

Chapter 1. Introduction

The Commonwealth of the Northern Mariana Islands (CNMI) consists of three large Islands - Saipan, Rota, and Tinian - and a series of smaller, volcanic islands to the north. The three large islands are raised coral islands, and, with the exception of Saipan, are flat with steep limestone cliffs. The climate is tropical and seasonal temperature variations are very small. Typhoons occasionally occur and **are frequently severe.**

SPANISH PERIOD

Although the Islands have been inhabited for more than 3,500 years, they were not 'discovered' until Magellan came in 1521. The islands were officially claimed by Spain in 1565, but a Jesuit mission was not established until 1668 by the Mission Fathers (and this one was on Guam). In between **Spanish, Dutch, and English explorers** and traders had **already** visited the **Islands and brought epidemics that decimated a population variously estimated** to have numbered 50,000 to 150,000 (Taeuber and Han 1950:95). The Indigenous Chamorros wanted no part of the **Spanish administration.** In **1669,** Lorenzo, a survivor of the Concepcion shipwreck in 1638 and who was acting as interpreter for the Jesuits on Anatahan Island was murdered (Ibanez 1886). General resentment of the Spanish led to rebellion and massacre in 1670, followed by 30 years of sporadic war between the native Chamorros and the Spanish soldiers.

Famine, cholera, and smallpox began to reinforce the repressive tactics of the Spanish guns to so weaken the natives that the Spanish could concentrate all surviving peoples under military control in Guam and Saipan. This movement was under the direction of Jose Quiroga, who became governor of the Marianas in 1694. The entire population was moved except for a small number of natives on Rota who apparently escaped detection and resettlement. Natives on Tinian, temporarily escaping to Agrigan, were finally defeated *by* Quiroga and removed to Saipan in 1695. A final resettlement took place when Chamorros residing on Saipan were removed to Guam in 1698, leaving only Guam and Rota occupied at the beginning of the 18th century (Underwood 1973:17).

Concentrating the people on Guam led to more famine and epidemics, **SO** that by 1710 when a count was made, only 4000 natives were still alive on Guam and Rota; of these, at least 3,500 were on Guam (Thompson 1945). Decline continued for the next 50 years; by 1764 there were fewer than 1800 Chamorros and mixed individuals. The native population of all the Marianas reached **its** lowest point in 1786, but the lowest point for Rota was 1753, according to Freycinet (1829). Also, around 1700:

The three principal islands of Guam, Rota and Tinian together are said to have contained about fifty thousand people. But since that time Tinian has been entirely depopulated and only two or three hundred Indians left at Rota to cultivate for the island of Guam so that now no more than Guam can be properly said to be inhabited (Anson 1742).

A major epidemic killed a large number of people in 1779 (Safford 1901). By 1784 only 1,585 Chamorros resided in the Marianas, and a series of epidemics over the next century reduced the population even more. For more

than a century the islands north of Rota were completely uninhabited; they were not completely deserted as hunters from Guam visited Tinian and sporadic attempts were made ,to resettle Saipan and Agrihan.

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Finally, the. population began to rebound. Taeuber and Han (1950:96) report that the Spanish encouraged movement particularly of Tagologs from Luzon, and that the Spanish soldiers mingled with the native women. Thus,. In the 19th century numbers began to Increase, haltingly at first, then more rapidly.

Caroline Islanders traditionally voyaged long distances In canoes, to_ trade goods and services, and out of a sense of adventure. In 1788, for example, a group of Caroline Islanders in outriggers arrived on Guam and started new trading partnerships, reviving an ancient trade with residents of the Marianas. According to Corte (1976:86-87), in 1815 canoes from the Truk Islands area came to Saipan, and the 200 Carolinians asked that "they be permitted to establish themselves on these islands, because they had suffered a great hurricane in their own islands which had left them without the means of subsistence."

By 1830, 55 Carolinians were noted as residing on Saipan (Olive 1887). In 1835 the total population of the island was 1885 (Spoehr 1954). The Carolinian settlement was augmented somewhat following the great earthquake and tidal wave which apparently hit many Caroline Islands, as well as Guam, in 1849, leading survivors of the calamity to flee their ravaged atoll homes and seek refuge elsewhere in Micronesia. An additional 41 Lamotrekese came to Saipan at this time (Safford 1901), "so that the total population of Saipan had reached 267 by 1851" (Underwood 1973:23). (In 1849 a Filipino was sent to Saipan as a catechist, perhaps the first Filipino immigrant to the CNMI). Hence, the actual resettlement of Saipan was not by Chamorros but by Carolinians (Spoehr, 1954: 70). Gradually, Carolinians started small colonies on Guam, Saipan, and Tinian.

Although Chamorro immigrants began to move to Saipan a few years after the initial Carolinian settlement in 1815, the number of residents actually decreased until 1850 (Underwood 1973:29).

By 1855, there were 266 Carolinians on Saipan (Olive 1887), although Corte (1876:87) claims most were Chamorro "but some 80 came from the Carolines on two expeditions by a ship". Many more Carolinians **came after a severe** smallpox epidemic in 1856 (Thompson 1941:31). In fact, by 1863, the total population of Saipan had increased to 420,- but most of the growth was from Immigration since in 1865 the recorded population was 433 (424 Carolinians and 9 Chamorros) (Spoehr 1954:71) with all of them living in Garapan or 435 (Wheeler 1900).

Fritz (1904) reports that between "1865 and 1869, more than 1,000 workers from Lamotrek, Satawal, and Elato settled on Pagan, Saipan, and Guam CTamunig), and workers from Unans, Biarrat [Pisarech], and Unon [UM] settled in Tinian " (1904:37). It is likely that there was an earlier contingent of some 600 Carolinians who were brought to Guam on labor contract about 1861, and, when an additional 95 Carolinians were brought in April, 1868, about 450 Carolinians resided around what is now Tamuning (Beers 1944, Ibanez 1886).

By 1870, some 686 persons lived In the single village of San Ysidro de Garapan, in one of three wards, of which two were occupied by Carolinians and one by Chamorros (Olive 1887). Corte (1876) disagrees with this count, writing in the 1870s that on Saipan there were "420 souls, the major part of them from the Carolines". Following the resettlement of some 200 Carolinians resident on Tinian to Saipan about 1886, an additional village, Tanapag, was established on Saipan. Thus, the total population of Saipan in 1886 was 1023, with 819 living in Garapan village and 204 In Tanapag (Olive 1887).

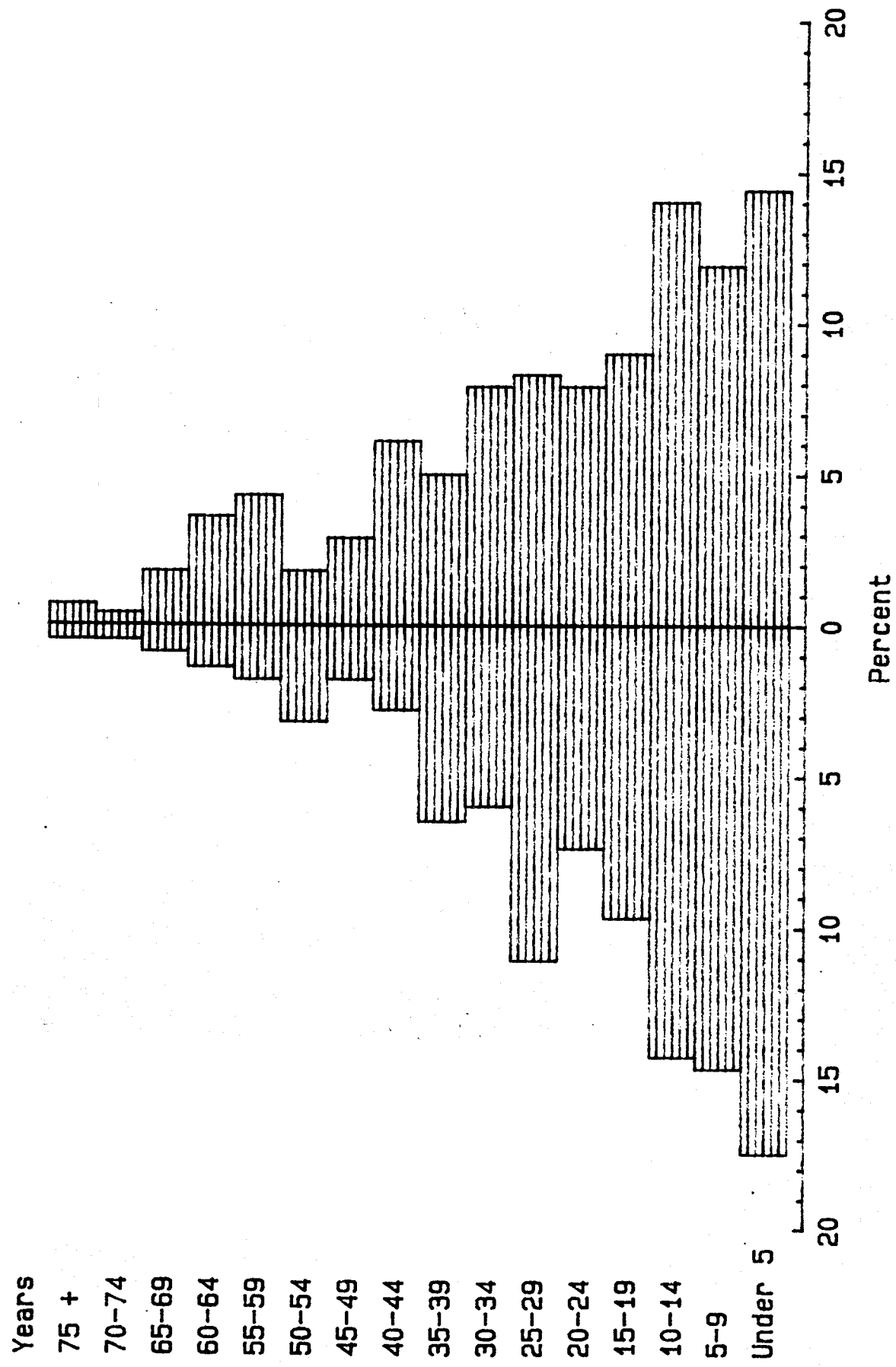
For Rota, there was a slow, but steady, Increase in population during the first half of the 19th century, increasing from about 300 people in the 1790s to 438 residents as of December 31, 1832. Following the epidemic of 1849, and the climatic disturbances of that time, the population declined to **349** by 1855. The smallpox epidemic of 1856 exerted a further depressing effect so that, despite the influx of Carolinian Immigrants, the total population of Rota was only 335 in 1865 (**Wheeler 1900**). **Probably** as a result of the Influx of immigrants, the population increased rather rapidly to 442 in 1866, but decreased to 326 in 1872 (Ibanez 1886). Filipinos were sent to Rota in 1877, and a brief period of population growth was seen, probably culminating about 1896 when 504 persons were listed as resident in Rota (1897 Census). Olive (1887) noted a disproportionate number of females, particularly among the Carolinians, in the Rota population in 1885, as well as the differential mortality of males in at least one recorded shipwreck off Rota in this period, but no specific data on age or sex composition of the Rota population is available prior to the 1897 census (see table 1.1) (Underwood 1973:29-30).

Table 1.1. Population of Rota: 1897

Age Group	Numbers			Percent		
	Total	Males	Females	Total	Males	Females
Total	495	217	278	100.0	100.0	100.0
0 to 4	78	38	40	15.8	17.5	14.4
5 to 9	65	32	33	13.1	14.7	11.9
10 to 14	70	31	39	14.1	14.3	14.0
15 to 19	46	21	25	9.3	9.7	9.0
20 to 24	38	16	22	7.7	7.4	7.9
25 to 29	47	24	23	9.5	11.1	8.3
30 to 34	35	13	22	7.1	6.0	7.9
35 to 39	28	14	14	5.7	6.5	5.0
40 to 44	23	6	17	4.6	2.8	6.1
45 to 49	12	4	8	2.4	1.8	2.9
50 to 54	12	7	5	2.4	3.2	1.8
55 to 59	16	4	12	3.2	1.8	4.3
60 to 64	13	3	10	2.6	1.4	3.6
65 to 69	7	2	5	1.4	.9	1.8
70 to 74	2	1	1	.4	.5	.4
75 to 79	3	1	2	.6	.5	.7

Source: Underwood, 1973:31

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Tinian was also resettled during this period, beginning about 1816, and several colonies of Carolinians were established on the island for varying periods. During the latter half of 1800s, a 'single village, San Luis de Medina, was maintained, and, by 1886, the total population of Tinian consisted of 235 Carolinians, some 18 Inmates of the leper colony, and the Chamorro administrator and his family (Olive 1887).

