ASSESSING THE QUALITY OF LIFE FOR WOMEN AND MEN IN FIJI USING ACTIVE LIFE PROFILE ANALYSIS*

John Cameron

Much of the discussion about development has been conducted in terms of monetary incomes with 'higher income per capita' being equated with 'more development'. But there have been periodic efforts to supplement, if not replace, monetary income measures with a non-monetary index of development. These attempts have failed because the indicators used often appeared unsystematic and local, and the weighting between the indicators was implicit or arbitrary. Active life profiles are non-monetary indicators of overall development which aim to meet both these criticisms. It would be mistaken to see them as replacing monetary income measures but they may have a role in complementing such measures, giving a different perspective for evaluating past change and prescribing policies to remove imbalances. Active life profiles aim to show patterning of states of economically active life for a specified group of people at a point in time. The states of life considered in this paper are those generally collected in national censuses under the three headings of education, forms of economic activity, and a broad definition of economic inactivity excluding those in formal education. In most national censuses, every person over the age of five is put in one, and only one, of these categories. Thus most problems of unsystematic and local indicators are removed although subjective classification by respondents and enumerators remains a problem. But this is arguably no more of a problem than recall of self-consumed harvested crops or casual wage income which would be needed to estimate money equivalent income.

---

* The OECD Development Centre and the Institute of Development Studies at the University of Sussex initiated in 1980 a programme of research to investigate the feasibility of using life expectancy as an integrating concept for social analysis and planning under varying national conditions. As part of this programme a country study was carried out in Fiji. Results from the Malaysia and Hong Kong country studies are also incorporated. The first version of this paper was presented at the Workshop on Life Expectancy as an Integrating Concept for Social and Demographic Data held at the OECD Development Centre in January 1983. The results of the discussions at that workshop are incorporated here.

It is possible simply to proxy development by the proportion of people in school, or the proportion of males able to consider themselves economically active, or the proportion of females in wage employment, and thus to go no further. But these proportions in each state of life are linked together and are best seen as an interrelated set, rather than state by state. Demographic variables can provide these links between states. In a hypothetical case, it means little to observe a high proportion of a population in school, if half the population is under 15 and many people are dying in their forties and fifties. In fact, the proportion of a total population in any state is related to death rates before and after the ages at which that state most frequently occurs. The problem can be partially resolved if the proportion of people in a particular state of life are subdivided by age and then each age weighted by the average chance at birth of a person alive at that age. The results will now be in the same units of measurement, that is years, and if all the states are mutually exclusive, the weighted sums will add up to the life expectancy at birth. The demographic factors are incorporated in a way that enforces consistency in calculation and uses age-specific death rates as an explicit set of weights, broadly analogous to prices in a set of monetary accounts. A 40 year old person recorded in the census as self-employed will receive a weight less than a 14 year old recorded as at school depending on the death rates between the two ages. A society in which death is relatively rare between 15 and 40 will have a higher weight for the self-employed person than one in which such deaths are more common. If each state is given a total value in years, that is the expected duration in that activity at birth, then a table can be constructed showing how long a person could expect to spend in each state viewed at the moment of birth. The expected duration in any state depends on the frequency of other states in the table and a hidden state, that of being dead.

If it can be agreed that people not dying at young ages is a good indicator of overall development then it is possible to use one column of figures to assess the socio-economic patterns and the general development status of a group of people. Just like a set of monetary national income accounts, different activities are allocated to particular headings, given a weight to get them into an additive form and then totalled up to arrive at a number which has some meaning as an indicator of social well-being. To turn the accounts from an audit record to a management tool requires assumptions about how the levels of different activities are being changed exogenously, how the weights are changing and how the endogenous relationships between activities are changing. If the desire for schooling is seen to be increasing, if it is estimated that death rates are falling, and it is assumed that only those in wage and salary employment create a surplus to support the inactive, then analysis in the framework of an active life profile can integrate these factors

to provide a guide for policy. The analysis would show how lower death rates would increase those at school relative to those economically active (including the wage employed) and those economically inactive but not at school. Differing assumptions would produce different results and more sub-division of states of life could allow more complex models to be built, just as in the analysis of national accounts.

