesian region. This course lasted two days.

The training of the enumerators for the household survey was intensive in nature as it had to be complete within the next three days. The training started with an explanation of the purpose of the Comprehensive Survey in general, and of the specific questions to be canvassed in particular. The enumerators, who are well-educated, were very alert and made several useful suggestions, particularly in regard to re-wording of some of the questions included in the schedule so as to elicit the correct response.

The enumerators were also provided with a practical training in survey enumerations when they were asked to interview each other or to complete the questionnaire by entering particulars relating to their own household members. They were also given training in interviewing techniques and provided with a copy of the instructions prepared in this regard for the Population and Housing Census. A copy of the set of instructions is attached to this report as

E. HOUSEHOLD ENUMERATION

The household survey commenced on Saturday, 2 June 1990, with the enumerators visiting the selected households allotted to them. The enumerators carried with them a letter signed by the Director, Bureau of Commerce, authorizing them to visit the selected households and obtain the necessary information. In the event of a selected household being unoccupied, or the occupants refusing to respond to the questions, the enumerators were instructed to skip that particular household and select the household next on the list.

The enumeration lasted for about a week as the task was undertaken mostly in the evenings when the occupants would be in their respective homes. Also, the enumerators who were full-time staff members of the MOC did not find it possible to undertake the household visits during normal working hours.

F. EDITING AND CODING OF COMPLETED QUESTIONNAIRE

The completed schedules were checked and edited daily by the Consultant. Where the information in respect of a particular question was found to be missing or incorrect, the enumerator was asked to revisit the household to obtain or verify that information. The task of coding the schedules was largely attended to by the Consultant with occasional assistance from Ms. Margaret Verato, External Data Studies Specialist, MOC.

The data that was collected was computer processed in Koror.

into the computer would commence from the time the final set of completed schedules were edited and coded, this task could not be started until 11 June 1990 since Ms. Ayano Boules of MOC who had agreed to undertake this responsibility also worked as enumerator for the household survey. The progress in regard to computer processing of the data was necessarily slow since Ms. Ayano had to attend to this task on a part-time basis.

The loaded diskettes were received in Bangkok in November 1990 and the analytical tables prepared at ILO/LAPTAP Office with the assistance of Ms. Amornrat Attanatho.

III. DEMOGRAPHIC CHARACTERISTICS

A. HOUSEHOLD SIZE

As noted in chapter II, the household survey covered a total of 257 sample households of which 226 were located in Koror state and 31 in Airai state. The distribution of the households by household size or membership is shown in table 7. The total enumerated population in the 257 households was 1,427 giving an average household size of 5.55 persons for both states combined. However, this average was larger in Koror (5.65 persons) compared to Airai (4.87 persons). According to the 1986 Census, the average size of private households¹⁵ was 5.45 in Koror and 4.76 in Airai.

Because of the small absolute size of the sample for Airai, all subsequent analysis in this report is being based on the combined sample for the two areas.

B. SEX-AGE COMPOSITION

A classification of the enumerated population by sex and broad age groups as at the 1990 Survey and 1986 Population Census is given

¹⁵The 1986 Census defined a private household as "a person living alone and/or a single complete family unit which normally lives together and share their meals. Members of such households are usually related to the head of the household". The 1990 Survey data relates to all households, private as well as group households which contain "a group of people who usually live together and share their meals for reasons other than family relationship".

Table 7. Distribution of sample households by population size:
Koror, Airai and both states

House- hold size	Koror		Airai		Both states	
	Number of house- holds	Number of persons	Number of house- holds	Number of persons	Number of house- holds	Number of persons
1	6	6	1	1	7	7
2	18	36	4	8	22	44
3	23	69	3	9	26	78
4	33	132	9	36	42	168
5	43	215	4	20	47	235
6	32	192	2	12	34	206
7	29	203	3	21	32	224
8	15	120	2	16	17	136
9	5	45	2	18	7	63
10 and over	22	258	1	10	23	268
Total	226	1,276	31	151	257	1,427

in table 8. The total number of males exceeds that of females in both inquiries. The overall sex-ratio, that is the number of males per 100 females, was 104.4 according to the 1990 Sample Survey and 115.3 according to the 1986 census. The decline in the sex-ratios between 1986 and 1990 may be due to emigration overseas of more males than females as is reflected in a sharper decline in sex-ratios at prime working ages 15-44 years, as well as the sampling factor.

According to the household survey data, females considerably outnumber males at ages 10-14, and 60 and over. However, the 1986 census data show an excess of females over males only at ages 60 and over. Both inquiries also show that, by and large, the excess of males is more pronounced in the working ages 15-59 years; the sex-ratio for this broad age group being 111.2 according to the 1990 Household Survey and 122.6 according to the 1986 Census. At the childhood dependent ages 0-14, these ratios were very much lower, viz, 100.5 in 1990 and 109.7 in 1986. At the older ages, 60 and over, females outnumber males according to data from both inquiries.

The distribution of the population by broad age groups for Koror/Airai given in table 9 shows that according to the 1990 Household Survey, children below 15 years of age constituted 29.4 per cent of the total population compared to 33.0 per cent at the 1986 Population Census. The slightly declining youthfulness of the population in the two states has been attributed in part to declining

Table 8. Numerical distribution of enumerated population by sex and broad age groups in Koror/Airai: 1990 Household Survey and 1986 Population

Age group	Household Survey 1990				Population Census 1986			
	Male	Female	Both sexes	Sex-ratio	Male	Female	Both sexes	Sex ratio
0-4	55	48	103	114.6	617	555	1,172	111.2
5-9	70	69	139	101.4	558	510	1,068	109.4
10-14	85	92	177	92.4	633	583	1,216	108.6
15-29	227	191	418	118.8	1,850	1,447	3,297	127.9
30-44	172	173	345	99.4	1,088	931	2,019	116.9
45-59	77	64	141	120.3	552	468	1,020	117.9
60+	43	61	104	70.5	305	366	671	83.3
Total	729	698	1,427	104.4	5,603	4,860	10,463	115.3

Table 9. Numerical and percentage distribution of the population of Koror/Airai: 1990 Household Survey and 1986 Population Census

	1990 Household Survey		1986 Population Census	
	Population	Percentage	Population	Percentage
0-14	419	29.4	3,456	33.0
15-29	418	29.3	3,297	31.5
30-59	486	34.0	3,039	29.1
60+	104	7.3	671	6.4
Total	1,427	100.0	10,463	100.0

fertility brought about by increased adoption of family planning practices¹⁶

Between 1986 and 1990 there has been an increase in the proportion of population of working ages, 15-59 years, from 60.6 per cent to 63.3 per cent. The share of the population of the elderly, that is those aged 60 years and over, has also recorded a slight increase from 6.4 per cent to 7.3 per cent.

Children below 15 years and the elderly aged 60 years and over are conventionally regarded as non-productive in the sense that they do not work, and the burden of supporting these two "unproductive" ends of the age-scale fall on the working age population. This burden is usually measured by the total dependency ratio (those below 15 years plus those 60 years and over as a proportion of those aged 15-59 years). According to the 1990 Household Survey, the total dependency ratio was 56.7 for Koror/Airai. This means that 100 persons in the working age group have to support roughly about 57 dependents in the two areas.

C. MARITAL STATUS

It would appear that particulars relating to the marital status of the population were not canvassed in the past censuses.

¹⁶Although family planning programme has been in operation in Palau for over a decade, there is no information on the extent and success of this programme. However, the project document on "Comprehensive Study on Population, Human Resources and Employment" prepared by the Office of Planning and Statistics states that the decline in the youthfulness of the population "may be explained by the impact of the family planning programme and increased

The 1990 Census of Population and Housing was perhaps the first one to collect this information; the relevant data from this census was not available at the time of writing this report. The marital status of the population of Koror and Airai as revealed by the 1990 Sample Survey of Households is presented in table 10.

It is evident from table 10 that there is a tendency both among males and females to delay their marriages. The Household Survey data shows that all males and females aged 15-19 years were unmarried, and that at peak fertility ages 20-24 only 13.9 per cent of the males and 37.7 per cent of the females were married. The proportions married increased with advancing ages; 35.9 per cent of the males and 48.2 per cent of the females aged 25-29 years reported as being married; after age 35 years, over three-quarters of the males and females were reported as being married.

The age-sex specific nuptiality pattern as revealed by the 1990 Sample Household Survey appears to be consistent with developments reported in respect of most micro states in the Pacific, where according to a 1980 study¹⁷, the proportion of women never married in the 20-24 age group increased from 25 per cent to 40 per cent between 1960 and 1970 in some countries, while in others the proportion never married varied from 50 to 60 per cent. The 1990 nuptiality pattern for Koror and Airai also seems to justify the estimates of Palauan birth rate currently placed at around 25 per

¹⁷John C. Caldwell, Graham C. Harrison and Pat Quiggin, "The demography of micro-states" in R.T. Shand (ed), The Island States of the Pacific and Indian Oceans, Apia, 1980, p. 10.

