

5

Population Growth and Human Resource Development Implications

Introduction

This chapter investigates selected demographic aspects of Samoa, especially the issue of population growth and its implications for human resource development. It examines population growth, the reasons for slow net population growth, and the use of primary-school enrollments as a proxy for net population growth. This is followed by an examination of the work force and its recent growth. A key conclusion is that the next Census (Population and Housing 2001) will be a vital instrument for verifying the nation's net rate of population growth and for future planning.

International Comparisons of Population Structure

The structure of the Samoan population is similar to that of other small Pacific Island nations. It is youthful, with a crude birth rate of around 29 to 31 live births per year per 1,000 population. (Note that the figures in Table 5.1 are based on United Nations Children's Fund [UNICEF] and other United Nations [UN] data with specific refinements to the Samoan situation discussed later.) The crude death rate of four persons per year per 1,000 population is relatively low, but around the average for similar nations.

Table 5.2 provides international comparisons of population growth over time. It demonstrates that population growth rates have declined for all countries shown during the past 30 years. Rates vary markedly, as do the base figures. For example, projections show that the Solomon Islands will add a further 100,000 persons by 2006, even with declining rates of population growth. The case of Samoa is not as clear.

In Table 5.2, Samoa is recorded as having the lowest mean annual urban growth rate. It also shows the lowest net national population

Table 5.1 **International Comparisons to Selected Aspects of Population for 1998**

Nation	Population	Population under 18	Population under 5	Crude birth rate	Crude death rate
		years of age	years of age		
		%	%	per 1,000	per 1,000
Fiji Islands	796,000	40	11	22	4
Kiribati	81,000	46	15	32	8
Micronesia	114,000	46	15	28	6
Palau	19,000	47	16	na	na
Samoa	174,000	46	13	29	5
Solomon Islands	417,000	50	16	35	4
Tonga	98,000	42	12	28	6

Note: na, data not available or not applicable. The UNICEF population and other estimates are maintained for comparative consistency.

Source: UNICEF (2000).

Table 5.2 **Population Growth Comparisons for Pacific Island Countries, 1970–1998**

	Population annual growth rate		Urban population 1998	Mean annual growth rate of the urban population	
	1970–90	1990–98		1970–90	1990–98
	%	%	%	%	%
Fiji Islands	1.7	1.2	41	2.2	1.8
Kiribati	1.8	1.5	36	3.3	1.9
Micronesia	2.3	2.0	28	2.6	3.1
Palau	2.0	3.0	68	3.0	2.1
Samoa	0.5	1.0 ^a	21	0.8	1.1
Solomon Islands	3.5	3.3	18	6.2	5.4
Tonga	0.8	0.3	43	3.5	2.6

Note: a. UN estimate, refer to the text for discussion.

Source: UNICEF (2000).

growth figures. Note that the UN estimate for growth is 1 percent per annum for 1990–1998, which is double the latest official Government of Samoa estimate of 0.5 percent.

With natural increase (crude births minus crude deaths) in the range of 2.1 to 2.5 percent per annum, Samoa's net population growth is heavily influenced by emigration. Thus the low overall growth figures can be misleading.

