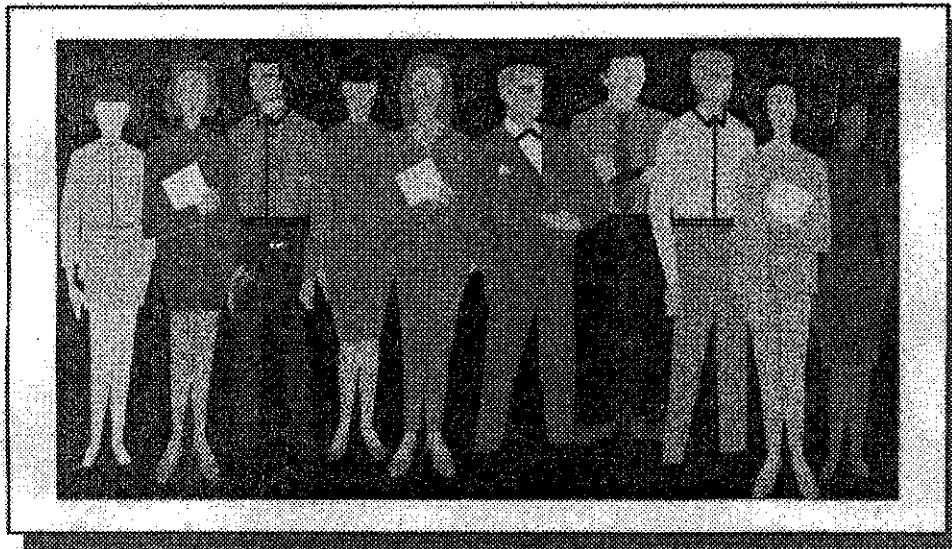




NAURU NATIONAL POPULATION CENSUS APRIL 1992



MAIN REPORT

BUREAU OF STATISTICS
MINISTRY OF FINANCE
REPUBLIC OF NAURU
CENTRAL PACIFIC

1-92-11-11-1

SH1

FOREWORD

Relatively little social analysis of the population of Nauru has been done in the past. To date only three locally conducted national censuses have been undertaken (1977, 1983 and 1992). Little analysis was done on both the 1977 and 1983 censuses, and no final reports were published on either. Perhaps the single largest inhibiting factor has been the lack of suitably qualified personnel on the island who can undertake analysis. The result has been a distinct lack of social data on the Republic.

This census marks a milestone in the development of Nauru's national capabilities. Initially the responsibility of the Department of Island Development & Industry, the 1992 Census underwent thorough planning with the support of the South Pacific Commission, and efforts were made to ensure that substantial follow-up, in terms of analysis, could and would be possible. Early on in 1993 it fell within the ambit of the newly created Bureau of Statistics to conduct analysis on the 1992 Census and to plan and undertake future censuses.

It is the objective of this report to present accessible analytical observations of the data obtained from the 1992 Census. Attention will be devoted to giving a cross-sectional representation of the population by studying its socio-economic characteristics. Presented will be tables, graphs and descriptive analysis of population distribution, mortality, fertility, employment, growth, income, nuptiality, education and housing.

Many people contributed in so many ways towards the success of the 1992 Census, and it would be remiss of me not to mention some names. Gratitude must first of all be extended to the South Pacific Commission, particularly the Demographers - Dr. Sundat Balkaran and Gerald Haberkorn, as well as the Data Analyst - Mr. Gregory Keeble, whose expert advice and patience helped to make the census the success it was. Thanks also to Colin Woodley - our resident consultant - who reviewed every step of the operation and contributed greatly to the design of the census. The substantial efforts of the various government department heads in offering their time, advice and workers towards the planning and execution of the census needs to be commended; the Department of Education for permitting its teachers to participate in the census, and for allowing use of its schools for training; the Department of Lands and Surveys for providing maps; the Works Department for providing household lists; Mr. Lagumot Harris, Mr. William Halm, Mr. Leo Keke, and Dr. Bill for sitting on the Census Advisory Committee; the staff of the Department of Island Development & Industry - particularly Mr. Joseph Cain - whose untiring efforts in supervising the census ensured its smooth running; Martin Hunt who prepared the tables and analysed the household data; and the people of Nauru whose patience and community spirit permitted the census.

Particular mention needs to be made of the man who was ultimately responsible for the census - the Secretary for Island Development & Industry, Mr. Felix Kun. His constant scrutiny of the planning process, his overwhelming desire to make every aspect of the census as good as it could be, and his ability to get the best out of those working under him, was every bit as responsible for the success of the census. Finally, I would like to express my appreciation to the office of the President, His Excellency Bernard Dowiyogo, and to the Minister of Finance, the Honourable Vinci Clodumar, for their guidance and continued encouragement throughout the execution of the project.

This report, while by no means a complete analysis, aims to give policy makers the opportunity to actively concern themselves with the ever-changing social structure of the island. With wise planning and management the data derived from the Census can be utilised by policy makers to steer the population on its course to the future.



F.W. PITCHER

Assistant Government Statistician/Economist
Bureau of Statistics
Republic of Nauru

December 1993

CONTENTS

PART I. CENSUS METHODOLOGY

CHAPTER 1. Introduction.....	2
1.1 The Need for a Census.....	2
1.2 Geography of Nauru.....	2
1.3 Flora and Fauna.....	2
1.4 History and Population.....	3
1.5 The Economy.....	4
CHAPTER 2. Background to the 1992 Census.....	6
2.1 Introduction.....	6
CHAPTER 3. The Administrative Framework.....	7
3.1 Introduction.....	7
3.2 The Census Office.....	7
3.3 Staffing and Recruitment.....	7
3.4 Census Laws and Regulations.....	7
CHAPTER 4. Mapping and Listing Operations.....	8
4.1 Introduction.....	8
4.2 Mapping.....	8
4.3 Listing.....	8
CHAPTER 5. The Questionnaire.....	9
5.1 Introduction.....	9
CHAPTER 6. Publicity and Training.....	10
6.1 Publicity.....	10
6.2 Training.....	10
CHAPTER 7. Census Field Operations.....	11
7.1 Introduction.....	11
CHAPTER 8. Data Processing.....	12
8.1 Introduction.....	12
8.2 Receipt of Forms and Preliminary Checking.....	12
8.3 Coding.....	12
8.4 Data Entry and Editing.....	12
8.5 Tabulation.....	12

PART II. CENSUS RESULTS

CHAPTER 9. Population Size and Distribution.....	14
9.1 Introduction.....	14
9.2 The Population Count.....	14
9.3 Distribution by Main Ethnic Group.....	14
9.4 Distribution of Population by District.....	15
9.5 Distribution of Nauruans by Tribe.....	16
CHAPTER 10. Age and Sex Characteristics of the Population.....	17
10.1 Introduction.....	17
10.2 Age Structure of the Population.....	17
10.3 Broad Age Group Distribution.....	18
10.4 Median Age.....	18
10.5 The Population Pyramid.....	19
10.6 Sex Composition of the Population.....	20
CHAPTER 11. Demographic Characteristics of the Population.....	21
11.1 Introduction.....	21
11.2 Fertility.....	21
11.3 Mortality.....	22
11.4 Nuptiality.....	22
CHAPTER 12. Population Growth and Projections.....	23
12.1 Introduction.....	23
12.2 Overall Population Growth Rate.....	23
12.3 Population Growth by Main Ethnic Group.....	24
12.4 Population Projections.....	24
CHAPTER 13. Education.....	25
13.1 Introduction.....	25
13.2 Experience of Education.....	25
13.3 School Attendance/Enrolment.....	26
13.4 Educational Attainment and Qualifications.....	27
CHAPTER 14. Economic Activity and Employment.....	28
14.1 Introduction.....	28
14.2 Economically Active Population.....	29
14.3 Economically Inactive Population.....	30
14.4 Employment.....	30
14.5 Unemployment.....	32
CHAPTER 15. Housing and Household Characteristics.....	33

ABSTRACT FROM THE 1992 CENSUS OF NAURU

CENSUS DATE: 17 April 1992

POPULATION: 9919 (Nauruans = 6831, Non-Nauruans = 3088)

SEX STRUCTURE:

	Whole Population	Nauruans
Males	5075	3451
Females	4844	3380

SEX RATIO:

Whole Population	Nauruans
105	102

AGE STRUCTURE:

	Whole Population	Nauruans
Proportion Aged 0-14:	41.8%	47.1%
Proportion Aged 15-64:	55.2%	49.5%
Proportion Aged 65 and over:	1.4%	1.6%

FERTILITY:

	Whole Population	Nauruans
Crude Birth Rate (per 1000):	23.5	34.1
Total Fertility Rate (per 1000):	7.5	--

MORTALITY:

	Whole Population
Crude Death Rate (per 1000):	6.7
Infant Mortality Rate (per 1000):	26

POPULATION GROWTH:

	Whole Population	Nauruans
Annual Growth Rate:	2.85%	4.26%

LEVEL OF EDUCATION:

	Nauruans
Primary	61%
Secondary	33%
Tertiary	6%

ACTIVITY RATES:

	Nauruans
General Activity Rate:	67.9%
Crude Activity Rate:	35.9%

INCOME FROM PRINCIPAL OCCUPATION:

	Nauruans
Mean Income - Males (per fortnight)	\$AUD 383
Mean Income - Females (per fortnight)	\$AUD 360

UNEMPLOYMENT:

	Nauruans
Unemployment Rate	18.2%

LIST OF TABLES IN MAIN BODY OF REPORT

CHAPTER 9. Population Size and Distribution.....	14
9.1 Total Population of Nauru and Percentage Distribution.....	14
9.2 Distribution of Population by Main Ethnic Group.....	14
9.3 Distribution by District.....	15
9.4 Distribution of Indigenous Nauruans by Tribe.....	16
CHAPTER 10. Age and Sex Characteristics of the Population.....	17
10.1 Distribution of Population by 5-Year Age Groups.....	17
10.2 Broad Age Group Distribution (%).....	18
10.3 Median Age of Selected SPC Countries.....	18
10.4 Sex Ratios of Selected Countries.....	20
CHAPTER 11. Demographic Characteristics of the Population.....	21
11.1 Crude Birth Rates and Total Fertility Rates of Selected Countries.....	21
11.2 Crude Death Rates and Infant Mortality Rates of Selected Countries.....	22
CHAPTER 12. Population Growth Rates and Projections.....	23
12.1 Population Growth Rates by Sex.....	23
12.2 Population Growth Rates of Selected SPC Countries.....	23
12.3 Population and Population Growth Rates of the Four Main Ethnic Groups.....	24
12.4 Projections.....	24
CHAPTER 13. Education.....	25
13.1 Experience of Education of Nauruans Aged 5 Years and Over, 1983 and 1992.....	25
13.2 School Attendees by Broad Age Group and Type of Institution, and Attendance Ratios.....	26
13.3 Qualifications Attained by Nauruan Population Aged 12 Years and Over.....	27
CHAPTER 14. Economic Activity and Employment.....	28
14.1 Crude Activity Rates of Selected Pacific Countries.....	29
14.2 Nauruan Age-Sex Specific Activity Rates.....	29
14.3 Employed Nauruan Population Aged 15 Years and Above by Occupation Group and Sex.....	31
14.4 Employed Population by Income Group.....	31
CHAPTER 15. Housing and Household Characteristics.....	33
15.1 Type of Construction Material.....	34
15.2 Households per District.....	35
15.3 Occupancy Status.....	35
15.4 Facilities Installed in Housing Units.....	36
15.5 Type of Lighting and Cooking Fuel.....	37
15.6(i) Percentage of Nauruan Households by Number of Household Appliances.....	38
15.6(ii) Percentage of Nauruan Households by number of Motor Vehicles/Boats.....	38

LIST OF FIGURES

CHAPTER 9. Population Size and Distribution.....	14
9.1 Distribution of Population By Main Ethnic Group.....	15
9.2 Population Distribution by District (%).....	15
CHAPTER 10. Age and Sex Characteristics of the Population.....	17
10.1 Whole Population Pyramid.....	19
10.2 Nauruan Population Pyramid.....	19
10.3 Age-Specific Sex Ratios.....	20
CHAPTER 11. Demographic Characteristics of the Population.....	21
11.1 Marital Status of Nauruans Aged 15+.....	22
CHAPTER 12. Population Growth and Projections.....	23
12.1 Population Projections, 1980-2020.....	24
CHAPTER 13. Education.....	25
13.1 Experience of Education, Nauruan Males and Females Aged 5+.....	25
13.2 School Attendees by Age and Institution.....	26
13.3 Nauruans Aged 5-29 in Full-Time education.....	26
13.4 Level of Education, Nauruans 5 and Over.....	27
CHAPTER 14. Economic Activity and Employment.....	28
14.1 Schematic Representation of Economically Active and Inactive Nauruan Population.....	28
14.2 Non-Economic Activities by Sex.....	30
14.3 Principal Employers by Percentage Employed.....	30
14.4 Income Concentration Curve.....	32
14.5 Unemployment Rates by Sex and Age-Group.....	32
CHAPTER 15. Housing and Household Characteristics.....	33
15.1 Percentage of Nauruan Households Living in 3 Types of Dwellings.....	33
15.2 Construction Materials.....	34
15.3 Number of Households per District.....	35
15.4 Occupancy Status.....	35
15.5 Number of Rooms.....	36

PART I. CENSUS METHODOLOGY

CHAPTER 1. Introduction

1.1 The Need for a Census

Nauru conducted a census of population in April 1992. This was the third locally conducted census, following national censuses in 1977 and 1983. The 1992 census is, however, the first census to undergo full analysis. Provisional estimates and some preliminary analytical observations of the 1977 and 1983 censuses were released but as yet a final report for either has not materialised. The 1992 National Census of Nauru was funded largely by the Government of Nauru, however, the United Nations Population Fund (UNFPA) contributed by providing funding for consultants (a Demographer and Data Analyst) to assist us with certain aspects of the census.

The need for a national census became obvious to the Government of Nauru since 1990. Many changes had occurred in Nauru since the heydays of the phosphate industry. The 1980's had been a period of strong economic growth, and the population of Nauru had experienced a prosperity that was well documented (Nauru at that time enjoyed one of the highest incomes per capita in the world). By 1990 it had become obvious, however, that the wealth the island derived from the phosphate industry had steadily fallen, and that its depletion was imminent. By 1992 changes in the socio-economic structure of the nation had become apparent. The population was growing visibly, while the distribution and socio-economic situation of the people seemed to be shifting noticeably.

It was decided in 1991 that a National Census of the Island was to be taken in 1992, more than 9 years after the 1983 census.

1.2 Geography of Nauru

Nauru is situated in the middle of the vast Pacific Ocean, 60 kilometres to the south of the equator, at latitude 0° 55'S and longitude 166° 55' E. Six kilometres in length and four kilometres in width, its total area is 21.1 square kilometres, ie., 5,263 acres. Its nearest neighbour is Banaba (also known as Ocean Island) in the Republic of Kiribati, 330 kilometres to the east.