Table 10. Population of Koror/Airai classified by marital status, sex and age groups:
Sample Household Survey 1990.

Age Group	Never married			Now married			Widowed			Divorced/Separated			All statuses		
	M	F	BS	M	F	BS	M	F	BS	M	F	BS	M	F	BS
0-14	210	209	419	-	-	-	-	-	-	-	-	-	210	209	419
15-19	91	78	169	-	-	-	-	-	-	-	-	-	91	78	169
20-24	62	38	100	10	23	33	-	-	-	-	-	-	72	61	133
25-29	41	24	65	23	25	48	-	-	-	3	3	3	64	52	116
30-34	20	16	36	41	48	89	1	-	1	4	4	4	62	68	130
35-39	11	5	16	47	44	91	-	-	1	2	3	3	59	52	111
40-44	6	2	8	44	45	89	-	-	3	1	1	4	51	53	104
45-49	1	4	5	24	15	39	-	-	2	1	2	2	26	22	48
50-54	-	-	-	30	24	54	-	-	-	2	2	4	32	26	58
55-59	-	-	-	17	10	27	-	-	4	2	2	4	19	16	35
60-64	-	1	1	13	10	23	1	7	8	-	-	-	14	18	32
65-69	-	1	1	6	9	15	-	4	4	2	0	2	8	14	22
70-74	1	-	1	10	1	11	-	5	5	-	-	-	11	6	17
75+	1	-	1	5	7	12	3	14	17	1	2	3	10	23	33
Total	444	278	822	270	261	531	5	40	45	10	19	29	729	698	1,427

thousand of the population. The 1980 study, referred to earlier, also noted:

"Some of the fertility decline in the Pacific and Indianocean islands can be ascribed to delayed age at female marriage which has occurred throughout most of the Third World (one index is the changing proportion of females either 15-19 or 20-24 years of age who are married). This phenomenon is usually not associated with a desire to limit family size but with economic and social change that reduces the pressure to marry daughters early"¹⁸

Widowhood appears to be more pronounced among women than men; the Survey reported 41 females and only 4 males as being widowed. This wide disparity may be explained in terms of the higher female life expectancy particularly at older ages, and possibly a higher rate of re-marriage among widowers.

D. CITIZENSHIP

A classification of the population of Koror and Airai according to citizens and non-citizens based on the 1986 census enumeration and the 1990 Sample Household Survey is presented in table 11. The non-citizens or non-Palauans constitute 10.2 per cent of the total population of the two states in 1990 compared to 13.6 per cent in 1986. The majority of the non-citizens, like the total population of the two states, were males; 54.8 per cent in 1990

Table 11. Citizenship of the population of Koror and Airai by sex:
1986 Population Census and 1990 Sample Household Survey

Category	1986 Population Census			1990 Household Survey		
	Males	Females	Total	Males	Females	Total
Citizens	4,672 (83.4)	4,370 (89.9)	9,042 (86.4)	649 (89.0)	632 (90.5)	1,281 (89.8)
Non-citizens	931 (16.6)	490 (10.0)	1,421 (13.6)	80 (11.0)	66 (9.5)	146 (10.2)
All persons	5,603 (100.0)	4,860 (100.0)	10,463 (100.0)	729 (100.0)	698 (100.0)	1,427 (100.0)

Table 12: Numerical and percentage distribution of non-citizens by five-year age groups in Koror and Airai: 1986 Population Census and 1990 Sample Household Survey.

Age group	1986 Population Census		1990 Sample Household Survey	
	Number	%	Number	%
0-4	71	5.0	5	3.4
5-9	58	4.1	6	4.1
10-14	46	3.2	3	2.1
15-19	158	11.1	8	5.4
20-24	277	19.5	23	15.8
25-29	157	11.0	21	14.4
30-34	173	12.2	22	15.1
35-39	137	9.6	16	11.0
40-44	129	9.1	18	12.3
45-49	82	5.8	8	5.5
50-54	51	3.6	6	4.1
55-59	32	2.3	5	3.4
60+	50	3.5	5	3.4
Total	1,421	100.0	146	100.0

compared to 65.5 per cent in 1986. The decline in the proportion of males among non-Palauans may be due to increasing in-migration of females particularly as domestic servants in recent years.

The numerical and percentage distribution of the non-Palauans or non-citizens by five-year age-groups as at the 1986 census and the 1990 Sample Household Survey is shown in table 13. It will be noted that the age-structure is heavily biased towards the working ages; about 87 per cent of the non-citizens in 1990 are aged 15-59 years compared to about 84 per cent in 1986. Persons in the prime working ages 20-44 years constituted 68.6 per cent of all non-citizens in 1990 as against 61.4 per cent in 1986.

A classification of the non-citizens or non-Palauans by nationality or country of birth given in table 13 shows that a majority of them (nearly 68 per cent) are from Philippines while another about 12 per cent are nationals of USA. Other Micronesians (FSM, North Mariana Islands and Marshall Islands) constitute about 13 per cent of the non-citizens of Koror and Airai.

E. MIGRATION

Information on place of birth was obtained in respect of the 1,427 persons enumerated in the 257 sample households in Koror and Airai. For a person reporting Palau as the place of birth, the particular state in which he/she was born was also recorded. The place of birth data was used to estimate the number of life time migrants, both internal and international, into Koror/Airai as at the date of the survey. The information on place of usual residence

Table 13. Country of birth of non-citizens of Koror and Airai:
1990 Sample Household Survey

Country of birth	Males	Females	Total	Per cent
Marshall Islands	-	2	2	1.4
F.S.M.	5	7	12	8.2
N. Mariano Islands	-	5	5	3.4
United States of America	13	4	17	11.6
Japan	5	-	5	3.4
Koror	3	-	3	2.1
Philippines	51	48	99	67.8
Other countries	3	-	3	2.1
Total	80	66	146	100.0

and place of usual previous residence collected in the 1986 Population Census provides the basis for determining the extent of life-time migrants into Koror/Airai as at the date of that census. An analysis of the migration data collected at the two inquiries is presented in table 14.

It is evident from table 14 that Koror/Airai has a relatively long established population estimated at 65.3 per cent according to the 1990 Survey and 64.3 per cent according to the 1986 census. This proportion appears to have increased over the years from a reported 56 per cent at the 1973 census¹⁹. The life-time internal migrants to Koror and Airai, that is those who have moved in from other parts of Palau, constituted 24.5 per cent of all residents in 1990, compared to 21.1 per cent in 1986.

The Survey also collected particulars relating to the date of migration and the reasons for migration. These information in respect of both internal and international migrants into Koror/Airai are presented in table 15. It will be noted from this table that the largest proportion of lifetime internal migrants (about 42 per cent) had moved into Koror/Airai over thirty years ago prior to 1 January 1970); about 28 per cent during the 1970s (between 1 January 1970 and 31 December 1979); and the remaining 30 per cent during the last decade (between 1 January 1980 and 31 May 1990). However, the vast majority of the lifetime international migrants (about 82 per cent) had come to Koror/Airai during the past decade.

¹⁹John Connell, *op cit*

Table 14. Life-time migrants to Koror/Airai: 1990 Sample Household Survey and 1986 Census of Population and Housing

Place of birth/place of usual previous residence	1990 Sample Household Survey		1986 Census of Population & Housing	
	Number	%	Number	%
Koror/Airai	931	65.3	6,579	64.3
Other states of Palau	350	24.5	2,110	21.1
Outside Palau	146	10.2	1,544	15.1
Total	1,427	100.0	10,233	100.0

Table 15. Migrants to Koror/Airai classified by sex, date of migration and reason for migration, 1990 Sample Household Survey

Date of migration	Employment		Marriage		Join relatives		Studies		Other		All reasons				
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	T
	-----		-----		-----		-----		-----		-----				
A. Internal migrants															
Prior to 1 Jan 1970	28	13	1	16	4	12	41	29	1	1	75	71	146		
1 Jan 1970-31 Dec 1979	11	8	1	7	10	17	24	21	-	-	46	53	99		
1 Jan 1980-31 Dec 1984	4	1	1	2	4	7	4	4	-	-	13	14	27		
1 Jan 1985-31 May 1990	4	6	4	6	15	20	15	8	-	-	38	40	78		
Total	47	28	7	31	33	56	84	62	1	1	172	178	350		
B. International migrants															
Prior to 1 Jan 1970	6	-	-	1	-	2	-	-	-	-	6	3	9		
1 Jan 1970-31 Dec 1979	2	-	1	-	7	7	-	-	-	-	10	7	17		
1 Jan 1980-31 Dec 1984	3	2	-	-	3	2	-	1	-	-	6	5	11		
1 Jan 1985-31 May 1990	50	37	-	1	5	8	3	5	-	-	58	51	110		
Total	61	39	1	2	15	19	3	6	-	-	80	66	146		

Another interesting feature is that there is a slight excess of females over males among lifetime internal migrants, the sex-ratio (or the number of males per 100 female) being 96.6. Among the life-time international migrants, males outnumber the females substantially, the sex ratio being 122.7.