Active life profile analysis rests on a number of ceteris paribus conditions and tends to use a comparative statics approach to change. Ideally, groups examined would be relatively homogenous in age-specific death rates. Spatially, it should be relatively immobile, staying within the boundaries of enumeration. Temporally, the population should not be rapidly growing and new generations should be expected to move through a similar sequence of stages of life in similar proportions to older generations. The first condition immediately suggests separate profiles for males and females. The second suggests national, not regional, profiles for a country the size of Fiji. The third condition is the most difficult to adjust for explicitly. An active life profile takes a census snapshot across a population and attempts to turn it into a moving picture across a whole single life-time. Looked at in this way, it gains a similar, rather spurious, communicative appeal to a set of national accounts envisaged as an individual disposing of a portfolio consisting of shares of all assets in proportion to their appearance at the national level. In such circumstances, the use of profiles is open to invalid manipulation and mistaken interpretation. Like any method aiming to encapsulate complex experience in a few numbers, active life profiles are open to abuse. Active life profiles, at this stage of their development, are only a static summary of a few, frequently enumerated states of socio-economic existence. They need to be seen in the context of processes of development, especially those which will act as dynamic exogenous factors which will move people between forms of activity (including death) in the future.

Comparison between Active Life Profiles of Fiji Women and Men (1976)

As noted above, differences between age-specific death rates for the sexes are almost invariably substantial enough to make construction of separate active life profiles desirable. Fiji is not an exception to this general rule, as the figures for life expectancy at birth, at the foot of the columns in Table 1, indicate. Table 1 shows that women in Fiji have a life expectancy at birth seven years greater than men. Lower infant mortality rates are important in explaining this difference but lower age-specific death rates are found for women at most ages compared with men. As there appears to be no institutional or sociological reason why deaths of females specifically should be

systematically unreported, compared with say a factor like distance from a recording office or medical facilities, the difference is probably real and not due to the method of data collection. The separation of female activity from male activity which mortality data demands for active life profiles is an obvious immediate difference from conventional national accounting classification, where the recorded unit is almost invariably the household. At a time when attention is being drawn increasingly on a world scale to the specific experiences of women, this property may be viewed as one of the strengths of the active life profile approach to evaluating development.

In Table 1, the expected durations of schooling for females and males can be seen as virtually identical, but in all states of economic activity, including declared unemployment, women have an expected duration figure which is only a fraction of that for men. Naturally, this failure to appear in economically active states is reflected in the very large economically inactive expected duration. This disparity raises two questions. Is the measurement accurate? If it does reflect a real difference, what does that imply for the relative positions of women and men in Fiji?

The answer to the first question must acknowledge that the nature of censuses tends to push women into the economically inactive response category. This is partially due to male prejudices but is compounded by the multiple roles played by many women virtually simultaneously. Given a census question which seeks to find a unique role it would not be surprising if a person asked whether their single role was looking after children, tending livestock, hoeing crops, selling a few vegetables, participating in community projects, going fishing, or seeking wage work, replied that looking after their children was most important, and this then would be recorded as the required single role. Table 2 shows a crude correction for this bias which increases the expected durations in economic activities for women, in the states most likely to be undernumerated, to figures in line with men's declarations making allowances for the lower death rates of women at every age. The economically inactive category for females is reduced to 36 years compared to male inactivity of less than six years. This crude adjustment does force the statistics to take on significantly different shape, which shall be used as an alternative to the original figures, but the real implication is that future data collection on people's economic role should be sensitive to the peculiar circumstances of women and more accurately assess the actual roles that they play in production as well as reproduction.

Using these figures to compare the relative position of women and men in Fiji raises conceptual problems. Women do have as much schooling as men and live significantly longer which suggests a privileged position for women.