There seems to have been little further Carolinian migration at this time, so for all of the Marianas, during the 1880s, the Carolinian population remained at about 1000. Thompson (1941:31-32) notes that "by 1899 there were 50 Carolinians on Guam, localized In the village of Tumuning (Dunca's Beach) on the northwest coast...under pressure by the American administration which objected particularly to their semi-nudity, the Guam group was moved to Saipan".

The first Carolinian migrants were from Satawal and, over the years until 1870, other Carolinian migrants followed from Lamotrek, Satawal, and other Caroline Islands. The descendants of these Satawalese remaining on Satawal retained land rights on Saipan even though they may never have visited the island; by contrast Alkire (1978:141-2) writes that most Carolinians on Saipan have lost interest in their sending islands.

The Carolinians and Chamorros did not mix well. The Carolinians, for example, "never intermarried with the Chamorros, but retained their own language and customs, living like savages in small huts with only a few leaves spread upon the ground to serve as a floor and bed, subsisting on fish, wild yams and fruits, and resisting all attempts to Christianize them" (1905: 119). Part of the reason there was traditionally little cultural interchange was that Chamorros considered "themselves far superior to their Micronesian neighbors (Thompson 1941:32).

It was not until towards the end on the 19th century that the number of Chamorros began to increase significantly but Chamorros probably did not outnumber the Carolinians until the start of the 20th Century. Rota's population history is more like that of Guam, as population increased steadily, while Tinian was resettled shortly after Saipan (Underwood 1973:29-30), and only around the end of the 19th century were the Northern Islands settled.

GERMAN PERIOD (1899 - 1914)

After Spain's defeat In the Spanish-American war, Guam became a U.S. territory and Spain sold the Northern Mariana Islands to Germany in 1899. From then on the Northern Mariana Islands remained politically and administratively separate from Guam. When Germany took over the Northern Marianas In 1899, Saipan had a population of about 1,938, concentrated in the two west coast villages of **Garapan** and Tanapag (Russell, 1982), and the economy was essentially based on subsistence agriculture, and fishing. The total population of the German Marianas was estimated in 1900 or 1901 to be 2,102 (772 Caroline Islanders and 1330 Chamorros) (German Government 1902:2981). The historic division between the Carolinians and Chamorros remains socially important but is not recognized in statistical analyses.

By 1902, there were 2,401 persons living in the Northern Marianas (Table 1.2). About 2/3rds of the natives were Chamorro, and 1/3 were Carolinian. Although most of the Carolinians were living on Saipan, the Northern Islands had the highest percentage of Carolinians, with 2/3rds of those islands being Carolinian. Tinian was more than 62 percent Carolinian, but Rota was almost 90 percent Chamorro.

Table 1.2. **Population** by Island: 1902

Island	Number			Percent			
	Total	Chain- orros	Caro- linians	Total	Chain- orros	Caro- linians	Other
Total	2401	1505	852	44	100.0	62.7	35.5 1.8
Saipan	1631	967	621	43	100.0	59.3	38.1 2.6
Rota	490	440	49	1	100.0	89.8	10.0 .2
Tinian	95	36	59	0	100.0	37.9	62.1 0.0
Northern Is..	185	62	123	0	100.0	33.5	66.5 0.0

Source: Hermann 1910; Fritz 1904

The migration of Carolinians to the Northern Marianas continued during the German period. Fritz, for example, notes that, "all those [Carolinians] who lived in Guam, more than 100 in all, came to Saipan. They preserved the traditions of their group in clothing, songs, and dances as well as in their language" (1904:37-38).

JAPANESE PERIOD (1914 - 1944)

To both the Spaniards and the Germans the Islands of Micronesia were tangential to other, more important areas. When the Japanese took over after the defeat of the Germans in the Pacific in 1914, however, there were great changes. The South Sea Islands were a critical segment of the strategic areas which Japan envisioned as necessary springboards toward continental hegemony and an ultimate imperial status comparable to the great powers of Europe. The Japanese were able to use the great production possibilities of these islands, employing labor intensive economic structures. The goals were economic and strategic, not social and demographic.

The major demographic transformation of Nanyo-gunto [Japanese Micronesia] was a by-product of the use of the limited lands of the Marianas by Japanese laborers engaged in the production and processing of sugar cane. Not only did large numbers of Japanese move to various areas of Micronesia to work and to oversee the operations of the South Seas Development Company, but large numbers of Micronesians were moved, some willingly, some not, transforming the age, sex, and ethnic distribution in the islands.

After 1935, when it was clear that Japan intended to become a great power comparable to the European powers, the military build-up brought still more Japanese to the islands. During the height of Japanese activity, Saipan had as many as 25,000 Japanese nationals and troops, Rota somewhat less than 10,000 Japanese troops, and Tinian 17,000-plus Japanese, Okinawans, and Koreans. On Rota, native population growth followed an erratic pattern, with the native population size not even doubling between 1897 and 1950 (Underwood 1973:38). Smith (1972) has shown that emigration is a major factor in the low rate of population growth for this Island. After World War II, Tinian experienced a four-fold increase in population size because of re-colonialization, partly by a colony of Chamorros resident on Yap Islands.

Underwood, in Investigating population trends in the Marianas found:

Perhaps the more interesting pattern of population growth has taken place on Saipan where population size has tripled since 1901. However, marked differences characterize the Chamorro and Carolinian segments of the resident population. While the Chamorro population increased four-fold during the period of 1901 to 1950, the Carolinian population had not quite doubled in the same period. Since it seems unlikely that any ethnic bias was at work in the estimated 300 native deaths incurred in the hostilities which ravaged Saipan at the end of World War II, no ready explanation of this sort seems able to account for this marked difference. Suggestive evidence of a demographic contrast between the two groups on Saipan is indicated by Military Government data for the early post-war years. Pending the availability of more detailed census data, these materials seem to confirm the comments of the Spanish observers of the late 19th century concerning the low fertility of the Carolinians in the Mariana Islands and to hint at a change in the direction of Chamorro patterns among the Carolinians in recent years (Underwood 1973:39).

In a review article published in 1950, Taeuber and Han described the growth of the Chamorro and the Carolinian communities during Japanese times:

Over-all stability or slow increase masked-sharply divergent trends among the various island peoples. The Chamorros, modern descendants of the Mariana Islanders whose surviving fragments had been revived biologically and adjusted psychologically within the Catholic culture of the Spaniards on Guam during their centuries-long sojourn there, increased at a generally accelerating rate. Their numbers increased almost one-third in the fifteen years between 1920 and 1935. The Kanakas, who, Included the native peoples of the Caroline and Marshall Islands plus a few Polynesians, increased less than three percent in this fifteen-year period. The more rapid growth of the Chamorros than of the Kanakas is reflected in the younger ages in 1935.

Our own analysis of the Japanese figures, however, comes up with different results. Although we do not have information by ethnicity for 1920, Table 1.3. shows the Taeuber and Han figures compared to those we have found in the Japanese census materials. We have assumed that all "Kanakas" were Carolinian; still, this does not explain the discrepancy between the two sets of figures. Since our Japanese is not fluent, we may have misinterpreted some of the figures, but our findings of internal consistency have encouraged us to show these data.

Table 1.3. Change in the Native Population: 1920 to 1935

Year	Numbers				Percent Change		
	----- Percent -----						
	Total	Cham- orros	Caro- linians	Cham- orro	Total	No - orros	Caro- linians
Taeuber and Han:							
1920	3398	2824	574	83.1	...	...	...
1925	3493	2952	541	84.5	2.8	4.5	-5.7
1930	3829	3301	528	86.2	9.6	11.8	-2.4
1935	4297	3720	577	86.6	12.2	12.7	9.3
Borja and Levin:							
1920	3398	2512	886	73.9	...	...
1925	3493	2578	915	73.8	2.8	2.6	3.3
1930	3829	2846	983	74.3	9.6	10.4	7.4
1935	4297	3274	1023	76.2	12.2	15.0	4.1

Source: **Japanese** Censuses of 1930 and 1935

There seems to have been little further Carolinian migration at this time, so for all of the Marianas, during the 1880s, the Carolinian population remained at about 1000. Thompson (1941:31-32) notes that "by 1899 there were 50

Carolinians on Guam, localized in the village of Tumuning (Dunca's Beach) on the northwest coast...under pressure by the American administration which objected particularly to their semi-nudity, the Guam group was moved to Saipan".

Although Taeuber and Han show a decrease in the number of Carolinians in the 1920s in the Northern Marianas, it seems that the Carolinians may have actually increased, at least in the latter part of the period. The Chamorros also increased significantly during the period. But the big differences appear in the proportions of Chamorros and Carolinians in the population. Taeuber and Han show percentages of Chamorro 6 more than 80 percent; our own analysis shows percentage Chamorro to be about 75 percent during the period.

Table 1.4 shows the distribution of Chamorros and Carolinians by locality in 1925, 1930 and 1935. The geographic distribution of Chamorros and Carolinians described by earlier writers continued during the **Japanese** period.

Table 1.4. **Population** by Ethnicity: 1925 to 1935

	1935		1930		1925				
Island	Total	Chaco- Carol- orros inians	Total	Chaco- Carol- orros inians	Total	Chaco- Carol- orros inians			
Total	4297	3274	1023	3813	2841	972	3480	2579	890
Saipan.....	3194	2331	863	2910	2061	849	2639	1863	776
South Garapan ..	1300	635	665	1074	387	687	977	346	631
North Garapan .	1594	1562	32	1592	1576	16	1450	1437	13
Puntan Muchut ...	54	54	0	6	6	0	0	0	0
Gaulo Rai	13	9	4	6	4	2	0	0	0
Tanapag	221	59	162	227	83	144	201	69	132
Chalan Kanoa	12	12	0	5	5	0	11	11	0
Rota.....	788	782	6	644	639	5	487	484	3
Tinian.....	24	23	1	43	41	2	180	169	11
Northern Is.....	291	138	153	216	-100	116	163	62	100
Anatahan -----	82	3	79	66	1	65	48	I	47
Pagan -----	131	103	28	122	94	28	86	61	25
Alamagan	20	20	0	5	5	0	0	0	0
Sariguan	21	11	10	23	0	23	23	0	23
Agrigan	37	1	36	0	0	0	5	0	5

Source: Japanese Census 1935

By 1930, the Carolinian population was aging compared to the Chamorro population. Fully 1 in 4 Carolinians was between 25 and 39, compared to only 18 percent of the Chamorros. The median age of Chamorros in 1930 was 18.2, less than the 20 years for Carolinians, and 18.8 years for all persons.