The percentage distribution of the lifetime internal migrants to Koror/Airai by reason for migration is given in table 16. The largest proportion (41.7 per cent) of all lifetime migrants came for studies, the proportion among males (48.8 per cent) moving for the same reason being considerably higher than that among females (34.8 per cent). The second largest proportion (25.4 per cent) reported that the reason for their move was to join relatives; a higher proportion among females (31.5 per cent) than among males (19.2 per cent) reported this reason. Only 21.4 per cent of the lifetime internal migrants had shifted to Koror/Airai for purposes of employment; a higher percentage of males (27.3 per cent) compared to females (15.7 per cent) migrated for this purpose. Marriage was given as the reason for migration by 10.9 per cent of all lifetime internal migrants, the proportion among females (17.6 per cent) being four times that among males (4.1 per cent).

This just goes to show the influence of "extended family" system in Palau is still working

Among recent internal migrants (those who moved into Koror/Airai after 1 January 1980), the most important reason for the move was reported to be to join relatives: 43.8 per cent of all recent migrants, 37.3 per cent of the males and 50.0 per cent of the females gave this reason. Studies was reported as the reason for migration by 29.5 per cent of all recent migrants, the proportion among males

being 37.2 per cent and 22.2 per cent among the female. Migration for purposes of employment was reported by about 14 per cent.

Thus, contrary to popular belief, employment does not appear to be, or is not being reported as, the most important motivation for persons to move from other states of Palau to Koror/Airai. But it is likely that a very substantial proportion of men and women who had originally shifted to Koror/Airai for other purposes such as studies or join relatives, will subsequently be looking for employment, thereby increasing the number of entrants to the labour force in Koror/Airai.

because there may not be jobs available

However, among lifetime international migrants to Koror/Airai, employment is the reason reported by a large majority (68.5 per cent) of all these migrants, the corresponding proportion among males being as high as 76.3 per cent compared to 59.1 per cent among the females. Employment was also reported as the reason behind their move by 76.6 per cent of all recent international migrants (those who came after 1 January 1980); 82.8 per cent of the male and 69.6 per cent of the female recent migrants came to Koror/Airai for employment. A little less than a quarter (23.3 per cent) of all lifetime international migrants said that they came to Koror/Airai to join relatives; a higher proportion among females (28.8 per cent) compared to males (18.8 per cent) immigrated for this purpose.

skills plus willingness of foreigners to work is reason for Palawan business and householder to recruit foreigners to fill job vacancies

IV. EDUCATIONAL CHARACTERISTICS

In any country, the quality of its human resources is determined, among other things, by education and training. The 1990 Sample Household Survey of Koror/Airai therefore collected relevant data on educational attendance and status of the population covered by the survey. This information was canvassed in respect of all persons aged 6 years and over; in Palau, the minimum age for school admission is six years, and all children between 6 and 14 years are required by law to be enrolled in schools.

A. EDUCATIONAL ATTENDANCE

A classification of the persons aged 6 years and over currently attending an educational institution by sex and type of educational institution attending is shown in table 17. It will be noted that of the 442 persons aged 6 years and over reported as currently attending an educational institution, 264 or nearly 60 per cent are enrolled in elementary education programmes; another 154 persons or about 35 per cent in high schools or secondary education; and 19 persons or nearly 4 per cent are enrolled in college and vocational education.

An interesting feature of educational enrolments or attendance is the very high participation of women; they constitute about 49 per cent of total educational enrolments at all levels; 50 per cent of the enrolments at the elementary level, 48 per cent at the secondary or high school level, 56 per cent of college and 60 per cent of

vocational education enrolments. According to the 1986 Census of Population and Housing, of the 3052 persons aged 6-24 years reported as attending an educational institution, 43.3 per cent were women.²⁰ Compared to a number of other small island countries of the Pacific, in Palau women are very well represented in the education system.

The age specific enrolment rates (that is the number of persons of a particular age group reported as attending educational institutions as percentage of the total population in that age group), based on the data of the 1990 Sample Survey and the 1986 Population Census, are given in table 18. The survey data shows that nearly 90 per cent of all children aged 6 to 9 years, and 97 per cent of the children at ages 10-14 years are currently attending school. In other words, about 94 per cent of the children in the compulsory school-going age, 6-14 years, are enrolled in the schools. This proportion is one percentage point less than that reported at the 1986 Population Census. While the 1990 survey shows a higher male than female enrolment rate at ages 6-9 years, the Census gives a higher female than male rate for the same age group.

It is also evident from table 18 that even beyond the ages of compulsory school attendance, enrolments rates appear to be comparatively high. At ages 15-19, which roughly correspond to the enrolment ages at high school or secondary education, the overall

²⁰Office of Planning and Statistics, 1986 Census of Population and Housing of the Republic of Palau (Belau), Koror, 1984.

enrolment rate is about 85 per cent according to the 1990 Sample Survey and about 68 per cent according to the 1986 census. The Survey data also shows a higher enrolment rate for females while the Census data gives a higher male enrolment rate. Nevertheless, these rates are on par with or even higher than the corresponding rates reported for countries such as Philippines (1985), Singapore (1983) and Sri Lanka (1986).²¹

Since the minimum age for school admission is six years and the elementary education level comprises eight grades, one would expect that the age group corresponding to this educational level will be 6-14 years and that most children in grade I to be aged 6 years; in grade II the children to be aged seven years, and so on. Similarly, children enrolled in high school or secondary education (grades IX - XII) will by and large be aged 15-19 years, with children aged 15 years being enrolled in grade IX and children aged 19 years in grade XII. However, due to various reasons, some children will be below and some above the age-group corresponding to the respective levels of education. Also some persons in the corresponding age group may be enrolled in school but not at the appropriate level. It will be noted from table 17 that of the 264 students enrolled at the elementary level, 13 persons or about 5 per cent are above the appropriate age range 6-14 years. Also, another 5 persons aged 6-19 years are enrolled in school but at the kindergarten or below elementary level. Similarly, of the 154 persons enrolled in the high school or secondary education, 8 persons or 5.2 per cent are above

²¹S. Selvaratnam, Population and Status of Women, Asia-Pacific Population Journal, Vol. 3. No 2. p.6.

Table 17: Persons aged 6 years and over currently attending an educational institution by nature of educational institution attending, sex and age group: Koror/Ainai, 1990

Age Group	Nature of educational institution currently attending														All educational institutions										
	Kindergarten			Elementary			High School			College			Vocational			Bs	M	F	Bs	M	F	Bs	M	F	
	M	F	Bs	M	F	Bs	M	F	Bs	M	F	Bs	M	F	Bs										M
6 - 9	4	1	5	50	50	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54	51	105
10 - 14	-	-	-	76	75	151	7	14	21	-	-	-	-	-	-	-	-	-	-	-	-	-	83	89	172
15 - 19	-	-	-	6	7	13	67	58	125	-	1	1	2	2	4	75	68	143	-	-	-	-	-	-	-
20 - 24	-	-	-	-	-	-	6 ^a	2	8	2	2	2	2	4	1	9	4	13	-	-	-	-	-	-	-
25 +	-	-	-	-	-	-	-	-	-	2	2	2	2	4	1	3	6	9	-	-	-	-	-	-	-
Total	4	1	5	132	132	264	80	74	154	4	5	9	4	6	10	224	218	442	-	-	-	-	-	-	-

Note: ^a Includes 1 (one) person following a special education course

Table 18: Educational enrolment rates in Koror/Airai: 1990 Sample Household Survey and 1986 Census of Population and Housing

Age Group	1990 Household Survey			1986 Census of Population		
	Male	Female	Both sexes	Male	Female	Both sexes
6 - 9	91.5	87.9	89.7	89.9	94.2	92.0
10 - 14	97.6	96.7	97.2	97.5	96.7	97.1
15 - 19	95.1	93.3	94.2	94.4	95.7	95.0
20 - 24	82.4	87.2	84.6	69.3	67.0	68.3
	12.5	6.6	9.8	29.4	19.6	21.5

the corresponding age group, 15-19 years, while 21 persons or 13.6 per cent are below the appropriate age-range. Further, 13 students aged 15-19 years are attending elementary level education programmes.

Table 19 gives the numerical distribution of all persons aged 6 years and over currently attending elementary and high school by their actual age and grade attending. It is evident from this table that a substantial number of children at each grade of the elementary and secondary levels are at least one or two years overaged for the grades in which they are currently enrolled. For example, of the 26 students enrolled in grade I, of the elementary level, 19 persons or about 73 per cent are aged 7 years and over, although the actual age corresponding to this grade is six years. However, since not all children will be exactly six years old on the date of admission (many could be older than six years depending on the relationship of their birthdays to the entrance ages permitted by law) it is perhaps more appropriate to deem ages 6 and 7 years as corresponding to grade I of elementary education. Thus, accepting the reported ages, about seven students or about 27 per cent of all students enrolled in grade I, could be considered as being overaged for that grade. Estimates based on the data in table 19 also indicate that about 24 per cent of all students currently enrolled at elementary level and 31 per cent of students enrolled in high school or secondary level appear to be overaged for the respective grades in which they are currently enrolled.

