

MIGRATION TO AMERICAN SAMOA\*

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Migration, both internal and international, is the "major regulator of demographic change in many of the small Pacific nations" (Connell, 1984a:175). In the past, migration tended to be circular - often seasonal and of short duration (see Bedford, 1980; Chapman, 1981; Prothero and Chapman, 1984). However, there is now substantial evidence that migration within and from the Pacific is permanent and involves longer distances (Shankman, 1976; Connell, 1983 studies; Connell, 1984a and b; McPherson, 1985). International migration beyond the South Pacific also appears to be increasingly important (Connell 1984b:307).

There has long been concern within the Pacific that the costs of migration outweigh the benefits, particularly for international migration (see Connell, 1983, especially country reports 18 and 22). Thus, as Connell (1984b:310) has noted "countries must understand the rationale for migration in order to devise strategies to minimize or redirect some migration streams, while encouraging others, in order to generate a more appropriate form of development." Since "migration behavior (also) has such an important bearing on the causes and consequences of population trends" (Connell 1984a:175) an understanding of migration will also aid in the understanding of population dynamics in many South Pacific nations.

What is planned in this study is an investigation of the characteristics of international and, to a limited extent, internal migration in the Pacific and in a second study the characteristics of migration from the Pacific to the United States. These investigations should illuminate the individual rationale for migration and inform policy making in the area of migration.

Ideally one would like to discuss migration among all nations of the Pacific. However as Greenwood and Stuart (1986) have shown, the different ways

in which countries collect migration data and define migration make even a simple 2 x 2 matrix of international migration flows of doubtful accuracy. As a consequence we will focus on migration to American Samoa. The advantage of using American Samoa is that the 1980 Census allows us to investigate the detailed characteristics of several migrant groups - Western Samoans, Tongans, and Samoans born in the U.S. and to compare these groups with the American Samoa-born population. By comparing these characteristics with those of the home or country of birth populations it may be possible to uncover the rationale for migration in the Pacific, since migration in the Pacific is primarily a Polynesian phenomenon (Connell, 1987).

The flow of Pacific migrants to American Samoa dominates the flow from American Samoa to other Pacific countries. For example, in 1981 individuals resident in Western Samoa but born in American Samoa were only 11 percent of those resident in American Samoa but born in Western Samoa. In 1976 only 265 individuals from other Pacific countries were enumerated in the Tongan census (0.3 percent of the population). Of these a very small percentage would have been American Samoan.

#### A Model of Migration

Many paradigms have been used to explain migration (see Sahota, 1968; Bedford, 1980; Chapman and Prothero, 1983; Connell, 1984a). By far the most successful, and the one used in this study, is the economic or human capital explanation of migration (Sahota, 1968; Sjaastad, 1962; Greenwood, 1975). Basically individuals or families migrate to increase their well-being, principally their economic well-being.

More formally, an individual will migrate if

$$(1) \quad PDV_m = \sum_{t=1}^T \frac{B_{jt} - B_{ot}}{(1+r)^t} - C > 0$$

where  $PDV_m$  = present discounted value of migration

$B_{jt}$  = the utility derived from the new location in year  $t$

$B_{ot}$  = the utility derived from the original location in year  $t$

$T$  = length of time in years one expects to live in the new location

$r$  = the rate of discount

$C$  = the utility lost in the move itself (direct and psychic costs);

and

$\Sigma$  = a summation over the yearly discounted net benefits over a period running from year 1 to year  $T$ .

In this study, the new location is American Samoa and the original location Tonga, Western Samoa, or the United States.

Usually the  $B$ s are assumed to be wages or incomes - either actual or expected - and the decision to migrate is based on lifetime wages or earning streams. However, recent work in urban economics has stressed the additional importance of locational amenities such as view, entertainment and community facilities, and climate (Graves, 1983; Linneman and Graves, 1979). These factors have traditionally been referred to in the Pacific migration literature under the rubric of "bright lights." Thus the  $B$ s are more completely viewed as sources of utility - income and locational amenities.