Table 1.5. Population by Age, Sex, and Ethnicity: 1930 -----

	Total			Males			Females		
Age Group	Chain- Carol- Total orros inians			Chain- Carol- Total orros inians			Chain- Carol- Total orros Inians		
Total	3829	2846	983	1945	1455	490	1884	1391	493
Percent.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
0-4 years...	16.9	17.5	15.3	16.5	17.4	13.7	17.4	17.6	16.8
5-9 years...	12.2	12.3	12.0	13.0	12.6	14.1	11.5	12.1	9.9
10-14 years.	12.0	12.5	10.6	11.5	12.4	9.0	12.5	12.7	12.2
15-19 years.	11.7	12.0	10.8	12.5	12.6	12.4	10.8	11.9	9.1
20-24 years.	10.0	9.9	10.5	10.4	10.4	10.6	9.6	9.3	10.3
25-39 years.	20.0	18.3	24.6	19.9	17.3	25.5	20.5	19.4	23.7
40-59 years.	13.5	13.2	14.1	13.2	13.3	12.9	13.7	13.2	15.4
60 + years..	3.7	4.2	2.1	3.5	4.1	1.8	3.9	4.4	2.4
Median	18.8	18.2	20.6	18.6	18.1	20.1	18.9	18.3	21.0

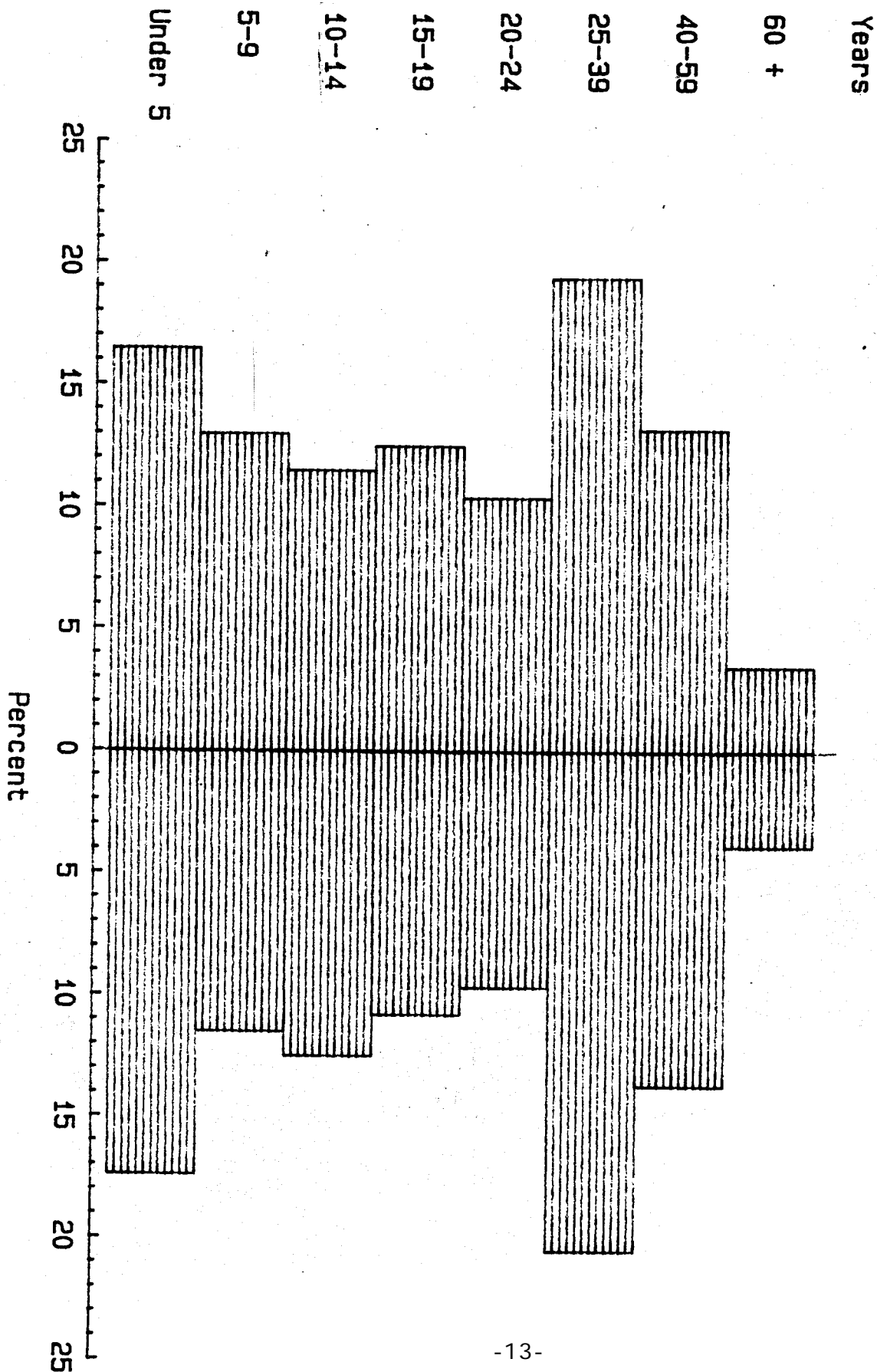
Source: Japanese Census, 1930

In 1930, almost 3 of every 4 Natives living In the Northern Mariana Islands had been born in the locality where he or she was living (Table 1.6). Another 11 percent were born in a different locality, but In the Northern Mariana Islands, and 3 percent were born in another district of what was to become the Trust Territory of the Pacific Islands. Finally, 12 percent were born on Guam.

While more than 80 percent of persons living In Rota had been born there, only 4 of the 43 Natives living on Tinian in 1930 were born there. Only about a third of-the people living on Pagan and Anatahan were born there, but only 1 of the 16 people living on Alamagan and 2 of the 22 living on Sariguan were born on that islands. Apparently all of the Northern Islands were resettled some time before 1930.

More than 3 out of every 4 persons living in Saipan in 1930 were born on Saipan. This same proportion had been born and were living in Garapan, and 2 of every 3 living in Tanapag had been born there; about 1 in 6 of those living in Tanapag, however, had been born In some other locality In the Northern Mariana Islands.

Age and Sex Distribution: 1930



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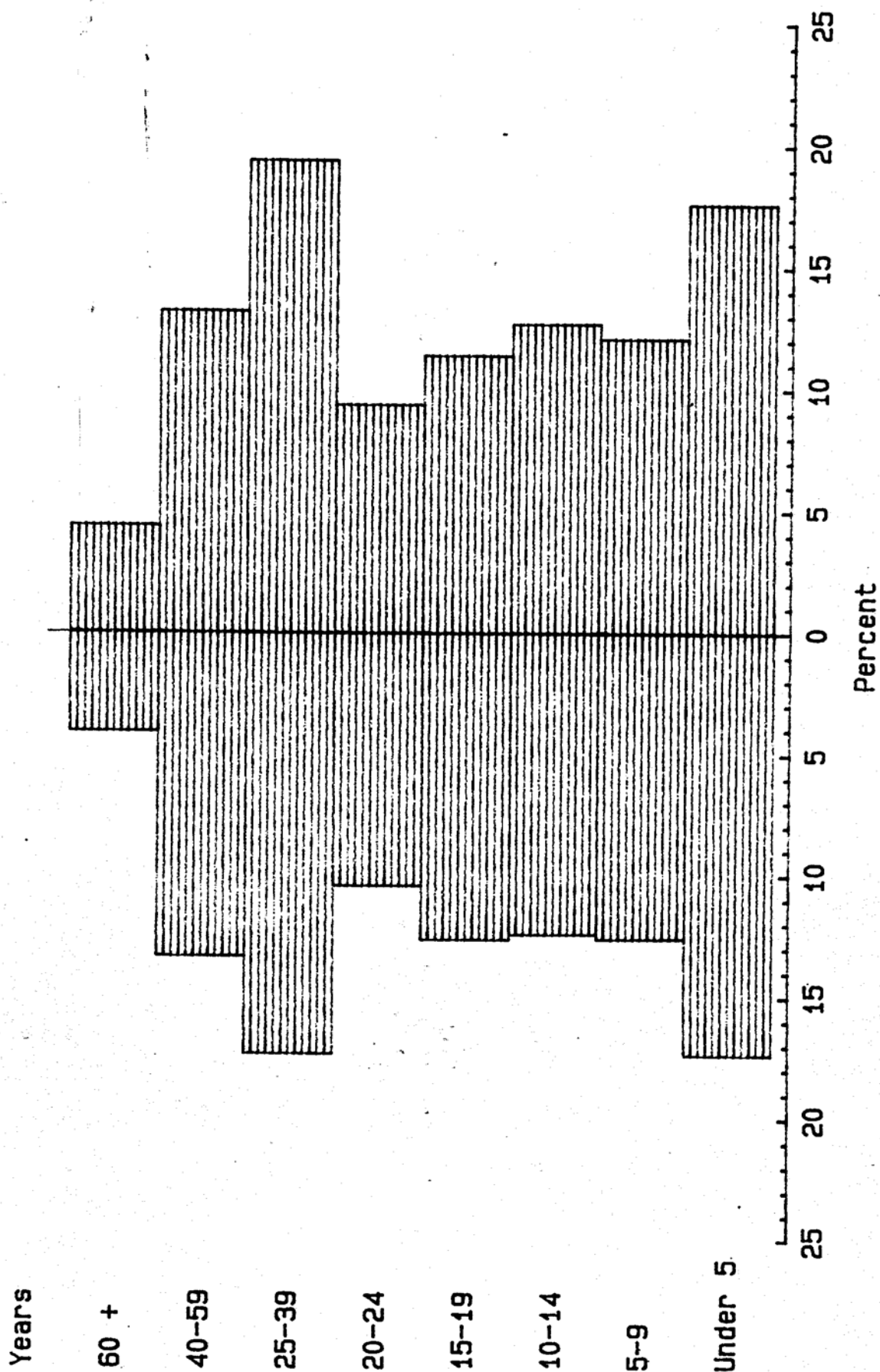


FIGURE 1.4

Age and Sex Distribution for Carolinian: 1930

Years

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40-59

25-39

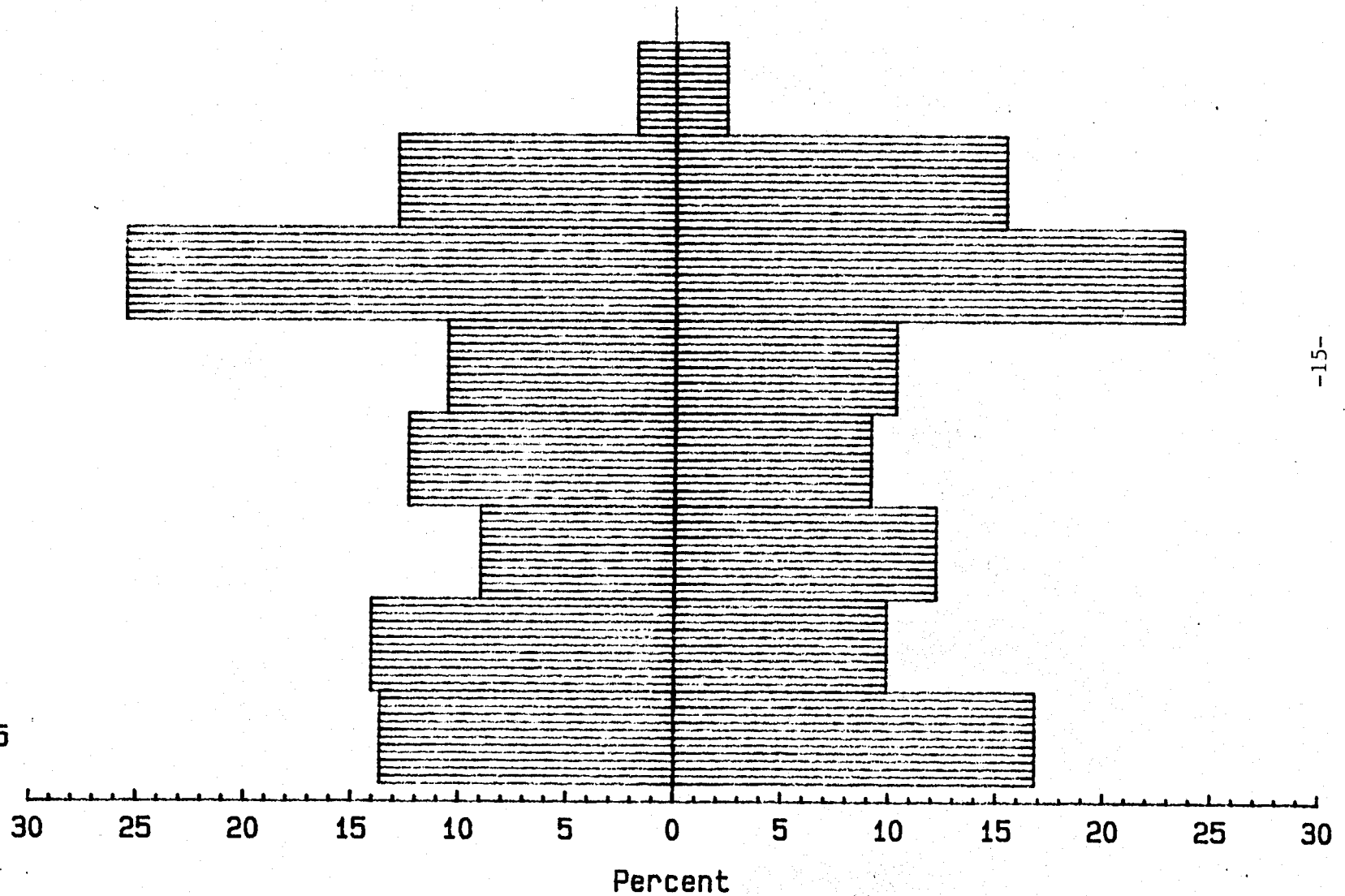
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Under 5



As noted in the discussion of the earlier administrations, many people were moved to Guam at various times and for various reasons. Although 12 percent of the total population of natives in 1930 had been born on Guam, 16 percent of those in North Garapan and 20 percent of those on Pagan had been born there - 9 of the 43 people living on Tinian, and 5 of the 22 living in scattered settlements outside the main settled areas of Saipan.