Table 19: Persons aged six years and over currently attending elementary/high school classified by actual age and grade attending and sex: 1990 Sample Household Survey of Koror/Airai.

Grade	Sex	Actual age of persons currently attending education																			Total
		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21+				
E 1	M	3	6	3																12	
	F	4	6	2	1															14	
E 2	M		10	6	2	3	1													22	
	F	2	7	6	3	1														19	
E 3	M	1	2	7	7	5														22	
	F		3	7	6															16	
E 4	M				3	6	4	1												14	
	F				3	6	1	2												12	
E 5	M					7	6	1	3											17	
	F					4	3	1	2											10	
E 6	M				1	5	5	3	3	1										18	
	F					9	5	3	3	1										18	
E 7	M						5	8	2	1										16	
	F						7	4	2											13	
E 8	M								3	5	3	1								12	
	F						1	11	12	4	2									30	
H 9	M								3	9	5	2	2							21	
	F								8	5	4	1	1							19	
H 10	M								3	4	6	4	5		2					24	
	F								2	2	6	11	3	1						25	
H 11	M										5	7	3	3						18	
	F										3	7	2	1						15	
H 12	M											1	9	2	2	2				16	
	F											2	10	1	1	1				15	
ALL Grades	M	4	18	16	12	22	15	13	17	16	18	17	14	19	5	4	2			212	
	F	6	16	15	13	11	13	16	23	26	16	21	13	14	1	1	1			206	

Table 20: Persons aged 6 years and over currently not attending educational institution classified by age-group, sex and educational attainment: Koror/Airai, 1990 Sample Household Survey.

Age Group	Sex	Never attended school	Completed elementary/high school grade number										Completed college grade number				Total		
			3 & below	4	5	6	7	8	9	10	11	12	I	II	III	IV +			
6 - 9	M	2		1															5
	F	4	2																7
10 - 14	M	1																	2
	F	1		1															3
15 - 19	M	1		1	2	3	5		2	1	1								16
	F						1		2	2	4	1							10
20 - 24	M	5		2			5	1	5	6	33	3	3						63
	F	2	1			2	3	2	5		34	2	4	1					57
25 - 29	M	2	1				5	2	3	3	34		7	4					61
	F	1		1			6		2	2	21		6	3	3				46
30 - 39	M	2	2	1	5	7	7	4	6	9	50	3	14	4	14				121
	F	4		1	1	3	7	4	5	6	61	2	10	2	14				120
40 - 59	M	3	5	1	4	3	1	4	18	2	47	4	11	1	23				128
	F	5	5	2	4	9	2	10	12	7	3	29	7	10	12				117
60 +	M	4	7	24	1	2	1				3								43
	F	8	23	22	1	3	1				1		2						61
All Ages	M	20	17	3	30	13	6	27	25	18	20	168	10	35	5	42			439
	F	25	31	4	28	13	7	30	19	21	13	150	12	30	8	30			421
BS	45	48	7	58	26	13	57	44	39	33	318	22	65	13	72				860

The survey recorded nine persons as attending college, of whom four were males and five females. Only one of these nine students (a female) was 19 years old; four of them were in the 20-24 age group while the other four were aged 25 years or over.

~~Four (4) males and six (6) females~~ were reported as attending vocational institutions. Excepting for one of the female students who was 16 years old, all the other nine students were either 19 years of age or older. Vocational courses are normally offered at secondary level and include construction and automechanism. The Micronesian Occupational College, situated in Koror, offers vocational/technical courses at post secondary level.

B. EDUCATIONAL ATTAINMENTS

The survey also collected information in regard to the educational attainment of all persons aged 6 years and over currently not attending any educational institution. This information is presented in table 20.

It will be noted from table 20 that of the 860 persons aged six years and over currently not attending an educational institution, only 45 persons or 5.2 per cent had never attended any educational institution and may therefore be regarded as persons without any education. This proportion was slightly higher among females (5.9 per cent) compared to males (4.6 per cent). Nearly 57 per cent of those who had never attended an educational institution were aged 30 years or over.

A total of 209 persons (96 males and 113 females) or 24.3 per cent had reported as having completed one or the other of the eight grades comprising the elementary education programme, this proportion being about 5 percentage points higher among females (26.8 per cent) compared to males (21.9 per cent). A majority (63.6 per cent) of those completing one or the other of elementary level grades was aged 40 years or over. The proportion of all persons completing the elementary education programme (that is all eight grades) was 6.6 per cent, this proportion being 7.1 per cent among all females and 6.2 per cent among all males.

An interesting feature revealed by the data on educational attainments is the comparatively large number of persons who had completed any one of the four grades in high school. The survey found that in all 434 persons (231 males and 203 females) or 50.6 per cent of persons aged 6 years and over currently not attending an educational institution belonged to this category. The corresponding proportion among males (52.6 per cent) was about 4 percentage points higher than that for females (48.2 per cent). Nearly 77 per cent of those persons completing any of the four high school grades were aged 25 years or more

Another significant feature is that of the 434 persons reported as having completed any of the four high school grades, 318 persons or 73.3 per cent had fully completed the high school or secondary education programme (that is all four grades). Those fully completing the secondary education programme constituted 37 per cent of all 860 persons who were reported as currently not attending an educational institution, the corresponding proportion among males

(38.3 per cent) was 2.7 percentage points higher than that among females (35.6 per cent). In this context, it may be noted that only 27.3 per cent of all 209 persons reported as having completed any one of the eight elementary grades fully completed the elementary education programme.

Those who had completed one or the other of the college grades numbered 172 persons (92 males and 80 females) or 20 per cent of those aged 6 years and over currently not attending an educational institution. As much as 78 per cent of those completing some college grade were aged 30 years or over.

The survey also found that among those aged 6 years and over currently not attending an educational institution, 137 persons had attended vocational schools in addition to completing a high school or college grade. The distribution of these 137 persons by age and sex given in table 21 shows that 84 persons or 61.3 per cent were males and 53 persons or 38.7 were females.

Table 21: Persons currently not attending educational institution but had attended vocational schools in addition to completing secondary or college education: Koror/Airai, 1990 Sample Household Survey.

Age Group	Males		Females		Both sexes	
	Number	%	Number	%	Number	%
15 - 19	2	2.4	-	-	2	1.4
20 - 24	18	21.4	15	28.3	33	24.1
25 - 29	11	13.1	7	13.2	18	13.1
30 - 39	28	33.3	21	39.6	49	35.8
40 - 59	23	27.4	9	17.0	32	23.4
60 +	2	2.4	1	1.9	3	2.2
All ages	84	100.0	53	100.0	137	100.0

C. EDUCATIONAL STATUS

The two preceding sections were devoted to analysing the pattern of educational attendance or enrolments by level of education and grades of all persons aged 6 years and over currently attending an educational institution, and the educational attainment of the population aged six years and over currently not attending an educational institution. Educational attainment was largely measured in terms of the highest grade completed within the education system. An attempt is made in this section to obtain a composite picture of the educational status of the population covered in the survey by combining the results of the analysis undertaken in the previous two sections.

Although a variety of indicators are used to measure the educational status of a population, the present analysis is based on two of these indicators, viz, literacy, and educational attainment

1. Literacy

Literacy has been defined as the ability of a person to both read and write with understanding, a short simple statement of his/her everyday life.²² Thus, a person who cannot meet this criteria is regarded as illiterate. The standard practice in obtaining literacy data is to ask the respondent if he/she can read

²²United Nations, Principles and Recommendations for the 1970 Population Census

and write, and the response to this question is usually accepted at face value.²³

The 1990 Sample Survey did not include specific questions on the ability of a person to read and write in order to determine whether he/she was literate or illiterate. The analysis in this section is therefore based on the concept of "functional illiteracy". This term is used to refer to persons who have completed no more than a few years of primary schooling. In the Palauan context, the functionally illiterate are defined as those persons aged 10 years and over who have never attended school or those who have completed no more than the third grade in elementary education.

A classification of the functionally illiterate in Koror/Airai by sex and age group is given in table 22. There were 94 functionally illiterate persons of whom 42 or 44.7 per cent were males and 52 or 55.3 per cent were females. The overall functional illiteracy rate, that is the number of functionally illiterate as a percentage of the total population aged 10 years and over, was 7.9. In other words, approximately one in every 13 persons aged 10 years and over in Koror/Airai was functionally illiterate; the rate for females (9.0) being slightly higher than that for males (7.0)

²³Henry S. Shryock, Jacob S. Siegel and Associates, The Methods and Materials of Demography vol.I., Washington D.C., Bureau of the Census, U.S. Department of Commerce, October 1971. p.325

Table 22: Functionally illiterate population classified by sex and age group: Koror/Airai, 1990 Sample Household Survey.