It is also important to note that the present discounted value formula emphasizes differences in utilities over the  $T$  years of the migration. Thus a migrant may earn less in the first few years in the new location (American

Samoa) than in the original location if education or training is initially acquired. One would then expect to see a steep age-earnings profile after education or training to compensate for the early period of low earnings (see Mincer and Ofek, 1982).

The cost variable  $C$  in the present discounted value formula can encompass cultural explanations of migration. For those with strong ties to family, community, or place migration is less likely to occur than where such ties are absent.

The economic model of migration is useful in that it orders our thoughts about the reasons for migration and thus allows us to predict the characteristics of migrants. An individual is more likely to migrate (or net migration flows are more likely to be observed):

1. the younger the potential migrant (and thus the longer the period over which returns from migration can be earned and the lower psychic costs of attachment to the place of origin);
2. the larger the difference in income between place of destination and place of origin;
3. the larger the difference in locational amenities between the destination and location;
4. the higher the education level of the individual (more educated workers are assumed to be more efficient in processing information or differences in opportunities and are, therefore, more likely to migrate);
5. the stronger the individual's labour force attachment. Since income differences are held to be so important, those with a stronger labour market attachment (higher labour force participation rate) are more likely to benefit from income differences and thus to migrate);

6. the lower the expected rate of unemployment in the destination location relative to the original location. The monetary returns in the present value calculation are expected returns - calculated as the actual wage multiplied by the expectation of receiving that wage (the employment rate or one minus the unemployment rate).

Recognition of migration as an investment and the primacy of economic factors is widespread. Shankman (1976), Pitt and McPherson (1974), and Pirie (1976) found that migration was a more lucrative investment than any other available in Western Samoa: "in many villages migrants yielded more money than any other cash crop" (Pitt and McPherson, 1974:13). Connell (Report 22, 1983) cites further evidence. In the late 1960s and early 1970s the prime destination for Western Samoan migrants was New Zealand. In the mid-1970s the New Zealand economy slumped and migration was reoriented towards the U.S. through American Samoa (p. 35/6). Between 1974 and 1976 net migration gain to New Zealand from the Cook Islands, Niue, Tokelau, Tonga, and Western Samoa more than halved; by 1979 it halved again (Bedford, 1984:124).

The present discounted value of migration is usually calculated over the working life of an individual but logically extends over the whole life when there are differences between the post-retirement incomes of the alternatives. Differences in post-retirement incomes occur in the Pacific. For example, many Samoans interviewed by McPherson (1984:159) compared unfavorably the prospect of low and uncertain retirement income in Western Samoa to the national superannuation scheme in New Zealand which would provide them with an inflation-adjusted, fixed income tied to the national wage. There are a number of other benefits such as workers compensation, family benefit, widows and orphans benefits, which also affect the calculation.

The primacy of economic factors as a motive for migration is also supported by survey research on stated motives for migration. In Table 1 41% of Samoan males and 31% of females who gave a motive for migration to New Zealand cited "job/income" or "to support the family" as the motive for migration. When locational amenities and education (long-run earnings potential) are added these percentages rise to 77% for males and 61% for females. Connell (Country Report 18, 1983:40) cites similar evidence for the primacy of economic reasons in the migration decisions of more than half of all migrants in a study of Tongan migration. Connell (1984a) and Walsh (1982:112) have argued that "internal and external migration are merely variations on similar phenomena." Connell (Country Report 18, 1983:45) cites a South Pacific Commission survey of reasons for emigration from Tonga. In the sample 47% of respondents cited education/training or work/employment as a reason for emigrating. However, the sample excludes households who had emigrated in their entirety, which, given the predominance of complete husband-wife households in the Tonga-born population in American Samoa (see discussion below) would indicate that economic reasons are probably a much more significant factor than the SPC sample indicates. Indeed, Whitehead (1974) found that employment and income-earning dominates all other motives reported by Tongan migrants interviewed at the destination.

