



Macroeconomic policy and poverty in Fiji

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Fiji is generally considered to have a fairly equitable income distribution. Unlike other countries in Asia, Africa and Latin America, poverty is not considered to be a major problem. However, given Fiji's poor economic performance in the last two decades, this notion of Fiji is increasingly being questioned. This study investigates the relationship between macro-economic policy and poverty in Fiji, using data from two household income and expenditure surveys (1977 and 1990/91) combined with macroeconomic data. The results suggest that overall, poverty has increased as the government's macroeconomic policy regime has deteriorated. There has been a differential impact on poverty in that the urban poor have become poorer, while the rural poor are no better off.

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Historically, many South Pacific island nations, including Fiji, have been perceived as idyllic paradises with abundant natural resources. Unlike developing countries in East and South Asia, Africa and Latin America, poverty in Fiji is not regarded as a common or serious problem. However, given Fiji's poor economic performance in the last two decades, many people are increasingly becoming sceptical about the validity of these widely held beliefs (Tables 1, 2 and 3).

Recent studies lend support to the view that Fiji has to grapple with increasing levels of poverty and income inequality

(Stavenuiter 1983; Ahlburg 1995; Barr 1990; Bryant 1993). Poor economic performance and increasing visibility of poverty such as the increase in the number of squatter settlements and associated problems of urban crime have brought the debate on poverty and income inequality into focus in Fiji. Recent analysis of poverty and income distribution shows that income distribution has worsened since 1977 (Ahlburg 1995). While these studies show the extent of poverty and income distribution in Fiji, to date none has focused on the causes and possible policy failures that may have led to the current situation. This study



Table 1 Contribution to GDP by economic activity, 1980-90 (F\$ million)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989p	1990p
GDP	716.2	760.0	712.5	683.9	741.6	703.7	761.9	711.4	728.4	815.5	854.8
GDP growth rate	-1.7	6.1	-6.3	-4.0	8.4	-5.1	8.3	-6.6	2.4	12.0	4.8
Agriculture ^a	152.8	172.6	175.6	143.8	180.9	156.2	186.0	173.7	170.0	189.6	182.8
Mining and quarrying	0.3	0.4	0.6	0.6	0.7	0.8	1.3	1.3	1.9	1.9	1.8
Manufacturing ^b	80.7	88.9	86.5	77.7	91.0	79.3	94.7	83.9	83.2	92.8	99.0
Electricity, gas, water	6.5	6.8	7.0	7.4	8.0	8.4	9.0	8.9	9.6	10.1	10.6
Building/ construction	59.7	60.5	53.4	50.9	39.8	38.1	38.7	29.1	30.8	34.1	37.1
Services ^c	392.5	409.3	408.0	423.7	441.8	442.8	453.2	435.2	455.6	511.4	552.0

^a Includes forestry, fishing, and subsistence.

^b Includes sugar, food, drinks and tobacco.

^c Includes trade, hotels, restaurants, transport and communications, finance, community and social services.

Source: Fiji Bureau of Statistics, 1992. *Current Economic Statistics*, Suva.

investigates the relationship between macroeconomic policy, income inequality and poverty in Fiji, using data from two household income and expenditure surveys (HIES) as well as macroeconomic data. The first household income and expenditure survey was carried out in 1977 while the second survey was conducted in

1990/91 (Stavenuiter 1983; Fiji 1991). The two studies were conducted by different people, so there are bound to be slight differences in data generation. Nevertheless, the two surveys yield valuable insights into general trends in poverty.

Poverty in Fiji

Analysis of the incidence and severity of poverty is useful in providing evidence of the economy's progress in lifting the living standards of low-income households. This type of analysis is also useful in shedding light on the social impact of the government's macroeconomic policies. There are, however, several methodological problems in measuring poverty. A good indicator of social welfare must be quantifiable (to enable objective comparisons) and must reflect a broad range of contributory factors. A poverty line must be selected. This is often a point of contention since value judgements must be made in deciding minimum acceptable living standards.

Table 2 Tourism earnings, 1990-95 (F\$ million)

	Tourism earnings (F\$ million)
1990	294.4
1991	286.3
1992	328.1
1993	344.4
1994	392.5
1995	442.3

Source: Forsyth, D., 1996. 'Fiji's economy at the crossroads', *Pacific Economic Bulletin*, 11(1):1.