Age Group	Males		Females		Both Sexes	
	Number	%	Number	%	Number	%
10 - 14	10	23.8	3	5.8	13	13.8
15 - 19	1	2.4	-	-	1	1.1
20 - 24	5	11.9	3	5.8	8	8.5
25 - 29	3	7.2	1	1.9	4	4.3
30 - 39	4	9.5	4	7.7	8	8.5
40 - 59	8	19.0	10	19.2	18	19.1
60 +	11	26.2	31	59.6	42	44.7
All Ages	42	100.0	52	100.0	94	100.0

It will also be noted from table 22 that the largest concentration of functionally illiterate was at ages 10-14 years for males and at ages 60 years and over for females.

The cumulative grade attainment rate was one of two measures used to obtain a rough indication of the educational attainment of the population of Koror/Airai as at the time of the 1990 Sample Household Survey. This measure gives the proportion of the population of a particular age (or age group) that had ever completed a given grade or level of schooling. For purposes of our analysis, this rate has been defined as the number of persons aged 15 years and over who had ever completed the elementary level (grade 8) education per 100 of the population aged 15 years and over. This number was obtained by adding all persons aged 15 years and over reporting as currently attending high school, college and vocational schools (Table 17) to those who have reported completing elementary grade 8 or higher levels or grades (Table 20).

Table 23: Sex-age-specific cumulative grade attainment rates for elementary education in Koror/Airai: 1990 Sample Household Survey.

Age Group	Males			Females			Both sexes		
	Population	No. completing elementary education	Attainment rate	Population	No. completing elementary education	Attainment rate	Population	No. completing elementary education	Attainment rate
15 - 19	91	78	85.7	78	71	91.0	169	149	88.2
20 - 24	72	65	90.3	61	56	91.8	133	121	91.0
25 - 29	64	61	95.3	52	49	94.2	116	110	94.8
30 - 39	121	111	91.7	120	111	92.5	241	222	92.1
40 - 59	128	111	86.7	119	90	76.9	245	201	82.0
60 +	43	5	11.6	61	7	11.5	104	12	11.5
All ages	519	631	83.0	489	384	78.5	1008	815	80.9

Table 24: Sex-age-specific educational attainment ratios (persons completing high school or higher grade per 100 persons completing elementary level or below): Koror/Airai 1990 Sample Survey

Age Group	Males		Females		Both sexes	
	Nos. completing High school and above	Attainment ratio	Nos. completing High school and above	Attainment ratio	Nos. completing High school and above	Attainment ratio
15 - 19	3	8.3	8	42.1	11	20.0
20 - 24	42	350.0	45	562.5	87	435.0
25 - 29	48	600.0	39	433.3	87	511.8
30 - 39	85	500.0	89	566.3	174	527.2
40 - 59	86	409.5	58	156.8	144	248.3
60 +	4	10.3	3	5.3	7	7.3
All ages	268	201.5	242	165.8	510	182.8

According to the 1990 Sample Survey, of the 1,008 persons aged 15 years and over, 815 persons or 80.9 per cent had ever completed the elementary level education, this proportion being 4.5 percentage points more for males (83.0 per cent) compared to females (78.5 per cent). The sex-age specific cumulative grade attainment rates for elementary education given in table 23 shows that the female rates are higher than the male rates at ages 15-19, 20-24, and 30-39, while at other ages the rates for males are higher than those for females.

The educational attainment ratio was the second measure used for assessing the educational attainment of the population. This ratio relates the number of people completing a higher level of education to those completing a lower level of education. For purposes of the present analysis, the educational attainment ratio was defined as the number of persons aged 15 years and over who had completed the high school or higher level or grade of education per 100 persons aged 15 years and over who had completed the elementary education or below (including those who have never attended school). These ratios for various age groups are presented in table 24.

It will be noted from table 24 that there were 510 persons aged 15 years and over who had completed the high school (secondary) education and/or a higher grade/level of education in Koror/Airai compared to 279 persons in the same ages who had completed elementary education or lower grades. In other words, for every 100 persons who had completed the elementary or lower grades, there were about 183 persons who had completed the high school and/or higher level education. This ratio was substantially higher for males (201.5) compared to females (165.8). However, the ratios for female were higher than those for males at ages 15-19, 20-24, and 30-39 years.

V. ECONOMIC ACTIVITY

The Sample Household Survey of Koror/Airai also collected data on economic activity to ascertain the pattern of labour force participation of the household members. This information was collected in respect of all household members aged 10 years and over.

A. MAIN ACTIVITY

The key question that was asked related to the "main activity" of a person during the one month period preceding the survey. For purposes of the survey, "main activity" was considered as "the activity to which the respondent devoted the largest part of his/her time during the one month reference period". Based on the situation obtaining in Palau, the survey provided for the reported "main activity" to be classified under any one of the following eleven categories:

- 1) Paid work (including paid employment in family business)
- 2) Self-employment
- 3) Helping out in family business without any pay (unpaid family worker)
- 4) Household work
- 5) Growing food for own use
- 6) Fishing for own use

- 7) Student (studies)
- 8) Unemployed
- 9) Retired
- 10) Disabled
- 11) Other

A classification of the persons aged 10 years and over by reported main activity, age group, and sex is shown in table 25.

It will be noted that all persons aged 10-14 years are not economically active in that they are students and two of them reported as being engaged in household work. Hence, in this chapter all subsequent analysis of economic activity is being presented only in respect of those aged 15 years and over. This will also facilitate comparison with the 1986 census data

Table 26 gives the percentage distribution of population 15 years and over by activity status and type of activity based on the 1990 Sample Household Survey and the 1986 Population Census. It is evident that the overall proportion of economically active has declined from 70.4 per cent in 1986 to 62.2 per cent in 1990. This decline has largely been due to the substantial decline in participation rates at ages 15-19 years and considerable decline at age 20-24 years. This in turn can be attributed, at least partly, to increases in enrolments in educational institutions observed at these ages. For instance, the proportion of those aged 15-24 years reporting as students has registered a marked increase from 34.1 per

Table 25: Persons aged 10 years and over classified by age group, sex, and main activity:
Koror/Airai

Age Group	Sex	PW	SE	UPW	HW	GF	FS	ST	UE	RT	DD	OT	NA	Total
		1	2	3	4	5	6	7	8	9	10	11		
10 - 14	M	-	-	-	1	-	-	84	-	-	-	-	-	85
	F	-	-	-	1	-	-	90	-	-	-	-	1	92
15 - 19	M	7	-	1	6	-	-	74	3	-	-	-	-	91
	F	4	-	1	4	-	-	68	1	-	-	-	-	78
20 - 24	M	50	-	-	7	-	-	9	4	-	-	1	1	72
	F	34	-	1	16	-	-	4	4	-	1	1	-	61
25 - 29	M	47	2	-	4	-	-	2	5	-	4	-	-	64
	F	31	-	-	13	-	-	3	4	-	-	1	-	52
30 - 39	M	99	14	-	3	-	-	-	1	-	4	-	-	121
	F	80	4	1	27	-	-	-	5	-	4	1	-	120
40 - 49	M	68	7	-	-	-	-	-	1	-	1	-	-	77
	F	55	2	-	17	-	-	-	1	-	-	-	-	75
50 - 59	M	41	6	-	1	-	1	-	1	-	1	-	-	51
	F	15	2	-	23	-	-	-	-	-	2	-	-	42
60 +	M	8	1	-	-	1	1	-	-	28	1	3	-	43
	F	2	3	1	25	2	1	-	1	16	6	4	-	61
Total	M	320	30	1	22	1	2	169	15	28	11	4	1	604
	F	221	11	4	126	4	1	165	16	16	9	7	1	581

Note: 1. Paid work (including paid employment in family business)

2. Self-employment
3. Helping out in family business (no-pay)
4. Household work
5. Growing food for own use
6. Fishing for own use
7. Student
8. Unemployed
9. Retired
10. Disabled
11. Other

Table 26: Percentage distribution of population 15 years and over in Koror/Airai by activity status
Sample Household Survey and 1986 Census of Population

Activity Status	1990 Sample H.H. Survey			1986 Population Census		
	Males	Females	Both sexes	Males	Females	Both sexes
1. Economically Active	<u>71.1</u>	<u>52.5</u>	<u>62.2</u>	<u>75.8</u>	<u>65.2</u>	<u>70.4</u>
A. Employed	<u>68.3</u>	<u>49.2</u>	<u>59.1</u>	<u>63.3</u>	<u>53.9</u>	<u>59.0</u>
1. Paid work	61.7	45.2	53.7	58.7	43.8	51.9
2. Self-employment	5.8	2.2	4.1	2.9 ¹	0.9 ¹	2.0 ¹
3. Unpaid family work	0.2	0.8	0.5	0.1	0.2	0.1
4. Non-monetary activity	<u>0.6</u>	<u>1.0</u>	<u>0.8</u>	<u>1.1</u>	<u>8.8</u>	<u>4.6</u>
5. Status not known	-	-	-	0.5	0.2	0.4
B. Unemployed	<u>2.8</u>	<u>3.3</u>	<u>3.1</u>	<u>12.5</u>	<u>11.3</u>	<u>11.4</u>
2. Not Economically Active	<u>28.9</u>	<u>47.5</u>	<u>37.8</u>	<u>24.2</u>	<u>34.8</u>	<u>29.6</u>
1. Household duties	16.4	15.3	15.8	12.9	10.3	11.7
2. Student	4.0	25.5	14.4	0.1	11.5	5.7
3. Retired	5.4	3.3	4.4	4.4	8.0	6.1
4. Disabled	2.2	1.8	1.9	2.2	2.2	2.2
5. Others	0.9	1.6	1.3	4.6	2.8	3.9
3. ALL STATUSES (1+2)	100.0	100.0	100.0	100.0	100.0	100.0

¹Includes those classified as self-employed and employers.