However, for women, unlike men, the states of economic inactivity is generally not one of leisure but repetitive domestic work for no personal reward in service of others, including husbands, children and mothers-in-law. It might well be true that the longer expected duration of economic inactivity contributes to the longevity of Fiji women compared with men, though of course it is also partly a function of that extra longevity. The small number of women credited in the census as family workers and villagers compared with men does suggest a probable lack of recognition of women's work; a lack indicating an absence of control over economic activity and corresponding lack of satisfaction. Thus, the long expected duration of economic inactivity for women is a very mixed blessing, confirmed in conversations with Labour Officers and Social Welfare Officers in Fiji, who have pointed to the strong desires of women for wage work with no connotations of house-keeping, and the helplessness of women in the face of domestic violence, mental cruelty and desertion. For most women so-called economic inactivity cannot be evaluated as a state of leisure and freedom of choice. However, on its own, the active life profiles only point to the differences between men's and women's experiences in Fiji after the completion of formal education. These differences suggest that a greal deal of women's production potential is not being utilised in Fiji and that death-related stress on women's lives is less than men's. It would seem unlikely that using some of the productive potential would increase stress in such a manner to reduce women's life expectancy. On the other hand, the relative lack of women in the unemployed state suggests that the Government is unlikely to come under significant political pressure to use that potential.

Comparison between Active Life Profiles of Fiji Men (1976), Malaysian Men (1970) and Hong Kong Men (1971)

As noted in the first section, one of the great strengths of active life profiles is that they use internationally relatively standardised census categories in a systematic fashion. Thus in Table 3, a comparison is made for the male populations of Fiji in 1976, Malaysia in 1970 and Hong Kong in 1971. Some of the Fiji categories have been aggregated to allow comparison with published profiles for the other two countries. Government and private employment are no longer distinguished and 'villagers' have been added to the self-employed.

The latter correction is problematic because the category 'villager' involves performance of economic activities on own account, acting as virtual unpaid family labour, and providing a label for some periods of economic inactivity. The Fiji development dilemma is clearly brought out if this

However, for women, unlike men, the states of economic inactivity is generally not one of leisure but repetitive domestic work for no personal reward in service of others, including husbands, children and mothers-in-law. It might well be true that the longer expected duration of economic inactivity contributes to the longevity of Fiji women compared with men, though of course it is also partly a function of that extra longevity. The small number of women credited in the census as family workers and villagers compared with men does suggest a probable lack of recognition of women's work; a lack indicating an absence of control over economic activity and corresponding lack of satisfaction. Thus, the long expected duration of economic inactivity for women is a very mixed blessing, confirmed in conversations with Labour Officers and Social Welfare Officers in Fiji, who have pointed to the strong desires of women for wage work with no connotations of house-keeping, and the helplessness of women in the face of domestic violence, mental cruelty and desertion. For most women so-called economic inactivity cannot be evaluated as a state of leisure and freedom of choice. However, on its own, the active life profiles only point to the differences between men's and women's experiences in Fiji after the completion of formal education. These differences suggest that a greal deal of women's production potential is not being utilised in Fiji and that death-related stress on women's lives is less than men's. It would seem unlikely that using some of the productive potential would increase stress in such a manner to reduce women's life expectancy. On the other hand, the relative lack of women in the unemployed state suggests that the Government is unlikely to come under significant political pressure to use that potential.

Comparison between Active Life Profiles of Fiji Men (1976), Malaysian Men (1970) and Hong Kong Men (1971)

As noted in the first section, one of the great strengths of active life profiles is that they use internationally relatively standardised census categories in a systematic fashion. Thus in Table 3, a comparison is made for the male populations of Fiji in 1976, Malaysia in 1970 and Hong Kong in 1971. Some of the Fiji categories have been aggregated to allow comparison with published profiles for the other two countries. Government and private employment are no longer distinguished and 'villagers' have been added to the self-employed.

The latter correction is problematic because the category 'villager' involves performance of economic activities on own account, acting as virtual unpaid family labour, and providing a label for some periods of economic inactivity. The Fiji development dilemma is clearly brought out if this

qualification is borne in mind when looking at the profiles. Fiji males have an expected duration of schooling and life expectancy at birth closer to Hong Kong than Malaysia, but have retained control of their own lives to an extent comparable with males in Malaysia, even if the 'villager' expected duration is partially allocated to other states. A further gain of three and a half years in life expectancy at birth for Fiji men to raise them to Hong Kong levels seems to require a socio-economic revolution according to the profiles. A revolution in which about 30 percent of male time over the age of 15 no longer involves the individual right to choose hours and conditions of work. The 1976 relatively high life expectancy and low self-identified unemployment levels do not suggest a great pressure to undertake such a revolution.