In addition to individual motivation for migration in the Pacific a number of writers have stressed the family motivation. For instance, Harrison (1978:12) has written of Samoan social organization as "a form of family organization meeting different types of income from different sources, allocating opportunities between individuals to meet the needs and requirements of the family." The family uses migration to diversify its (locational) portfolio of

assets (members): "in an attempt to spread and diversify the sources of income and welfare, and minimize risk" (Connell, Country Report 22, 1983:39).

#### FACTORS AFFECTING MIGRATION

##### Age

Consistent with the model discussed above migration from Western Samoa and Tonga to American Samoa seems to be motivated by labour market considerations. The migrants are predominantly of working age and the majority of these are of young working-age (15-34 years), the group most likely to benefit from migration. The motivation for migration from the U.S. to American Samoa is less clear. Only half of these migrants are of working age although the majority of these are of young working age.

The age-sex distribution of migrants is shown in Table 2. Of the 796 Tongans in American Samoa in 1980, 617 (78%) were adults (taken to be 15 years and over). Of those born in Western Samoa, 80% were adults, while only 46% of those born in the U.S. were adults. Sixty percent of the Tonga born adults were of young working-age (15-34 years), while the corresponding figures for those born in Western Samoa and the U.S. were 66% and 67% respectively. Note that these figures refer to all migrants in American Samoa at the time of the Census no matter when they migrated to American Samoa. Table 1 does not refer only to recent migrants and so the percentages of migrants of young working-age are probably lower bounds. This point will be addressed when immigration by calendar year and place of birth is discussed in Section II. The age structure of Tongan and Western Samoan migrants in American Samoa is quite different to that of the home country populations. Based on 1976 Census data for Tonga and 1981 census data for Western Samoa (Kingdom of Tonga, nd.; Government of Western Samoa, 1983) the home country populations are much younger than the



migrant populations. In Tonga 44% of the population was less than 15 years of age compared to 45% in Western Samoa. The adult migrant populations were also somewhat younger than the home populations. In Tonga 15-34 year olds constitute 57% of adults and in Western Samoa 60%.

The age structure of the migrant groups also differs from that of the American Samoa-born population. Individuals less than 15 years of age constitute 52% of the population and young working-age individuals constitute only 54% of the adult population, considerably lower than that of the immigrant groups and a little lower than the Tongan and Western Samoan populations.

The age-structure differences are also reflected in the median ages of the populations. The median age of the America-Samoa born was 14.4 years, a little more than the 13.8 years for those born in the U.S. The median ages of Tonga and Western Samoa-born were 27.3 and 24.5 years respectively. These differences again point to the possibility of a different motivation for migration among the U.S. born unless they simply reflect differences in composition of similarly motivated households. This issue will be addressed below.

The gender and ethnic distribution of migrants from Tonga and Western Samoa differ from those from the U.S. More young female than male workers migrate from Tonga and Western Samoa (sex ratio, males/females = .95) while an even larger percentage of females migrate from the U.S. (sex ratio = .86). However, the sex ratios for all adult migrants (those aged 15 years and over) are 1.12, 1.01, and 1.07 respectively. The young adult and total adult sex ratios for American Samoa-born are .86 and .90, reflecting the male bias in American Samoan international migration (see the second report). The sex ratio for both young workers and the total population in Western Samoa in 1981 was 1.08. The corresponding ratios for Tonga (1976) were 1.05 and 1.01.

Connell (1983, Country Report 18:46) claimed that there is a male bias in Tongan emigration although the extent of the bias is unknown. He cites a study of Tongan migration to New Zealand in the early 1970s that indicated that male emigration was at least double that of females. The South Pacific Commission (1979) also found a male bias, although not as great as in the earlier study. Table 2 reports a male bias in total adult Tongan migration to American Samoa of 12% but females outnumber males in the 5-9 years, 15-19 years, and 30-34 years age brackets and thus in the young worker age group. (sex ratio = .95). Thus, although there is male bias in overall Tongan migration, there is a female bias in young working-age Tongan migration - at least to American Samoa (the sex ratio in Tongan migration to the U.S. exceeds one). Both groups of Western Samoan migrants are more female than the corresponding groups in the home population indicating a female bias in Western Samoan migration to American Samoa.