Table 1.6. Birthplace of de Facto Population: 1930

Residence	Number				Percent							
	Same		Other		Same		Other		Guam			
	Local-	Dist-	Dist-	Guam	Local-	Dist-	Dist-	Guam				
	Total	ity	ri	ct	Total	ity	ri	ct				
CNMI.....	3829	2839	405		114	471	100.0	74.1	10.6	3.0	12.3	
Saipan	2915	2253	168	104	390	100.0	77.3	5.8	3.6	13.4		
S. Garapan ...	1074	838	76	53		107	100.0	78.0	7.1	4.9	10.0	
N. Garapan ..	1592	1245	55		25	267	100.0	78.2	3.5	1.6	16.8	
Tanapag	227	154	36	26	11	100.0	67.8	15.9	11.5	4.8		
Other	22	16	1	0	5	100.0	72.7	4.5	0.0	22.7		
Rota	644	520	79	2		43	100.0	80.7	12.3	.3	6.7	
Tinian	43	4	30	0	9	100.0	9.3	69.8	0.0	20.9		
Sariguan	22	2	19	1	0	100.0	9.1	86.4	4.5	0.0		
Alamagan	16	1	12	1	2	100.0	6.2	75.0	6.2	12.5		
Pagan	122	39	56	3	24	100.0	32.0	45.9	2.5	19.7		
Anatahan	64	20	41	3		0	100.0	31.2	64.1	4.7	0.0	

Source: 1930 Japanese Census Report, Natives Only

The distribution by birthplace for Chamorros in 1930 was similar to that of the population as a whole, except in the case of a few of the Northern Islands (Table 1.7). Only 9 percent of the Chamorros were born in other localities in the CNMI, more than 15 percent were born on Guam, and less than 1 percent were born in other districts. There were no Chamorros on Sarigua or Anatahan in 1930, and only 5 of the 16 on Alamagan were Chamorro (the rest were Carolinian migrants.)

None of the 5 Chamorros living on Alamagan were born there. And although 31 percent of those on Pagan were born there, 42 percent were born on other islands in the Northern Mariana Islands, and 26 percent were born on Guam.

Table 1.7. Birthplace of Chamorros: 1930

Residence	Number				Percent				-	
	Total	Same Local- ity	Same Dist- rict	Other Dist- rict	Guam Total	Same Local- ity	Same Dist- rict	Other Dist- rict		
CNMI	2846	2135	248			24	439	100.0	75.0	8.7
.....		8	15.4							
Saipan	2066	1583	101		22 360	100.0	76.6	4.9	1.1	17.4
S. Garapan.....	387	272	35	2			78	100.0	70.3	9.0 .5 20.2
N. Garapan....	1576	1234	55		20 267	100.0	78.3	3.5	1.3	16.9
Tanapag	83	63	10	0			10	100.0	75.9	12.0 0.0 12.0
Other	20	14	1	0		0	100.0	70.05	0.0	0.0
Rota	639	519	77	0			43	100.0	81.2	12.1 0.0 6.7
Tinian	41	4	28	0		9	100.0	9.8	68.3	0.0 22.0
Alamagan.....	5	0	3	0		2	100.0	0.0	60.0	0.0 40.0
Pagan	94	29	39	2		24	100.0	30.9	41.5	2.1 25.5
Anatahan.....	1	0	0	0	0	100.0	0.0	0.0	0.0	0.0

Source: 1930 Japanese Census Report, Natives Only

The 1930 census data show the migration of the Carolinians (Table 1.8). Although 72 percent of the Carolinians were born in the locality where they were living in 1930, 16 percent were born in other localities in the Northern Marianas (compared to 11 percent for the total population), only 3 percent were born on Guam (compared to 12 percent of the whole population), and fully 9 percent were born in other districts (compared to 3 percent for the total population.)

Only Carolinians living on Saipan had been born on Guam. The largest percentage being born and also living in the same locality was South Garapan in which 82 percent of the resident Carolinians were born there.

Table 1.8. Birthplace of Carolinians: 1930

Residence	Number					Percent				
	Same		Other		Guam	Same		Other		Guam
	Local-	Dist-	Dist-	Dist-		Local-	Dist-	Dist-	Dist-	
Total	ity	ri	ct	ri	Total	ity	ri	ct	ri	Total
CNNI	983	704	157	90	32	100.0	71.6	16.0	9.2	3.3
Saipan	849	670	67	82	30	100.0	78.9	7.9	9.7	3.5
S. Garapan	687	566	41	51	29	100.0	82.4	6.0	7.4	4.2
N. Garapan	16	11	0	5	0	100.0	68.8	0.0	31.2	0.0
Tanapag	144	91	26	26	1	100.0	63.2	18.1	18.1	.7
Other	2	2	0	0	0	100.0	100.0	0.0	0.0	0.0
Rota	5	1	2	2	0	100.0	20.0	40.0	40.0	0.0
Tinian	2	0	2	0	0	100.0	0.0	100.0	0.0	0.0
Sariguan	22	2	19	1	0	100.0	9.1	86.4	4.5	0.0
Alamagan	11	1	9	1	0	100.0	9.1	81.8	9.1	0.0
Pagan	28	10	17	1	0	100.0	35.7	60.7	3.6	0.0
Anatahan	64	20	41	3			0	100.0	31.2	64.1
-----	4.7	0.0								

Source: 1930 Japanese Census Report, Natives Only

Table 1.9 summarizes the above data for the two major ethnic groups by locality. In some areas, like Puntan Muchut, Chalan Kanoa, and Alamagan, the population was completely Chamorro; in North Garapan, Rota and Tinian almost all of the people were Chamorro. On the other hand, Tanapag and South Garapan on Saipan were more than half Carolinian, as were the Northern Islands of Anatahan and Agrigan.

Table 1.9. Population by Ethnicity: 1935

Island	Number			Percent		
	Chain- Total	Caro- orros	linians	Chain- Total	Caro- orros	linians
Total.....	4297	3274	1023	100.0	76.2	23.8
Saipan.....	3194	2331	863	100.0	73.0	27.0
South Garapan..	1300	635	665	100.0	48.8	51.2
North Garapan..	1594	1562	32	100.0	98.0	2.0
Puntan Muchut	54	54	0	100.0	100.0	0.0
Gaulo Rai.....	13	9	4	100.0	69.2	30.8
Tanapag.....	221	59	162	100.0	26.7	73.3
Chalan Kanoa.....	12	12	0	100.0	100.0	0.0
Rota.....	788	782	6	100.0	99.2	.8
Tinian,.....	24	23	1	100.0	95.8	4.2
Northern Is.....	291	138	153	100.0	47.4	52.6
Anatahan.....	82	3	79	100.0	3.7	96.3
Pagan.....	131	103	28	100.0	78.6	21.4
Alamagan.....	20	20	0	100.0	100.0	0.0
Sariguan.....	21	11	10	100.0	52.4	47.6
Agrigan.....	37	1	36	100.0	2.7	97.3

Source: 1935 Japanese Census

In 1935, the Japanese did not use the same age groups for males and females, so it was necessary to use very broad age groups to compile the data for both sexes combined, and the data by sex are also somewhat obscured (Table 1.10). The median age for the population in 1935 was 19.1. The population was very youthful, with more than half being under 20. Only Tinian of the islands had a slightly older population.

Table 1.10. Age by Island: 1935

Age	Numbers				Percent					
	Total	Saipan	Rota	Tin- North. ian	Sal- Is.	Total	pan	Rota	Tin-North. ian	Is.
Total..	4297	3194	788	24291	100.0	100.0	100.0	100.0	100.0	100.0
0	204	148	43	1	12	4.7	4.6	5.5	4.2	4.1
1-5	691	519	125	5	42	16.1	16.2	15.9	20.8	14.4
6-14....	875	667	150	2	56	20.4	20.9	19.0	8.3	19.2
15-19...	464	330	96	2	36	10.8	10.3	12.2	8.3	12.4
20-24...	471	352	80	3-	36	11.0	11.0	10.2	12.5	12.4
25-59...	1422	1041	265	10	106	33.1	32.6	33.6	41.7	36.4
60-64...	78	64	13	1	0	1.8	2.0	1.6	4.2	0.0
65-69...	45	36	7	0	2	1.0	1.1	.9	0.0	.7
70 4....	47	37	9	0	1	1.1	1.2	1.1	0.0	.3
Median..	19.1	19.0	18.9	20.0	15.0					

Source: 1935 Japanese Census Report, Natives Only

FIGURE 1.5

Age and Sex Distribution: 1935

Years

60 +

40-59

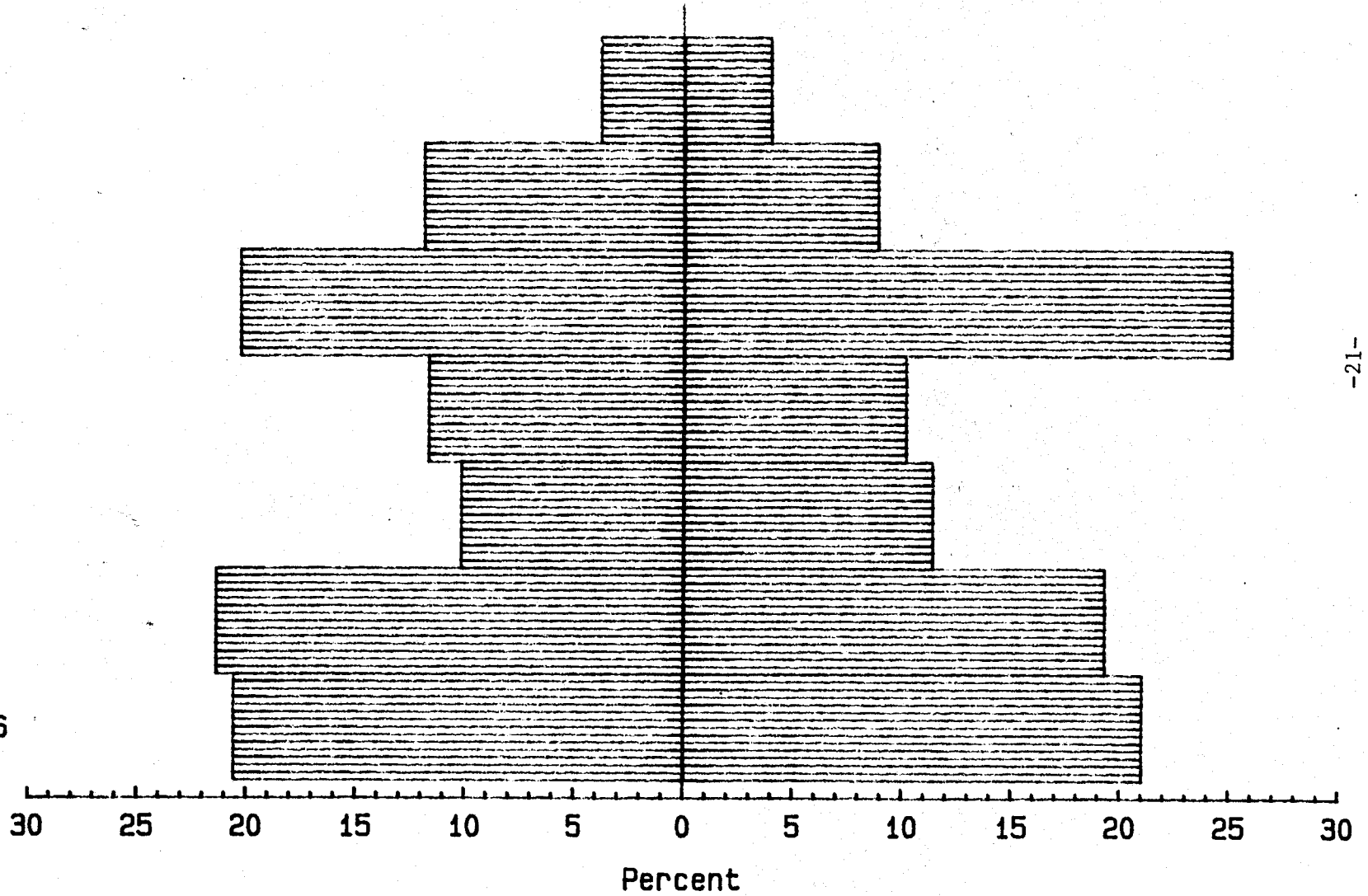
25-39

20-24

15-19

6-14

Under 6



The strange distribution of age groups in the 1935 census is seen in Tables 1.11 and 1.12. For males, the age groups 25 to 39 and 40 to 59 are used, compared to 25 to 44 and 45 to 59 for females. Perhaps this latter grouping for females was made to account for a longer period of fertility, but this seems unlikely since no fertility data were shown in any of these censuses. The data by sex had very similar distributions to those for the whole population.