The Island is of volcanic origin. The corals built upwards from the volcanic platform and erected it some 4,800 metres above the seafloor to form a landmass of 50 metres average height above sea level. The island is girdled by a 200 metre coastal reef which is exposed at low tide. The coastal belt is some 150 to 300 metres wide and covers the entire 19 kilometre circumference of the island. The small area surrounding the inland Lagoon of Buada is fertile and cultivation is limited to these areas where coconut palms and pandanus grow in abundance, Bananas and some vegetables are produced. However, the top soil throughout Nauru is thin and porous, varying between 5 cm and 30 cm.

Beyond the coastal belt, the coral cliffs rise to heights of 70 metres above sea level to form a vast plateau, generally referred to as "The Topside". The Topside contains the only major land based economic resource of Nauru, the phosphate deposits, which cover nearly four-fifths of the country's total land area. The phosphate is mined by open-cut method from amongst the tall coral limestone pinnacles. The deposits vary in depth from eight to twenty-five metres, but they do not run deeper than sea level.

1.3 Flora and Fauna

There are about 200 species of flora now, some 30 of which are indigenous including the tomano, coconut, banyan and almond trees, and about 50 indigenous species appear to have become extinct due to the phosphate mining. The

fauna include about a dozen species of birds, the important of which are the frigate bird (which has found its eternal place in the official emblem of the Republic), the white and the black noddies, and the nightingale reed warble known as the Nauruan canary. Birds are not plentiful to Pacific standards, but this has been due to the increasing degradation of the land by phosphate mining over the years. Nauru has no indigenous animals. Domestic animals are mainly dogs, pigs, cats, and fowls. The surrounding reef and ocean is abundant with fish and sealife.

1.4 History and Population

Nauruans appear to be racially closer to the Micronesians, though it is thought that the race is a mixture of all three Pacific cultural groups. The Nauruan language has adopted the Roman script but has little in common with other Pacific languages. Nauruans belong to twelve distinct tribes - Deiboe, Eamwidara, Eamwidumwit, Eamwit, Eano, Emangum, Emea, Eaoru, Irutsi, Iruwa, Iwi, and Ranibok. The twelve points of the star on the Republic's national flag represent these tribes.

Little is known of Nauru's history before it was visited in 1798 by Captain John Fearn of the British whaling ship, *The Hunter*, while sailing from New Zealand to the China seas. He noted that the island is "extremely populous" with many houses, and he named it Pleasant Island.

The island's isolation meant that it remained free of European contact for much longer than the Pacific Islands. However, during the nineteenth century, numbers of European traders and beachcombers establish themselves there, and by the introduction of firearms and alcohol, they exacerbated an already existing state of inter-tribal warfare in 1878-1888.

The island did not come under the control of any of the European powers until when under the Anglo-German Convention, it was allocated to the German sphere of interest and reverted to its native name of Nauru. By 1888, when the Germans first sent an administrator to the island, continual warring between the 12 tribes has reduced the population from about 1,400 in 1842 to a little over 900. Alcohol was banned and arms and ammunition confiscated under the German Administration in an effort to restore law and order. With the arrival in 1887 of the first missionaries, Christianity and western style of education were introduced. The translation of the Bible into Nauruan, gave the language its standard form. Thanks to the efforts of Head Chief Detudamo, the Hymn Book is in Nauruan.

In November 1914, soon after the outbreak of World War 1 the Germans surrendered Nauru to an Australian expeditionary force and in 1919, Germany formally renounced its title to the island. A league of Nations mandate was granted to Australia, Britain, and New Zealand, and Nauru was thereafter administered by Australia on behalf of the three governments.

During the German Administration, the island's rich deposits of high grade phosphates has been discovered in 1900, and were worked by a British company, The Pacific Phosphate Company, under license from a German company from Gallate, Marshall Islands in 1906-1907. A year before the establishment of the mandate, the three governments purchased the interests of the phosphate (one representing each government) to run the industry. The mandate for Nauru was granted in 1920 and subsequently it was ratified by the League of Nations. Australia was the principal administering power under the Mandate.

After the Second World War, under the Trusteeship Agreement approved by the United Nations on 1st November 1947, Nauru became a Trust Territory jointly administered by the Governments of the United Kingdom, Australia and New Zealand. Under further agreement between the three governments, the Government of Australia exercised full powers of legislation, administration, and jurisdiction over Nauru. In 1951, Nauru Local Government Council was set up and the first elections to the Council were held on 15th December 1951. The Nauru Local Government Council was dissolved by an Act of Parliament in 1992.

In 1965, in pursuance of a further agreement between the governments of the United Kingdom, Australia and New Zealand, the Federal Parliament of Australia enacted the Nauru Act 1965, which provided for the Legislative Council

and Executive Council of Nauru. First general elections for the Legislative Council were held on 22nd January 1966, and inaugural meeting of the Council was held on 31st January 1966.

Little was known of the size of the population before Nauru became a Trust Territory in 1947. One famous estimate dates back to 26 October, 1932 when it is said the indigenous population touched 1,500 for the first time since WWI and the Flu Influenza decimated the population. Since then, this day is celebrated annually as Angam Day. During the Second World War in June and July 1943, one thousand two hundred and one (1,201) Nauruans were deported to the island of Truk in Micronesia. When the war ended in 1945, there were only 591 Nauruans on the island. Of the 1,201 sent to Truk, 464 died of starvation, disease and bombing; the survivors, 737 returned to Nauru on the 31st January, 1946. The indigenous population again reached the 1,500 mark in 1950.

Modern Nauru is still small in terms of its population. The total population on the island according to the latest census was 9,919 (1992) of which indigenous Nauruans comprised 6,831. The remaining 3,088 included other Pacific islanders from Kiribati, Tuvalu and Solomon Islands, as well as Chinese, Filipinos, Indians, Australians, and New Zealanders. Table 1.1 shows some population estimates dating back to 1947. The estimates from 1947 to 1968 were made by the Australian Trusteeship administration, while the 1977, 1983 and 1992 estimates came from national censuses conducted by the independent Republic.

Table 1.1 Population Estimates - 1947 to 1992			
Year	Non-Nauruans	Nauruans	Total Population
1947	1,386	1,379	2,765
1950	1,850	1,582	3,432
1955	1,741	1,935	3,676
1960	2,147	2,328	4,475
1965	2,827	2,734	5,561
1968	3,121	3,065	6,186
1977	3,080	4,174	7,254
1983	3,020	4,654	7,674
1992	3,088	6,831	9,919

1.5 The Economy

Nauru's economy is based mainly on the phosphate mining industry. Exports of phosphates go to Australia, New Zealand, Japan, South Korea, and the Philippines.

The Nauru Phosphate Corporation, a statutory corporation founded in 1969, operates the phosphate industry on the island on behalf of the Nauruan people and is responsible for both mining and marketing. It has a Board of Directors appointed by Cabinet.

A substantial part of the revenue from phosphate exports is being invested in long-term trust funds established to provide an income for the Nauruan people when the phosphate is exhausted. In order to broaden the basis of the economy, and to further provide for the time when the phosphate deposits are exhausted, extensive investments in various sectors on Nauru and abroad are taking place. The five-jet national airline, established to cater for the problems arising from the geographical isolation of the island, is an example of such investment.

The central plateau has limited agricultural value. But some 500-600 acres (202-243 hectares), mainly around the coastal belt, are available for cultivation. Coconut, banana and Papaya are the main fruit crops and small quantities of vegetables are also grown. However, all cultivated crops are for home consumption only, thus most food requirements (except of course fish) have to be met by imports from Australia and New Zealand.

Nauru has no taxation and has become a tax-haven for several international corporations. Government revenue is generated mostly through phosphate sales, philatelic sales and investment returns.

CHAPTER 2. Background to the 1992 Census

2.1 Introduction

The Government of Nauru had decided as early as 1990 to conduct a national census. The Department of Island Development & Industry - the department responsible for the two previous national censuses - began correspondences with various agencies regarding the drafting of an appropriate timetable and framework for the proposed census. It was originally planned that the census be conducted late in 1990, however this was quickly changed to early 1991 because of the Government's busy schedule that year.

As the 1991 deadline approached it became obvious that progress was too slow. The Department of Island Development & Industry, already laden with numerous projects, could not afford to allocate the manpower required for the Pre-census stage. A first draft of the proposed questionnaire form had been designed, and a review of the legislation and procedures required had been initiated, but apart from that little else had been done.

Towards the end of 1991 the department employed a Special Project Officer whose main responsibility was the Census. The census was designated a 'Special Project' soon after and work on it began in earnest. With the assistance of the South Pacific Commission Demographer a timetable was formulated and the procedures and framework for the forthcoming census were set.

The Department of Island Development & Industry devoted a great deal of time designing the forms and tabulation plan for the census. However, because the Special Project Officer was also responsible for other important projects, progress was still relatively slow. Each proposal for the pre-census stage had to go through two stages before it passed to the President (as Minister for Island Development & Industry) for his approval. Nonetheless, after several months of endless work the Department was at last ready to conduct the census by April of 1992.

CHAPTER 3. The Administrative Framework

3.1 Introduction

The Census Advisory Committee (CAC) was established by the Department of Island Development & Industry with the permission of the President in January 1992. The CAC was set up in order to provide advice and direction to the project administrators, particularly with regards to constructing the appropriate machinery for the conduct of the census. One of its primary functions was to ensure that the commitment needed from the national institutions was forthcoming. Accordingly the President strategically appointed to the committee senior representatives of key Government departments and other national institutions; these included - the Secretary for Island Development & Industry, the General Manager of the Nauru Phosphate Corporation, the Secretary for Justice, the Secretary for Education, and the Chief Secretary of the Public Service - who was appointed Chairman of the committee. The CAC was inform regularly on the progress of the census, and its approval was sought before any major aspect of the census proceeded.

3.2 The Census Office

Although it would have been more desirable to set up an independent Census Office to oversee and conduct the census, this was just not possible at the time. The Bureau of Statistics had not then been established, while the Department of Island Development & Industry did not have the resources nor manpower. The only option open was to utilise several project officers within the department. The Special Project Officer and a Project Assistant were assigned to the Census, both reporting directly to the department's Senior Project Officer I - who in turn reported to both the Secretary and the CAC. This setup came to be known as the Census Office. All preparatory work on the census was done in the Department Of Island Development Office. Training was conducted in a rented hall. A separate office was allocated for the post-census stage (this office was kindly lent by the Nauru Television Station to house the coders and data input staff). It was stocked with three computers and the necessary facilities needed to carry out the work.

3.3 Staffing and Recruitment

Personnel requirements for the census were small even by Pacific standards. The Special Project Officer was in charge of the project while the Senior Project Officer I looked after administrative matters such as the budget and recruitment. A Project Assistant was allocated for the pre-census stage, while two Project Assistants were utilised for the post -census coding stage. All throughout the project two consultants were used - both from the South Pacific Commission (a Demographer and a Data Analyst), along with an advisor, Mr. Colin Woodley.

The Census Supervisors and Enumerators were recruited from the Public Service. A total of 12 Enumeration Area Supervisors were recruited - mostly senior public servants. 89 Field Enumerators - mostly teachers - were similarly temporarily employed. For the data entry stage 4 computer operators were donated by the Computer Bureau.

3.4 Census Laws and Regulations

The census was conducted under an act of Parliament called the Census Act of 1976 . This act provides for the legal taking of the census and provides the Census Office with the authority to ask questions of the residents of Nauru. The act also gave the Minister the power to make appropriate regulations relating to the census, though this power was used for the 1992 census since it was found that the earlier regulations for the previous censuses were sufficient.

CHAPTER 4. Mapping and Listing Operations

4.1 Introduction

The Mapping and Listing operations were part of the preparatory work to be completed prior to the actual enumeration in April 1992. The mapping exercise provided enumerators with an up to date guide to locate their specific enumeration areas and to demarcate physical boundaries of their areas so that no dwellings were missed. The listing exercise was designed to provide a complete list of households and the names of their heads of household. This list would be checked against the final census enumeration to ensure that no households were missed.

4.2 Mapping

Up to date maps are necessary in defining census boundaries. The maps must physically demarcate each enumeration area and show each area in relation to the surrounding topography. All the houses, buildings, roads and distinctive geographical features of each enumeration area is drawn into the map so as to give the enumerator a clear idea of the houses in his allotted area.

Established maps did exist but unfortunately these had not been updated for almost ten years. Many new houses had been erected and some vacant ones were destroyed in this time. Since the Department of Lands and Surveys had been responsible for the previous maps, they were approached again to update the existing maps. The operation lasted for several days and involved two surveyors going around the island and visually verifying existing dwellings and drawing in new houses and buildings. Nauru being such a small island it was possible in some cases to mentally picture where new houses had been built and where old ones had been torn down.

The updated 'Master Map' of the entire island was subdivided into small enumeration areas of between 8 and 12 houses by the Census Office staff. Clusters of between 5 and 8 geographically related enumeration areas were made up Supervisors Areas. Each enumerator and supervisor was given his/her own map which covered only the area that particular person was responsible for.

4.3 Listing

Listing is necessary to ensure full coverage of the country. A Household List is a list of all the houses on the island and includes the names of the heads of each household. This is important because the enumerator needs to know who to approach first when conducting interviews on households.

The listing of households was conducted by the Public Works Department - Housing Section. Since most of the houses on the island were built by this department, they already had a basic list on paper. All they really had to do was include the privately built dwellings in the list and update the names of the household heads (since many of the older houses had been registered to residents who have long since died).

The listing operation itself lasted fewer than two weeks, though it was some time before the Census Office received the updated lists. The lists were compared to the maps produced by the Department of Lands and Surveys to test the credibility of each. Having found the maps and household lists to be compatible, the two were integrated so that each enumerator received a map showing the houses with their respective heads in his/her allotted area. A separate list of households and their heads was also given to the enumerators so that mistakes and changes to the current lists could be entered. This system worked well, with only one reported case of double-counting a household.

CHAPTER 5. The Questionnaire

5.1 Introduction

The 1992 Census Questionnaire comprised a Household Form and an Individual Form. In the previous two censuses the questionnaire was designed so that the respondent could fill it in himself. This led to a great deal of half filled forms and/or inaccurate responses. The solution was to train enumerators to interview respondents and to cross-check responses to ensure accuracy. The result was that the Census Office was able to design a form which was more complicated and longer than the previous ones had been.

Initially the 1992 questionnaire was based on the earlier questionnaires so as to provide comparisons with the 1977 and 1983 censuses. However, many more questions were added covering a much wider range of topics. Work on the design of the 1992 questionnaire began in earnest in late 1991 with the employment of the Special Project Officer. The earliest drafts were designed using a computer program called 'FormWorx', but these were found to be too inflexible for our ever-changing blue-prints. Wordperfect was used to design the later drafts with much success. Everytime the Census Office came up with a new draft of the questionnaire it was promptly sent off to the SPC Demographer for his verdict and advice. This happened several times with the Demographer suggesting minor changes for the better. Finally, in February of 1992 the final draft of the Census Questionnaire received the O.K from SPC and the Census Advisory Committee. The questionnaire went to the Government Printer for printing soon after.