Comparison between Active Life Profiles of Fiji Women (1976), Malaysian Women (1970) and Hong Kong Women (1971)

An adjustment similar to that made for males has to be made to the profile for Fiji females in order to make the profiles shown in Table 4 internationally comparable. But in Table 4 the profile from Table 1 and the 'corrected' profile from Table 2 are included. It may well be the case that Malaysian and Hong Kong profiles should have a similar adjustment and this should be remembered when making comparisons. The transfer from 'inactive' to 'villager' to 'self-employed' makes a dramatic difference to the apparent position of Fiji women compared to their sisters in Malaysia and Hong Kong. This adjustment suggests that Fiji women exercise greater control over their economic destinies - a hypothesis which needs investigation, not a firm conclusion!

Overall, a similar conclusion can be drawn with respect to Malaysia and Hong Kong as that for Fiji men in their international comparison, Fiji women have the advantage of the education and life expectancy of Hong Kong (as indicators of development) but the socio-economic pattern of activity closer to Malaysia which had a much shorter expected duration of schooling and lower life expectancy. To reach the expected duration in employment for Hong Kong women, Fiji would have to create around 50,000 jobs targeted at women, without considering population growth or male employment. If industrialisation in Fiji is to be built on the wage labour of women, as it has been in many other societies, then it would seem to really require a 'miracle' or a very long time. Fiji women are comparatively well educated but the current base for expansion of their wage employment is chronically weak.

Comparison between Active Life Profiles of Fijian Men and Indo-Fijian Men (1976)

Data on education and economic activity, and age-specific death rates are published for the two largest ethnic groups in Fiji each accounting for about half the total population. Therefore active life profiles can be constructed for the men of both groups and compared. As can be seen in Table 5, both groups have a similar expected duration of education, but states of economic activity look dissimilar, primarily due to the term 'villager' being exclusively applied to Fijians in the census. This category does capture some important attributes of Fijian rural life in terms of strong communal rights and obligations involving agricultural and non-agricultural production and distribution of produce. Certainly there is a genuine distinction to be made between this way of life and that of Indo-Fijian settlers involved in sugar cane, homestead production for a large para-statal organisation. and members of both ethnic groups not engaged in agriculture. Thus the longer expected duration of Indo-Fijians in employer/self-employed and employee states does reflect different relationships in agriculture as well as predominance in private sector non-agricultural activity. Looking at the active life profiles we find with ethnic Fijians higher life expectancies and virtually equal access to education are combined with longer expected duration in activities where the individual exercises some explicitly recognised control over his economic life. Even the time in employment is absolutely and proportionately more in relatively secure government employment. The only drawbacks for Fijian men are a slightly lower expected duration of inactivity, though being a 'villager' at an advanced age does probably mean performing little labour, and a slightly higher expected duration of unemployment.

Thus the conclusions from active life profile analysis point towards an assessment that any higher average money-equivalent income of Indo-Fijians needs to be considered as only one indicator of inequality between the major ethnic groups. To give a basis for comparison and contrast, the active life profiles for Malay men and Chinese men in Malaysia in 1970 are also shown in Table 5. In this case, the Chinese with a higher average money-equivalent income, also have greater life expectancy, a much longer expected duration of inactivity, and considerably greater access to tertiary education, than Malay men. In the Malaysian case, inequality between males in two ethnic groups seems much more unambiguous than in Fiji.