The migrant streams from Tonga and Western Samoa are ethnically Tongan and Samoan respectively. Over 95% of Tongans and Western Samoans responded with place of birth corresponding to ethnicity (see Table 3). In the migration flow from the U.S. those of Samoan ethnicity made up 70% of individuals stating ethnicity. Thus, this flow was not simply the return of Samoans born in the U.S. to Samoa; a large part of the remainder, however, were white contract workers.

#### Household Structure, Fertility, and Parent's Place of Birth

The household structure of the population groups born in American Samoa, Tonga, Western Samoa, and the U.S. differed considerably in 1980 (Table 2). Household data is based on the ethnicity or birthplace of the householder. If the householder was born in the U.S. then the household becomes "U.S." no

matter where the remaining individuals were born. Family households constituted over 95% of all households except for U.S. born householders where they are only 70% of all households. In addition, the migrants groups had a higher percentage of family households with husband and wife both present than in American Samoa-born households. For the American Samoa-born, 77% of households were husband-wife whereas for Tonga-born, Western Samoa-born, and U.S.-born the figures were 81%, 89%, and 86%. These figures point to a high incidence of the migration of complete households rather than single individuals - except in the case of U.S. born migrants. Here those households that move are intact but a significant number of U.S. born are not in family households, again underscoring the different nature of the migration of U.S.-born.

The composition of households also varied. Households with an American Samoa-born householder had on average 4.2 children per household whereas the Tongan and Western Samoan households had 1.5 and 1.8 children respectively. The households of U.S.-born households contained 3.9 children. In addition American Samoa-born and U.S.-born households contained 1.0 and 1.4 grandchildren whereas very few Tongan and Western Samoa-born households contained grandchildren. Tongan and Western Samoan households, however, contained 2.0 and 2.6 parents or other relatives of the householder while American Samoa and U.S.-born households had only 1.1 and 0.7 parents or other relatives. Thus the Tongan and Western Samoan households tended to be composed of a husband and wife and approximately two children and two relatives whereas the American Samoa and U.S.-born households were composed of a husband and wife and approximately four children. Also, as noted before, a significant percentage of U.S. born households were non-family households.

In the home population the average size of a Western Samoan household is 5.11 persons, with 2.07 children, and 1.37 parents or other relatives. Thus migrant households tend to be larger than non-migrant households, the differences being fewer children and more related adults in the migrant households. In contrast, Tongan migrant households are smaller than the average non-migrant household (5.54 versus 6.48 persons).

The structure of the household groups again emphasizes the Tongan and Western Samoan migrant groups as composed of adult families with relatively few children (children usually inhibit migration by imposing extra monetary and psychic costs of migration) whereas the U.S.-born migrant group is rather more heterogeneous with its family households resembling American Samoan family households in their composition.

As shown in Table 2 the fertility of Tonga and Western Samoa-born women aged 15 - 44 is lower than that of American Samoan women-1.7 and 1.9 versus 2.0, although fertility in the year preceding the Census was roughly equal. The fertility of U.S.-born women was much lower than that of all other groups.

The fertility of migrant groups was considerably lower than that of the home populations. In Tonga in 1976, the number of children ever born per woman 15 - 44 years and children still alive per woman 15 - 44 years were 4.1 and 3.8 respectively. In Western Samoa in 1981, the number of children born alive per woman 15 - 44 years was 4.2. The lower fertility of the migrant groups probably reflects their higher education and work attachment than that of non-migrants.

Table 3 also contains data on the place of birth of the parents of the population of American Samoa. Fully 70% of those born in American Samoa had parents who were also born in American Samoa, while 25% had parents born in

Western Samoa. When the minority is added to Western Samoans in American Samoa at least 45% of the American Samoan population in 1980 was either Western Samoan or of Western Samoan descent.

Almost all Tongan migrants were of Tonga-born parents (98%) and a very small percentage of American Samoa-born were of Tongan parents, although this group of second generation Tongans was one-third the size of the migrant group. Tongans are a small percentage of the American Samoan population and a relatively small percentage of all migrants. These characteristics imply that Tongan migration is of a fairly recent vintage - a point supported by the data on immigration by year by place of birth.