The head of the household to be enumerated was interviewed using the Household Form. Each person residing in the household was listed on the summary sheet on the back of the form with the sex and age of each given. The Household Form asked a wide range of questions relating to types of housing, water supply sources, toilet and cooking facilities, lighting, construction materials, and whether the household engaged in cash or subsistence activities such as fishing, craftmaking crop-growing.

Every individual listed on the Household Form was interviewed using the Individual Form. Detailed personal information was asked of the respondents but the Individual Form had only a Person Number to identify the individual being interviewed - this number corresponded with a number allocated to each individual listed on the Household Form Summary Sheet which was collected separately by the Enumeration Area Supervisors after preliminary checking.

There were two different types of Individual Form - one for Nauruans and one for Non-Nauruans. We later found out that this method could cause many problems with regard to deciding who is Nauruan and who is not. We first agreed that anyone holding a Nauruan passport or who was married to a Nauruan should be considered Nauruan since that person would be a permanent resident. However, it was later decided that only persons with Nauruan blood would be enumerated on the Nauruan Form. This decision did cause some consternation for some people and the method of having two separate Individual Forms will no doubt need to be reviewed.

The Nauruan Individual Form asked detailed questions on education, employment, income, fertility, mortality and many other areas of socio-economic interest to the Government. The Non-Nauruan Individual Form asked questions on ethnicity, religion, birthplace etc. The Latter form was shorter and much less in-depth.

CHAPTER 6. Publicity and Training

6.1 Publicity

Publicity is an important aspect of the census operation. In order for any census to be successful, the Government or agency responsible for the enumeration must be sure that it has the confidence of the population. This ensures that the information that the respondents provide is accurate and truthful. Wide publicity is thus crucial, and it must reach as much of the population as possible.

The Census Office made use of various forms of media available in the country. The first task taken up by the office was to publish an information booklet on the census. The Census Booklet contained information on the history of the census, its use and importance to the government and the people, and was aimed particularly at the school-age population. The booklet was distributed to all the schools on the island the week before the census and it was incorporated in the curriculum. Concurrently, information pamphlets were also distributed to every household on the island the week before the census. Government designated this week as 'Census Awareness Week', and to supplement the booklets and pamphlets, daily advertisements on the national radio and television stations were run. Posters depicting the national census logo were put up in every public area as well as on cars and buses during Census Week. On 'Census Eve' and on 'Census Day' the advertisements on the radio and television stations began airing hourly.

The publicity campaign was perhaps one of the most successful aspects of the entire census. The Census Office was often pleasantly surprised to find that even very young school children knew what a census was and what use it would be to the Government. According to verbal reports from the enumerators, of all the houses enumerated none were ignorant to the fact that a census was being conducted.

6.2 Training

The training of the Census Supervisors and Enumerators was conducted separately with the assistance of the South Pacific Commission Demographer - Dr. Sundat Balkaran. Dr. Balkaran was assisted by the Special Project Officer.

Training of the Supervisors was conducted first at one of the local schools after working hours. The entire course lasted for three sessions of two hours duration (six hours total). The selected supervisors were mostly highly educated senior government officials who learnt very quickly and were able to pass on their knowledge easily. This group had their own 'Supervisor's Manual' which outlined their responsibilities and procedures, but they were also expected to study and learn the 'Enumerators Manual' as part of their training.

Training of the enumerators was conducted the following week in a rented hall with the assistance of the supervisors. Each of the enumerators was allocated a supervisor with whom to work for the duration of the training course (approx. 10 hours over one week). The SPC Demographer gave a one hour lecture at the beginning of each session then the supervisors went over the lecture notes and exercises with their allocated enumerators for the following hour. A test was conducted at the end of each session. A final test was given at the end of the course to measure the effectiveness of the training, those who failed were given extra exercises to complete at home with the help of their supervisors.

Each enumerator was given a 'Census Kit' which contained an Enumerators Manual, an Enumerator Record Sheet, Maps of their specific Enumeration Area, a Household List, Household and Individual Questionnaire Forms, an official identification badge, as well as pens and writing paper. The training emphasised what each of the contents of the 'Census Bag' was to be used for and pretesting was carried out to ensure that all enumerators and supervisors knew exactly what to do.

CHAPTER 7. Census Field Operations

7.1 Introduction

Census Day was Saturday 17 April 1992. Most enumerators began work on Friday - one day before Census Day. This first visit involved approaching all households in the allocated enumeration area and filling in the Household form for each. Once the enumerators had filled in the Household Summary Sheet attached to the form they knew exactly how many Individual Forms to bring on the second visit - Census Day. The first visit also afforded the enumerators the opportunity to update the maps and Household Lists, as well as to ensure that all household residents listed are present for the individual enumeration on Census Day.

The 1992 census was conducted on a De Jure basis for Nauruans and on a De Facto basis for non-Nauruans. The de jure method counted all Nauruans at home or abroad by counting them as part of the household where they usually resided. Thus if a person was visiting a friend on Census Day he was not counted in that friend's household but in his own. The de facto method counts only resident non-Nauruans and not any members of their families abroad.

The field operations were supervised by the Special Project Officer within the Department of Island Development and Industry during the days allocated for the first visit. During the second visit operations were run from the Special Project Officer's home since it was the weekend and the offices were closed. All spare forms, manuals and other materials were available from his home, and all queries and problems were brought there.

The supervisors initially showed the enumerators where to begin and end their enumeration. On the first visit, only the heads of households were questioned, but on the second visit all persons listed on the Household Summary Sheet were interviewed individually. The supervisors were present at several of the interviews to make sure that the enumerators followed procedure, and to offer advice where and when needed. If a person was absent from the house on Census Day, that person was enumerated anyway with the help of the family. The enumerators kept track of which households had been enumerated and which ones had to be revisited by logging his/her progress on the Enumerator Record Sheet. The Record Sheet was valuable in performing checks against the Household Lists to assess whether an area had been properly enumerated.

Once an enumerator had completed his work the supervisor went over the filled-in forms to check for accuracy and completeness. If forms were incomplete or were perceivably inaccurate the enumerator was told to go back and re-enumerate. When all forms for the enumeration area were returned and checked, the supervisor summarised all the record sheets in the Supervisor Control Sheet and submitted all the completed forms to the Census Office. The Census Office prepared the filled-in forms for checking and coding by sorting and packing them by enumeration area. The Supervisor Control Sheets were collected and a provisional count of population was made almost immediately.

Field operations lasted a total of seven days from start to finish. Friday 16 April was allocated for the first visit in which the Household form was filled in; Saturday 17 to Wednesday 21 comprised the actual enumeration period, and; Thursday 22 to Friday 23 was for the supervisors to check and summarise the forms and record sheets. The supervisors returned the filled-in forms on the 23rd - exactly one week after they were distributed. There was only one case of a supervisor requesting more time.

CHAPTER 8. Data Processing

8.1 Introduction

Data processing covers the coding of questionnaires, entering of data into computers, editing of data and the tabulation of the results.

8.2 Receipt of Forms and Preliminary Checking

All filled-in forms were handed in to the Census Office on the 23rd of April 1992. Returned forms were checked initially by the office staff who were told to firstly ensure that the information on the Enumerator Control Sheets tallied with that given by the Household Lists and the Supervisor Control Sheets. Batches with incomplete or missing forms were returned to the supervisors for checking and /or re-enumeration. Once the returned forms had passed this preliminary check they were sorted by supervisor enumeration area and district and packed in labelled bags ready for coding and data entry.

8.3 Coding

The coding operation was done by two Census Office staff over four weeks. Since much of the 1992 Questionnaire was self coded, very little had to be coded. The design of the Questionnaire ensured that all but a very few answers would be recognised by the data entry software package, those that were not were coded using a small prepared Code List.

8.4 Data Entry and Editing

Two borrowed computers were used for the data entry stage. Four computer operators from the Computer Bureau worked 2 four-hour shifts every day for around six weeks averaging about 250 entries a day. The data entry system was setup by the South Pacific Commission Data Processing Specialist who recommended using a United Nations package called PC EDIT. After data entry was complete the same program was used to perform specified edits on the data.

Editing included telling the computer to cross check data from the household and individual forms to test for consistency in age reporting and sex, as well as employing data manipulation techniques such as 'Cold Deck' and 'Hot Deck' imputations to fill in the gaps. The expertise of the SPC specialist ensured that editing was completed early.

8.5 Tabulation

Another United Nations software package, X TABLE, was employed to tabulate the edited data from PC EDIT. Again, the SPC Data Processing Specialist set up the original system and provided training in the use of the tabulation package. The Special Project Officer took over the tabulation operation after the specialist left the island. The tabulation plan was prepared in consultation with the SPC Demographer and various proposed users. The final tables were produced in August 1992 and revised again in January 1993.

PART II. CENSUS RESULTS

CHAPTER 9. Population Size and Distribution

9.1 Introduction

As in the past national censuses, the 1992 census was conducted on a De jure basis for Nauruans and a De facto basis for non-Nauruans. The de jure method counts all Nauruans at home or abroad by counting them as part of the household where they usually reside. The de facto method counts only resident non-Nauruans and not any members of their families abroad. It was the aim of the 1992 national census to count every single person on the island as of Census Day (April 17, 1992), as well as all Nauruans abroad at the time of enumeration.

9.2 The Population Count

The total population counted was 9,919, of which 5,075 were males and 4,844 were females. Of these 6,831 were Nauruan and 3,088 were non-Nauruan. As previously stated, these figures also include Nauruans living abroad at the time of enumeration. Table 9.1 shows the percentage distribution of the residents and sexes.

Table 9.1 Total Population of Nauru and Percentage Distribution						
Population	Male	%	Female	%	Total	%
Nauruan	3,451	35	3,380	34	6,831	69
Non-Nauruan	1,624	16	1,464	15	3,088	31
Total	5,075	51	4,844	49	9,919	100

9.3 Distribution by Main Ethnic Group

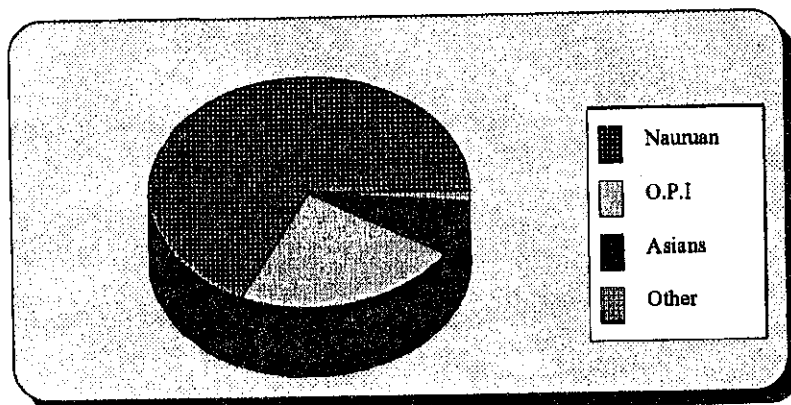
Because of the Government's policy of recruiting workers from various countries from around the region and other parts of the world, there are many different nationalities living on Nauru at any one time. The nationalities range from Pacific Islanders to Chinese, from Filipinos to Burmese, Australians and even Yugoslavians. For the purpose of simplification the great number of nationalities have been divided into four main ethnic groups in this report, they are: Nauruans, Other Pacific Islanders (OPI), Asians, and Others. Asians include mostly Chinese, Filipinos and Indians, while Others include Australians, New Zealanders and Europeans. Apart from the Nauruans the Other Pacific Islanders group is the largest at 2,354, or around 24 percent of the total population.

Table 9.2 Distribution of Population by Main Ethnic Group						
Ethnic Group	Male	%	Female	%	Total	%
Nauruan	3,451	34.8	3,380	34.1	6,831	68.9
O.P.I	1,158	11.7	1,197	12.1	2,355	23.7
Asians	388	3.9	197	2	585	5.9
Other	78	0.8	70	0.7	148	1.5
Total	5,075	51.2	4,844	48.8	9,919	100

Note: 'O.P.I' = Other Pacific Islanders. 'Asians' include mostly Chinese, Indians, Filipinos and South-East Asians. 'Other' includes mostly Caucasians from Australia, NZ, and Europe.

This latest census shows that Nauruans alone accounted for almost 70% of the population, while together with Other Pacific Islanders they represented over 92% of the population of Nauru. Figure 9.1 illustrates the percentage distribution of the main ethnic groups.

Figure 9.1 Distribution of Population by Main Ethnic Group

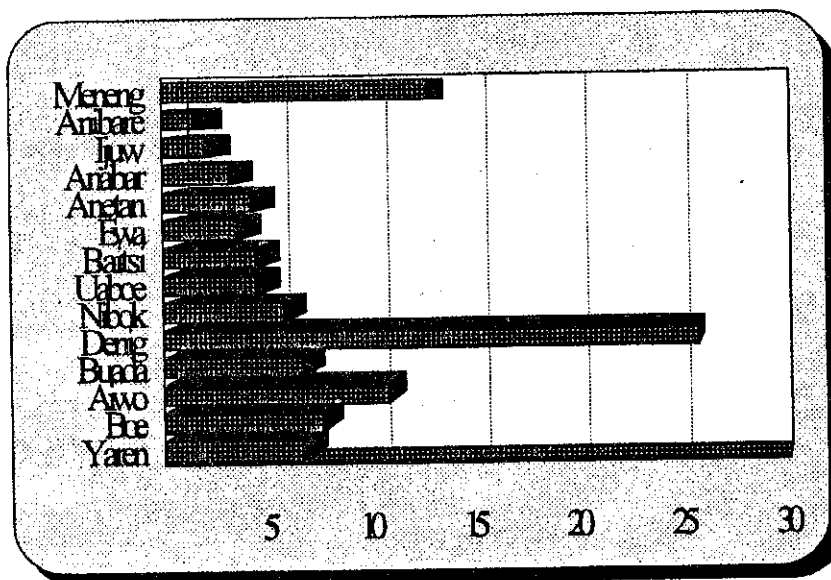


9.4 Distribution of Population by District

Unlike the majority of pacific countries Nauru has no rural communities. The urban population is divided into 14 districts which form the organisational structure of the political and social arenas. All but one of the districts is located on the periphery of the island. The district of Buada is located inland surrounding the lagoon. Looking at the overall distribution of the population by district we see that the district of Denigomodu is the most populated district on the island. The Location Compound - where over 2,300 contract labourers reside - is situated here, thus explaining the high population density. The district of Meneng (mostly Nauruans) is the second most populated district with over 1,100 residents, this compares to the district of Anibare, the least populated district which boasts only 165 residents.