Comparison Between Active Life Profiles of Fijian Women and Indo-Fijian Women (1976)

Table 6 shows the active life profiles for females in the two major ethnic groups. Both profiles are shown in two forms: firstly, with the statistics derived directly from the census figures; secondly, with the large inactivity figure adjusted up to the equivalent for males in the states of villager, family worker and unemployed. Given the supposed differences between the two ethnic groups, it is interesting to note how similar the unadjusted inactivity figures are in the two female profiles. In fact, the two unadjusted profiles are generally very close to each other, though Fijian women have higher expected durations in economic activity states than Indo-Fijian women. This qualitative conclusion is not fundamentally altered by the dramatic changes caused by the adjustments. If Fijian women are called 'villagers' rather than 'inactive', then this may be regarded as conferring a superior ranking compared with 'inactive'. Any access to decision making or choice of activity that a Fijian woman may appear to gain through the reclassification may be seen as reinforcing the better position she has through her greater life expectancy. Thus, the conclusion from the active life profiles is similar to that for men. Inequality between the ethnic groups in active life profile terms runs against inequality in money-equivalent income terms. But for all women, men stand between them and money income due to very low female expected durations associated with employment, or self-employment. Thus more information is needed about how incomes flow within households to be sure that Indo-Fijian women are not trebly disadvantaged in comparison with Fijian women, through having shorter lives, less control over their economic activities, and lower money-equivalent incomes.

Conclusion

Active life profiles for Fiji based on statistics from the seventies and early eighties, are consistent with the following conclusions:

- Fiji possessed the demographic and education characteristics of a relatively developed country for the whole population, both major ethnic groups, and both sexes. However the activity patterning was that of a less developed country if we take Hong Kong and Malaysia as benchmarks for comparison.

- The economic activity pattern of women raises questions about measures of non-monetary activities in censuses. Where it was most probably accurately recorded in formal employment activities, the expected duration

for all women (and women in both major ethnic groups taken separately) in those activities was low compared with Malaysia and Hong Kong. Women's position in Fiji merits special investigation in itself. As statistical matters stand, Fiji appeared to have a large proportion of long-lived, well-educated housewives.

The relative position of the two major ethnic groups as seen from their active life profiles offset their ranking in terms of average money-equivalent incomes. This can be contrasted with the situation in Malaysia, if the positions of the Malays and Chinese in 1970 are compared. A comfortable conclusion might be that the socio-economic positions of the ethnic groups were merely different and not fundamentally unequal. The reality is one in which complex, counteracting factors gave rise to differences as shown in the active life profiles. This suggests that dramatic, immediate action was not needed, as opposed to steady, continuing, positive discrimination and at least as much stress on class as ethnicity as the basis of inequality.

TABLE 1 ACTIVE LIFE PROFILES FOR ALL FEMALES AND MALES IN FIJI (1976)

Socio-economic state	Expected duration of state in years	
	Female	Male
Pre-school	5.56	5.51
Between 6-15 and not at school	0.76	0.79
Primary school	7.83	7.86
Secondary school	2.06	2.00
Post-secondary education	0.14	0.19
Employer/self-employed	1.15	9.73
Villager	1.00	8.30
Employed by government	1.43	7.10
Employed by private employer	2.70	12.13
Family worker	0.85	2.24
Unemployed	0.95	1.86
Inactive	46.34	5.72
Residual	0.37	0.43
Life expectancy at birth	71.14	63.86

SOURCES For Table 1 and all subsequent active life profiles for Fiji people:

1. The Table uses activity information from the 1976 Population Census joined with mortality rate calculations using both Registrar General and Ministry of Health estimates for the year 1978, published as Vital statistics in Fiji (1981).

2. Census information on schooling was in one year periods from age 5 to 20. From age 15, schooling, forms of economic activity, and economic activity were reported in five year periods up to age 29, and ten year periods after that with an open ended class starting at 60 years of age.

3. For mortality rates the basic data used were the Registrar-General's figures by year for ages 0-4 and by five year periods from 5 upwards with an open ended class starting at 75. These figures were adjusted by, firstly, using the Ministry of Health's figure for total infant mortality allocated between the sexes in proportion to registered deaths; and, secondly, allocating the remaining additional deaths reported by the Ministry of Health over registered deaths by sex and then by age in strict proportions.