Population

Population Growth

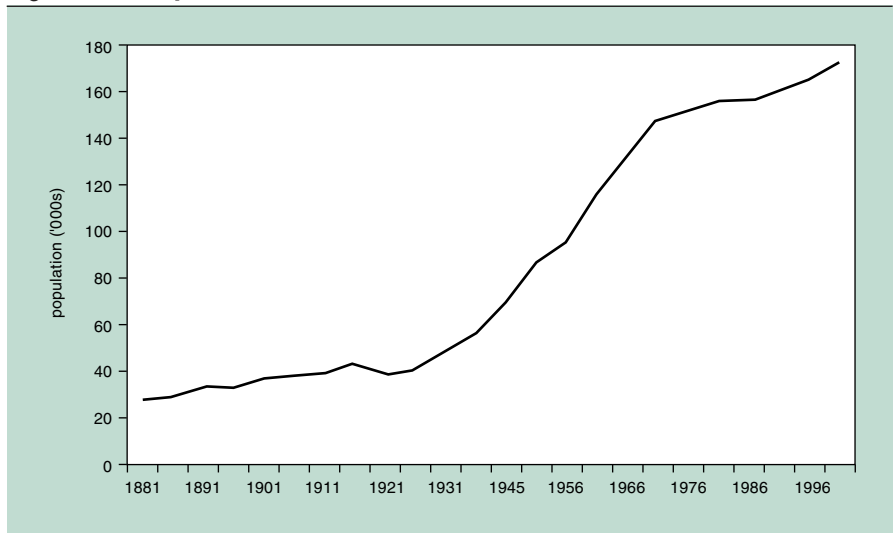
From the earliest records and estimates, there are four clear phases to population growth in Samoa. Phase one ended shortly after initial contact

with the West; estimates in 1836 placed the population at approximately 47,000. In phase two, population decline occurred through introduced disease and internecine warfare; by the 1880s, Samoa's population had been reduced to some 28–29,000. Figure 5.1 documents population growth from this point, with total numbers growing slowly and sporadically to the 1920s. In fact, the influenza epidemic of 1918–21 actually reduced Samoa's total population from some 42,000 to 38,500.

The third phase commenced toward the end of the 1920s. It is characterized by rapid population growth as evidenced by the steep rise shown in Figure 5.1. A considerable portion of the impetus is attributable to a focus on public health, supported in rural areas through village women's committees. This has been an essential part of the foundation for a highly successful approach to health that remains to this day (discussed further in Chapter 7).

The 1951 census recorded 84,909 persons in Samoa. In 1952, the New Zealand Government Statistician estimated a future population of 184,000 by 1975. This did not occur, despite continued strong population growth. Instead, net population growth slowed significantly in the 1970s. This marks the fourth and present phase, characterized by continued emigration resulting in net growth of around 0.5 percent for the past 30 years. Again, this dramatic change is clear from Figure 5.1.

Figure 5.1 Population of Samoa, 1881–2000



Sources: Stace (1956); Department of Statistics (1984–93); Government of Samoa (1998b).

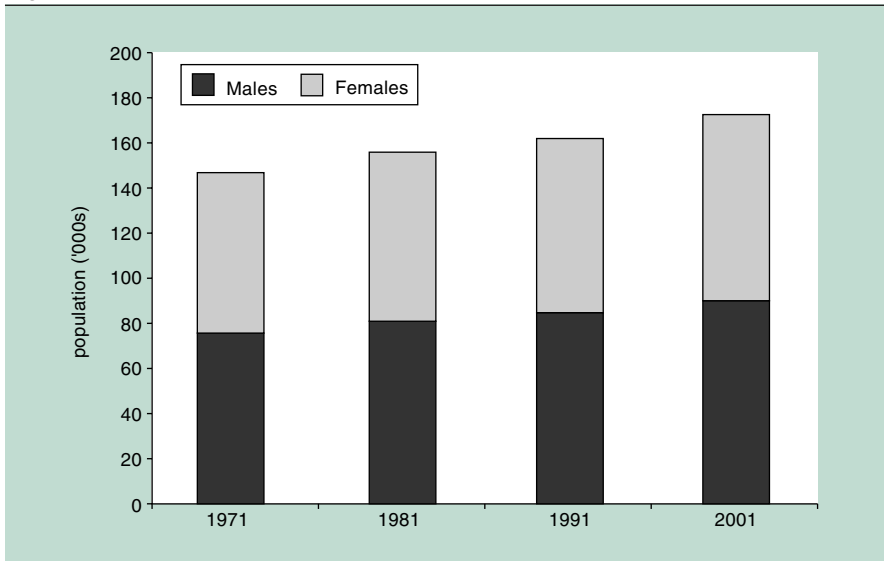
Two issues emerge from these processes as questions of considerable importance: For how long will net population growth remain at around half a percent through emigration? For how long will emigrants maintain their special relationships to Samoa, providing a regular stream of remittances or capital and skill inputs upon return? Assessments vary, with repercussions for the nation's population policy and human resource development.