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(39 per cent) of all paid workers are employed in the services industry which includes community, social and personal services such as domestic services. A greater proportion among females (44.8 per cent) than among males (35 per cent) reported as being employed in services. The second largest proportion of all paid workers (16.5 per cent) was employed in wholesale and retail trade including restaurants, the proportion among females (23.1 per cent) being considerably higher than among males (11.9 per cent). The number as well as proportion among male workers exceed those of females in business or industries such as agriculture and fisheries; construction; electricity and gas; and transport and communications.

It will also be noted from table 27 that in regard to those who reported as self-employed, the largest proportion among males (26.7 per cent) were engaged in agriculture and fisheries business while the largest proportion among females (45.4 per cent) were engaged in trade including restaurant business.

The numerical and percentage distribution of paid workers and self-employed persons aged 10 years and over by broad occupational groups and sex is given in table 28. It is evident from table 28 that the largest proportion (29.4 per cent) of all paid workers were engaged as labourers or manual workers, this proportion being the same for males as well as females. The second largest proportion of all paid workers (24.2 per cent) was employed in professional, technical and related work, this proportion being somewhat higher for males (25.6 per cent) compared to females (22.1 per cent). Clerical

Table 27: Paid workers and self-employed aged 15 years and over classified by nature of business:
Koror/Airai 1990 Sample Household Survey

Nature of business	Paid workers						Self-employed					
	Males		Females		Both sexes		Males		Females		Both sexes	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Agriculture, fisheries, forestry	33	10.3	5	2.3	38	3.0	8	26.7	1	9.1	9	22.0
Mining and manufacturing	1	0.2	-	-	1	0.2	-	-	-	-	-	-
Construction	42	13.1	2	0.9	44	8.1	2	6.7	-	-	2	4.9
Electricity, gas, water etc.	12	3.8	1	0.5	13	2.4	1	3.3	-	-	1	2.4
Wholesale and retail trade	38	11.9	51	23.1	89	16.5	2	6.7	5	45.4	7	17.1
Transport, storage & communications	32	10.0	8	3.6	40	7.4	7	23.3	-	-	7	17.1
Financing, insurance & real estate	8	2.5	17	7.7	25	4.6	-	-	-	-	-	-
Community, social & personal services	112	35.0	99	44.8	211	39.0	7	23.3	1	9.1	8	19.5
Other business	37	11.6	35	15.8	72	13.3	2	6.7	3	27.3	5	12.2
Not stated	5	1.6	3	1.4	8	1.5	1	3.3	1	9.1	2	4.9
Total	320	100.0	221	100.0	541	100.0	30	100.0	11	100.0	41	100.0

Note: ¹Includes restaurants

Table 28: Paid workers and self-employed person aged 10 years and over classified by sex and broad occupational groups: Koror/Airai 1990 Sample Household Survey

Nature of occupation	Paid workers				Self-employed							
	Males		Females		Males		Females		Both sexes			
	No.	%	No.	%	No.	%	No.	%	No.	%		
Professional, technical and related	82	25.6	49	22.1	131	24.2	4	13.4	-	4	9.8	
Administrative and managerial	45	14.1	26	11.8	71	13.1	6	20.0	5	45.4	11	26.8
Claerical and related	31	9.7	65	29.4	96	17.7	-	-	3	27.3	3	7.3
Agriculture, animal husbandry fishing	22	6.9	1	0.4	23	4.3	6	20.0	1	9.1	7	17.0
Production and related	13	4.0	9	4.1	22	4.1	1	3.3	1	9.1	2	4.9
Transport, equipment operator	27	8.4	3	1.4	30	5.5	9	30.0	-	-	9	22.0
Labourer	94	29.4	65	29.4	159	29.4	3	10.0	-	-	3	7.3
Not stated	6	1.9	3	1.4	9	1.7	1	3.3	1	9.1	2	4.9
All occupations	320	100.0	221	100.0	541	100.0	30	100.0	11	100.0	41	100.0

and related work was the third in importance with 17.7 per cent of all paid workers; 29.4 per cent of female paid workers and 9.7 per cent of male paid workers being engaged in these occupations. Nearly 13 per cent of all paid workers were employed in administrative and managerial occupations; this proportion was higher for males (14.1 per cent) compared to females (11.8 per cent).

Among all those who reported themselves as being self-employed, nearly 27 per cent were engaged in administrative and managerial occupations, which was also the group of occupations in which the largest proportion of self-employed females (45.4 per cent) were engaged. The largest proportion among self-employed males (30 per cent) were working as transport, equipment operators.

Those persons who reported themselves as being engaged in paid work or self-employment as their main activity were asked whether they were looking for alternate paid full-time employment. Of the 582 persons aged 15 years and over who were engaged in paid work or self-employment, 49 persons or 8.4 per cent reported that they were looking for alternate paid full-time employment; 504 persons or 86.7 per cent reported that they were not looking for alternate paid full-time employment; the remaining 29 persons or 4.9 per cent did not give a definite answer. (Table 29) Nearly 76 per cent of the males and 72 per cent of the females who reported as looking for alternate paid full-time employment were aged 30 years or over.

Table 29: Classification of paid workers and self-employed aged 15 years and over by age and sex and whether looking for alternate paid full-time employment: Koror/Airai 1990 Sample Household Survey

Age Group	Looking		Not looking		No Answer		All Persons	
	M	F	M	F	M	F	M	F
15 - 19	-	-	7	4	-	-	7	4
20 - 24	4	1	41	32	5	1	50	34
25 - 29	5	2	41	29	3	-	49	31
30 - 39	18	4	87	74	8	6	113	84
40 - 49	10	2	62	54	3	1	75	57
50 - 59	1	2	45	15	1	-	47	17
60 +	-	-	9	4	-	1	9	5
Total	38	11	292	212	20	9	350	232

2. Non-monetary activity

It is significant to note from table 26 that the proportion reporting non-monetary activity has recorded a marked decrease from 4.6 per cent in 1986 to less than 1.0 per cent (0.8 per cent) in 1990 for all persons aged 15 years and over. "Non-monetary activity is the equivalent of subsistence activity in which a person mainly produces for his/her own family's use and needs, such as growing/gathering food, fishing, making copra for home use, raising livestock, making handicrafts for own use, constructing their own dwelling and so on."²⁶ In most countries, such activities are usually carried out by women in rural areas, and for Palau as a whole, the 1986 census indicated that 501 women as against 102 men

²⁶Office of Planning and Statistics, 1986 Census of Population and Housing of the Republic of Palau (Belau), Koror, April 1987. p. 11

were engaged in non-monetary activities. But, somewhat surprisingly, as much as 56 per cent of the women reported as being engaged in non-monetary activity were found in Koror/Airai, the most urbanised area of the Republic. One possibility is that in the 1986 census, those engaged in household duties may have been classified as being engaged in non-monetary activity.²⁷ In this context, it may be noted that in Palau as a whole, a little over 50 per cent of women classified as working in the non-monetary sector, worked less than 15 hours during the reference week.

The sharp decline in the proportion of females reporting non-monetary activity also appears to be one of the reasons for a decline in the proportion economically active between 1986 and 1990.

3. Unemployed

It is also significant to note from table 26 that the proportion reporting as being unemployed has declined markedly from 11.4 per cent in 1986 to 3.1 per cent in 1990 for all persons aged 15 years and over.

As will be noted later, according to the 1990 Sample Survey, 626 persons aged 15 years and over (369 males and 257 females) were estimated to be in the labour force, of whom 31 persons (15 males and 16 females) are reported to be unemployed. The overall unemployment rate, that is the total unemployed as a percentage of total labour

²⁷This presumption also appears to be justified by the fact that the proportion reporting household duties is much higher according to the 1990 Survey compared to the 1986 census.

force is 5.0 per cent for both sexes combined, the unemployment rate among females (6.2 per cent) being over two and a half-times the rate for males (2.9 per cent). The overall unemployment rate of 5.0 per cent disclosed by the 1990 Survey data is substantially lower (less than one-third) the rate of 16.2 per cent estimated on the basis of the 1986 Population census data.

The reported decline in overall unemployment rate between 1986 and 1990 may be explained in terms of a number of factors. To begin with, it may be noted that the relevant data from the two inquiries are not strictly comparable due to difference in the reference period and definitions of some concepts adopted. As mentioned in footnote 2 of this chapter, the reference period for reporting economic activity was one week prior to the date of the census in 1986 and one month preceding the date of the survey in 1990. It is likely that more people would have reported as being unemployed during a one-week's reference period than during a one-month period, although it is not possible to ascertain or estimate the exact numbers involved.