TABLE 2 ACTIVE LIFE PROFILES FOR ALL FEMALES AND ALL MALES IN FIJI (1976) CORRECTED FOR LIKELY UNDERSTATEMENTS OF FEMALE ECONOMIC ACTIVITY

Socio-economic state	Expected duration of state in years	
	Female	Male
Pre-school/not at school	6.32	6.30
Formal schooling and education	10.03	10.05
Employer/self-employed	1.15	9.73
xVillager	8.50	8.30
Employed by government	1.43	7.10
Employed by private employer	2.70	12.13
xFamily worker	2.50	2.24
xUnemployed	2.00	1.86
xInactive	26.14	5.72
Residual	0.37	0.43
Life expectancy at birth	71.14	63.86

x adjusted categories for women
SOURCES: As for Table 1.

TABLE 3 ACTIVE LIFE PROFILES FOR FIJI MALES (1976) MALAYSIAN MALES (1970 AND HONG KONG MALES (1971)

Socio-economic state	Expected duration of state in years		
	Malaysian males (1970)	Fiji males (1976)	HongKong males(1971)
Pre-school	5.65	5.51	6.24
Not at school	0.79	0.79	
Primary/secondary school	7.96	9.86	10.24
Post-secondary education	0.16	0.19	0.32
Employer/self-employed	15.99	18.03	6.66
Employee	18.43	19.23	34.18
Family labour	3.19	2.24	0.51
Unemployed	-	1.86	1.83
Inactive	7.96	5.72	7.38
Residual	-	0.43	-
Life expectancy at birth	60.12	63.86	67.36

TABLE 4 ACTIVE LIFE PROFILES FOR FIJI FEMALES (1976), ORIGINAL AND ADJUSTED, MALAYSIAN FEMALES (1970) AND HONG KONG FEMALES (1971)

Socio-economic state	Expected duration of state in years			
	Malaysian female (1970)	Fiji female (1976) original	Fiji female (1976) adjusted	Hong Kong female (1971)
Pre-school	5.71	5.56	5.56	6.30
Not at school	0.91	0.76	0.76	-
Primary/secondary school	6.99	9.89	9.89	9.67
Post-secondary education	0.14	0.14	0.14	0.19
Employer/self-employed	4.84	2.15	9.65	1.61
Employee	6.37	4.13	4.13	18.33
Family labour	4.95	0.85	2.50	0.94
Unemployed	-	0.95	2.00	0.96
Inactive	34.15	46.34	36.14	37.01
Residual	-	0.37	0.37	-
Life expectancy at birth	64.06	71.14	71.14	75.01

SOURCE: As for Tables 1 and 3.

SOURCES: As for Table 1; and Kwok Kwan Kit, Life expectancy as an integrating concept for social and demographic data: the Malaysia country study, [CD/R(82)3006], OECD Development Centre, Paris, May 1982; and Census and Statistics Department of Hong Kong, Life expectancy as an integrating concept for social and demographic data: the Hong Kong country study, [CD/R(82)3007], OECD Development Centre, Paris, August 1982.

TABLE 6 ACTIVE LIFE PROFILES, ORIGINAL AND ADJUSTED, FOR FIJIAN FEMALES AND INDO-FIJIAN FEMALES

Socio-economic state	Expected duration of state in years			
	Fijian females	Indo-Fijian females	Malay females	Chinese females
Pre-school	5.58	5.55	5.58	5.55
Not at school	0.80	0.76	0.80	0.76
Primary school	7.88	7.86	7.88	7.86
Secondary school	1.89	2.13	1.89	2.13
Post-secondary education	0.13	0.13	0.13	0.13
Employer/self-employed	0.93	0.98	0.93	0.98
Villager	2.44	-	18.57	-
Employed by government	1.82	1.06	1.82	1.06
Employed by private employer	3.14	1.66	3.14	1.66
Family worker	0.87	0.74	1.10	2.64
Unemployed	0.94	0.52	1.92	1.63
Inactive	46.20	49.09	28.86	43.08
Residual	0.22	0.45	0.22	0.45
Life expectancy at birth	72.84	67.93	72.84	67.93

Note: Life expectancies estimated by two methods from the 1976 census for Fijian females were 63 and 70, the estimates for Indo-Fijian females were 61 and 68.
SOURCE: As for Tables 1 and 2.