Table 3 GDP annual average growth rates, 1971–94 (per cent)

	Nominal GDP	Real GDP	Real per capita GDP
1971–96	22.9	5.3	3.3
1980–86	8.0	1.5	-0.2
1987–94	7.4	2.8	1.8
1980–94	7.7	2.2	0.9

Source: Chandra, R.C., 1996. 'Manufacturing in Fiji: mixed results', *Pacific Economic Bulletin*, 11(1):47.

Several measures of poverty have been proposed in the literature. The commonest is the head count index, which measures the share of the population below the pre-determined poverty line. The focus of this study is on absolute poverty which defines poverty as having less than the absolute minimum of resources represented by the poverty line.¹ Other indexes account for the severity of poverty by weighting extremes of poverty more heavily. Since the head-count index does not reveal changes in the conditions of the poorest of the poor, it may result in vastly different conclusions compared to other methods.

Bearing in mind the above caveats, we consider the incidence of poverty in Fiji. Stavenuiter established in his 1977 study that urban households spent 55 per cent of their income on food, settlement households 64 per cent and rural households 76 per cent. Nationally, he found that households allocated 66 per cent of their total expenditure to food (Stavenuiter 1983). The 1990/91 HIES estimated that average weekly household food expenditures were F\$56.33 for urban households, F\$58.79 for rural households and F\$55.10 for settlements, and F\$55.82 for the national average (Bureau of Statistics 1991).

An estimate of basic expenditure (expenditure on food and other necessities—housing, medical care) can be

found by applying an appropriate multiplier to the food expenditures. Such a multiplier is commonly estimated by the inverse of the proportion of income expended on food by the bottom 20 per cent of the population. To enable some sort of comparison to be made between the 1977 and 1990/91 household surveys, we derive the multipliers from the proportions of income spent on food in the 1977 survey. We then apply these multipliers to average weekly household expenditures obtained from the 1990/91 survey, in order to establish the poverty lines. Thus, using the 1977 data, the multipliers are as follows: urban households ($1/0.55 = 1.82$); settlement households ($1/0.64 = 1.56$); rural households ($1/0.76 = 1.32$); and national average ($1/0.66 = 1.52$). Multiplying these numbers by the 1990/91 weekly expenditure results in the following poverty income levels: urban households, F\$102.50; rural households, F\$77.60; and settlement households, F\$86.00 (Table 4).

It must be borne in mind that incomes are expected to rise as a result of economic growth, so the above-poverty levels are likely to be underestimated for 1990/91. An alternative approach would have been to adjust the 1977 poverty levels by, say, the growth in the consumer price index (CPI). However, that would also lead to overestimation since it could be argued that income growth has not kept up with

Table 4 **Fiji: trends in absolute poverty, 1977 and 1990**

	Poverty income level (F\$ 1991)	Percentage of population in poverty		Change in poverty (percentage points)
		1977	1990	
National	84.90	15.0	25.2	+10.2
Urban	102.50	11.6	32.8	+21.2
Rural	77.60	21.4	23.1	+1.8
Settlement	86.00	19.6	29.0	+9.4

Note: Absolute poverty is based on the head count index.

Sources: For 1977, Stavenuiter, S., 1983. *Income distribution in Fiji: an analysis of its various dimensions, with implications for future employment, basic needs and income policies*, Central Planning Office, Suva; for 1990, Fiji Bureau of Statistics, 1991. *1990/91 Household Incomes and Expenditure Survey*, Bureau of Statistics, Suva.

inflation. Ignoring differences in data generation in the two studies, some general observations can be made about trends in poverty between 1977 and 1990/91 (Table 4). The proportion of the population in poverty increased by about 10 percentage points within this period. A detailed breakdown suggests that the incidence of poverty was worse for urban areas (+21 percentage points) compared to rural areas (+2 percentage points) and settlements (+9 percentage points).

Recent studies suggest that there are close links between poverty and macroeconomic policy (Dorosh and Sahn 1993; Ravallion and Hupi 1991 and Sarris 1994). Cuts in government spending will affect the poor much more if these cuts are made on consumption rather than on investment. In the case of Fiji, both private consumption and current government expenditure rose in the period under study and these categories of expenditure are unlikely to have impacted on the poor. A policy such as exchange rate devaluation tends to increase prices of traded goods (exports and import substitutes), drawing producers, employment and income from the non-tradable sector into the traded

goods sector. To the extent that rural households are net producers of traded goods, they are more likely to benefit from such a policy. Urban dwellers are more likely to bear the brunt of currency devaluation since they are more dependent on imported goods and services which become more expensive.