Further, there was also some difference in the way the "unemployed" were defined and classified at the two inquiries. Both inquiries defined unemployed as those respondents who did not have a job and were actively seeking employment and/or were available for work. But the 1986 census also regarded as unemployed those students who indicated that they were seeking work or were available for work. It would also appear that students who indicated as seeking work or being available for work were classified both as unemployed

as well as students. This is evident from the following analysis of the activity status of males aged 15-29 years.

Age group	Total population	Number employed	Number un-employed	Number labour force	Number not in labour force	Number attending regular school	Number not attending school
15-19	718	157	104	261	457	498	220
20-24	664	426	129	555	109	193	471
25-29	469	337	87	424	45	22	447

It will be noted that the number of males aged 15-19 years reported as currently attending a regular school is more than the number estimated as being not in the labour force. Since those not in the labour force include those attending to household duties, the handicapped etc. in addition to students, it would appear that a number of students who indicated that they were available for work/looking for work have been classified both as unemployed as well as students. However, the numbers involved appear to be relatively small to significantly reduce the unemployment rate reported in the 1986 Census.

An important factor that appears to have contributed at least to some extent to the lower unemployment rate in 1990 is the observed increase in paid employment as well as self-employment between 1986 and 1990. As noted earlier in this chapter, the proportion of those engaged in paid work and in self-employment has registered an increase during this period (table 26) and that these increases could be considered to reflect genuine increases in employment opportunities.

It has, however, to be admitted that even if the various factors discussed above have individually and collectively played a role in either overstating the level of unemployment in 1986 or depressing the proportions reported in 1990, the gap between the two rates is bound to remain substantially wide. Clearly, further investigation or probing is needed, and perhaps the 1990 Census data, when tabulated and analysed, may help clarify the picture.

It has also to be stated that the estimates of the unemployed discussed in the preceding paragraphs of this sub-section relate to those respondents who had reported themselves as being totally "unemployed" during the reference period. These estimates by themselves do not reflect the true situation in regard to unemployment in the country since there may be other persons who though had reported and been classified under other activity statuses may still be looking for work and/or are available for work. "In many developing countries, it has been observed that a considerable part of the labour force, without being employed in the formal sense and yet not being able to afford to be totally unemployed, create or engage themselves in marginal activities usually with low incomes and productivity."²⁸ Such persons, who are considered as under-employed, may be waiting for or looking for full-time employment. These may still be others, as for example those currently engaged in household duties, who may have been classified as not being in the labour force, but who may be looking for full-time or paid jobs and

²⁸Ghazi M. Farooq, Population and Employment in Developing Countries, Background Papers for Training in Population, Human Resources and Development Planning. Paper No.I. ILO. Geneva. 1986. p. 19.

who could therefore be considered as being unemployed. Appropriate questions were therefore asked in the 1990 Sample Household Survey to probe further into these aspects.

The 1990 Sample Survey obtained information on the number of hours usually spent on paid work per week, and a classification of the paid workers by number of hours worked is shown in table 30. It will be noted that about 96 per cent of those reporting as being engaged in paid work had devoted 31 hours or more per week to their work and a further 2.4 per cent had spent 10 hours or more on their work. Only one paid worker reported spending less than 10 hours per week on his job. Thus, there does not appear to be a serious problem of under-employment among paid workers

Table 30: Paid workers aged 15 years over classified by number of hours usually spent on paid work per week: Koror/Airai

No. of hours usually spent on paid work per week	Males		Females		Both sexes	
	No.	%	No.	%	No.	%
Less than 10 hrs	1	0.2	-	-	1	0.2
10 - 20 hrs	5	1.6	4	1.8	9	1.7
21 - 30 hrs	-	-	4	1.8	4	0.7
31 hrs or more	309	96.6	210	95.0	519	95.9
Not reported	5	1.6	3	1.4	8	1.5
Total	320	100.0	221	100.0	541	100.0

However, the Sample Survey revealed that in addition to the 31 persons who had reported as being unemployed, another 55 persons aged 15 years and over not reporting paid work or self-employment as main

activity had indicated that they were looking for full-time paid job at the time of the Survey. If these 56 persons, who were either unpaid family workers or were engaged in household duties, are considered as unemployed, then the total unemployed would amount to 86 persons of whom 28 were males and 58 were females. These alternate estimates yield an overall unemployment rate of 12.8 per cent, the rate for males being 7.3 per cent and females 19.7 per cent.

The distribution of the 86 persons reckoned as unemployed by age and sex is given in table 31. It will be observed that 71.5 per cent of male and 50.8 per cent of the female unemployed were in the age group 15-29 years. Thus, the alternate estimates of unemployment appear to confirm that employment is a problem more serious among the young as well as among the females.

Table 31: Distribution of the unemployed (alternate estimates) by age and sex: Koror/Airai 1990 Sample Household Survey

Age Group	Males		Females		Both sexes	
	No.	%	No.	%	No.	%
15 - 19	8	28.6	7	12.1	15	17.4
20 - 24	5	17.9	13	22.4	18	20.9
25 - 29	7	25.0	10	17.2	17	19.8
30 - 39	3	10.7	17	29.4	20	23.3
40 - 49	1	3.6	10	17.2	11	12.8
50 - 59	2	7.1	-	-	2	2.3
60 +	2	7.1	1	1.7	3	3.5
All ages	28	100.0	58	100.0	86	100.0

The age-sex-specific unemployment rates for Koror/Airai based on the alternate estimates of unemployment in 1990 and the 1986 census data are presented in table 32. A comparison of the two sets of estimates indicates that the unemployment rate for all persons aged 15 years and over in 1990 was less than the 1986 rate by 3.4 percentage points, and that while the rates for males has declined substantially from 15.4 per cent in 1986 to 7.3 per cent in 1990, the rate for females has increased slightly from 17.3 per cent to 19.7 per cent during this period. Table 32 also indicates that unemployment rate at ages 15-19 has recorded a marked increase for both males and females.

Table 32: Age-specific unemployment rates for Koror/Airai: 1990 Sample Household Survey (alternate estimates) and 1986 Census of Population

Age Group	1990 Sample Household Survey			1986 Population Census		
	Males	Females	Both sexes	Males	Females	Both sexes
15 - 19	50.0	58.3	53.6	39.8	39.9	39.9
20 - 24	9.1	27.1	17.5	23.2	28.5	25.4
25 - 29	12.5	24.4	17.5	20.6	16.9	18.9
30 - 39	2.6	16.3	9.1	18.3	11.2	10.2
40 - 49	1.3	14.9	7.7	6.1	11.8	8.5
50 - 59	4.0	-	3.0	4.9	9.9	7.0
60 +	15.4	10.0	13.0	4.8	5.5	5.0
All Ages	7.3	19.7	12.8	15.4	17.3	16.2

B. LABOUR FORCE PARTICIPATION

The labour force of a country is defined to comprise all persons who are employed (working for pay or profit) or unemployed (not employed but actively seeking work). Thus, in the Palauan context, the labour force would consist of all persons who reported themselves as being in paid work, self-employment, helping out in family business, growing food for own use, and fishing for own use, these five categories together constituting the employed; and the unemployed.²⁹ The employed and the unemployed aged 15 years and over together comprise 626 persons of whom 369 or 58.9 per cent were males, and 257 persons or 44.1 per cent were females. The distribution of the labour force by age and sex is presented in table 33.

Table 33: Numerical and percentage distribution of the labour force by age and sex: Koror/Airai 1990 Sample household Survey

Age Group	Males		Females		Both sexes	
	No.	%	No.	%	No.	%
15 - 19	11	3.0	6	2.3	17	2.7
20 - 24	54	14.6	39	15.2	93	14.9
25 - 29	54	14.6	35	13.6	89	14.2
30 - 39	114	30.9	92	35.8	206	32.9
40 - 49	75	20.3	58	22.6	133	21.2
50 - 59	50	13.6	17	6.6	67	10.7
60 +	11	3.0	10	3.9	21	3.4
All Ages	369	100.0	257	100.0	626	100.0

²⁹For purposes of this analysis, the unemployed includes only the 31 persons who reported themselves as unemployed in the 1990 Sample Survey.

The estimated total labour force of 626 persons constituted about 62.1 per cent of all persons aged 15 years and over; this proportion was higher among males (71.1 per cent) compared to females (52.6 per cent). It will also be noted from table 33 that the largest concentration of the labour force, both males and females, is at ages 30-39 years with the second largest concentration at ages 20-29 years.

A more realistic picture of labour force participation could be obtained from the age-specific participation rates, or the rates calculated for specific age groups. These rates based on the data of the 1990 Sample Survey and the 1986 Population Census are presented in table 34. It must, however, be emphasised that as noted earlier although the 1986 census and the 1990 survey adopted the labour force concept to measure economic activity, the data from the two inquiries are not strictly comparable due to differences in the reference period as well as in definitions of some of the terms used. These factors have to be borne in mind in comparing the labour force data obtained from the 1986 census and the 1990 Sample Survey.