1991 Census

The Government of Samoa conducted its last complete population census in 1991 and is presently in the initial stages of preparation for the 2001 census. The 1991 census data portray a youthful population: approximately 53 percent of inhabitants were 19 years old or younger; some 38 percent were between 20 and 54 (55 is the government's official retirement age) and the remaining 9 percent were 55 or older.

Figure 5.2 presents data on net population growth and gender, with the present population estimated at some 170,000 persons. As to gender in Samoa, males predominate in all age categories (at five-year intervals) in all censuses from 1971 to 1991. Males consistently account for 52 percent of the total population and females 48 percent.

Figure 5.2 Total Population and Gender, 1971–1991



Note: Year 2001 is an Official estimate.

Source: Department of Statistics.

Table 5.3 **Change in the 0–4 Year-Old Age Group, 1971–1991**

	1971	1976	1981	1986	1991
0–4 year olds	26,768	24,646	22,866	21,859	23,245
percent change	–	–7.9	–7.2	–4.4	6.3

Source: Department of Statistics.

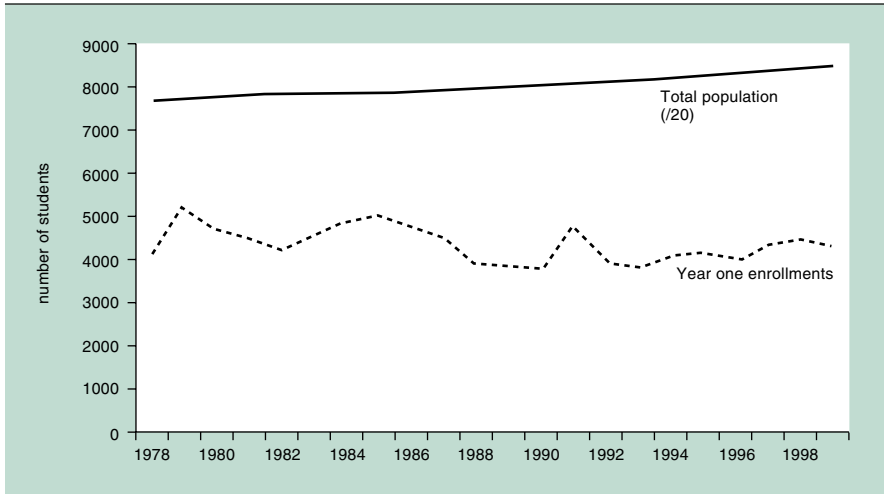
Although male-to-female ratios are expected to slightly favor males at birth, the Samoan pattern of 112 males to 100 females in the 1–4-year-old sets indicates some other factor or factors. Possible reasons for this include an undercount of females (unlikely through five censuses), a variation from the general norm of 105 males to 100 females at birth, a combination of both these factors, or some other explanation.

Decreasing Fertility

Data provided in Table 5.3 document that from 1971 to 1991, the 0–4 year-old group declined. The decline is not steady and is subject to variation, as shown in the slight upward movement from 1986 to 1991. The overall downward trend is, in part, indicative of a decreasing fertility rate and an increasing rate of contraceptive use. Health Department Annual Reports show that some 14 percent of women of childbearing age were accepting family planning in 1988; the figure increased to 29 percent in 1993. The latest Demographic and Health Survey 1999 (Department of Statistics undated) indicates that some 42 percent of sexually active females and 20 percent of sexually active males use some form of family planning. This accounts for some decrease in population, where the present natural increase (crude birth rate minus crude death rate) is around 2.3 to 2.5 percent per year. At such rates, population should double in about 28 years. As this is not occurring, it is evident that emigration remains the greatest factor contributing to slow net population growth.