Figure 9.2 Population Distribution by District (%)

District	Residents	% of Total
Yaren	672	6.8
Boe	750	7.6
Aiwo	1,072	10.8
Buada	661	6.7
Denigomodu	2,548	25.7
Nibok	577	5.8
Uaboe	447	4.5
Baitsi	450	4.5
Ewa	355	3.6
Anetan	427	4.3
Anabar	320	3.2
Ijuw	206	2.1
Anibare	165	1.7
Meneng	1,269	12.8



9.5 Distribution of Nauruans by Tribe

Indigenous Nauruans belong to one of twelve tribes - Deiboe, Eamwidara, Eamwidumwit, Eamwit, Eano, Emangum, Emea, Eaoru, Irutsi, Iruwa, Iwi and Ranibok. In the past the tribal system was the centre of virtually all aspects of the lives of Nauruans, recently, however, tribes have been important only in certain cultural events. The tribal distribution of the indigenous Nauruan population is of interest, nonetheless, as it offers a cultural dimension to the study of the population, as well as presenting an interesting socio-genetic phenomenon.

As revealed by the 1992 Census, the Iruwa tribe is the largest of the twelve Nauruan tribes. This is important because of the fact that this tribe comprises mostly Nauruans and their descendants with mixed blood (Iruwa literally means 'foreigner'). According to the last census in 1983, the Iruwa tribe was the second largest to the Eamwit tribe, however, with an annual growth rate of 4.9% the Iruwa tribe quickly surpassed all others. The implication that can be derived here is that the indigenous population is steadily becoming racially mixed.

Combined, the two largest tribes of Iruwa and Eamwit contained just over half of the indigenous Nauruan population, with an even distribution of males and females. On the opposite end, the tribes of Irutsi and Iwi boast a combined total of only 5 members. These two tribes will most likely become extinct in the near future, particularly so the Irutsi tribe which has only two males remaining (children take their mother's tribe).

Curiously enough, a study done in 1977 concluded that the Ranibok tribe was also in imminent danger of becoming extinct. Fortunately, today this tribe is enjoying a growth rate exceeding 6% per annum, and is in no such danger. Table 9.4 shows the distribution of the Nauruans over the twelve tribes. It is somewhat disturbing to note that over 7% of Nauruans do not know (or refuse to state) their tribe.

Table 9.4 Distribution of Indigenous Nauruans by Tribe				
Tribe	Males	Females	Total	%
Deiboe	280	294	574	8.4
Emangum	57	67	124	1.8
Eamwidumwit	557	523	1,080	15.8
Eamwidara	64	54	118	1.7
Eano	82	89	171	2.5
Eaoru	88	101	189	2.8
Emea	263	248	511	7.5
Eamwit	764	792	1,556	22.8
Iruwa	980	965	1,945	28.5
Ranibok	28	30	58	0.8
Iwi	2	1	3	0.04
Irutsi	2	0	2	0.03
Not stated	284	216	500	7.3

CHAPTER 10. Age and Sex Characteristics of the Population

10.1 Introduction

The questions on age and sex provide perhaps the most useful information in the census. The data we derive from these two characteristics can give us a cross-sectional representation of the society at large and affords us an excellent opportunity to study the structure and dynamics of the population. Lifetime activities and events are determined largely by a combination of these two characteristics - from education and work to marriage and fertility.

10.2 Age Structure of the Population

The distribution of the population by five-year age groups reveals a disturbing trend in the age structure of the island's population. Tables 10.1 shows clearly that Nauru's population is becoming increasingly 'young' - meaning that there are more children being born than there are people growing old. A 'young' population inevitably requires more resources to be directed towards education, while also requiring a large influx of migrant workers to meet the demand for skilled labour - which rarely can be satisfied locally. There are basically two simple ways of measuring the age structure of a population - by observing the Broad-Age Group Distribution, and by calculating the Median Age of the population. Both methods, while crude, offer an excellent opportunity for comparisons with other populations. Both methods will be utilised on the next page using the age-sex distribution table provided below - perhaps the most valuable table that a census can produce.

Table 10.1 Distribution of Population by Sex and Five-Year Age Groups								
Age Group	Nauruan Population only				Whole Population			
	Males	Females	Total	Cum %	Males	Females	Total	Cum %
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
0-4	636	577	1,213	17.8	832	744	1,576	15.9
5-9	539	561	1,100	33.9	730	737	1,467	30.7
10-14	472	433	905	47.1	569	537	1,106	41.8
15-19	368	345	713	57.5	407	430	837	50.3
20-24	304	268	572	65.9	403	397	800	58.3
25-29	283	274	557	74.1	420	420	840	66.8
30-34	217	247	464	80.9	371	387	758	74.4
35-39	202	222	424	87.1	354	372	726	81.8
40-44	132	130	262	90.9	294	271	565	87.5
45-49	55	54	109	92.5	182	154	336	90.8
50-54	50	56	106	94.1	177	105	282	93.7
55-59	43	45	88	95.3	119	80	199	95.7
60-64	39	38	77	96.5	79	54	133	97
65-69	19	35	54	97.3	29	43	72	97.8
70-74	10	20	30	97.7	13	26	39	98.2
75-79	7	11	18	97.9	7	14	21	98.4
80+	4	1	5	98	4	1	5	98.4
N.S.	71	63	134	1.96	85	72	157	1.6
Total	3,451	3,380	6,831	100 %	5,075	4,844	9,919	100 %

N.S. = 'Not Stated'. Columns 5 & 9 show the Cumulative Percentage Frequencies of the respective age groups.

10.3 Broad Age-Group Distribution

For the purpose of observing the age composition of a population, demographers often calculate the frequency distribution of the population by broad age-groups. The most common broad age-grouping counts the distribution of persons aged 0-14, 15-64, and 65 and over - representing childhood, adolescence and old age respectively. These distributions can be easily obtained from an age-sex distribution table like the one on the previous page.

Table 10.2 shows the broad-age distribution of Nauruans as well as the whole population. As expected, the distribution shows that the number of Nauruan children is very high, with the broad-age group 0-14 accounting for over 47 percent of the entire indigenous population. This figure drops a little when non-Nauruans are included, but is still relatively high at 41.8 %. The 'main body' of the population - the broad-age group 15-65 - comprises only 49 % of the indigenous population and just over 55 % of the whole population. Nauru has a very small percentage of residents aged over 65, perhaps due in large to the low life-expectancy experienced on the island.

Table 10.2 Broad Age Group Distribution (%)		
Age Group	Nauruans	Whole Population
0-14	47.1	41.8
15-64	49.4	55.2
65+	1.6	1.4

10.4 Median Age

The Median Age is defined broadly as the middlemost age which divides the population into two equal halves when arranged chronologically. This measurement is a useful, if crude, indicator of the age composition of a population, and, moreover, it allows us to easily make comparisons between different populations. By means of Linear Interpolation we are able to put Nauru's median age at exactly 18 years of age - including Non-Nauruans. For Nauruans only, the median age drops to 15.7. Looking at table 10.3 we can see that Nauru's overall median age of 18 is lower than the 20.5 average for the South Pacific region. The median age for indigenous Nauruans, when looked at separately, is the second lowest in the entire region at 15.7, with only the Marshall Islands lower at 14.1. Again, this is highly indicative of the relative juvenescence or youth of Nauru's population - a fact that will be further brought to light when we study the shape of the Population Pyramid.

Table 10.3 Median Age of Selected SPC Countries			
Country	Median Age	(Cont'd)	(Cont'd)
PNG	18.2	Palau	25.2
Solomons	15.8	Nauru	18
Fiji	20.1	W. Samoa	17.8
Vanuatu	17.6	Tonga	18.1
Guam	24.6	Cooks	19.5
FSM	16	Tuvalu	24.8
Kiribati	19.9	Niue	21.5
Marshalls	14.1	Regional	20.5

Source: SPC, Provisional data for forthcoming 1993 Population Bulletin.

10.5 The Population Pyramid

One of the best methods of representing the age-sex structure of a population for general comparison is to illustrate it in a population pyramid, so called because it has a shape not unlike a pyramid. Conventionally males are shown on the left and females symmetrically on the right, with the younger ages on the bottom of the pyramid and old age on the top. A few types of pyramid shapes can be distinguished according to past trends of population change in fertility and mortality. Presented here are two slightly different shaped pyramids representing the whole population and indigenous Nauruan population.

The pyramid for the whole population given in figure 10.1 shows a mild 'potbellied' shape, with a bulge around the ages 25 to 44. This type of pyramid is common for countries that absorb a greater amount of young in-migrants. As had been shown earlier in the distribution of the population by ethnic groups, more than 30% of Nauru's population is expatriate, and as most of these expatriates are young to middle-aged contract workers this is reflected accordingly in the pyramid by the distinctive bulge around the mid-section.

Figure 10.1 also shows a slight imbalance between males and females in the pyramid around the ages 40 to 64. This poses an interesting question because as we can see in figure 10.2, the Nauruan only pyramid also shows an imbalance but is reversed in these same ages, ie. there appear to be more indigenous females than males around this age group, whereas there are more males in the above pyramid. The answer may lie in the practice of the contract labourers, particularly the Gilbertese and Tuvaluan workers, of sending back their wives and families to their homeland after living on Nauru for many years. It could also be assumed that a certain number of these expatriates might have been single when they were employed.

Figure 10.2 shows the population pyramid for Nauruans only. Gone is the potbellied shape and what we see now is a 'mountain-shaped' pyramid with a broad base and narrowing peak. This type of pyramid, common for developing countries, is evidence of a rapidly increasing population with high fertility and declining mortality. In this case, this pattern appears to be particularly strong for indigenous Nauruans, with over 57% of them aged under 20 years and only 7% aged over 50. The extremely broad base of the pyramid narrows sharply as age increases and is accentuated by the very low number of old age residents, particularly males.

While the high number of young Nauruans can be directly attributed to a high fertility rate with a corresponding low infant mortality rate, the low incidence of Nauruans aged over 45 requires further elaboration.

No doubt the low life expectancy of Nauruans has played a big part in restricting the number of older Nauruans, however, one must also take into consideration history. World War II, and in particular the forced deportation by the Japanese of over 65% of the Nauruans to the island of Truk, had grave consequences on the Nauruan population that even today manifest themselves in the structure of the population. The high mortality rates amongst infants and young men during the exile is reflected now, more than forty years later, in the small number of Nauruans aged over 45 years.

Figure 10.1 Whole Population Pyramid

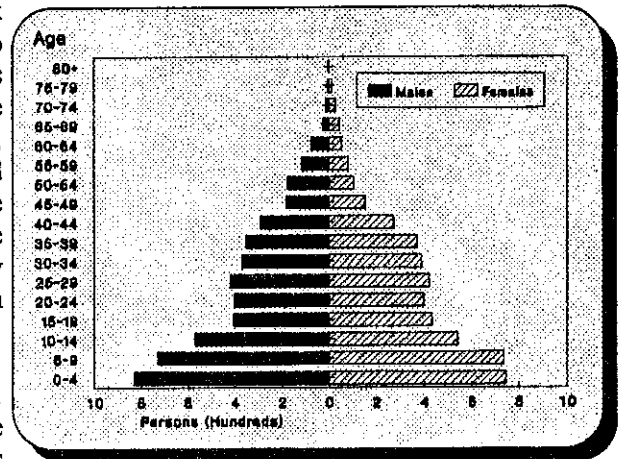
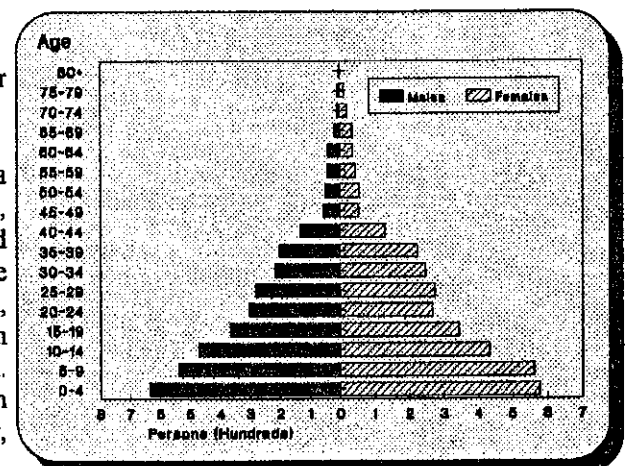


Figure 10.2 Nauruan Population Pyramid



10.6 Sex Composition of Population

In the previous chapters the distribution of the sexes was presented briefly through various tables, but there is an important indicator which is used to summarise the sex composition of a population and its different age components. This indicator is the Sex Ratio, which is usually calculated as a ratio of males to females (M/F*100). A ratio of over 100 indicates an excess of males, while a ratio of less than 100 means there are more females than males.

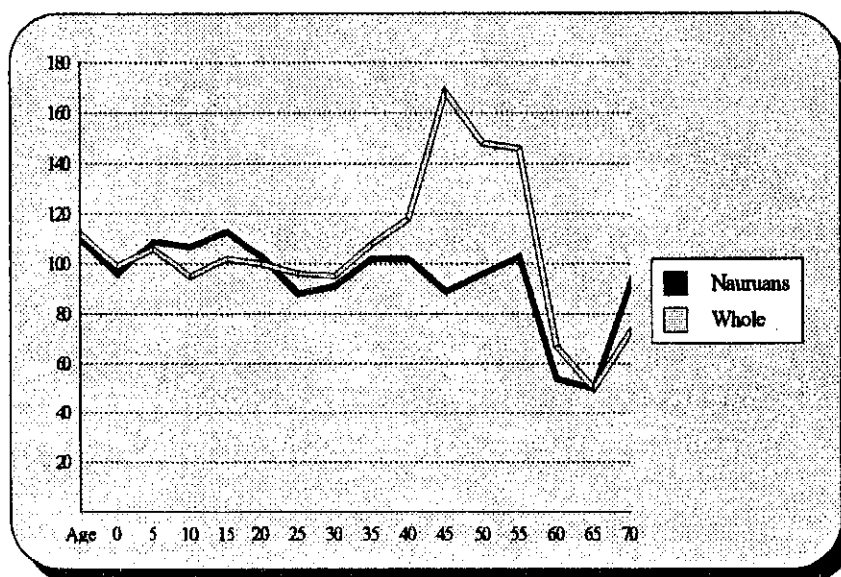
According to the 1992 census, the Sex Ratio for the whole of Nauru was 105, meaning that there were 5% more males than females in the population. For Nauruans only the ratio drops to 102 (down from 104 in 1983) indicating that the local female population is growing faster than its' male counterpart. Table 10.4 compares Nauru's Sex Ratio to those of its' neighbouring countries.

Country	Sex Ratio	Country (cont'd)	Sex Ratio
Nauru	105	Palau	114
Cook Islands	109	PNG	108
Fiji	103	W. Samoa	113
Guam	114	Solomons	108
Kiribati	98	Tonga	101
Marshall Islands	111	Tuvalu	94
FSM	105	Vanuatu	106
Niue	103	<i>Regional Ave.</i>	<i>106</i>

Source: SPC, Provisional data for forthcoming 1993 Population Bulletin.