Table 1.11. Age by Island for Males: 1935

Age	Numbers					Percent					
	I Total	Saipan	Rota	Tin- Ian	North. Is.	Sal- Total	pan	Tin-North. Rota	Ian	Is.	
Males.	2217	1611	413	14	179	100.0	100.0	100.0	100.0	100.0	
0	104	78	23	1		2	4.7	4.8	5.6	7.1	1.1
1-5	353	261	65	3		24	15.9	16.2	15.7	21.4	13.4
6-14	474	355	80	2		37	21.4	22.0	19.4	14.3	20.7
15-19 ...	226	153	49	1		23	10.2	9.5	11.9	7.1	12.8
20-24 ...	259	190	44	0				25	11.7	11.8	10.7
25-39 ...	451	314	87	3		47	20.3	19.5	21.1	21.4	26.3
40-59 ...	264	192	50	3		19	11.9	11.9	12.1	21.4	10.6
60-64 ...	40	31	8	1	0	1.8	1.9	1.9	7.1	0.0	
65-69 ...	25	21	3	0	1	1.1	1.3	.7	0.0	.6	
70 +	21	16	4	0	1	.9	1.0	1.0	0.0	.6	

Source: 1935 Japanese Census Report, Natives Only

Table 1.12. Age by Island for Females: 1935

Age	Numbers				Percent					
	Total	Saipan	Rota	Tin- Ian	North. Is. Total	Sai- pan	Rota	Tin-North. Ian	North. Is.	-
Fmles.	2080	1583	375	10	112	100.0	100.0	100.0	100.0	100.0
0.....	100	70	20	0	10		4.8	4.4	5.3	0.0 8.9
1-5.....	338	258	60	2	18	16.2	16.3	16.0	20.0	16.1
6-14....	401	312	70	0	19	19.3	19.7	18.7	0.0	17.0
15-19...	238	177	47	1	13	11.4	11.2	12.5	10.0	11.6
20-24...	212	162	36	3	11	10.2	10.2	9.6	30.0	9.8
25-44...	522	397	89	3	33	25.1	25.1	23.7	30.0	29.5
45-59...	185	138	39	1	7	8.9	8.7	10.4	10.0	6.2
60-64...	38	33	5	0	0	1.8	2.1	1.3	0.0	0.0
65-69...	20	15	4	0	1	1.0	.9	1.1	0.0	.9
70+	26	21	5	0	0	1.2	1.3	1.3	0.0	0.0

Source: 1935 Japanese Census Report, Natives Only

The Japanese had a vital registration system for both the Natives and the Japanese themselves. The death rates for Natives were the first collected regularly by any of the administrations, and were very high (Table 1.13). It is not clear whether there was generally ill health because of the kind of work the natives were forced to do for the Japanese, the apparent movements of Natives by Japanese to do this work, diseases introduced by the Japanese and others, or some combination of forces. The birth rates were also very high, which continued into the American Administration.

Table 1.13. Birth and Death Rates: 1924 to 1935

Period	Births	Deaths
	Per 1,000 Persons	Per 1,000 Persons
1924.....	40.6	18.2
1924-1930..	41.7	25.7
1925	33.2	28.6
1925-1929..	41.3	29.2
1931-1937..	38.9	23.8
1935	38.0	18.9

Source: Preliminary Report: Marianas District

AMERICAN ADMINISTRATION

The American Administration in the Northern Marianas started soon after World War II ended with the defeat of the Japanese. The **population** of natives in the Northern Marianas remained at the low levels experienced during the Japanese period for a short time after the war, and then shot up suddenly, at least based on Navy censuses (Table 1.14). About 3 out of every 4 natives were Chamorro during this period.

It is not clear when all of the **Japanese** left the area. In a paper called "Preliminary Report on the Population: Marianas District", prepared by the Office of the Marianas District Planner, June 24, 1974, and distributed in mimeograph, the author notes that "In 1945 the U.S. Navy counted 2,966 Chamorro and 1,025 Carolinian along with **13,954 Japanese** and **1,411 Koreans**. The **1949** total **population** was recorded at 6,255...". If the U.S. Navy count referred to here was taken late in the year, it conforms with the data presented by Underwood, showing the rapid influx of Chamorros and Carolinians from other areas.

Table 1.14. Change In the Native Population, Saipan: 1944 to 1947

Date	Number		Percent		Percent Change from Census		
	Total	Chain- orros	Caro- linians	Chain- orro	Total	Chain- orros	Caro- linians
7/5/1944	3040	2258	782	74.3	...		
4/11/1945	3236	2426	810	75.0	6.4	7.4	3.6
7/1/1947	4796	3754	1042	78.3	48.2	54.7	28.6

Source: Underwood 1973:39

The large **Jump** from 1945 to 1947 cannot be explained only by natural increase, so if the 1947 data are right, a large number of Chamorros and Carolinians either returned or immigrated to the Northern Marianas soon after the War. Underwood has written that:

population distribution in the Mariana Islands outside of Guam underwent radical changes during the period 1899 to 1950 as natives were displaced to limited areas by the burgeoning demands of the Japanese military and agricultural programs. Saipan became a major sugar growing and refining center, as well as a key airport in the Japan-Saipan-Palau route, providing additional economic opportunities to the native residents (1973).

At the end of World War II 6 villages on Saipan emerged: Chalan Kanoa, with 3,845 residents in 1950, while the smaller villages of Susupe (Yaptown), Oleai (Chalan Laulau), San Antonio, Aslito, and (New) Tanapag supported populations of less than 300 each at the same date (Taylor, 1951). Both Rota

and Tinian consisted of single villages. Only a few of the Northern Islands - Agrigan, Alamagan, Anatahan, Pagan, and Sariguan - were settled, and while they briefly supported intensive **Japanese development programs** and remained populated during midst of the Japanese, the populations have always remained small.

Under the Trusteeship established by the United Nations, and administered by the United States, annual reports to the United Nations Trusteeship Council were required so that progress could be monitored. In connection with these reports, annual censuses were taken by the Trust Territory of the Pacific Islands Administration (under the High Commissioner's Office).

NOTE: This portion was intentionally left blank.

These censuses were not censuses in the traditional sense, but tended to be counts of the population made by the Health Aides or other government officials who were not trained in census enumeration procedures. The censuses seem to have been combinations of de facto and de iure censuses, combining population who were on the Island on whatever day the enumerator decided to count the population (de facto) with whomever the enumerator felt belonged to (modified de jure). Thus, in the aggregate, particularly for the Northern Mariana Islands which has few islands, and relatively stable population patterns, the data show real trends, (but for some of the other areas of TTPI, a lot of noise appears in the figures). The population change by 15 years for the Northern Mariana Islands is shown in Table 1.15.

The population of the CNMI more than doubled between 1949 and 1973, each of the islands (municipalities) except the Northern Islands increased population as well. Even the Northern Islands showed population stability until the mid-1960s, and probably only started decreasing then because of increased educational and economic opportunities on Saipan and the other arising out of the expansion of government services provided by the American Administration.

Table 1.15. Population by Island: 1949 to 1973

Year	Total	Saipan	Rota	Tinian	Northern Islands
1949	6,225	4,898	681	364	282
1950.....	6,286	4,943	686	368	289
1951	6,506	5,059	753	405	289
1952	6,701	5,209	753	390	349
1954	7,372	5,800	847	437	288
1955	8,494	6,781	893	470	350
1956.. ..	8,494	6,781	893	470	350
1957.....	8,042	6,270	962	463	347
1958	8,220	6,611	970	367	272
1959	8,319	6,666	990	455	208
1960	9,134	7,317	996	468	353
1961.....	9,300	7,464	1,014	467	355
1962	9,586	7,830	1,054	416	286
1963.....	10,062	8,151	1,080	486	345
1964.....	10,275	8,404	1,108	495	268
1965	10,486	8,422	1,182	544	338
1966	10,743	8,664	1,142	596	341
1967.....	10,986	9,035	1,078	610	263
1971	13,074	10,458	1,727	781	108
1972	13,381	10,745	1,727	779	130
1973	14,333	12,382	1,104	714	133

Source: TTPI Annual Reports

Table 1.16. shows the population change for the Northern Islands. Anatahan and Sariguan Island were only inhabited during the middle part of the period; Alamagan, Pagan, and Agrihan were Inhabited continuously throughout the period, but with wildly fluctuating populations. These three remained inhabited until a volcanic eruption on Pagan in the early 1980s, causing the people residing there to leave.

Table 1.16. Population of the Northern Islands: 1949 to 1973

Year	Northern Islands	Alamagan	Pagan	Agrihan	Ana- tahan	Sari- guan
1949.....	282	136	0	146	0	0
1950.....	289	135	0	154	0	0
1951.....	289	145	0	144	0	0
1952.....	349		88	173	0	0
1954.....	288	80	107	90	11	0
1955.....	350	82	76	128	64	0
1956.....	350	82	76	128	64	0
1957.....	347	93	81	120	53	0
1958.....	272	57-	75	94	35	11
1959.....	208	54	0	102	43	9
1960.....	353	81	93	113	32	34
1961.....	355	89	93	116	25	32
1962.....	286	40	65	126	37	18
1963.....	345	41	70	157	46	31
1964.....	268	48	49	148	14	9
1965.....	338	50	91	161	21	15
1966.....	341	63	96	131	32	19
1967.....	263	15	87	94	64	3
1971.....	108	2	54	52	0	0
1972.....	130	24	56	50	0	0
1973.....	130	25	57	48	0	0

Source: TTPI Annual Reports

One of the accomplishments of the American Administration in the Trust Territory of the Pacific Islands was its contribution to the improved health of the **population**. The population became healthier and lived longer. The mortality rates dropped precipitously from the Japanese period to between 6 and 7 deaths per 1000 per year for 1955 to 1979 (Table 1.18). The birth rate also decreased during the period on the basis of registered births, from 52 per 1000 during the 1955 to 1959 period to 39 per 1000 during the period 1975 and 1979. Some of this decrease must be attributed to Improved health care, since morbidity and mortality decreased, therefore Increasing the likelihood that a pregnancy would come to full term, and that the child would survive when born. Infant deaths did increase during the late 1960s and early 1970s, but had decreased considerably by the end of the decade.-

Table 1.17. Vital Rates: 1955 to 1979 -----

Year	Fstim. Popu- lation	Births	Birth Rate	Infant Deaths	Infant Death Rate	Deaths	Death Rate	Natural Increase	Rate of Natural Increase	
1955-59	7951	2065	51.9	(NA)	(NA)	253	6.4	1812	45.6	
1960-64	9671	2128	44.0		76	35.7	315	6.5	1813	37.5
1965-69	11099	2322	41.8		109	46.9	379	6.8	1943	35.0
1970-74	12134	2508	41.3		108	43.1	409	6.7	2099	34.6
1975-79	14362	2783	38.8		73	26.2	452	6.3	2331	32.5

Source: Population from Annual Reports; births and deaths from registration

In Chapter 5 we will be discussing fertility based on the 1973 and 1980 censuses.

However, it is appropriate to discuss fertility based on the administrative records of the American Administration here. If we use the 1967, 1973 and 1980 censuses to provide the women exposed to pregnancy in the years between 1967 and 1979, and the registered births by age of mother for the Northern Mariana Islands, we find that the total fertility rates decreased from 7267 during the 1967 to 1970 period, to 5165 between 1971 and 1975, to 4507 between 1975 and 1979 (Table 1.18). In other words, the average women living in the CNMI between 1967 and 1970 had an average of 7.3 children during her reproductive period, but this decreased to 5.2 during the middle period, and 4.5 during the final period. We will see later that some of the decrease can be attributed to delay in first marriage, but much of it must be attributed to fertility control, probably brought on by increased access to the workplace for females.