Income inequality in Fiji

Several measures of income inequality have been proposed to enable comparisons across countries to be made about household income distribution. One of the commonest measures of income inequality is the Lorenz curve which shows the relationship between the cumulative proportion of income received and the cumulative proportion of income receiving units (that is, households or individuals). A Lorenz curve with a 45° line on the diagonal implies perfect income equality (that is, all households receive the same income). On the other hand, if the curve is bowed below the 45° line, income inequality is implied (Sen 1973). A variation of this approach is to consider percentages of income received by



particular percentages of the population.

Other commonly used measures of income inequality are scalar or summary measures which calculate either the variation in income distribution or the deviation of a given distribution from a perfect income equality. Examples of such measures are the range, the relative mean deviation, the coefficient of variation, the standard deviation of logarithms and the Gini coefficient. The Gini coefficient is the best known of these measures and is used here to analyse trends in income distribution.² It measures the degree of deviation of an actual distribution (the Lorenz curve) from the line of perfect income equality. Thus, a Gini coefficient of zero implies perfect income equality, while a value of one implies perfect income inequality.

Gini coefficients suggest that, nationally, income inequality worsened by about 10 per cent from the 1977 and 1990/91 surveys (Table 5). A disaggregation of the changes reveals widely differing results. Income inequality increased most for urban households (19 per cent) and settlements (14 per cent). On the other hand, there was a marginal improvement in income inequality (-3 per cent) for rural households. Once again, a link may be

made between government policy and income inequality.

Macroeconomic policy and poverty in Fiji

To conduct a quantitative evaluation of the relationship between macroeconomic policy and poverty, we compute indexes for changes in fiscal, monetary and exchange rate policies. Scores are then applied on a consistent basis to performance in each of these areas to arrive at a final index for each component. A single index, which is a weighted average of performance in each of the three components, is then computed to represent the macroeconomic policy regime (Demery and Squire 1996; World Bank 1994).³

The procedure used to compile the final macroeconomic policy index is as follows

- an initial index of a given policy variable is calculated as the average of the year of the first survey (that is, 1977) and the two preceding years. This index provides a measure of the macroeconomic regime before and during the 1977 survey
- a final index for a given policy variable is calculated as an average

Table 5 **Fiji: trends in income inequality, 1977 and 1990**

	1977	1990	Percentage change
National	0.420	0.461	+ 9.8
Urban	0.425	0.507	+19.3
Rural	0.391	0.378	- 3.3
Settlement	0.386	0.441	+14.2

Note: Income inequality is measured by the Gini coefficient and is based on per capita household income. **Sources:** For 1977, Stavenuiter S., 1983. *Income distribution in Fiji: an analysis of its various dimensions, with implications for future employment, basic needs and income policies*, Central Planning Office, Fiji; for 1990, Fiji Bureau of Statistics, 1991. *1990/91 Household Incomes and Expenditure Survey*, Bureau of Statistics, Suva.


Table 6 Changes in macroeconomic policy index for Fiji, 1977–90

Index	Weight	Raw Score	Weighted Score
Fiscal policy	0.37	-2.0	-0.7
Monetary policy	0.12	-1.5	-0.2
Exchange rate policy	0.51	-	-
Overall macroeconomic policy	1.00	-3.5	-0.9

Note: Weights are from Bouton, L., Jones C. and Kiguel, M., 1994. 'Macroeconomic reform in Africa: adjustment in Africa revisited'. Policy Research Working Paper 1394, Policy Research Department, World Bank, Washington, DC.

Sources: Authors' calculations (see Appendix).

of the year of the second survey (that is, 1990/91) and the two preceding years⁴

- the change in macroeconomic policy is taken to be the difference between the initial and final indexes.

Table 6 shows the final macroeconomic index for Fiji for the period 1977–90. It was calculated by adjusting the raw scores with weights reflecting the importance of a given component in affecting growth. The weights are based on cross-country regressions linking these indicators to economic growth (Bouton, Jones and Kiguel 1994). (A detailed description of the procedure used in calculating the indexes is given in Appendix 1.) There was a deterioration in fiscal and monetary policies in that period, while there was no change in the exchange rate policy stance. Overall, there was a deterioration in macroeconomic policy between 1977 and 1991 (Table 6).