Figure 10.3 shows the age-specific sex ratios. In most populations around the world there are usually more males born than females, but with the higher mortality rates generally experienced by males the sex ratio falls with age. For Nauru the drop in the number of males is particularly strong around the ages 55 to 65 (for both the Nauruan population and the population as a whole). An interesting aspect of the age-specific sex ratios is the large number of males around the ages 40 to 55 for the whole population. As this phenomenon is not present in the Nauruan age specific sex ratios, it must be assumed that this anomaly is due to the large number of migrant male workers.

Figure 10.3 Age-Specific Sex Ratios



CHAPTER 11. Demographic Characteristics of the Population

11.1 Introduction

As in past national censuses of Nauru, questions have been asked specifically to estimate mortality and fertility. The number of births and deaths occurring within a population is, as one would expect, the primary determinant of the size of a population, thus special attention needs to be devoted to the relevant questions in a census. Whether or not the results obtained are accurate is another question, as these types of questions are subject to specific types of errors. However, care has been made to ensure that the results presented in this report are as close to reality as possible. This has been done largely by cross-referencing the census data with official statistics. Included also in this chapter are sections on nuptiality and religion.

11.2 Fertility

The census asked all women aged 15-49 to report the number of babies they had given birth to over their lifetime, and particularly in the six months prior to the census. From the results we are able to compute the two basic measures of fertility - the Crude Birth Rate, and the Total Fertility Rate.

The Crude Birth Rate (CBR) shows the number of births per 1000 population per year, indicating the overall effect of fertility upon the growth of a population during a year. In 1992 Nauru's overall CBR was 23.5, meaning that for every 1000 people there were 23.5 births. For Nauruans only the CBR rises dramatically to 34.1, indicating that the indigenous population is enjoying strong growth. Looking at table 11.1, it can be seen that Nauru's overall CBR is on average lower than most of the Pacific countries, but this is to be expected considering the low fertility rate of its' large expatriate population. The CBR of the local Nauruan population compares much more favourably with the regional countries, with only the Federated States of Micronesia and the Solomon Islands higher.

The Total Fertility Rate (TFR) represents the average number of children born to a woman. To put it in another way, the TFR shows the number of children a woman can expect to conceive over the duration of her reproductive years - assuming current fertility patterns remain unchanged. From the 1992 census data we are able to compute Nauru's TFR using age-sex specific birth rates covering the child-bearing ages for women (ages 15 to 49). The Island's current Total Fertility Rate is 7.5, meaning that women on Nauru bear an average of 7.5 children. This figure has remained at the current level since the last census in 1983, and since then it has also been the highest in the region.

Table 11.1 Crude Birth Rates and Total Fertility Rates of Selected Countries					
Country	CBR	TFR	Country (cont'd)	CBR	TFR
Nauru (Whole)	23.5	7.5	Niue	23.3	3.5
Nauru (Locals)	34.1	--	Palau	24.5	3.1
Cook Islands	25.1	3.5	PNG	33.5	5.4
Fiji	24.1	3.2	W. Samoa	31.7	4.7
Guam	21.3	3.1	Solomons	37.6	5.8
Kiribati	32.5	3.8	Tonga	30.2	5.2
Marshall Islands	38.7	7.1	Tuvalu	25	3.3
FSM	36.7	5.6	Regional Ave.	29.1	4.6

Source: UN, 'Statistical Indicators For Asia and The Pacific'. Volume XXIII, No. 2, 1993.

11.3 Mortality

Nauru's public health system is thorough and is available to the population free of cost, while the people enjoy a standard of living which is one of the highest in the region. It may thus be expected that mortality should have decreased while development progressed. The census data gives us the opportunity to prove this assumption by allowing computation of the two basic measures of mortality - The Crude Death Rate and the Infant Mortality Rate.

The Crude Death Rate (CDR) is the ratio of deaths in a year to the midyear population. In 1992 Nauru's CDR was 5.2, meaning that for every 1000 people 5.2 deaths occurred. As can be seen in table 11.2, Nauru has one of the lowest Crude Death Rates in the region, and is way below the regional average of 7.0. It should be noted also that Nauru's CDR has dropped from 8.9 deaths per thousand in 1972 - a drop of 42% over twenty years.

The Infant Mortality Rate (IMR) is computed as the ratio of annual infant deaths (under the age of one) to the number of live-births during the year. Because mothers are sometimes reluctant to speak of the death of their children, the census data was cross-referenced with hospital records to ensure accuracy. The 1992 Infant Mortality Rate for Nauru was 25.8, that is, for every 1000 live-births around 26 infants died before their first birthday. Again, this is below the regional average of 31, moreover, it represents a massive drop of 62% from Nauru's 1972 Infant Mortality Rate of 74.1 infant deaths per thousand births.

Country	CDR	IMR	Country (cont'd)	CDR	IMR
Nauru	6.7	26	Palau	11	25
Cook Islands	4.61	25	PNG	10.7	72
Fiji	4.6	22	W.Samoa	6.8	28
Guam	3.9	12	Solomons	4.4	38
Kiribati	10.9	65	Tonga	6.3	26
Marshall Islands	5.2	63	Tuvalu	11	40
FSM	7.8	52	Vanuatu	7.3	45
Niue	7.8	12	Regional Ave.	7	31

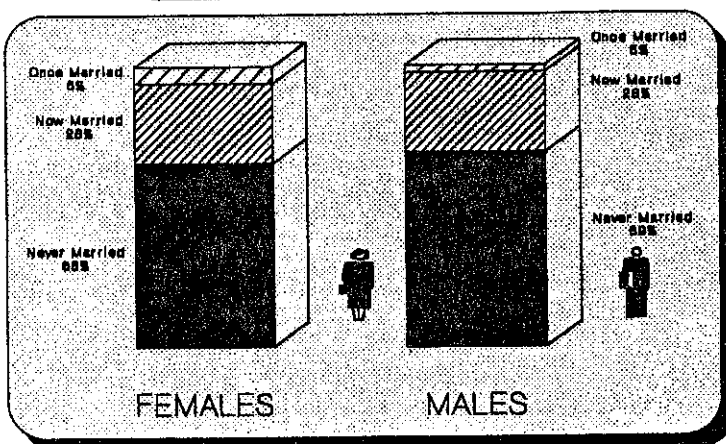
Source: UN, 'Statistical Indicators For Asia and The Pacific'. Volume XXIII, No. 2, 1993.

11.4 Nuptiality

Nuptiality, which primarily studies the occurrence and frequency of marriages, is important in gauging the extent to which the population is replacing itself through the formation of new family units, and thus has important repercussions on reproduction and fertility rates.

Marriage patterns for the local Nauruan population are shown in figure 11.2. There is a slightly higher percentage of single men than single women, a common demographic trait considering that women tend to marry at a younger age. Using a technique known as the 'Singulate Mean Age at Marriage', or SMAM for short, it is estimated that the average age at which Nauruan males marry is 24.7, compared with 23.66 for females. Rates for divorce and widowhood ('Once Married') are, in contrast, higher for women. Given that women tend to live longer on Nauru, and that divorced men tend to remarry more often, this is not surprising.

Figure 11.1 Marital Status of Nauruans Aged 15+



CHAPTER 12. Population Growth and Projections

12.1 Introduction

By using continuous exponential growth rates (a technique which utilises natural logarithms), we can determine the annual rate of growth experienced by the population of Nauru and its various components over the nine years between the 1983 and 1992 censuses. The same technique also allows us to make future projections of the population.

Because this technique utilises population aggregates derived from census data, a point needs to be made here regarding the 1983 census data. While no final report was ever written on the 1983 census, tables of the census data were made and distributed - though the data was raw and underwent no editing. Prior to the data entry stage of the 1992 census, the 1983 census was reentered on the computer (the forms had been stored safely in government archives) and was edited by the SPC Data Analyst. A new set of tables were subsequently made which gave somewhat different figures from the earlier ones. Though it would make no difference for population projections, it was decided that the figures given by the latest (edited) 1983 census tables would be used for the computation of growth rates.

12.2 Overall Population Growth Rate, 1983-1992

Assuming a constant rate of growth, it can be determined that the population of Nauru has been growing annually at rate of 2.85%. Table 12.1 shows that the female section of the population has experienced much stronger growth with an annual rate of 3.47%, compared to the male growth rate of 2.29% per annum. As will be shown later in the following chapter on the growth rates of the different ethnic groups, females have outgrown males across the board - though they are still fewer in number than males. While part of the reason for this imbalance might possibly be found in sex-specific migration rates, one should also take into consideration the effects that high male mortality rates and a lower life expectancy can have on the local male population. Table 12.2 compares Nauru's growth rate to other countries from the SPC region. Nauru's overall growth rate is about double the regional average of around 1.4%.

Table 12.1 Population Growth Rates by Sex			
	1983 pop.	1992 pop.	Growth (%)
Males	4129	5075	2.29
Females	3545	4844	3.47
Total	7674	9919	2.85

Table 12.2 Population Growth Rates of Selected SPC Countries			
Country	Growth Rate	Country (cont'd)	Growth Rate
Nauru	2.85	Palau	1.76
Cook Islands	-.20	PNG	2.28
Fiji	1.10	W.Samoa	.00
Guam	2.28	Solomons	3.33
Kiribati	1.85	Tonga	.57
Marshall Islands	4.20	Tuvalu	2.40
FSM	.96	Vanuatu	3.02
Niue	-3.01	Regional Ave.	1.47

12.3 Population Growth by Main Ethnic Group, 1983-1992

Between 1983 and 1992 the total population of Nauru grew by 2,245 (29%), representing, as previously stated, an annual growth rate of 2.85%. Looking now at the respective growth rates of the four main ethnic groups we see a somewhat different picture. The first thing that becomes apparent is that the local Nauruan population has grown at an astounding rate, while the expatriate population has stagnated or even shrunk in the case of some ethnic groups.

Between the 1983 and 1992 censuses, the local Nauruan population increased by 2,177 (47%) at average annual rate of 4.26%. The only other ethnic group to experience positive growth is the Other Pacific Islanders (OPI) which showed a modest growth of around 1.44%. Asians and 'Other' (mostly Europeans) declined in number. As can be seen in table 12.3, in all the main ethnic groups females experienced stronger growth than males (or encountered less decline as the case may be).

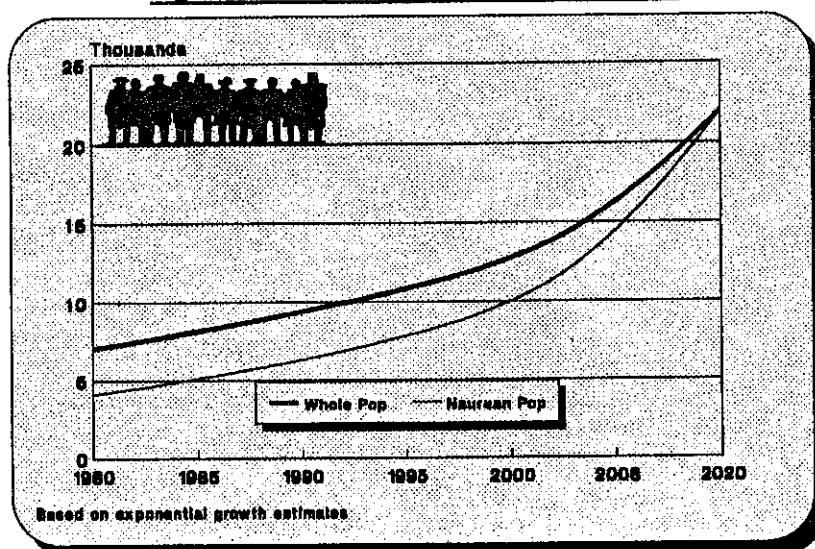
Table 12.3 Population and Population Growth Rates of the Four Main Ethnic Groups, 1983-1992.												
Ethnic Group	Nauruans			Other Pacific Islanders			Asians			Other		
Year	1983	1992	Growth	1983	1992	Growth	1983	1992	Growth	1983	1992	Growth
Males	2,382	3,451	4.12	1,125	1,158	0.32	471	388	-2.15	151	78	-7.34
Females	2,272	3,380	4.41	943	1,197	2.65	195	197	0.11	135	70	-7.30
Total	4,654	6,831	4.26	2,068	2,355	1.44	666	585	-1.44	286	148	-7.32

12.4 Population Projections

The above growth rates, particularly those for the indigenous Nauruans, indicate that the population is in no danger of shrinking - as was once believed. In fact, using the above technique, it is projected that the local population alone will reach 10,000 by the turn of the century, and will have doubled its 1983 numbers by the year 2008 - a mere 16 years (most developed countries take about 40 years to double their populations). Another interesting projection is that at current growth rates females will have outnumbered males by the year 2008. As shown in figure 12.1, it is also estimated that by the year 2020 the projected 22,000 people of Nauru will be almost all local Nauruans - assuming that expatriates continue to decline in number at present rates.

Figure 12.1 Population Projections, 1980-2020

Table 12.4 Projections		
Year	Whole Pop	Nauruans
1983	7,674	4,654
1984	7,896	4,857
1985	8,124	5,068
1986	8,359	5,289
1987	8,601	5,520
1988	8,850	5,760
1989	9,106	6,011
1990	9,369	6,273
1991	9,640	6,547
1992	9,919	6,831
1993	10,206	7,130
2000	12,460	9,610
2008	15,653	13,519
2020	22,000	22,000



CHAPTER 13. Education

13.1 Introduction

Because of its influence on the quality of manpower, education constitutes one of the most important determinants of the socio-economic behaviour of a population. As such the educational level of the population reflects roughly the level of social and economic development attained by a country.

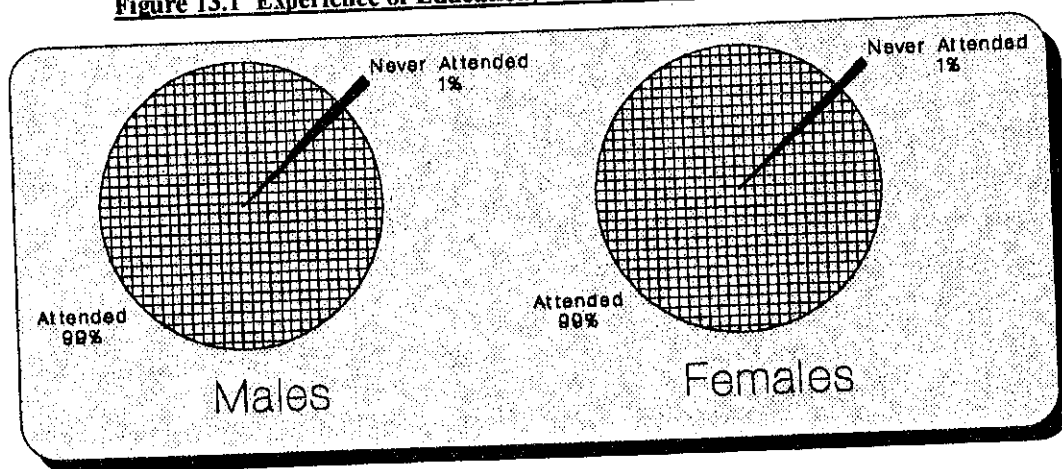
The 1992 census asked questions on education only to nationals in order to focus on the specific section of the Nauruan population that most requires attention and planning - the Nauruans. Hence the analysis presented in this chapter concerns only the local Nauruan population.