Approximately 90% of the Western Samoa-born had parents born in Western Samoa and 10% had parents born in American Samoa. Those of U.S. birth were a much more diverse group. Approximately 50% had parents born in American Samoa and were in a sense "returning home", as were the 10% of Western Samoa-born migrants, or this could reflect women travelling to Hawaii to give birth. About 40% had parents born in the U.S. and, given the ethnic diversity of this group, represented more than a second-generation "returning home." Slightly more than 5% had parents born in Western Samoa and may reflect the use of American Samoa as a way-station to the U.S. for American Samoans.

#### Income

Income differences between American Samoa and the home countries of the migrant groups are quite marked. In 1981, for example, income per capita (\$ U.S.) in American Samoa was \$4167 whereas it was only \$830 in Western Samoa and \$528 in Tonga (Chilcott and Lucas, 1985:3). Connell (1983, Country Report 22:37) noted that the daily wage rate in Western Samoa is approximately the

same as the hourly rate in American Samoa. Higher incomes in American Samoa are an important motive for migration.

A straightforward comparison of the earnings of migrants and non-migrants, however, tends to overstate the potential gain to migration because migrants are non-randomly distributed within the population as a whole (see Nakosteen and Zimmer, 1980). That is, migrants tend to have some characteristics which both cause them to migrate and to have a higher expected income in the absence of migration. Thus the earnings of the population from which the migrant is drawn (the home population) may provide an underestimate of the earnings the migrant would receive in the absence of migration (see Greenwood, 1975). As a consequence a comparison of the 1979 income of migrant groups in American Samoa with the income in their home countries may overstate the gains from migration. This comparison is further complicated by the use of exchange rates to express the incomes in a single currency.

Table 4 reports the income distribution within American Samoa of individuals with earnings by place of birth. Although both median and mean incomes are reported in Table 4 care must be taken in using the mean for small sub-groups since it is strongly influenced by extreme values in the distribution. The median, which is not affected by extreme values is, therefore, a better measure of central tendency or "representative" income than is the mean when the population base is small.

Of the migrants groups only those born in the U.S. have higher income than those born in American Samoa. Those born in Tonga have the lowest income. The median incomes for U.S.-born, American Samoa-born, Western Samoa-born, and Tonga-born were \$9,222, \$4,562, \$3,650, and \$3,458 respectively. With the exception of those born in the U.S. the groups we are studying have lower

income than all other immigrant groups. Reasons for these differences will be explored in the succeeding parts of this section.

For all the groups the median income is less than the mean. Thus, the income distribution is skewed to the right. The income distributions for American Samoa-born and U.S.-born appear to be more skewed than those of the other groups with the mean income being about 50% higher than the median, while for Tongans and Western Samoans the mean is only about 15% higher. The relatively more compact nature of the income distribution for Tongans and Western Samoans is also reflected in the fact that only about 11% of individuals earn above the mean while for American Samoan-born and U.S.-born the percentages are 14 and 20 respectively. These patterns are also true for females separately, although the percentage of Tongan and Western Samoan women with income above the mean is only half that in the overall distribution.

Table 5 reports household income by source of income for all households. No breakdown by place of birth of households is available at this stage. Almost all households receive income (95%) and of households receiving income 96% receive wage and salary earnings. The next largest category of income is "other income". Fourteen percent of households receive income from unemployment insurance, veterans payments, pensions, alimony and child support and remittances. Average household receipts from these sources are exceeded only by average receipts from wages or salaries and non-farm self-employed income.

#### Locational Amenities

There has been a tradition in studies of migration in the Pacific to stress the strong social element in migration--the so-called "bright lights" motive (see Connell, 1984:310). The "bright lights" theory of migration is really a consumption theory of migration rather than an investment theory.

However, Graves and Linneman (1979) have shown that these theories are complementary not competitive.