Emigration

New Zealand is the principal destination listed for emigration and has a relatively long history of accepting Samoan migrants. At present some 100,000 Samoans are official residents of New Zealand; treaty commitments between the two nations enable 1,100 Samoans to migrate per year indefinitely. Beyond this quota, New Zealand also considers the acceptance of Samoans on family reunification grounds and will consider general applications to emigrate. Other principal targets for emigration are Australia, American Samoa, and the US.

Figure 5.3 **Total Year One Primary School Enrollment, 1978–1998**

Note: 1986–88 figures were interpolated from other years.

Sources: Stace (1956); Department of Statistics (1984–93); Government of Samoa (1998).

Maintaining 0.5 Percent Net Population Growth

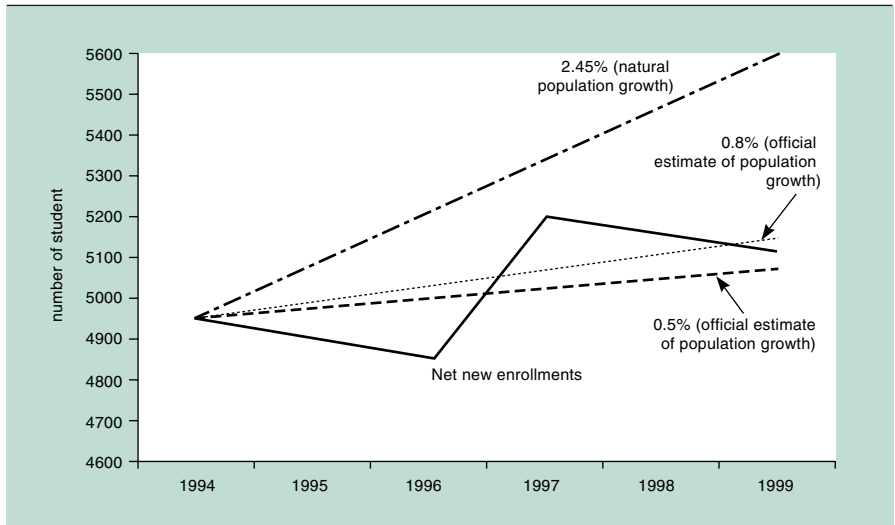
For the ten-year period 1988 through 1997 (the latest Immigration Office and Department of Statistics official figures) the net recorded outflow of persons was approximately 1,900 a year, of approximately 55,000 citizens recorded traveling overseas annually. To maintain 0.5 percent net population growth, the emigration figures should record an average of 3,500 persons a year (or some 1,600 more than are recorded). Interestingly, from the limited data available, it also appears that approximately 5,000 departing Samoan citizens have listed their purpose for going abroad as “new employment” for the years commencing in 1993 through 1997. This would represent some 8 percent of the 20–54-year-old age group.

If only 1,900 Samoans are emigrating annually, then net population growth should be greater than what has been assumed. This would place pressures on education and the job market and have other ramifications for development. To better understand the situation, the growth of first-year primary-school enrollments is examined in the section that follows.

Year One Enrollment at Primary School

Entrance to primary school is the basic building block for human resource development. All indications are that the vast majority of Samoans

Figure 5.4 **New Enrollments for Year One Primary School and Possible Growth Scenarios**



Sources: Department of Statistics; Department of Education (1999b).

commence primary education. Collection procedures for school enrollment data have varied over the past two decades, making many series comparisons difficult. However, gross year one primary enrollments (that is, repeaters and new entrants) are available and have been plotted in Figure 5.3. This figure also shows total population growth recorded by censuses from 1976 through 1991 and the Government's estimated 2001 population. The total population sums have been divided by 20 for ease of comparison to the trend for enrollments.