13.2 Experience of Education

Of the total local Nauruan population in 1992 aged over 5 years, 2,660 males and 2,656 females claimed they had attended or were attending school. As shown by figure 13.1, these figures represented almost 99% of all eligible males and females ('eligible' in this case refers to those aged 5 and over who had responded to the relevant questions). Table 13.1 compares 1983 and 1992 and shows that some advance had been made in the 9 years between the two censuses, particularly for females. Males improved from around 97% in 1983 to 99% in 1992, while 99% of all females by 1992 had attended or were attending school compared with 96.8% in 1983. The combined average of 98.9% is extremely high for the region and for developing countries, but not surprising considering the island's commitment to compulsory education.

Table 13.1 Experience of Education of Nauruans Aged 5 Years and Over, 1983 and 1992						
% of total eligible	1983			1992		
	Males	Females	Total	Males	Females	Total
Attended	97.2	96.4	96.8	98.8	99	98.9
Never Attended	2.8	3.6	3.2	1.2	1	1.1

Figure 13.1 Experience of Education, Nauruan Males and Females - 1992



1

11

13.3 School Attendance/Enrolment

Figure 13.2 shows the number of Nauruans aged 5 and over who were attending an educational institution in 1992. Out of a total population of 3,763 aged 5-29 years, 2,163 (57%) were attending an educational institution at the time of the census. Of these 304 were attending preschool, 1,143 were at primary school, 632 were at secondary school, 48 were studying at college or university, and 36 were attending various trade and correspondence schools.

Table 13.2 gives details of attendance at the various educational institutions together with the overall attendance ratios of the various age-groups. The attendance ratios are given as a percentage of school attendees in a given age-group to the total age-group.

Figure 13.2 School Attendees by Age and Institution

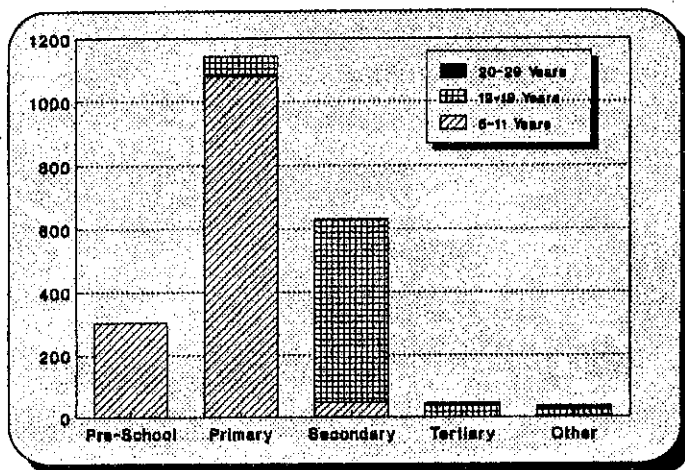
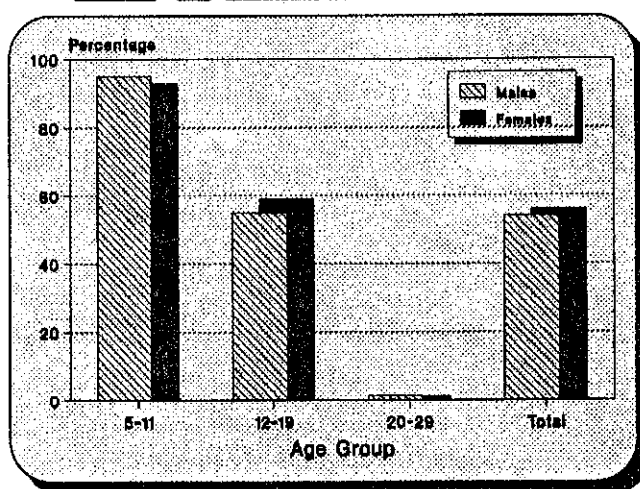


Table 13.2 School Attendees by Broad Age-Groups and Type of Institution, and Attendance Ratios, 1992.

Age-Group	Pre-School	Primary	Secondary	Tertiary	Other	Total (Ratio - %)
5-11	304	1,081	50	0	4	1,439 (98%)
12-19	0	62	577	36	18	693 (58%)
20-29	0	0	5	12	14	31 (3%)
Total	304	1,143	632	48	36	2,163 (57%)

Figure 13.3 % Aged 5-29 in full-time Education

Figure 13.3 shows the percentage of Nauruans still in full-time education by broad age-group and sex. The percentage of Nauruans aged 5-11 attending school was encouragingly high with 95% for males and 93% for females. Note that these percentages are slightly lower than the attendance ratios given in table 13.2 which counted also those studying part-time. The high dropout rate of Nauruans from the age-group 5-11 to the age-group 12-19 (37%) appears to affect males in particular with only 55% of males in this age-group attending school, compared to 59% for females. The percentage of males and females attending a tertiary institution in the age-group 20-29 is very small with around 1% for both. Overall, there is a higher percentage of females studying full-time (56%) than males (54%).



The high dropout rates for Nauruans after both primary school (roughly the years 5-11) and secondary school (the years 12-19) are of some concern. Around 37% of those Nauruans attending school dropped out around the ages 12-19, of those remaining another 56% will not continue on to tertiary level. Admittedly, compulsory education ends at the age of 16, perhaps explaining the high dropout rate in the age-group 12-19. On the positive side, the number of Nauruans enrolled in tertiary institutions has increased substantially since 1983 when much less than 1% of males and females aged 5-29 attended a tertiary level educational facility.

13.4 Educational Attainment and Qualifications

Overall educational attainment can be measured by studying the general levels of education of a population. This can be an important exercise as it gives us an indication of the quality of the country's present and future workforce. The level of education is gauged by observing the percentage of the population aged over 5 years that has attained primary, secondary and tertiary levels respectively. Figure 13.4 shows that of the total Nauruan population aged 5 years and over, just over 61% had attained or were still attending primary level, around 33% had or were attending secondary level, and 5% had or were attending tertiary level. Overall, more than 98% of the eligible population had some educational experience.

Figure 13.4 Level of Education, Nauruans 5 and over

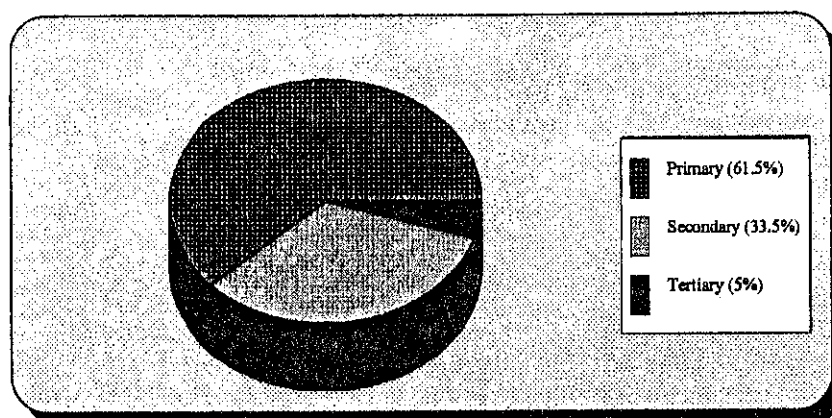


Table 13.3 outlines the types of qualifications attained by the Nauruan population aged above 11 years. There are no certificates awarded for successful completion of primary level studies, so the first qualification usually attained by Nauruans is the Secondary School Leaving Certificate (Form IV). Matriculation certificates require completing Forms V and VI. Out of the total Nauruan population in 1992 aged 12 years and over, 499 males and 452 females claimed to have obtained qualifications. The total of these figures represents 25% of the eligible population (this percentage would be up around the high nineties had primary school certificates been awarded).

The most common qualification (71% of all qualifications) was a Secondary School Leaving Certificate, with 338 females having obtained one compared to 334 males. Slightly more females again (27) claimed to have obtained a matriculation certificate compared to 25 for males. However, in all the various categories of tertiary qualifications males outnumbered females substantially, particularly in university degrees where five times as many males claimed to have obtained one than females. Despite what appears to be a small number of tertiary graduates, the level of education attained by the Nauruan population shows strong improvement over the levels experienced in 1983. The 228 tertiary graduates enumerated in 1992 compares favourably to the 97 enumerated in 1983.

Table 13.3 Qualifications attained by Nauruan Population Aged 12 Years and Over							
Qualification	Sec Sch Cert	Matric	Dip/Cert	Degree	Post-Grad	Other	Total
Males	334	25	83	10	3	44	499
Females	338	27	57	2	1	27	452
Total	672	52	140	12	4	71	951
Percentage	71	5.5	15	1.3	0.4	7.5	100

CHAPTER 14. Economic Activity and Employment

14.1 Introduction

The type of economic activity that people are engaged in and the income they earn from it plays an important role in national development and planning. The 1992 census devoted many questions to the topic of employment and income in order to permit a thorough assessment of the nation's workforce. Again, only the local Nauruan population was targeted.

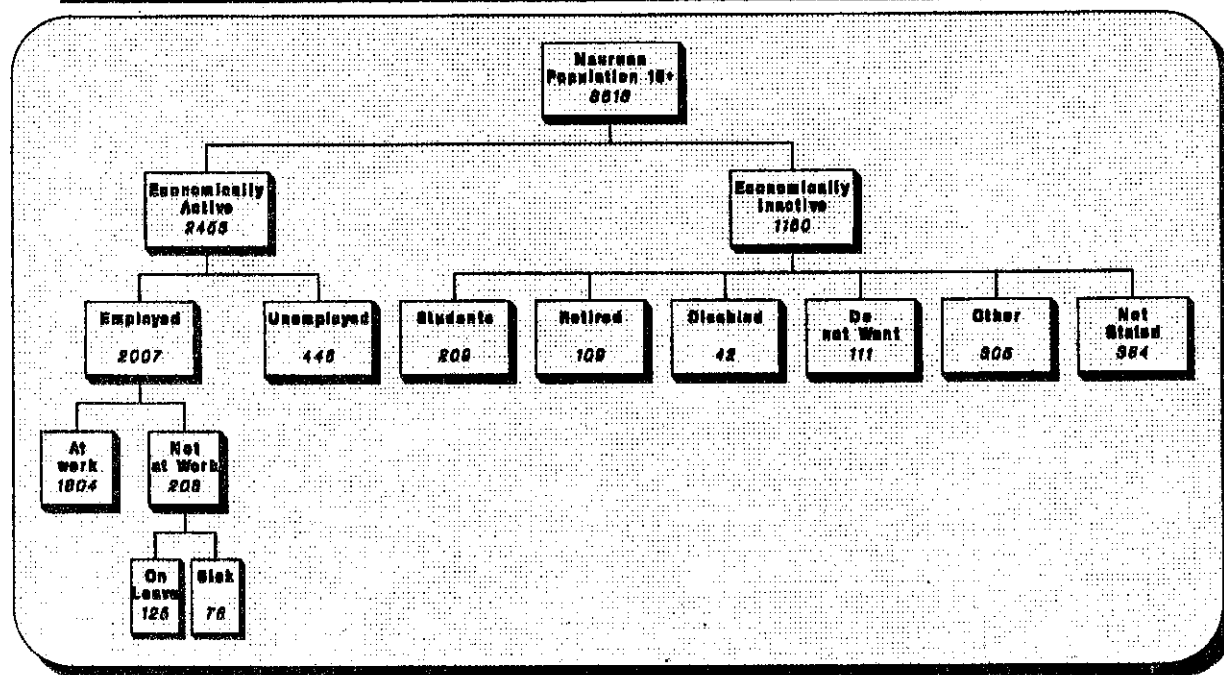
To interpret the results obtained from these questions, it is necessary to understand some of the concepts involved. All Nauruans aged 10 years and above were asked whether they did any work during the week prior to the census. All those who had worked for one or more hours were considered 'employed'. Where doubt existed, it was important to consider whether the work contributed to the provision of economic goods or services. People who worked for commissions or profit were considered employed, as were people who worked for no money in a family business for example.

Those aged 10 and over who did not have a job at the time of the census but were willing or actively seeking a job during the reference period were considered 'unemployed'. The employed and the unemployed together comprised the 'economically active' population.

Almost all other persons were described as 'economically inactive', that is they neither did any economic work nor looked for work during the reference period. Most of these people were housewives, students, the retired etc. There were, however, several important exceptions, such as those who had a job but were on leave, were sick or just plain absent. These persons were considered 'employed but not at work'.

Figure 14.1 gives a schematic representation of the above concepts with the actual figures. This diagram and the above concepts will be used throughout this chapter, and only Nauruans aged 15 and over will be studied.

Figure 14.1 Schematic Representation of Economically Active and Inactive Nauruan Population



14.2 Economically Active Population

Escap defines the Economically Active Population as all persons who furnish the supply of labour for the production of economic goods and services during a given time-reference period. In Nauru's case the Labour Force Approach was used, which allocates a time reference period of one week. The broad concept of Economic Activity can be broken down and studied in more detail by looking at its' two basic measures - the General Activity Rate and the Crude Activity Rate. The Age-Sex Specific Activity Rates provide the general activity rates for the various age groups and for males and females separately.

The General Activity Rate is calculated as the ratio of economically active persons (including those who are currently unemployed but are seeking work) to the total population aged 15 and above. Using figure 14.1 from the previous page, we are easily able to determine that the Nauru's general activity rate in 1992 was 67.9%, meaning that 67.9% of the Nauruan population above the age of 14 were actively engaged or were actively seeking work in the production of economic goods or services during the week before the census. The ratio of economically active to the total Nauruan population gives us the Crude Activity Rate, which provides a good basis for comparison. Table 14.1 shows that Nauru's crude activity rate (35.9%) is about average for the region.

Table 14.1 Crude Activity Rates of Selected Pacific Countries (Latest available year)						
Country	Nauru	Cook Islands	Fiji	Fr. Polynesia	Niue	Tonga
Activity Rate	35.9	38.6	34.2	39.9	34.7	25.1

Source: 'Compendium of Social Development Indicators in the ESCAP Region; Quality of Life in the ESCAP Region'. UN, 1993.

Table 14.2 below gives the age-sex specific activity rates for Nauruans in 1992. It would appear from the table that Nauruan males are most economically active around the ages 20-55, with activity rates averaging around 90%. Females appear to be most active around the ages 25-50, but their activity rates around these years peak at only 75%. Overall, the most economically active years for Nauruans are between the ages 25-40, when around 81% of the population is engaged in an economic activity.