In the integrated theory of migration there are traded and non-traded goods. The non-traded goods are location-specific and only changing demands for or supplies of non-traded goods will result in changing optimal locations, that is, migration. Examples of "bright-lights" non-traded goods are the "excitements and variety of town life" described by Maude (1965:89): "cinemas, sport, social clubs, dances and other amusements, and the endless opportunities for conversation and kava." However, it is difficult to argue that all of these attractions are non-tradeable. In addition, the distinction between traded and non-traded goods depends upon the level of a society's technology. In general the costs of trade are negatively related to technology and as technology improves relatively fewer goods will be categorized as non-traded. For example, VCRs and video cassette movies replace cinemas. Thus as a particular society develops its own "bright lights," motivation for migration should decline.

Since "bright lights" are positively related to destination income, the "bright-lights" hypothesis is difficult to test directly. Places of relatively higher income also have brighter lights since incomes create the demand for these non-tradeable goods. Empirical support for the bright lights hypothesis is not very strong. Sevele (1973:84-85), for example, tends to discount it as a motive, at least for internal migration in Tonga.

Table 6 contains some data on commodities that may be thought of as signalling "bright lights". For those commodities for which we have complete data levels of consumption are higher in American Samoa than in Tonga or Western Samoa. Thus we expect migration driven by "bright lights" consistent



with these differences. However, with the possible exception of cinemas, these commodities are tradeable, not non-tradeable, and reflect income differences among the countries. This fact points out the difficulty of testing the "bright lights" theory.

An argument can be made for the inclusion of education and health as non-tradeable commodities-although they may clearly be viewed as being primarily investment goods not consumption goods (see Lazear, 1977 for a discussion of this issue). There is ample evidence of a deficit of educational and health services in outlying areas because of the inability to attract and maintain qualified personnel in these areas. There may also be perceived quality differences between local and overseas education. These real or perceived differences may motivate migration either for consumption or investment (future income) reasons.

Ahlburg (1986) and Connell (1983) have emphasized the importance of educational and health services in internal migration in the Pacific and Thaman (1983; cited in Connell, Country Report 18, 1983:41) attributed an important role to education in Tongan international migration. Also, as shown in Table 1, education was a major motive for Samoan migration to New Zealand.

Changing demands for and supplies of education and health services are thus more likely to be the locational amenities motivating migration than are "bright lights."

#### Education

Table 7 contains detailed educational data by place of birth. However because the age breakdowns do not correspond to those in Table 2, school enrollment rates cannot be calculated and compared to those in the home

countries. However, the data do suggest reasons for the income differences observed in Table 4.

Almost all individuals over 25 and born in the U.S. were high-school graduates whereas roughly one in two American Samoa-born and one in three Tonga-and Western Samoa-born individuals were high school graduates in 1980. These differences also applied by gender, although the percentage of American Samoan females who were high school graduates is lower than that for males.

The educational level of migrants exceeded that of the home population. For example, in Tonga in 1976 only 16 percent of those age 25 years or older had completed at least Form 4 of high school. The modal level of education was class 5 of primary school (25 percent). In Western Samoa in 1981 26 percent of those over 15 years of age had attended at least Form 4 of high school. The modal level of education was Form 2 of high school (22 percent of those 15 years and over).

A large proportion of the U.S.-born group also had some college (75%), significantly greater than the 15% for American Samoa-born, 10% for Tonga-born, and 9% for the Western Samoa-born. Similar differences, although of lesser degree, held for vocational training. About 18% of U.S.-born had some vocational training, while for American Samoa-born, Tonga-born, and Western Samoa-born the figures were 13%, 5%, and 5% respectively. In the home populations less than one percent of Tongans and 2% of Western Samoans had some college. In Tonga 2.3% of those over 25 years of age had a vocational or technical certificate or diploma.

Thus Tongan and Western Samoan migrants in American Samoa have much higher levels of education than the home populations, consistent with the predictions

of the migration model and the concerns expressed by the home country governments (see McPherson, 1984:146 and Government of Western Samoa 1983:37).