Table 7 puts together information from Tables 4 to 6 to provide an overview of the links between changes in macroeconomic policy and changes in poverty. In general, the worsening in the macroeconomic policy regime can be associated with the deterioration in absolute poverty and income inequality. It should be noted that we are not inferring causality between

macroeconomic policy and poverty in Fiji.⁵ However, our results suggest that there is an association between past macroeconomic policy and changes in poverty in this country. While the standards of living may have improved for some sections of the population, our results suggest that past government policy has failed to improve the lot of the poor, and may have created a new class of urban poor.

Policy implications

While direct causation is not assumed to run from macroeconomic policy to poverty,

Table 7 Macroeconomic policy, poverty and income distribution in Fiji, 1977–90

Variable	Change
Macroeconomic policy	-0.9 (% points per annum)
Absolute poverty	+0.7 (% points per annum)
Income inequality	+0.7 (% per annum)

Sources: Tables 1, 2 and 3.



the association between the two variables has implications for policymakers. Fiji began to move away from an import-substitution policy to an outward-oriented economy in 1984, and more vigorously after the political events of 1987. Macroeconomic policy has been targeted at making the economy internationally competitive and efficient. Furthermore, the policies have been directed towards the manufacturing sector. Despite nine years of policy targeting the manufacturing sector, its contribution to GDP remains at about 12 per cent, increasing marginally since the early 1970s.

Agriculture still remains an important sector in the economy and contributes about 20 per cent of GDP. Since the mid-1980s the shift in macroeconomic policy has clearly been away from agriculture. Theoretically, it is expected that as industrialisation proceeds resources released from agriculture will be absorbed into the urban manufacturing sector. In the case of Fiji, this has not happened. Resources, in particular, surplus labour released from agriculture have not been absorbed in manufacturing. The majority of unskilled labour moving to the urban areas have joined the increasing numbers of people living in poverty. The number of urban dwellers living below the poverty line increased from 5 per cent in 1977 to 36 per cent in 1991. Agricultural policies should promote high levels of production so that the surplus could eventually be invested in industry. It appears that agriculture may have suffered the decline too soon. The experience of countries such as Taiwan lends support to the view that increased productivity in agriculture will also support industrialisation (Clark 1996).

The government has tried pursuing a tight fiscal policy strategy since 1987 but has not been able to contain the fiscal deficits. Until 1986 Fiji pursued a relatively stable exchange rate policy that insulated it from imported inflation. However, as pointed

out by Treadgold (1992), it did not lead to the expected improvement in external competitiveness. After the 1987 coups, the currency was devalued by 33 per cent. This may have led to increased competitiveness, in turn leading to a boost in production and employment but the short-run direct impact of the devaluation is likely to have affected the poor, particularly those in urban areas.

Wages policy has been one of the key policy issues for the Fijian government. The deregulation of the labour market was designed to improve the competitiveness of the economy. Fiji, according to the World Bank and the IMF, has been a high wage economy. In 1984 the Fiji government, on the recommendation of the IMF, imposed a wage freeze which was lifted in 1987. Fiji still has a relatively high-wage economy. For example, its manufacturing wage is 71 per cent higher than Mauritius, 346 per cent higher than Indonesia, 507 per cent higher than Sri Lanka and 649 per cent higher than China (Mosley and Weeks 1993). This comparison could be misleading as it does not say much about the cost of living in the various countries. In the case of Fiji real wages in 1975 prices have continued to decline. For example, the overall real wage in 1990 was 74 per cent of the 1975 level. While higher wages may discourage investment in the short run, in the long run it is increased productivity that will determine the competitiveness of the economy.

Summary and conclusions

This paper has investigated the relationships between macroeconomic policy, and poverty and income distribution in Fiji, utilising data from household expenditure and income surveys for 1977 and 1990/91. The results suggest that over the period 1977 and 1990, poverty in Fiji increased by about 10 percentage points. The breakdown of this



change suggests that poverty increased fastest in urban areas (+21 percentage points) compared to settlements (+9 percentage points) and rural areas (+2 percentage points). Within this period, income inequality also worsened by 10 per cent. Once again, the breakdown suggests that urban households and settlements were most affected (+19 per cent and +14 per cent, respectively). On the other hand, there was a marginal improvement (-3 per cent) in the income distribution of rural households.