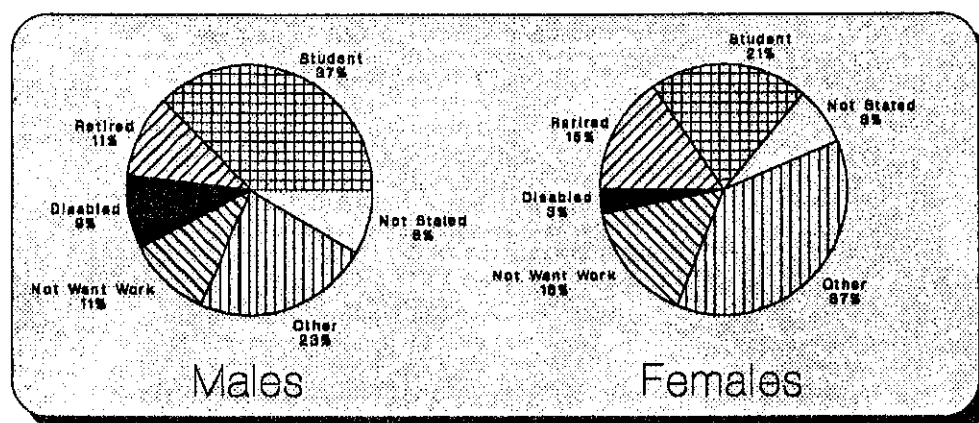
Males in 1992 enjoyed an overall activity rate of 77%, compared to 68% for females. But both males and females in the age-bracket 15-19 rated poorly, with only 56% of males and 44% of females economically active in this age-group. Not surprisingly, Nauruans aged over 60 also tended to be absent from the economy (the mandatory retirement age is 65).

Table 14.2 Nauruan Age-Sex Specific Activity Rates			
Age-Group	Males	Females	Total
15-19	56	44	50
20-24	87	68	78
25-29	91	73	82
30-34	90	70	80
35-39	89	75	82
40-44	87	69	78
45-49	82	65	73
50-54	90	46	67
55-59	72	51	61
60-64	74	16	45
65+	35	9	19
Total	77	59	68

14.3 Economically Inactive Population

Of the total Nauruan population aged 15 and over, 1160 (32%) claimed to be economically inactive. The reasons given for this inactivity varied for males and females, but were centred around certain non-economic activities. Among males the largest category of non-economic activity was studying - 37% of economically inactive males claimed to be students, and thus unable to work, compared to 21% for females. More males than females appeared to be unable to work due to physical disabilities (9% and 3% respectively). The most common non-economic activity for females was 'Other', which included largely housework and parenting (37% compared to 23% for males). Furthermore, more females than males were either retired or simply did not want to work. (See Figure 14.2).

Figure 14.2 Non-Economic Activities by Sex

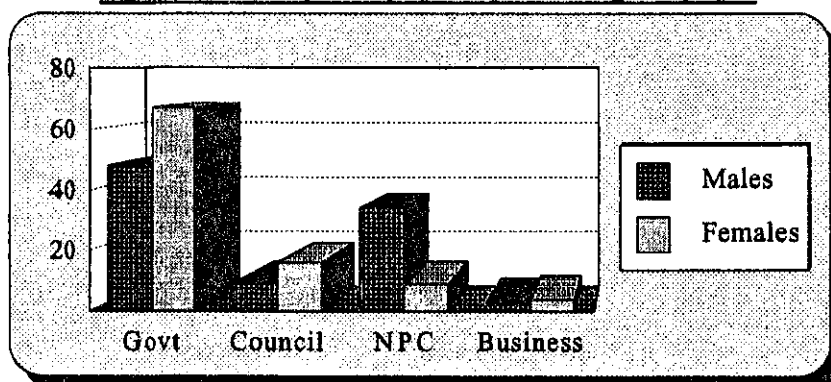


14.4 Employment

Employment includes information on occupations, employers and income. The information on occupations was classified according to the 1988 Revised International Standard Classification of Occupations (ISCO 88), while employers were simply listed according to the island's main employers.

The principal employers on Nauru in 1992 were the Government, the Local Council, Nauru Phosphate Corporation, and private business. The largest employer for locals was the Government which employed over 59% of all working Nauruans (53% of males and 67% of females). Nauru Phosphate Corporation employed 34% of working local males but only 9% of working females, compared to the 16% of females and 9% of males employed by the Local Council. The rest were employed privately by the private sector. Figure 14.3 shows the distribution of the employers.

Figure 14.3 Principal Employers by Percentage Employed



The revised classification of occupations used in 1992 attempts to classify the employed population according to similarities in skill levels required to carry out work. Table 14.3 gives a broad outline of the occupation groupings obtained from the revised classification. Not surprisingly, the occupations listed by Nauruans were strongly gender orientated. A much larger percentage of Nauruans working as craftsmen and plant operators were males, while more females than males were office workers (clerks) or professionals (teachers and nurses). Almost all Nauruans working as Legislators, Senior Officials and Managers were male - there was only one female politician at the time. Overall, the occupation group with the highest percentage of workers was 'Elementary Occupations' (eg. labourers, drivers, freight handlers etc), employing 18% of all female workers and over 21% of males.

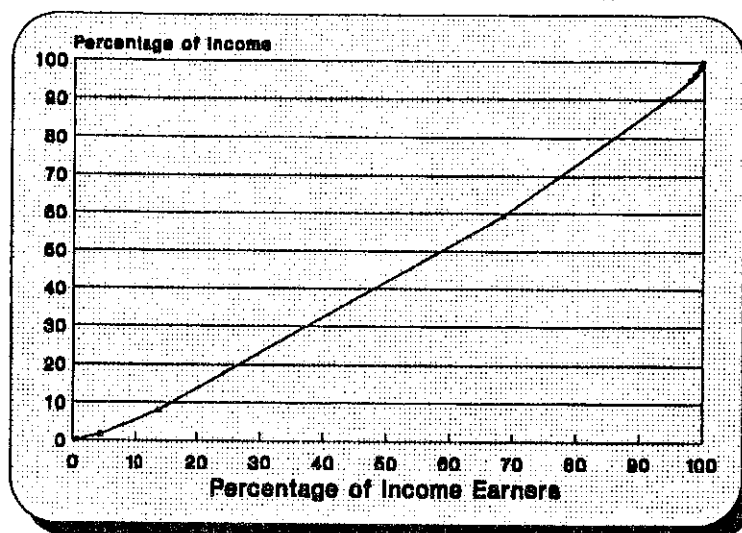
Table 14.3 Employed Nauruan Population Aged 15 and above by Occupation Group and Sex						
Occupation Group	Males		Females		Total	
	#	%	#	%	#	%
Legislators, Senior Officials & Managers	17	1.4	1	0.1	18	0.9
Professionals	70	6	138	16.5	208	10.4
Technicians & Associate Professionals	65	5.5	50	6	115	5.7
Clerks & Office Workers	98	8.4	257	30.8	355	17.7
Service, Shop & Market Sales Workers	139	11.8	111	13.3	250	12.5
Agriculture & Related Workers	2	0.2	0	0	2	0.1
Craft & Related Workers	285	24.3	14	1.7	299	14.9
Plant, Machine Operators & Assemblers	115	9.8	21	2.5	136	6.8
Elementary Occupations	251	21.4	150	18	401	20
Not Stated	131	11.2	92	11	223	11.1
Total	1,173	100	834	100	2,007	100

Table 14.4 shows the distribution of income earned from the principal occupations of Nauruan males and females. Most Nauruans earned around \$300-400 per fortnight in 1992, but there was a quite a range of incomes for males and females. While almost 3% of males took home over \$900 a fortnight, the highest income for females was about \$700 - with only one exception. The average income for males was higher at \$383 per fortnight compared to \$360 for females.

Table 14.4 Employed Population by Income Group			
Income (\$)	Males	Females	Total
\$0-99	3	6	9
\$100-199	42	32	74
\$200-299	111	75	186
\$300-399	582	458	1,040
\$400-499	290	203	493
\$500-599	56	13	69
\$600-699	10	2	12
\$700-799	7	0	7
\$800-899	9	1	10
\$900-999	2	0	2
\$1000+	9	0	9
Not Stated	52	44	96
Total	1,173	834	2,007
Mean Income	\$383	\$360	\$374

The distribution of income over the employed population can be illustrated using a technique called the 'Concentration Curve' (figure 14.4). With this method the more curved the cumulative percentage plotting of income earners to income earned, the more unevenly distributed income is in the economy, at least that is the theory. Nauru's income concentration curve is fairly evenly distributed as shown by figure 14.4. The lowest ten percent of income earners shared around 5% of total income, while the bottom fifty percent earned just over 40% of the total income that was paid to the employed population. On the other end of the scale, the top ten percent of income earners took home around 15% of total income. Regardless of these imbalances, this can be considered as a good distribution.

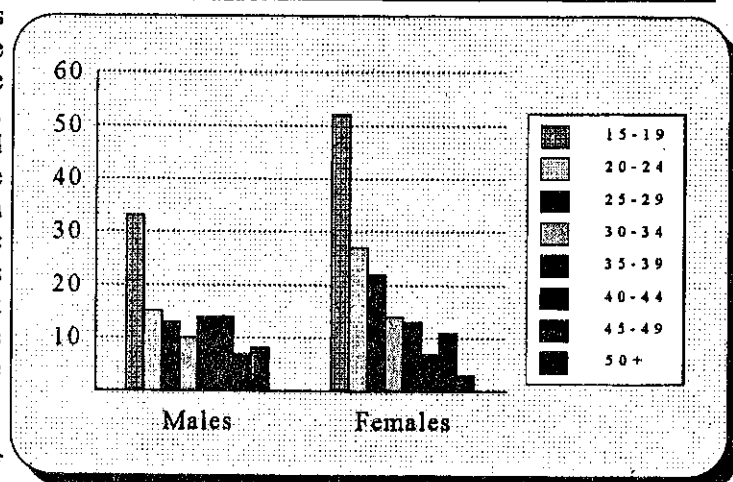
Figure 14.4 Income Concentration Curve



14.5 Unemployment

As stated previously in the introduction to this chapter, the unemployed are defined as those persons who did not work during the time reference period but were actively seeking work. The ratio of these unemployed to the total economically active population gives us the unemployment rate, which in 1992 was a high 18.2%. Looking at the age-sex specific unemployment rates given in figure 14.5, it is easy to see why Nauru's overall unemployment rate is as high as it is - given that the unemployment rates for the younger Nauruans are so high.

Figure 14.5 Unemployment Rates By Sex & Age Group



Nauruans aged between 15-19 were the worst off in terms of employment in 1992. 33% of males and a surprising 52% of females in this age group were unemployed at the time. The unemployment rate for males was more than halved for Nauruans aged 20-24, with 15% unable to find work in this age bracket compared to 27% for females. Unemployment gradually fell as age progressed with females achieving lower unemployment rates by the ages of 35 to 44. After the age of 50 many workers begin to drop out of the work force, thus the unemployment rate dropped in reflection of the fewer job-seekers in this age bracket.

CHAPTER 15. Housing and Household Characteristics

15.1 Introduction

The state of housing conditions is considered to constitute an important part of peoples welfare in a country or community. The 1992 census included a separate household questionnaire which asked questions to the household head regarding the composition, structure, living pattern and standard of living of the household. This chapter offers a very brief analysis of the data derived from the household questionnaire. Several topics only have been included - topics which may be of some use in gauging the standard of living experienced by the population of Nauru.

Before proceeding however, we must emphasise that there are only 685 Nauruan households on the island. Quite a small sum considering the size of the Nauruan population of 6831. It is this figure that this analysis will solely be based on. That is, Nauruan households only.

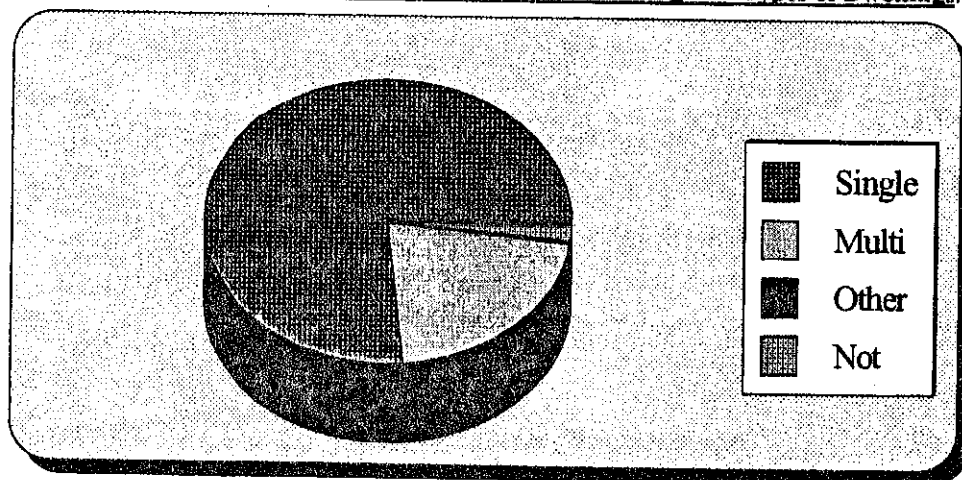
To assist users in interpreting the housing analysis in this report, statistical graphs and tables are presented, with a brief description of each. Most of the statistics presented are calculated by percentage of households. Also included are calculations of ratios to show: the Average Size of households (in terms of number of rooms); Density of Occupation (average number of persons per household) and the Housing Needs Ratio.

15.2 Type of Building

A building may be defined as "any independent free standing structure comprising one or more rooms or other spaces covered by a roof enclosed within external walls which extend from the foundations of the roof". Unlike many other tropical island countries, traditional type huts and villages are not common on Nauru. Instead Nauruans reside in modern houses that can be classified into three main types of dwellings: Single dwellings, Multi dwellings and Other Quarters.

Figure 15.1 shows the percentage distribution of the three types of dwellings found on Nauru. Single dwellings are single structure buildings that are occupied by one household (usually blood related inhabitants), while multi dwellings are more like apartments or flats where several families and/or non-related family units may all share the same building or structure. The majority of Nauruan households occupy single-type dwellings (76.5%). A minority live in Other Quarters (0.3%). These may be substandard housing units provisionally arranged for human habitation.

Figure 15.1 Percentage of Nauruan Households Living in 3 Types of Dwellings.