Educational differences among groups are important because of the positive relationship observed between education and income (for a theoretical treatment see Lazear, 1977). For individuals in American Samoa with only an elementary school education median income in 1980 was \$3,590. For those who had completed high school, vocational school, and college the median incomes were \$5,280, \$6,366, and \$9,694 respectively. The relative gains to high school completion and college completion were higher for females than for males. The educational qualifications of all the island born groups were lower than those of individuals born in the U.S. and Asia and, at least in part, explain the marked income differences between these groups.

School enrollment and labour force status data for 16 - 19 year olds is also reported in Table 7. The educational differences noted for those aged 25 years or older also occur in the 16-19 age group. Slightly more than 80% of U.S.-born and American Samoa-born individuals were currently enrolled in school. For Tonga-born and Western Samoa-born the figures were 30% and 51% respectively. These differences could reflect real differences in school attendance or differences in the age composition of the group. From the data on the percentage of those not enrolled in school, it appears that real differences in school attendance existed.

Of those not currently enrolled 51% of American Samoa-born 16-19 year olds were high school graduates, while 38% of Tonga-born, 35% of Western Samoa-born, and 77% of U.S.-born youths were in this category. For all groups except the U.S.-born these figures represent a modest increase in educational attainment relative to the older age-group. However, the pattern of marked educa-

tional differences among the groups remains and implies that the income differences observed in Table 4 will carry over into the new generation of workers.

The importance of educational attainment to labour market success is also shown in Table 7. The employment rate of high school graduates is several times higher than that of young people who are not graduates in the American Samoa and U.S.-born populations. Western Samoan graduates enjoy a modest advantage in employment over non-graduates whereas the position is reversed for Tongans. Educational attainment is also associated with higher labour force participation for American Samoa and U.S.-born youths but not for the Tonga or Western Samoan-born. It is not known whether the large percentage of high school graduates who are not in the labour force are undertaking further education or are engaged in other non-labour market activities.

The labour force participation of young American Samoa and U.S.-born graduates is equal to that of the adult group but for Tongans and Western Samoans it is considerably lower. For non-high school graduates labour force participation rates are very low compared to those for all adults. It would be very useful to know what activities those not in the labour force were engaged in and what differences exist by gender. The policy implications of being out of the labour market and engaged in further schooling, or childbearing and rearing, or "doing nothing" are quite different.

#### Labour Force Attachment and Unemployment

It is difficult to make comparisons between the labour force status of migrants and those in their home populations because of the paucity of comparable labour force data in Tonga and Western Samoa.

In addition, there is a suspicion that the classification of individuals in the 1980 census as being out of the labour force rather than unemployed may have been in error. If this is correct the labour force participation rates and unemployment rates are biased down. However, it is not known whether this error, if it exists, is more serious for some place-of-birth groups than for others. Thus even though the absolute rates may be in error the relative rates may not be. These reservations should be kept in mind when looking at the labour force and unemployment data discussed.

In the latest Censuses the percentages of those 15 years and over who were economically active in Tonga was 43% and in Western Samoa in 1981 was 47%. In the migrant populations in American Samoa in 1980 46% of Tongans and 45% of Western Samoans were in the labour force or were involved in subsistence activity only. Thus Tongan migrants seem to have a slightly higher labour force attachment than in their home population while the attachment of Western Samoan migrants is slightly less than that in Western Samoa. These conclusions are tentative given the difficulties of defining economically active and the comparison of data across years and countries.

Within the population groups only those born in the U.S. have a significantly higher participation rate than the average. These aggregate rates, however, mask some gender differences. The participation rates for males 16 and over are 56%, 59%, 52%, and 70% for those born in American Samoa, Tonga, Western Samoa, and the U.S. respectively. For females, the rate for Tonga-born women is lower and that for U.S.-born women higher than the average.

The participation rates for males are much lower than those recorded in the home countries. The male participation rate in Tonga was 72% in 1976 and in Western Samoa it was 79% in 1981. The participation rates for females born

in Western Samoa was more than twice the rate of women in Western Samoa (15%) while the rate for Tonga women was slightly higher than that of women in Tonga (14%).