Table 1.18. Age Specific and Total Fertility Rates: 1967 to 1979

	Women			Births			ASFR				
Age Group	1976- 1979	1971- 1975	1976- 1970	1976- 1979	1971- 1975	1976- 1970	1976- 1979	1971- 1975	1976- 1970		
15 to 19			3443	4222	2969	391	472	351	114	112	118
20 to 24			3018	3243	1765	803	953	611	266	294	346
25 to 29			2464	2247	1182	591	552	396	240	246	335
30 to 34			1874	1591	985	293	310	314	156	195	319
35 to 39			1310	1465	925	115	177	221	88	121	239
40 to 44	1126	1188	703	40	77	60		36	65	85	
45 to 49	905	891	635	2	1	7		2	1	11	
TFR...								4507	5165	7267	

Source: Numerators from registered births, Denominators Interpolated from 1967, 1973 and 1980 censuses.

CENSUSES UNDER THE AMERICAN ADMINISTRATION

1

During the American Administration there have been 5 full-fledged censuses, including a census in 1958 undertaken by the High Commissioner's Office, a health census taken by the United States Peace Corps in 1967, the 1970 Decennial Census, an official census taken by the High Commissioner's Office in 1973, and the 1980 Decennial Census.

1958 Census. This census was conducted by the High Commissioner's Office and was used at the official 1960 census by the U.S. Bureau of the Census and other Federal Agencies. The enumeration and tabulation procedures are not known, nor is the whereabouts of the data.

The census tabulations were mostly by ethnicity which has obscured their use for this monograph; in most cases data on Chamorros are presented separately, but not by place, and no comparable census data for Carolinians were presented at all. The data seem to be internally consistent and reliable.

In 1958 Rota and Saipan were still separate districts, so when data were tabulated by district, these were tabulated separately. Tables 1.19 through 1.21 show the age and sex distributions for the Northern Mariana Islands, and for Rota, and the rest of the CNMI separately. The data were grouped by 10 year age groups, rather than 5 year groups, thus making comparisons with other data sets somewhat difficult. The median age for males was 11.9 and for females was 12.6.

Table 1.19. Population by Age and Sex: 1958

Age Group	Numbers			Percent		
	Total	Males	Females	Total	Males	Females
Total	8290	4169	4121	100.0	100.0	100.0
Under 5 years	1750	858	892	21.1	20.6	21.6
5 to 14 years	2499	1250	1249	30.1	30.0	30.3
15 to 24 years	1310	677	633	15.8	16.2	15.4
25 to 34 years.	910	469	941	11.0	11.2	10.7
35 to 44 years	713	356	357	8.6	8.5	8.7
45 to 54 years	549	284	265	6.6	6.8	6.4
55 to 64 years	334	155	179	4.0	3.7	4.3
65 years and over	225	120	105	2.7	2.9	2.5

Source: High Commissioner's Census, Table 14

The population was very young, with more than half under 15 years old. The baby boom which affected much of the rest of the world, also affected Micronesia. Because! of relatively excellent health facilities, mortality was reduced precipitously, and morbidity also was very, very low. The population of Rota was **even** younger than that of the rest of the Commonwealth.

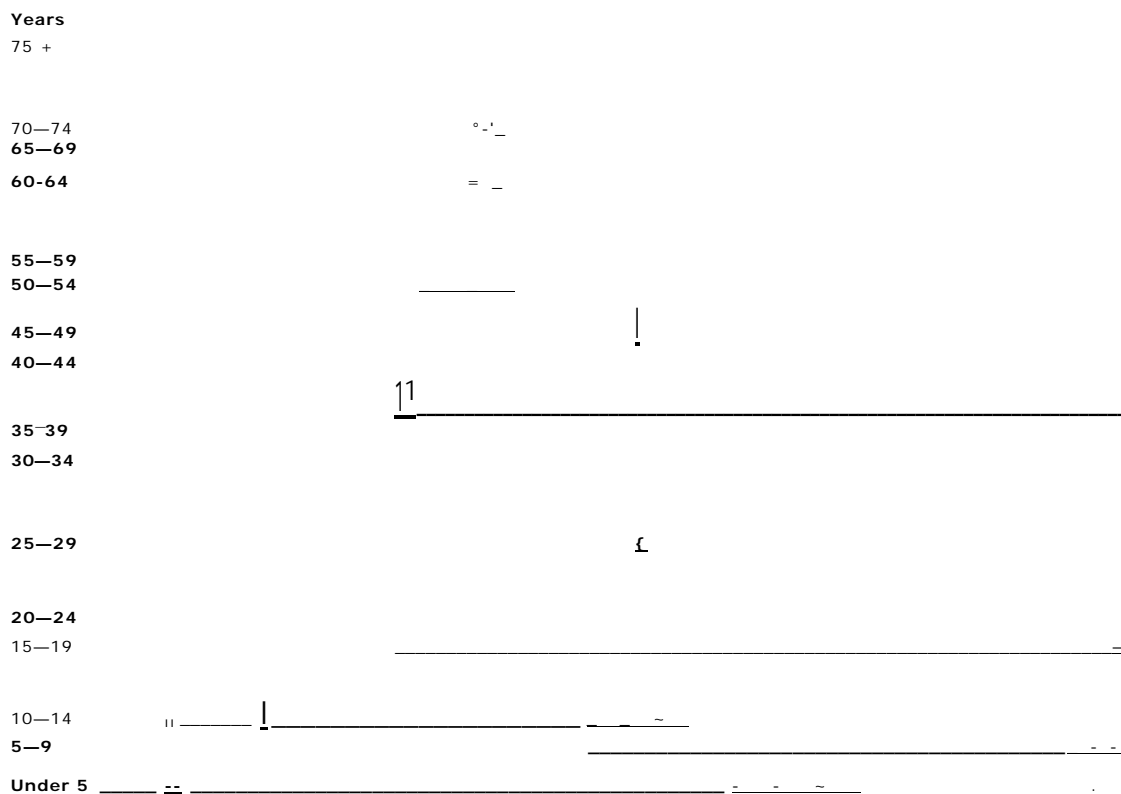
Table 1.20. Population by Age and Sex, Rota: 1958

Age Group	Numbers			Percent		
	Total	Males	Females	Total	Males	Females
Total.....	969	469	500	100.0	100.0	100.0
Under 5 years.....	244	108	136	25.2	23.0	27.2
5 to 14 years.....	301	157	144	31.1	33.5	28.8
15 to 24 years.....	130	63	67	13.4	13.4	13.4
25 to 34 years.....	86	42	44	8.9	9.0	8.8
35 to 44 years.....	82	39	43	8.5	8.3	8.6
45 to 54 years.....	68	36	32	7.0	7.7	6.4
55 to 64 years.....	42	-18	24	4.3	3.8	4.8
65 years and over.....	16	6	10	1.7	1.3	2.0

Source: High Commissioner's Census, Table 14

FIGURE 1.6

Age and Sex Distribution: 1958



22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22
Percent

i

-30--

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Table 1.21. Population by Age and Sex, Saipan, Tinian and N. Islands: 1958

Age Group	Numbers			Percent		
	Total	Males	Females	Total	Males	Females
Total	7321	3700	3621	100.0	100.0	100.0
Under 5 years....	1506	750	756	20.6	20.3	20.9
5 to 14 years.....	2198	1093	1105	30.0	29.5	30.5
15 to 24 years.....	1180	614	566	16.1	16.6	15.6
25 to 34 years.....	824	427	397	11.3	11.5	11.0
35 to 44 years.....	631	317	314	8.6	8.6	8.7
45 to 54 years.....	481	248	233	6.6	6.7	6.4
55 to 64 years.....	292	137	155	4.0	3.7	4.3
65 years and over	209	114	95	2.9	3.1	2.6

Source: High Camissioner's Census, Table 14

1967 Census. The 1967 census data were collected by the **Peace Corps** and tabulated by the Department of Public Health at the University of Hawaii. Not all Islands were enumerated, but all of the Northern Marianas Islands were **covered, and the data** are consistent with other sources. Basic demographic data were collected and tabulated, although number of pregnancies was substituted for number of children ever born. Most of the census was devoted to housing conditions. Individual data are **available** on computer tape at the University of Hawaii and at the East-West Population Institute.

The general quality of the tabulated data is very good, and will be used for comparative purposes, where appropriate, in this monograph. However, due to space requirements, we will not use all data.

1970 Decennial Census. The 1970 Decennial Census was taken in conjunction with the 1970 United States Census. The procedures used in the States were modified, but there were apparently both enumeration and tabulation problems because there were both "misplaced" persons (persons moved from one island to another in the **process of tabulation**) and a **large undercount in some areas, including** the Northern Mariana Islands. The data were processed in the United States and remain on computer tape at the U.S. Bureau of the Census,

1973 Census. When it became apparent that the 1970 census data could not be used for reapportionment of the Congress of Micronesia, **appropriations** were requested to take another census. In 1973, a census was organized under the High Commissioner's Office in conjunction with the South Pacific Commission. This census took place on September 25, 1973. The data were coded in Saipan, and punched and processed at the East-West Population Institute in Honolulu. The data are highly reliable, and are stored on tape at the East-West Center. The original census forms have now been microfiche and are available in Saipan and at the National Archives. These data **will** be used for comparative purposes with the 1980 data whenever possible.

1980 Decennial Census. The 1980 **Decennial** Census was conducted in conjunction with the 1980 U.S. Census. The questionnaire was developed at the Census Bureau but reviewed by **participants** from the Pacific Islands areas in May, 1979, at a **Pacific-areas** conference in Honolulu. Preliminary **tabulations** were also **reviewed** by a representative of the CNMI in Honolulu in December, 1979, at another conference.

The questionnaire was similar to that used in the States, but was modified to account for different conditions in the CNMI. Unlike In the States, all persons responded to all questions. Also, the census was collected through direct interview. Enumerators visited and listed every housing unit, asking the questions as worded In the **questionnaire** (or translating into the native language, if necessary), and recording the answers. A single questionnaire was used, which contained all the questions asked **of every person** and household.

Special questionnaires were used for the enumeration of persons in group quarters such as the hospital, the prison, and the nursing students' housing at the Community College of Micronesia. These forms contained the same population questions that **appeared** on the regular questionnaire but did not include any housing questions.

Responses were determined by the-questionnaire and the instructions given to the enumerator; these instructions had been adapted from instructions used Stateside, but were modified to account for differences in the Northern Mariana Islands from those found in the States. The definitions and explanations for each subject are included in the discussions of these subjects in the other chapters of this monograph, and **are** drawn largely from various technical materials and procedures used in the data collection.

Facsimilies of the questionnaire pages containing the population and housing questions used to produce this report are presented in Appendix II.

As in 1973, and in accordance with U.S. census practice, each person enumerated In the 1980 census was counted as an inhabitant of his or her "usual place of residence," which was generally construed to mean the place where the person lived or slept most of the time. This place was not necessarily the same as the person's legal residence or voting residence.. In the vast majority of cases, however, the use of these different bases of classification would produce substantially the same statistics, although there might be appreciable differences for some small areas.

The implementation of this practice resulted in the establishment of residence rules for certain categories of persons (such as crews on ships, persons away at school, etc.) whose usual place of residence was not immediately apparent. Furthermore, this practice means that persons were not always counted as residents of the place where they happened to be staying on Census Day. Persons without a usual place of residence, or persons with no one at their usual place of residence to report them to a census taker, however, were counted where they happened to be staying.

The 1980 census questionnaires were processed in a manner similar to that used in the States. They were designed to be processed electronically by the Film Optical Sensing Device for Input into Computer (FOSDIC). For most items

on the questionnaire, the information obtained by the enumerator was recorded by marking the answers in the predesignated positions that would be "read" by FOSDIC from a microfilm copy of the questionnaire and transferred onto computer tape with no intervening manual processing. The computer tape excluded Information on individual names (and addresses).

The tape containing the information from the questionnaires was processed on the Census Bureau's computers through a number of editing and tabulating steps. Among the products of this operation were computer tapes from which the tables in the published reports were prepared on **photo-typesetting** equipment at the Government Printing Office.

Errors in the 1980 Census data,. Since 1980 population and housing data were tabulated from the entries for persons on all questionnaires, these counts were not subject to sampling error. In any **large-scale** statistical operation such as a decennial census, human and mechanical errors occur. These errors are commonly referred to as nonsampling errors. Such errors include failure to enumerate every household or person in the population, not obtaining all required information from respondents, obtaining incorrect or inconsistent information, and recording information incorrectly. Errors can also occur during the field review of the enumerator's work, the clerical handling of the census questionnaires, or the electronic processing of the questionnaires.