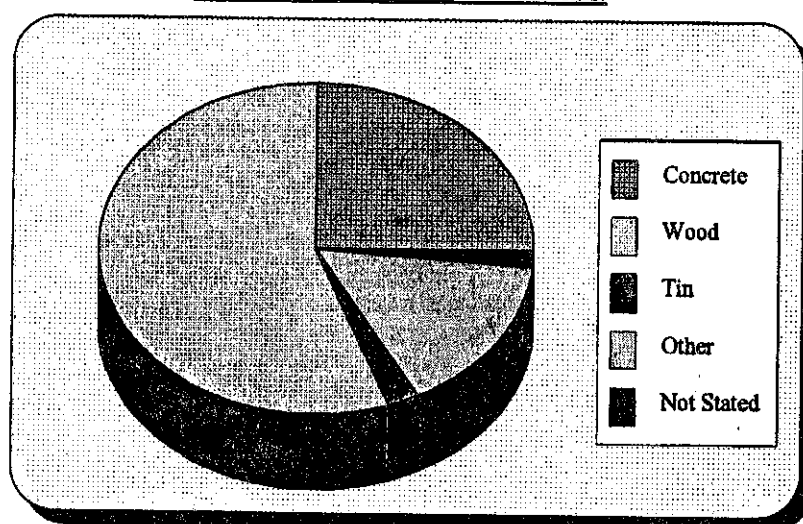
15.3 Construction Materials of Outer Walls

In order for us to understand the quality of households on Nauru, we should take into account the type of construction materials used for those households. The distribution of dwellings by materials of construction of the walls of a building will also be useful as the basis for estimating maintenance costs for repairs as well as for appraising the durability of dwellings in existence.

Figure 15.2 shows the percentage of households using four different types of construction materials for their outer walls. Wood (55.6%) as evident in the graph is the most commonly used material for construction, while Tin is the least commonly used (2.3%). Concrete and Other Materials contribute a considerable amount towards the total percentage, having 25% and 15.5% respectively. Table 15.1 provides the percentage breakdown.

Table 15.1 Type of Construction Material (%)	
Concrete	25%
Wood	55.6%
Tin	2.3%
Other Materials	15.5%
Not Stated	1.6%

Figure 15.2 Construction Materials.



15.4 Location of Living Quarters

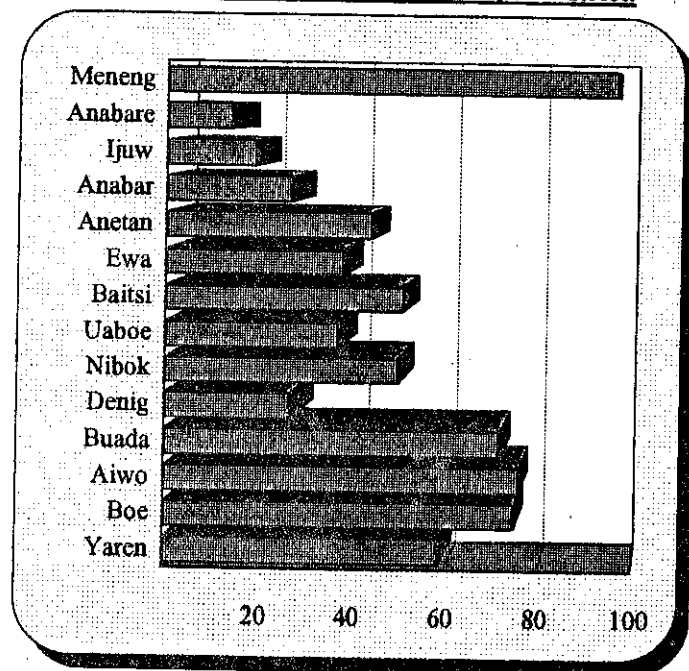
This basically shows the number of Nauruan households per district and helps us to determine whether the number of households per district is proportionate to the size of each district. This can also be useful in determining which districts can sustain further construction.

The bar graph illustrated in Figure 15.3 shows the number of households per district. Meneng District being one of the largest district in area has the most number of households (96). However, Boe District, the smallest in area, has the third most number of households (75), giving it the highest density of Nauruan Households on the island. On the

other side of the scale, Anibare district, one of the largest in area, has the least number of households with only 14 - implying that this district could sustain substantial development in the future.

Table 15.2 Households per District	
Yaren	59
Boe	75
Aiwo	76
Buada	72
Denigomodu	27
Nibok	50
Uaboe	37
Baitsi	51
Ewa	38
Anetan	44
Anabar	27
Ijuw	19
Anibare	14
Meneng	96

Figure 15.3 Number of Households per District.

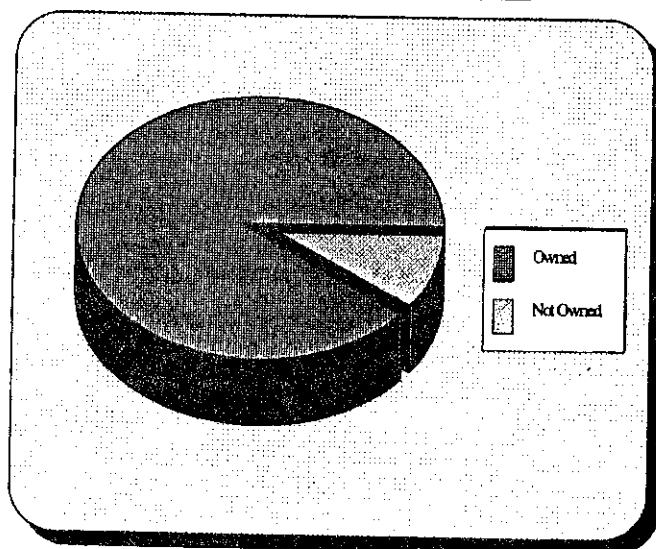


15.5 Occupancy Status.

The Occupancy Status of Nauruan households tells us whether Nauruans own the living quarters they are dwelling in, whether they are rented, government provided or occupied by some other type of arrangement. It gives us a fair indication of the standard of living. Table 15.5 shows the household occupancy status percentage distribution. It is evident that most Nauruans own the dwellings they reside in with some 87% of household heads claiming ownership of their living quarters. The minority are represented by those who do not own but squat on vacated premises (0.2%).

Table 15.3 Occupancy Status (%)	
Own House	87.2%
Rent Private	0.4%
Housing Authority	3.7%
Employer Provided	0%
Government Housing	5.1%
Squatter	0.2%
Others	1.2%
Not Stated	2.2%

Figure 15.4 Occupancy Status.



15.6 Water Supply System, Toilet Facilities and Cooking Facilities.

These three topics may generally be used to measure the quality of housing and the sanitary conditions prevalent. Such information is thus considered important for housing policy as well as public health policy.

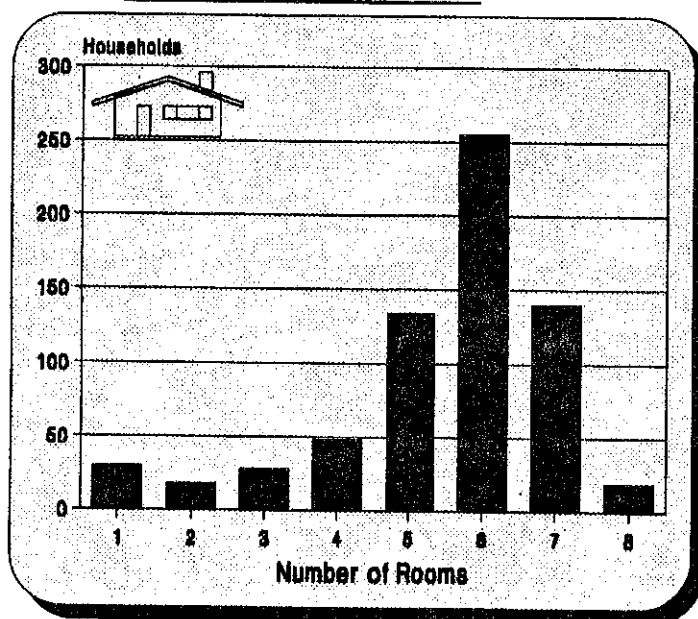
Table 15.4 shows the percentage of Nauruan households and how the various facilities are either shared, their own or used by some other means. The majority of households have their own water supply system (71.7%) and toilet facilities (65.3%), while 60.1% of households have a sharing arrangement for their cooking facilities. A substantial percentage of households also share their water and toilet facilities (26% and 31% respectively). Cooking arrangements appear to follow a pattern of sharing most facilities (perhaps using the same oven, pots and pans), however, many households (36.1%) opt to neither share or use their own cooking facilities - instead purchasing ready-made foods like chinese takeaway and canned food.

Table 15.4 Facilities Installed in Housing Units				
Facility	Share (%)	Own (%)	Other (%)	Not Stated (%)
Water Supply System	26.0%	71.7%	1.6%	0.7%
Toilet Facilities	31.7%	65.3%	1.5%	1.6%
Cooking Facilities	60.1%	3.1%	36.1%	0.7%

15.7 Number of Rooms.

The following graph and calculations are helpful measures of housing conditions and dimensions of dwelling occupations in Nauruan households. The average size of living quarters (number of rooms per house) represents a useful basic measure of housing conditions. For the purpose of roughly estimating the standard of health (in terms of hygiene) as well as the relative privacy of household occupants, the Density of Occupation ratio is often used.

Figure 15.5 Number of Rooms.



(I) Number of Rooms: As evident in Figure 15.7 the majority of households have between 5 and 7 rooms (a total of 529 households). This may be due to extensions made to the original house. Children of families who have grown up or have married usually occupy these extensions, especially in large families. The minority however, only have 2 rooms per house (18 households).

Table 15.6 (i) Percentage of Nauruan Households by Number of Household Appliances.							
Household Appliances	Number of Appliances						
	0	1	2	3	4	5+	Not Stated
Refrigerator	14	69.8	12.3	2.2	0.7	0.3	0.7
Deep Freeze	40	54.5	3.7	1.3	0	0	0.6
Microwave	85.8	12.3	1	0.3	0	0	0.6
Television	20.7	54.3	16.9	6.6	0.9	0	0.6
Video Tape Recorder	24.5	53.3	15.2	5.4	0.9	0.2	0.6
Radio	32.4	46.7	12.4	4.7	2.6	0.6	0.6
Telephone	66.6	29.3	3.1	0.4	0	0	0.6
Air Conditioning Unit	35	33.1	18.8	7.4	2.6	1.8	0.9
Hot Water System	79.6	19	0.2	0.6	0	0.2	0.6
Garbage Collection	95	3.5	0.6	0	0	0.4	0.6
T.V. Decoder	73.4	25.3	0.7	0	0	0	0.6
Garage	62.3	31.7	4.5	0.6	0.3	0	0.6
Ceiling/Ground Fans	10.7	7.2	7.6	10.4	15.3	45.4	3.5

Table 15.6 (i) shows the percentage of households by the number of certain household appliances. We may derive from this table, as an example, that over a half of all Nauruan households have all of the following appliances: at least one refrigerator (69.8%); one deep freezer (54.5%); one television (54.3%) and one video cassette recorder (53.3%). Another distinct feature that is evident in this table is that almost half of all Nauruan households have at least 5 or more ceiling or ground fans (45.4%). The average Nauruan household, as can be gathered from the above table, is substantially better off than the average Pacific household in terms of household appliances.

Table 15.6 (ii) Percentage of Nauruan Households by Number of Motor Vehicles and Boats							
Vehicle/Boat	0	1	2	3	4	5+	Not Stated
Motor Car	45.4	38	11.4	3.4	0.3	0.9	0.6
Land Rover	54.6	35.5	7.3	1.6	0.4	0	0.6
Truck/Van/Minibus	84.4	13.6	10.2	0.3	0.2	0	0.6
Motorbike	53.7	33.1	9.1	2.5	0.6	0.2	0.9
Motor Boat	85	12.3	1.6	0.6	0	0	0.6
Sail Boat	99	0.2	0.2	0	0	0	0.6
Canoe	96.4	2.3	0.6	0	0.2	0	0.6

Table 15.6 (ii) shows the percentage of households with a certain number of vehicles and/or boats. It illustrates that approximately a third of all Nauruan households may have at least one motor car (38%), a land rover (35.5%) or a motorbike (33.1%). Surprisingly, over 12% of households own a motor boat, compared to the 2.3% who own a canoe.

15.10 Housing Needs Ratio.

The Housing Needs Ratio is used in a social sense to express the extent to which housing conditions fall below the acceptable norms in the light of health, privacy and environment for individual members of the population. Thus a standard of housing level has to be ascertained to those households who are accommodated in dwellings of substandard level and hence in need of better housing.

The **Crude Method** of estimating housing needs shows the total number of dwellings which are needed to meet the existing housing shortage in addition to new requirements due to an increase of households and a loss of old dwelling units.

The Formula:

$$E(t) = H - U + H(t) + rU(t)$$

H: The number of households as of the beginning of the period covered by the estimates.

U: The number of acceptable living quarters in the inventory as of the beginning of the period covered by the estimates.

H(t): The projected increase in the number of households during the period (t) covered by the estimates.

r: The percentage rate at which acceptable living quarters will need to be replaced during the period (t) covered by the estimates.

The Calculation:

H= 685

U=685 (this is because there are no unacceptable living quarters)

H(t)=1.79% (over 9 years)

r = 1.79%

Therefore E(t)= 1228

This implies that the total number of dwellings needed to meet the existing and future housing shortages would be 1228 by the year 2001. At present there are some 685 habitable houses on the island so it is projected that another 543 housing units need to be built over the next decade to house the growing population of Nauru - an increase of almost 80% on current stocks.

APPENDIX A. Concepts and Definitions

The **Census** included everyone living in Nauru at the time of the Census including persons usually resident in Nauru who were absent overseas.

In the Census the basic unit of enumeration was the **Household**. In 1983 a household was defined as a unit consisting of one or more persons who make common arrangements for providing themselves with food. Following this definition a house could contain one or households. In 1992, however, this definition was altered by the Census Advisory Committee so as to reflect more closely the situation in Nauru. It was felt that because most households of the island consisted of extended families who quite often had separate cooking arrangements but who almost invariably shared other facilities and responsibilities, it would be more appropriate to define a household as a house. In this case one house would comprise one household. As is common in the Pacific it was frequently the elders who were nominated as the household heads, unless the members themselves agreed on a separate choice.

Marital Status included those living in consensual unions or defacto marriages. The Census permitted persons to respond according to how they felt about their marital status, regardless of whether or not they were legally married.

A '**usual resident**' of a household is a person who has been staying with the household for 6 months and over, or intended to stay for more than 6 months.

Fertility questions were asked only to women aged 15 to 49 (ie. under 50) which approximately comprises the 'fertile age group'.

Education questions were asked only to Nauruans aged 5 years and over

Employment questions were directed at Nauruans aged 10 years and over, though only those aged 15 and above were included in the analysis as is the common practice.

The procedures for the actual enumeration were conducted in a manner similar to other censuses in the region, if not the world. The enumerators were allotted areas on maps that clearly marked the location of houses in each district. In 1983 the enumerators were instructed to contact the households in their respective areas and to distribute the forms to the heads of households for **self enumeration**. In 1992 Census, however, the enumerators actually interviewed all members of the household. After collecting the forms the enumerators entered the name of the heads and the number of males and females on a control sheet - which was used later for the preliminary count of population.

The **Census Questionnaire** refers to the three forms that were filled out - the Nauruan Individual Form, the Non-Nauruan Individual Form, and the Household Form.