The labour force participation rates of the Pacific groups are 15 to 20 points lower than those for New Zealand-born and Asian-born groups. Since the rates for females are greater than or equal to those of these groups the differences are in the male rates. These differences contribute to the income differences between these groups in the American Samoan population.

These differences are important because labour force participation is, of course, related to income since the majority of income comes from wages and salaries (see Table 5). Non-participation imposes a heavy income penalty in American Samoa. The median income of those in the labour force in 1980 was \$4,538 while that of those not in the labour force was \$2,670.

Subsistence activity, either alone or in conjunction with other employment is relatively more prevalent among the two Samoan groups. About 9% of Samoans 16 years and over were engaged in subsistence activity compared to about 5% for the other groups. Of those employed, 15% of Samoans also engaged in subsistence activities compared to about 7% for the other groups. These subsistence activities are not purely related to relatively lower incomes otherwise we would have expected the Tongan-born to be engaged in them to a greater extent.

Among females, those with children under six years had a higher participation rate than all women except for Tongans. This reversal of the pattern observed in many developed countries may reflect the fact that the participation rates of young women are higher than those for older generations of women and those women having children are predominantly young. The exception in the case of Tongan women may be because, relative to the other groups, they

are more likely to drop out of the labour force to have children. Similar to the pattern in developed countries, those women with children older than six are more likely to be in the labour force than women with children under six.

Unemployment rates do not vary greatly except for Tongan women who, although they have a much lower participation rate, have an unemployment rate double that of other groups. This is somewhat surprising given that their educational attainment is similar to that of American Samoan-born and slightly better than that of Western Samoan-born women. The Tongan figures are small relative to the size of the other groups and reporting errors are correspondingly more important and may explain these differences.

The unemployment rates for Tongans are much lower than those recorded in the 1976 census of Tonga. The unemployment rate for males was 12% and for females 18%. The 1981 census of Western Samoa, in contrast, recorded almost no reported unemployment. In 1980 the unemployment rate for Samoans in the U.S. was 9.7%.

Unemployment carried a heavy income penalty. The median income of males who worked in 1979 was \$4,942 and of those with unemployment in 1979, \$3,227. For females the corresponding incomes were \$3,730 and \$2,071.

#### Class of Worker

The pattern of employment among the groups also differed by class of worker. Tongans and Western Samoans were predominantly private wage and salary workers (83% and 63%, respectively). The majority of American Samoa-born workers were employed by the government (70%) with lower representation among U.S.-born (58%) and Western Samoa-born (34%). Very few Tongan workers are employed by any level of government (9%) and were the only group with much self-employment (8%). These patterns were similar for both male and female

workers. In contrast, 24% of Tongans in Tonga in 1976 were employed by the government or semi-government agencies.

Median incomes vary by type of worker. In 1979 median income for wage and salary workers was \$3,871, for local government and federal government employees \$5,170 and \$6,385, respectively, and for the self-employed \$5,750. The heavier concentration of Western Samoans in government employment relative to Tongans may explain one puzzling feature of the income differences in Table 5. Despite having higher educational qualifications, a greater percentage of individuals working and working 50-52 weeks in 1979, Tongan median income was lower than that of Western Samoans. Government employment of Western Samoans provides a possible explanation.

#### Occupation

In 1980, almost 85% of U.S.-born employed persons were in managerial and professional or technical, sales, and administrative occupations, this compared to 53% for American Samoa-born, 20% for Tonga-born, and 31% for Western Samoa-born. Tongan and Western Samoan workers were concentrated in the precision production, craft, and repair and operators, fabricators, and labourers occupations (63% and 54%, respectively). These figures are twice those for the American Samoa-born and roughly five times that of the U.S.-born.

It is difficult to compare occupational classifications across countries. However, some general statements are possible. Very few migrants in American Samoa worked in agriculture whereas half of all employed Tongans worked in agriculture in 1976 and 64% of Western Samoan males and 10% of Western Samoan females worked in agriculture in 1981. In these years 20% of those employed in Tonga were in professional, technical, administrative, or managerial occupa-