The pattern that emerges for both is one of very slow long-term growth in line with present government estimates. Given that in the late 1980s population grew extremely slowly, with emigration possibly double that of the earlier portion of the decade, the first-year enrollment figures appear to mirror these events. The sharp rise in enrollments from 1990 to 1991 is attributable to the two cyclones delaying enrollment during this period.

Figure 5.4 charts new year one primary enrollments from 1994 (given the disruption and anomalies of the 1990 and 1991 cyclones, in conjunction with improvements to data collection). New primary-school enrollments (total enrollment in year one minus repeaters) are plotted for the years 1994 to 1999 and compared to possible population growth rates that have been used for official estimates (0.5 and 0.8 percent for net growth and 2.45 percent for natural growth). The result indicates

that net growth is in the vicinity of 0.5 to 0.8 percent for both primary school entry and, as a proxy, for the population as a whole. The only other explanation would be that numerous children are not entering primary school. All evidence, however, runs contrary to this.

In sum, Figures 5.3 and 5.4 demonstrate slow net growth and the continued importance of emigration. For education, the figures mean that planning for improvements can take place at present within a framework of slow student expansion. This means that dropouts need to be kept to a minimum to ensure sufficient throughput for secondary and postsecondary studies. For both education and the preparation of the workforce in general, the low growth rate means that external opportunities continue to remain important areas for policy consideration.

Samoa's Workforce

Workforce Categories

The workforce consists of two major categories: first, *persons who work primarily to earn money* and second, *persons who work primarily to grow, gather, or catch food*. The first category is taken primarily to represent the formal employment sector; the second represents a larger and more fluid semiformal and informal sector primarily based around agriculture. Table 5.4 provides a brief summary of the 1991 census categories. Proportionally, men consistently outnumber women in all categories. The total workforce in 1991 consisted of 68 percent men and 32 percent women.

Table 5.4 **Categories of Employed for 1991**

	Percent of the Total	Males	Females
	%	%	%
Employers	1	70	30
Employees	28	64	36
Self-employed	5	86	14
Unpaid workers	66	69	31
Total	55,967	38,240	17,727

Sources: Census; Population and Housing (1993).

The bulk of the economically active population recorded by the 1991 census worked primarily to grow, gather, or catch food and totaled over 37,000 persons or some 66 percent of the labor force. The other category, *persons who worked primarily to earn money*, appeared to be growing.

The *Demographic and Health Survey 1999* (Department of Statistics undated) of a 20-percent sample of the total population records 52 percent of the population 15 years and over as economically active, with about half of these persons working primarily to earn money. A further 10 percent are studying, 35 percent are involved with domestic duties, and the remainder are either retired/disabled or did not respond.

With regard to gender, the 1999 sample proportions have changed to a work force consisting of 78 percent men and 22 percent women. If this is actually the case, it represents a considerable shift in favor of men.

Formal Sector Workforce

Most of the workforce is in the informal sector, involved in rural income generation and semisubsistence agriculture, with remittances from abroad still the major source of cash income for many (see also Chapter 2). Samoa's formal private-sector work force is relatively small and subject to considerable variation over time. (Note that at present there is a need for consistency of categories and the application of International Standard Industrial Classification codes among the various collectors of employment data to assist in the use of these data for planning and monitoring.)

Men predominate in all divisions of the formal economy. The tertiary sector has a relatively greater number of women and as this sector appears to hold the greatest potential for growth, women participation should continue to increase. This is certainly the trend in the public sector, where Table 5.5 records some 53 percent of all permanent public servants as being women (with temporary employees being predominantly men). At senior levels, at present the permanent secretaries for both the Public Service Commission and for the Treasury are women, examples of women's increasing participation at all levels of government.

Government policy is presently directed to reducing public-sector employment. To what extent this will actually occur remains a moot

Table 5.5 Public Sector Employment, 1998

	Male	Female	Total
	%	%	
Permanent (salary)	47	53	4,281
Temporary (casual)	67	33	1,414
Total public sector employment ^a	2,959	2,736	5,695

Note: a. Excludes statutory authorities.