It is clear from table 34 that the pattern of age-specific participation rate as revealed by the two enquiries is similar in that the highest rates are found in respect of the age groups 20-24 through 50-59 years for males, and 20-24 through 40-49 years for females. The two sets of data also show that the male rates are considerably higher than the female rates at all age-groups. A comparison of the 1990 age-specific participation rates with the 1986 rates show that for males, the 1990 rates are lower than the 1986

rates in respect of the age groups 30-39, 40-49 and 50-59 years, and that for females the 1990 rates are higher than the 1986 rates at all ages. The overall participation rate, that is the rate for all persons aged 15 years and over, was higher for males as well as females in 1986 than in 1990. The decline in overall participation rates between 1986 and 1990 has been largely due to the substantial decline in participation rates at ages 15-19 presumably because of increasing school enrolments at these ages.

Table 34: Age-specific labour force participation rates for Koror/Airai: 1990 Sample Household Survey and 1986 Census of Population

Age Group	1990 Sample H.H. Survey			1986 Population Census		
	Males	Females	Both sexes	Males	Females	Both sexes
15 - 19	12.1	7.7	10.1	36.4	33.0	35.0
20 - 24	75.0	63.9	69.9	83.6	74.7	79.8
25 - 29	84.4	67.3	76.7	90.4	80.9	85.8
30 - 39	94.2	76.7	85.5	90.3	85.4	88.1
40 - 49	97.4	77.3	87.5	91.9	83.0	87.9
50 - 59	98.0	40.5	72.0	87.2	65.5	76.6
60 +	25.6	16.4	20.2	41.3	19.9	29.7
All Ages	71.1	52.6	62.2	75.0	65.2	70.5

VI. CONCLUSIONS

As noted earlier, the Sample household Survey was carried out in order to collect requisite information that would help to throw additional light on the perceived problems relating to rural-urban migration and unemployment, particularly among the youth. Due to constraints of resources, both financial and manpower, the Survey had to be limited to 257 households selected on a systematic random sampling basis in Koror and Airai which together accounted for about 75 per cent of Palau's population. Statistically, the 257 selected households, which constitute about 12 per cent of all households in the two survey areas, could be considered to be adequately representative of the actual situation in respect of the issues intended to be probed in Koror/Airai. However, it has to be admitted that the total household population covered in the Survey, 1276 in Koror and 151 in Airai, was not large enough to yield sufficient number of observations for purposes of undertaking detailed analysis of some aspects of the problems sought to be examined.

Nevertheless, the survey data seems to generally confirm the conclusions earlier drawn from various other inquiries, limited as they may be, in regard to the movement of people from the rural areas/outer islands to the nation's capital, Koror, and adjoining Airai state, as well as the resultant problems of unemployment in the urban areas. According to the Survey, about 22 per cent of all life-time internal migrants to Koror/Airai are recent migrants in that they had moved into these two areas between 1 January 1985 and

31 May 1990. The Survey also shows a slight excess of females over males (110 females per 100 males) among the internal migrants during the last two decades, 1970-1990. On the other hand, as is to be expected, about 75 per cent of all life-time international migrants had immigrated into Koror/Airai after 1 January 1985, and males have consistently outnumbered the females in the international migrant stream.

Based on studies in various countries, it has often been argued that migration is broadly a function of perceived relative deprivation, primarily in terms of income levels, as well as expectations of superior welfare services. According to the survey, studies or education has been reported as the most important reason for moving by all life-time internal migrants and the second most important reason given by recent migrants, that is those who have moved into Koror/Airai after 1 January 1985. Employment has been cited as the reason by the second largest proportion among all life-time internal migrants as well as recent migrants. Nevertheless, it is likely that a substantial proportion of persons who had originally moved to Koror/Airai for other reasons would have sooner or later been seeking employment thus swelling the ranks of job-seekers in these two areas.

Unemployment had for long been perceived to be a serious problem in Koror/Airai because estimates based on past population censuses and other somewhat limited investigations seemed to suggest high unemployment levels of around 16-18 per cent of the labour force. However, as noted in preceding chapters, these estimates have been considered to be very high for various reasons. As rightly

observed by Connell in 1983, "It is apparent both that unemployment is high but that, in practice, it had not been possible to produce accurate data on unemployment levels or trends especially in the rural areas."³⁰ The 1990 Survey shows a considerably lower unemployment rate of about 5.0 per cent for all person aged 15 years and over. The implicit decline in the rate of unemployment between 1986 and 1990 may, however, be only partly real reflecting increased employment opportunities especially in paid and self-employment, and the differences between the two rates therefore need further probing. Using a wider concept of unemployment than used in the censuses and in the 1990 Survey, alternate estimates of unemployment were constructed and these estimates indicate an overall unemployment rate of about 13 per cent in 1990.

Apart from the question of the level of unemployment, the attention of the policy makers need to be directed to other facets of the unemployment problem. First, this problem is partly the result of the influx of substantial number of persons from rural areas/outer islands in search of better opportunities for employment and for earning one's living. Secondly, the reported unemployment levels co-exist with shortages within the country of persons with specific skills, thus necessitating the recruitment of expatriates to fill a large number employment vacancies both in the public and private sectors. This situation is confirmed by the data on work permits issued annually by the Labour Division (not included in this report), and also by the Survey data which shows that nearly 79 per cent of

³⁰John Connell, Migration, Employment and Development in the South Pacific, Country Report NO 13; Palua, South Pacific Commission, Nonmea, 1983. p. 12

all recent international immigrants have come to Koror/Airai for employment purposes. Third, given the current age structure of Palauan population, the future annual increments to the labour force will be substantial and most of this increase will take place in Koror/Airai due to continued migration to these areas. To what extent the public sector and the private commercial sector, which are currently the two most important avenues of employment in Koror/Airai, will and could expand in the immediate future to absorb the increasing number of job-seekers is as yet not known. Perhaps, the data collected in the other two surveys, one relating to government employees and the other of business establishments, when processed and analysed, will provide information in regard to this aspect.

As in most small island countries of the Pacific, in Palau, population censuses have been the primary source of demographic as well as related socio-economic data. During the past five years alone, as mentioned earlier, two nation-wide censuses have been conducted, one in March 1986 and the other in May 1990, just prior to the Sample Household Survey. Although the data collected in the 1986 census were processed and tabulations published in the form of several tables in April 1987,³¹ not much is yet available by way of detailed analysis of this data. The 1990 Census has also collected a wealth of information on migration and economic activity of the population and should therefore provide a valuable data base

³¹Office of Planning and Statistics, 1986 Census of Population and Housing of the Republic of Palau (Below), Koror, Republic of Palau, April 1987.

for analysing the level of unemployment and its structural characteristics throughout the country.

In this connection, it must be explained that an important or main factor hindering the systematic analysis of available data and their utilization in planning and policy formulation is the serious lack of adequate national skills to carry out such analysis. In Palau, as in most other small island countries of the Pacific, the national capacity in terms of staffing and skill level remains very limited. For instance, in June 1990, the entire staff of the Office of Planning and Statistics (OPS), which is responsible for the collection and analysis of all statistical data as well as formulation of development plans and programmes, consisted of only two professionals (the National Planner who is a citizen of Palau, and the National Statistician, an expatriate U.N. volunteer whose contract was to terminate in October 1990) and a secretary. Thus, unless the staff strength and capability of OPS are adequately enhanced, one cannot expect any systematic analysis and study of the 1990 census data to be undertaken within the country itself.

Annexure II

LIST OF ENUMERATORS*

1. Ms. Ayano Boules	Director, Institutional Research
2. Mr. Vicent Ito	Job Development Officer
3. Mr. Sherman Daniel	GET Instructor
4. Ms. Serelino R. Oeti	Business Education Instructor
5. Mr. Bruce Rimirch	Computer Curriculum Specialist
6. Ms. Maurine Alexander	Business Instructor
7. Mr. Joseph I. Tiobech	Agriculture Instructor
8. Mr. Bennie Brel	Staff, Continuing Education
9. Ms. Josepha Tutii	Library/AV room
10. Mr. Don Kebon	Student
11. Mr. Dwight Jossien	Student
12. Mr. Paul Haleyalpiy	Student

* All enumerators who assisted in the Household Survey were either staff members or students of Micronesia Occupational College (MOC), and the designations given indicate their respective designations at the time of their participating in the Survey.

HOUSEHOLD QUESTIONNAIRE

PART I: IDENTIFICATION

State/Area Street/Lane Household No.

PART II: HOUSEHOLD PARTICULARS

Serial No.	Name	Relationship to the head of household	Sex	Age	Marital Status	Citizenship	Place of Birth	For migrants to Koror/Arai	Are you attending any educational institution at present	What was your main activity last month
								When Migrated	Reason for Migration	
								(8)	(9)	(10)
				(4)	(5)	(6)	(7)			(11)
(1)		(2)	(3)							1/
										2/

1/ To be completed only for those aged 6 years and over.
 2/ To be completed only for those aged 10 years and over.

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