In an attempt to reduce various types of nonsampling error in the 1980 census, a number of techniques were introduced on the basis of experience in previous censuses and in tests conducted prior to the census. These quality control and review measures were used throughout the **data collection and** processing phases of the census to minimize undercoverage of the population and housing units and to keep errors to a minimum. Enumerators were trained with special materials developed by Census Bureau personnel familiar with the Pacific Islands and in conjunction with representatives from the Pacific Islands areas, and the enumerator's work was frequently checked by supervisors during the data collection to maintain accuracy throughout the census period.

Editin^g the census data,. In the field, questionnaires were reviewed for omissions and certain inconsistencies by census clerks in Saipan, and, if necessary, a followup visit was made to obtain missing information. In addition, a similar review of questionnaires was done in the central processing office in Laguna Niguel, California, but forms could not be returned to the field at that point. As a rule, editing was performed by hand only when it could not be done effectively by machine.

As one of the first steps in editing,. the configurations of marks on the questionnaire columns were scanned electronically to determine whether they contained information for a person or merely spurious marks. After this kind of edit, if any characteristics for a person were still missing when the questionnaires reached the central processing office, they were supplied by allocation. Allocation, or assignment of acceptable codes in place of unacceptable entries, was needed most often when there was no entry for a given item or when the information reported for a person on that item was inconsistent with other information for the person. This procedure was not used for other censuses taken during the American period, except for the 1970 decennial census. In 1970 and in 1980, the general procedure for changing

unacceptable entries was to assign an entry for a person that was consistent with entries for other persons with similar characteristics. For example, a person who was reported as a 20-year-old son of the householder, but for whom marital status was not reported, was assigned the same marital status as that of the last son processed in the same age group.- The assignment of acceptable codes in place of blanks or unacceptable entries is supposed to enhance the usefulness of the data.

The 1980 census data on the economic questions such as Industry, occupation, class of worker, work experience, and Income were processed using an allocation system which assigned values to missing entries in these questions, as necessary, from a single respondent with similar socioeconomic characteristics.

Three population and two housing reports were published after the 1980 census. These were:

PC80-1-A57A	Number of Inhabitants
PC80-1-B57A	General Population Characteristics
PC80-1-C/D57A	Detailed Social and Economic Characteristics
HC80-1-A57A	General Housing Characteristics
HC80-1-B57A	Detailed Housing Characteristics

In addition to the printed reports, results of the 1980 census also were provided on computer tape in the form of summary tape files (STF's). These data products were designed to provide statistics with greater subject and geographic detail than was feasible or desirable to provide in printed reports. The STF data were made available at nominal cost. Because of likelihood of incompatible computer systems, the STF data were also provided on microfiche. Recently, the data have also been provided on floppy discs which can be read on IBM-PC or compatible equipment.

STF 1 provides population and housing data summarized for the CNMI as a whole, for municipalities (Islands), for census designated places, and for enumeration districts. The data include those shown in PC80-1-A57A, PC80-1-B57A, and HC80-1-A57A. STF 3 contains data on various population and housing subjects such as education, employment, and income. The areas covered are the same as STF 1.

RECENT POPULATION TRENDS BY ISLAND

In this section we will be looking at recent changes in the population distributions on Saipan, Rota, Tinian and the Northern Islands from the censuses in the Japanese and American Administrations.

The population has increased in each census under both the Japanese and American Administrations (Table 1.22). Saipan has continued to be the most populated of the islands throughout the period. Also its percentage of the total population has been increasing during the period, from 72 percent of the Native population in 1920 to 87 percent of the total population in 1980. Although many people moved on and off island, particularly during the Japanese times, Tinian has remained at about 5 percent of the total population of the Northern Marianas. On the other hand, Rota has decreased in its percentage of the total population from 19 percent in 1920 to only 8 percent in 1980, although its population doubled during the period. Although the **percentage** of the population living in the Northern Islands increased during Japanese times, from 5 to 7 percent, both the population and its percentage of the total has been decreasing rapidly during the 45 years before the 1980 census, and was less than 1 percent of the total in 1980.

FIGURE 1.7

I

Population of the Northern Mariana Islands: 1920 to 1980

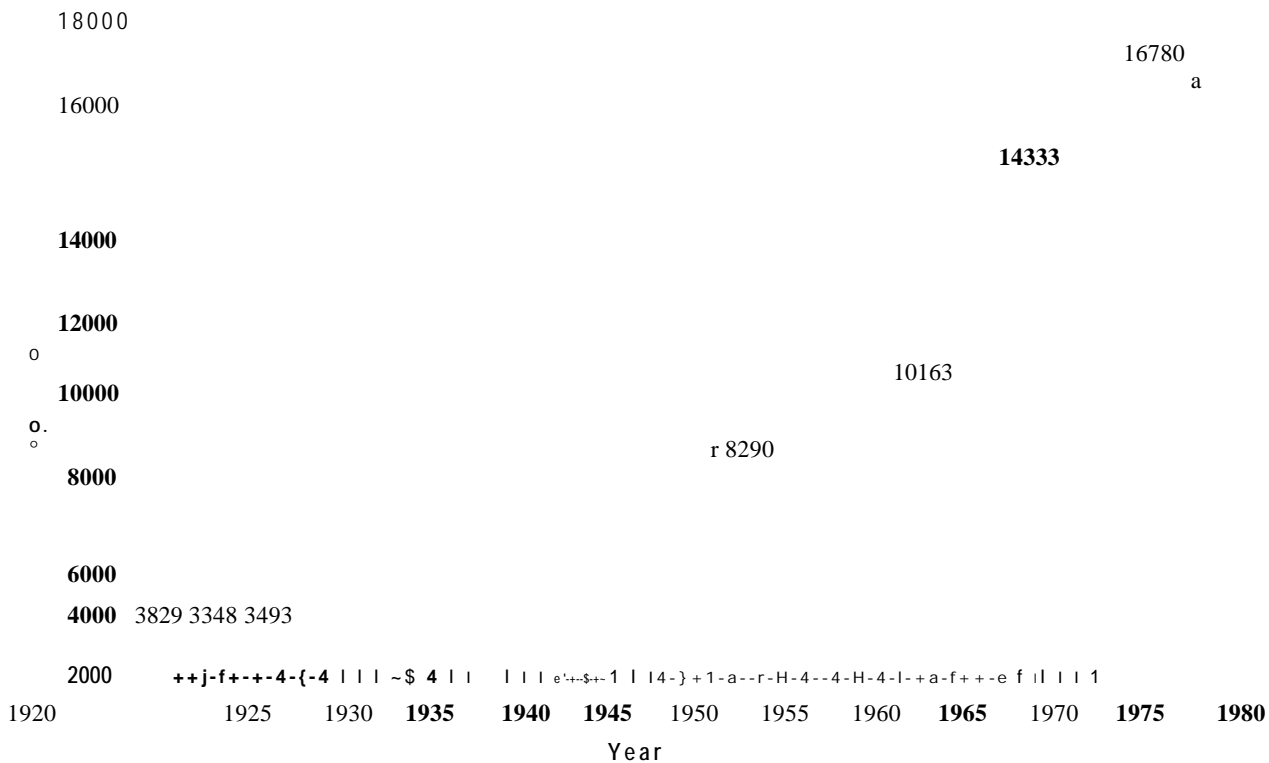


Table 1.22. Population by Island: 1920 to 1980

Numbers					Percent				
Year	Total	Saipan	Rota	Tin- ian	North. Is.	Total	Sal- pan	Tin-North. Rota	Ian Is.
1980....	16780	14549	1261	866	104	100.0	86.7	7.5	5.2 .6
1973....	14333	12382	1104	714	133	100.0	86.4	7.7	5.0 .9
1958....	10986	9035	1078	610	263	100.0	82.2	9.8	5.6 2.4
1935....	8290	6654	969	405	262	100.0	80.3	11.7	4.9 3.2
1930....	4297	3194	788	24	291	100.0	74.3	18.3	.6 6.8
1925....	3829	2915	644	43	227	100.0	76.1	16.8	1.1 5.9
1920....	3493	2639	487	180	187	100.0	75.6	13.9	5.2 5.4
1920....	3398	2449	651	112	186	100.0	72.1	19.2	3.3 5.5

Source: Census Reports for respective years; 1920-1935 for Natives only

The total area of the Northern Mariana Islands is 184 square miles. Saipan, the largest island in the chain, is 45 square miles, with Tinian being 39 square miles and Rota being 32 square miles. The Northern Islands in total comprise 68 square miles.

In 1980, there were 91 persons per square mile in the CNMI (Table 1.23). Since the population has increased throughout the century, it has also become more densely settled. In 1920, there were only 18 persons per square mile. (It is important to remember that as many as 40,000 Japanese are excluded in the tabulations, so the actual densities for all persons in 1920 through 1935 would be much higher). The population of the CNMI doubled between 1958 and 1980, so the density also doubled.

Saipan had both the largest population, and was the most densely populated. There were more than 50 persons per square mile on Saipan even as early as the 1920s, but by 1958 the density had almost tripled to 150 per square mile, and then more than doubled to **over 300 per square mile in 1980.**

The densities of both Rota and Tinian were less than for Saipan, partly because their populations were much smaller, particularly when land areas are considered. The population of Rota has grown more slowly than that of Tinian, so the increase in the density is less, growing from **about 20 per square mile** in 1920 to nearly 40 per square mile in 1980. The density for Tinian increased much more, from about 3 per square mile in 1920 to 22 in the last census, but was still the smallest of the three major islands. Because of their relatively large, although not always inhabitable, areas, the density on the Northern Islands is much less, and since the population is decreasing, the density also has been decreasing. The peak period of habitation in this century, about 1935, saw 291 people in the Northern Islands, about 4 per **square** mile.

Table 1.23. Population Density by Island: 1920 to 1980 -----

Numbers				Per Square Mile						
Year	Total	Saipan	Rota	Tin- North. Ian	Is.	Sal- Total	pan	Rota	Tin-North. Ian	Is.
1980....	16780	14549	1261	866	104	91.2	323.3	39.4	22.2	1.5
1973....	14333	12382	1104	714	133	77.9	275.2	34.5	18.3	2.0
1967....	10986	9035	1078	610	263	59.7	200.8	33.7	15.6	3.9
1958....	8290	6654	969	405	262	45.1	147.9	30.3	10.4	3.9
1935....	4297	3194	788	24				291	23.4	71.0
1930....	3829	2915	644	43				227	20.8	64.8
1925....	3493	2639	487	180	187	19.0	58.6	15.2	4.6	2.8
1920....	3398	2449	651	112	186	18.5	54.4	20.3	2.9	2.7

Source: Census Reports for respective years; 1920-1935 for Natives only

The population of the CNMI increased by 17 percent between 1973 and 1980, the smallest Increase between censuses during the American Administration (and an annual increase of about 2 percent) (Table 1.24). Part of the smaller Increase was due to reduced fertility, and part was probably due to the beginning of the phasing out of the TTPI government, with employees and their families returning to other parts of the old TTPI. Also, the 1980 census was taken before the big influx of migrants, particularly from the Philippines and other parts of Asia as the economy began to expand.

Between 1967 and 1973, the previous intercensal period, the population Increased about 30 percent (about 5 percent annually), only slightly less than between 1958 and 1967 (more than 3 percent annually).

- Table 1.24. Population by Island: 1920 to 1980

Change from Previous Census				Annual Change (Linear only)						
Year	Total	Saipan	Rota	Tin- North. ian	Is.	Sal- Total	pan	Rota	Tin-North. Ian	Is.
1980.	17.1	17.5	14.2	21.3	-21.8	2.4	2.5	2.0	3.0	-3.1
1973....	30.5	37.0	2.4	17.0	-49.4	5.1	6.2	.4	2.8	-8.2
1967....	32.5	35.8	11.2	50.6	.4	3.6	4.0	1.2	5.6	.0
1958....	92.9	108.3	23.0	1587.5	-10.0	4.0	4.7	1.0	69.0	-.4
1935....	12.2	9.6	22.4	-44.2	28.2	2.4	1.9	4.5	-8.8	5.6
1930....	9.6	10.5	32.2	-76.1	21.4	1.9	2.1	6.4	-15.2	4.3
1925....	2.8	7.8	-25.2	60.7	.5	.6	1.6	-5.0	12.1	.1

Source: Census Reports for respective years; 1920-1935 for Natives only

As noted previously, the distribution of the population by island did not change very much between 1973 and 1980. There were considerable changes on Saipan, however. While some of the villages increased dramatically, led by San Vicente with a 113 percent increase in the 6 1/2 year period, and Garapan with a 47 percent increase, some of the older areas experienced a considerable population decrease (Table 1.25). Each of the districts in Chalan Kanoa and Susupe lost population during the period; districts 2 and 4, in fact, lost about one third of their populations during the period. The Northern Islands also lost population between censuses.