Source: Public Service Commission of Samoa.

point. However, it does appear certain that the public sector will not be a strong growth sector for future employment. It represents a very important area for first-class human resources and development, but will offer opportunities for a relative few.

National Provident Fund data show total formal-sector employment of some 23,000 persons in 1999. Employment has declined since 1996, reflecting a loss of employment in the manufacturing sector (see Chapter 2).

Assessing Occupational Demands

Agriculture remains the primary area for employment. Fisheries is gaining in importance and tourism will potentially provide increasing demand for skilled and semiskilled labor. Absolute numbers required for tourism, however, at present remain small. At other formal levels, demand arises from the various sets of categories shown in Chapter 2. Again, however, occupational demands are for relatively small sets of individuals (see chapters on agriculture, fisheries, and tourism).

The capacity of educational facilities to meet demand is discussed further in Chapter 6. The key point for human resource development is that an overly-prescriptive approach is likely to face high risks, due to variation and change that cannot be foreseen within the vagaries of globalization and the context of a very small formal internal workforce. Human resource development appears best directed to provide the workforce with a solid foundation that allows for flexibility and change. This entails a broad-based approach that focuses on the fundamentals of numeracy and literacy first. These are the priority prerequisites for the adult working population, including those who will work abroad. Discussion in Chapter 6 will show that the present education system is working on the potential for this, as well as improving responsiveness to specific internal needs.

Implications of Remittances

The fact that remittances from abroad are the major source of cash income for most rural households has considerable implications for human resource development. It means that the dependency ratios based on the internal population and the internal workforce fail to have the usual interpretation with respect to dependence and support. In this respect, the contribution of the external international Samoan workforce must be given more credit. The social capital invested in education and health in Samoa needs to be seen more broadly than just in developing human capital to work in Samoa. It is certainly important internally, but

it should also be seen as assisting Samoa's international workforce. The available data indicate an ongoing commitment to cash support from emigrant and urban workers in Samoa for their Samoan rural kin who have far more limited income-generating opportunities. This has been the pattern for the past 30 years. Although emigration has often been interpreted as a problem, it demonstrates a very strong commitment by the majority of Samoans to their culture and extended family. Furthermore, as emigrants return for family reunions (either temporarily or more permanently), ideas, information, and training are brought to rural Samoa. This is happening in the tourism industry, for example, where returning migrants are able to support small-scale tourism ventures, and in other businesses as well.

Another area of emerging importance is emigrants who return from New Zealand to retire in Samoa. Commencing in 1999, they may now draw their New Zealand pensions in Samoa. If the number of retirees grows, this should reflect a further valuable income stream to Samoa. It may also impact public health services that have been heavily subsidized to date but that are now considering means as a criterion for improving cost recovery (see Chapter 7). Another possibility is that the returning emigrant retiree may choose to use New Zealand for more complex health treatments and Samoa for minor treatment. The full impact of potential returning retired emigrants will only become evident in the future, given the very recent changes to New Zealand pension entitlements.

The 2001 Census

The single most important demographic issue to emerge is the next census. Until 1991, Samoa held a Population and Housing Census every five years. The reasons for moving to a ten-year interval have not been clearly articulated, but it would appear that sampling has been considered an adequate alternative at an obviously lower per-unit cost. Such an approach is rational if the sampling system that has been employed is effective. The *1999 Demographic and Health Survey* demonstrates the latest sampling approach. As noted in the text, the sample appears to be showing significant changes in the gender divisions of the work force and the primary motivation to work as two examples of change during the past ten years.

Other data sources and estimates, particularly with regard to employment categories, population growth, and migration appear incomplete or difficult to compare. This makes the next census crucial as a means of validating sampling systems and as the single most important fu-

ture source for planning data across all sectors, with special application to health, education, and human resource development. It is an unparalleled opportunity. Therefore, the 2001 census should be fully resourced (and assisted if need be) to maximize its timeliness, accuracy, and validity.