An attempt was made to link the changes in poverty and income distribution to changes in government policies. For this purpose, changes in the government's economic policies were quantified by constructing a macroeconomic policy index based on scores for fiscal policy, monetary policy and exchange rate policy. The results of the analysis suggest that, overall, there was a deterioration in macroeconomic policy performance in the period under review. Linking the changes in policy to changes in poverty and income distribution, we conclude that there is a close association between the deterioration in the macroeconomic policy regime, on the one hand, and the deterioration in poverty and income inequality on the other. While government policy may have improved the lot of some sections of the population, it failed to improve the living conditions of the urban poor.

There is a need for continuing research on the relationships between macroeconomic policy, poverty and income distribution in Fiji. In particular, there is the need for a systematic causal analysis to identify the impacts of macroeconomic policy and other variables on poverty and income inequality. A key research question is whether growth in per capita incomes is sufficient to reduce poverty and income inequality, or whether there is a need for government policy interventions. The evidence produced in this study suggests

that the growth that has been achieved since the mid-1980s has been insufficient to reduce poverty. As has been argued, government policy itself may have contributed to the problem. There is a need for a more systematic study of policy variables that will address the negative impacts of rural-urban migration and the general problem of poverty and income inequality in Fiji.

Appendix

The macroeconomic policy index comprises three main components: fiscal policy, monetary policy and exchange rate policy. Higher policy scores denote an improvement.

Fiscal policy scores

The fiscal policy scores are calculated from scores for changes in the fiscal deficit, adjusted for changes in total revenue. The schedule used is as follows

Changes in fiscal deficit (percentage points)	Fiscal score
less than -10	-3
-10 to -5	-2
-5 to -2	-1
-2 to 1	0
1 to 3	1
3 to 5	2
greater than 5	3

Change in total revenue (percentage points)	Adjustment to fiscal score
less than -4	-1
greater than 3	+1

Monetary policy scores

The monetary policy scores were calculated from an average of seigniorage and inflation scores. For purposes of this study, seigniorage was defined as the ratio of change in M_2 to GDP. Inflation was measured as the change in the CPI. The



schedule for the scores is as follows

Changes in seigniorage (percentage points)	Score
greater than 4	-3
2 to 4	-2
1 to 2	-1
-0.5 to 1	0
-2 to -0.5	1
-3 to -2	2
less than -3	3

Changes in inflation (per cent)	Score
greater than 31	-3
10 to 31	-2
5 to 10	-1
-2.5 to 5	0
-10.0 to -2.5	1
-50 to -10	2
less than 50	3

Exchange rate policy scores

The exchange rate policy scores were calculated from changes in the real exchange rate (RER) which was defined as

$$RER = ER \cdot \frac{P_f}{P_h}$$

where ER = nominal exchange rate (F\$ per US\$),

P_f = index of foreign prices, approximated by the US wholesale price index, and

P_h = index of home prices, approximated by the CPI.

Changes in RER (percentage points)	Score
less than -10	2
-10 to 5	1
-5 to 2	0
2 to -15	1
15 to 31	2
greater than 31	3

For each variable, the change is computed as the percentage difference in the average of the variable in the year of the first survey

and the preceding two years (1975–77) and the average of the variable in the year of the second survey and the two preceding years (1987–90). The final index is calculated by summing the three components using the following weights: fiscal policy (36.7 per cent); monetary policy (11.8 per cent); and exchange rate policy (51.5 per cent). These weights are based on regressions which link these policy indicators to economic growth (World Bank 1994).

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Notes

- ¹ Another problem with absolute poverty as an indicator is that it is income based. Income may not be a good indicator of living standards in cases where some goods and services are subsidised or provided free. A relative poverty measure is sometimes used. This is defined as having income (or expenditure) which is below 50 per cent of either average or median household income (or expenditure).
- ² Different income distribution measures make different assumptions about the significance of changes in income in different categories of the distribution, often resulting in contradictory conclusions. A variety of measures is often recommended in order to test the robustness of the conclusions.
- ³ This method was developed by the World Bank and has been used in quantitative studies of the links between policy and poverty in Africa.
- ⁴ The choice of three years is arbitrary. Three years is considered long enough to allow policy changes to work through the economy.
- ⁵ Worsening poverty could be due not only to macroeconomic policy but also to structural changes. For example, there could be an increase in the number of young, working-age adults with lower skills, and hence poor prospects of getting employment.