The areas which experienced the biggest increases in numbers, obviously also increased by the largest percentages as well. While Chalan Kanoa decreased from 28 percent of Saipan's population in 1973, it made up only 18 percent in 1980; Garapan increased from 22 percent to 28 percent (becoming the largest village), and San Vicente increased from 6 to 12 percent of the population. This picture will also be greatly changed in 1990 because of the large amounts of development in the extreme north and extreme south of Saipan.

Table 1.25. Population by Island and Place: 1973 and 1980

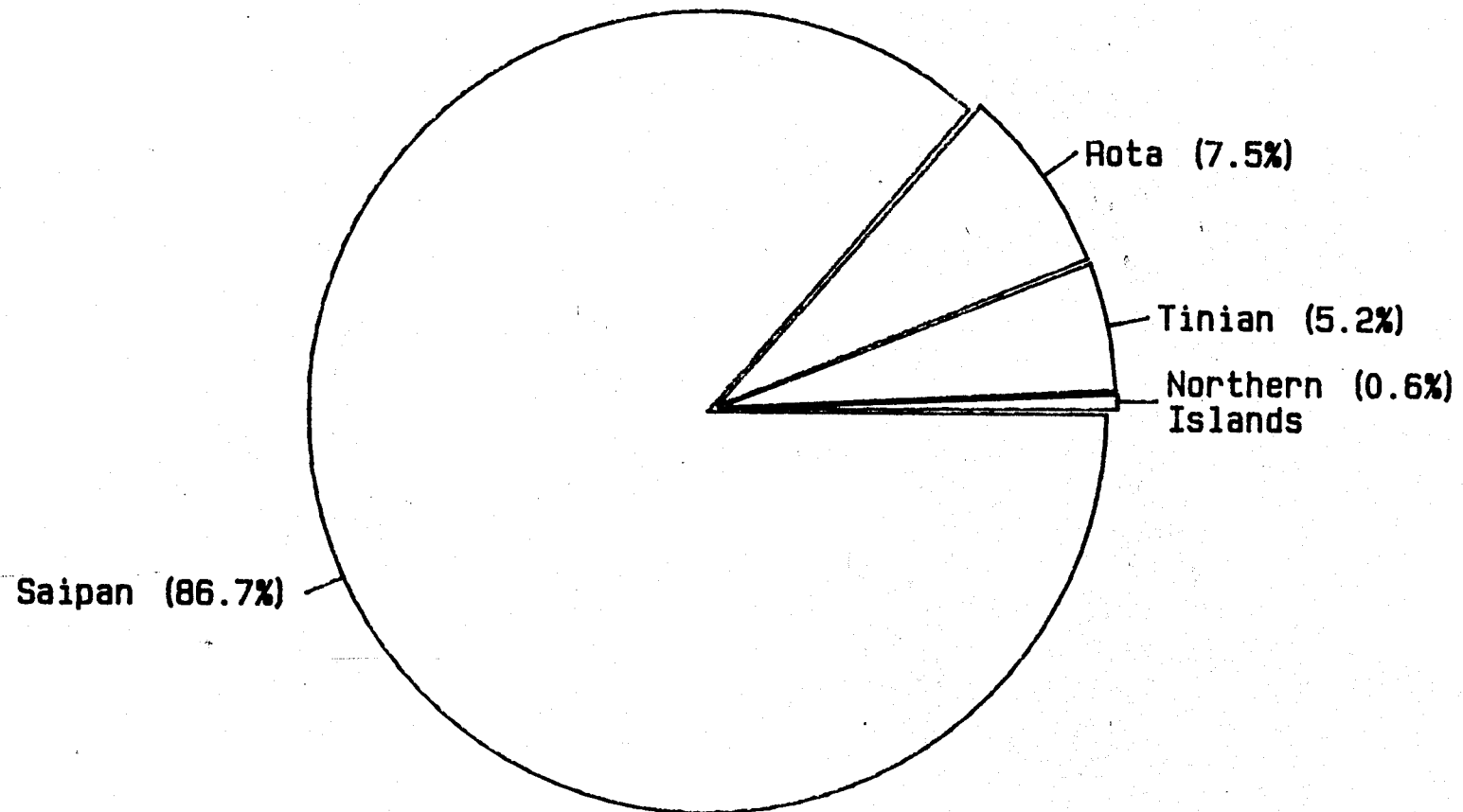
Island and Place	Numbers			Percents			
	1980	1973	Change	1980	1973	1980	1973
Total.....	16780	14333	17.1	100.0	100.0	...	...
Saipan.....	14549	12382	17.5	86.7	86.4	100.0	100.0
San Roque	629	627	.3	3.7	4.4	4.3	5.1
Tanapag	1476	1146	28.8	8.8	8.0	10.1	9.3
Garapan	4006	2717	47.4	23.9	19.0	27.5	21.9
Oleai	1720	1456	18.1	10.3	10.2	11.8	11.8
Susupe	722	812	-11.1	4.3	5.7	5.0	6.6
Chalan ranoa ..	2678	3479	-23.0	16.0	24.3	18.4	28.1
District 1....	836	1035	-19.2	5.0	7.2	5.7	8.4
District 2.....	677	969	-30.1	4.0	6.8	4.7	7.8
District 3.....	734	838	-12.4	4.4	5.8	5.0	6.8
District 4	431	637	-32.3	2.6	4.4	3.0	5.1
San Antonio ...	1644	1360	20.9	9.8	9.5	11.3	11.0
San Vicente ...	1674	785	113.2	10.0	5.5	11.5	6.3
Rota.....	1261	1104	14.2	7.5	7.7	...	...
Tinian....	866	714	21.3	5.2	5.0	...	...
Northern Is	104	133	-21.8	.6	.9	...	...

Source: PC80-1-A57A, Tables 4a and 5, TTPI 1973 Census Report

As noted earlier, data from the 1970 decennial census of the Northern Mariana Islands are not being used, in most cases, for comparison with the 1980 census because of deficiencies in the 1970 data set. It is not clear in all cases what went wrong in the 1970 census, but for the Northern Marianas, at least, there was a very large undercount in 1970, and the undercount was concentrated in certain areas of Saipan (Table 1.26).

FIGURE 11.8

Population Distribution by Island, Census Designated Places: 1980



Although the data for Tinian are reasonable when compared to data from previous and more recent censuses, and the data for the Northern Islands might be explained by visiting or other reasons for large numbers of persons to be off-island. In a more traditionally mobile population, the data for Rota indicate about a 200 person undercount. For Saipan, the data look even worse; perhaps as many as 2000 to 3000 persons were not included in the tabulations. There is some evidence that these people were enumerated, but for some reason not all questionnaires were returned to the States for processing.

The areas of most severe undercount on Saipan seem to have been Tanapag, Susupe, San Antonio, and San Vicente. There doesn't seem to be a pattern in the omissions since Tanapag is in the north, Susupe in the center, San Antonio in the south, and San Vicente in the east, so probably the omissions were random. In any case, the undercount is **severe** enough that we are using the data only sparingly for comparison.

Table 1.26. **Population by Island and Place: 1970 to 1980**

Island and Place	Numbers			Percents		
	1980	1973	1970	1980	1973	1970
Total	16780	14333	9640	...	...	...
Saipan	14549	12382	7967	100.0	100.0	100.0
San Roque	629	627	550	4.3	5.1	6.9
Tanapag	1476	1146	654	10.1	9.3	8.2
Garapan	4006	2717	1098	27.5	21.9	13.8
Oleai	1720	1456	1220	11.8	11.8	15.3
Susupe	722	812	274	5.0	6.6	3.4
Chain Kanoa	2678	3479	3481	18.4	28.1	43.7
San Antonio	1644	1360	483	11.3	11.0	6.1
San Vicente	1674	785	207	11.5	6.3	2.6
Rota	1261	1104	895	...	...	...
- Tinian	866	714	710	...	...	...
Northern Is.	104	133	68	...	...	...

Source: **P80-1-C/D57A**, Tables **4a** and **5**, TTPI 1973 Census, PC(1)-A58,
Table 3

In this chapter we have presented a brief population history of the Commonwealth of the Northern Mariana Islands. Although there have been few censuses in the CNMI, the data have been reasonably good, with only a few exceptions, **SO** that a fairly complete picture of the population changes has been obtained.

FIGURE 1.9

Population Distribution for Saipan,
Census Designated Places: 1980

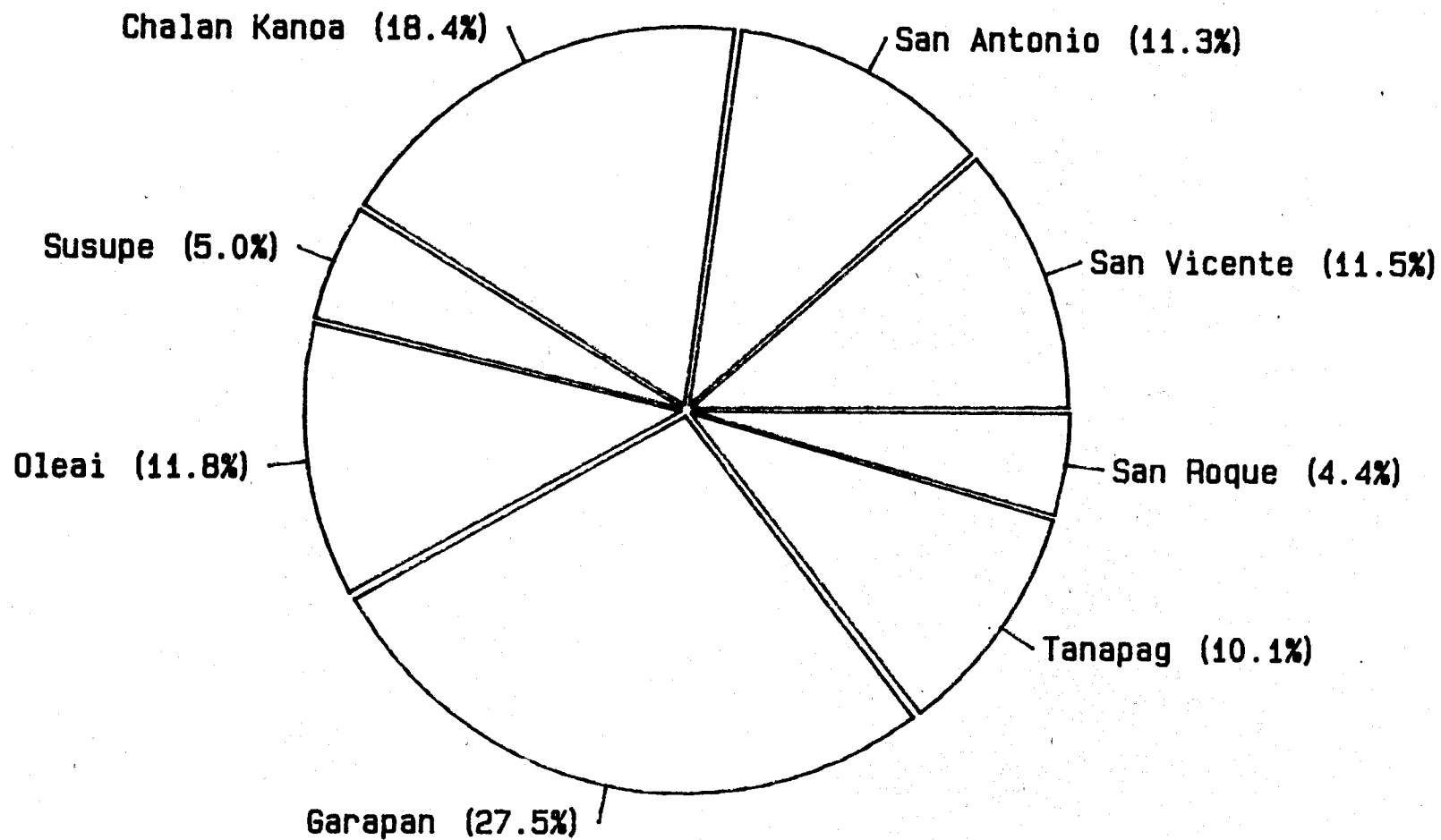


FIGURE 1.150. PERCENT INCREASE IN POPULATION BY
DISTRICT::,'1973 to 1980

