

8 Aspects of Macroeconomic Adjustment

8.1 INTRODUCTION

The economy of Sierra Leone fell into stagnation and then decline in the 1970s and 1980s, and in the mid-1980s into chronic instability. This instability the World Bank attributed to economic mismanagement by the government. In light of our subsequent discussion, it is worth giving an extended quotation that summarizes the view of the Bank,

[The Government] did not adjust the exchange rate in a timely and sufficient manner, and it continued to keep agricultural producer prices . . . low and incurred huge budget deficits. In 1979, when the terms of trade drastically turned against Sierra Leone, instead of managing demand, the Government . . . increased its expenditure program sharply. Domestic inflation soared, and the spread between the official and parallel market exchange rate widened sharply. With the Leone grossly overvalued in the official market, most trade and foreign exchange was attracted away from that market. (World Bank, 1985a, p. 1)

The Bank story can be summarized as follows: the economy suffered a severe external shock, and the government turned this shock into a domestic disaster by mismanaging the exchange rate (which made a bad balance-of-payments problem worse), generating disincentives for agriculture (which undermined exports), and reckless spending (which provoked rampant inflation). It will be argued that there is very little truth in this story;¹ on the contrary, much of the economic instability

resulted from the implementation of multilateral conditionalities, with the 'floating' of the exchange rate being the most important case of macroeconomic mismanagement. Prior to developing this argument, it is necessary to deal with several misconceptions about the performance of the economy

- (1) that the external account suffered from chronic disequilibrium;
- (2) that the exchange rate was grossly over-valued;
- (3) that government expenditure grew out of control.

After correcting these three misconceptions, we turn to a discussion of inflation.

8.2 THE BALANCE OF PAYMENTS

A key point in the multilateral diagnosis of the ills of the Sierra Leonean economy was that the government mismanaged the exchange rate, allowing it to be grossly overvalued ('unrealistic' was a term often used). The maladies resulting from this particular mismanagement were alleged to be several:

- (1) it discouraged exports in general and encouraged imports;
- (2) specifically, it stimulated the smuggling of diamonds and gold (into Liberia) to seek better prices in hard currency;
- (3) it penalized agriculture relatively to urban industry.

To rectify this mismanagement, the IMF in 1986 pressed upon the Government a float of the Leone against the advice of professionals in the Bank of Sierra Leone and the Ministry of Finance. In 1989 the IMF continued to require what it called a 'clean float' as conditionality.²

The first step in assessing whether instability derived from government mismanagement is to see whether the exchange rate was in fact over-valued and when. Some general theoretical considerations are necessary to interpret the statistics. There is a sense in which an exchange rate is by definition over-valued if there is unsustainable balance-of-payments pressure. If one

believes that exports are negatively related to the exchange rate and imports positively related and capital flows are ignored, then, *ceteris paribus*, there is a devaluation which will correct the balance-of-payments disequilibrium. However, by explaining all balance-of-payments deficits, this explains none, as well as begging the practical questions. For example, a balance-of-payments deficit may be the result of a deficit on the current account accompanied by a smaller surplus in the capital account (or vice versa). Particularly for African countries, the two accounts are unlikely to respond to a change in the exchange rate in the same manner. It could be argued that private investment is responsive to the exchange rate,⁵ but this is much less important than official lending for the small SSA countries. For these countries during the 1980s, the non-trade account suffered from heavy deficits as a consequence of debt payments and the decline of official lending. If such a situation is treated as a relative price problem, then the exchange rate becomes captive of non-trade flows, and its role as regulator of commodity trade according to comparative advantage is lost. The view that debt-related deficits should be covered by exchange-rate-promoted trade surpluses has a decidedly mercantilist flavour. Further, pressing for larger trade surpluses to cover a debt deficit presupposes the value judgement that the debt should be paid in full, a position abandoned with regard to Africa by major donor governments in the late 1980s.

With these points in mind, we turn to an inspection of the external account in Table 8.1. The 25 years divide into five periods. During 1963-7, the country ran rather small trade deficits roughly equal to the overall deficit in the external account, with both private and official net capital flows positive. This period of small deficits was followed by six years, 1968 to 1973, when the trade account fluctuated between deficit and surplus, with an positive export-import balance for the years taken together. During this second period the overall external balance was positive every year except the last, when the shortfall was quite small. In the third period, 1974 to 1977, the trade balance turned negative. However, capital flows remained net positive, so the balance-of-payments pressure

Table 8.1 Measures of the external account, 1963-88

Year	Trade account (US\$m)		Percent of GDP*			Comment	
	Exports	Imports	X/M	X-M account	balance on period		
Period 1:							
1963	72	74	-2	-0.5	-5.5	-0.6	Small trade
1964	88	89	-1	-0.1	-6.4	-0.1	deficit, net
1965	83	94	-11	-2.8	-9.2	-2.6	capital flow
1966	78	87	-9	-2.4	-6.8	-1.8	positive
1967	68	79	-11	-2.9	-7.5	-3.0	
Period 2:							
1968	93	81	12	3.4	-0.6	3.5	Positive
1969	105	99	7	1.6	-2.4	2.0	X/M,
1970	101	103	-2	-0.7	-3.8	0.7	capital flow
1971	104	109	-5	-1.0	-4.7	0.1	positive
1972	114	105	8	1.7	-1.9	2.1	
1973	131	140	-9	-1.5	-5.0	-1.4	
Period 3:							
1974	145	200	-54	-8.0	-9.0	-2.2	Substantial
1975	147	186	-40	-5.1	-9.4	-3.8	X-M
1976	115	148	-33	-4.9	-8.5	-4.3	deficit,
1977	148	168	-20	-2.5	-5.2	-0.7	capital flow
Period 4:							
1978	193	263	-71	-6.7	-11.5	-3.8	Large X/M
1979	197	336	-139	-8.7	-8.8	-0.9	deficit,
1980	214	386	-172	-14.7	-7.2	1.0	capital flow
1981	152	282	-130	-9.3	-10.3	-7.3	positive
1982	110	260	-150	-9.9	-11.2	-8.3	
Period 5:							
1983	107	133	-26	-1.8	-1.2	-5.9	Virtual
1984	133	150	-17	-1.0	-1.3	-5.1	trade
1985	132	141	-9	-0.8	0.6	-5.0	balance,
1986	126	111	15	2.0	17.9	-38.6	capital flow
1987	139	114	25	2.9	-3.2	-2.7	negative
Period 6(?):							
1988	104	138	-34	-3.3	-0.4	-12.5	???

Table 8.1 continued

Averages	Exports	Imports	X-M
1963-67	78	84	-6
1968-73	108	106	2
1974-77	139	176	-37
1978-82	173	305	-132
1983-87	128	130	-2

*The percentages are: (trade balance/GDP); (current account balance/GDP); and (overall balance/GDP), using the definition of the IMF in each case. For example, in the December 1990 number of *International Financial Statistics*, these three external balances are lines 77acd, 77a.d, and 77c.d. The percentages are calculated from external account flows and current GDP measured in Leone. Therefore, the figures are close to but not exactly what one would obtain by converting GDP into dollars and dividing into dollar-denominated external account categories.
Source: SLG, BSL, items a, b, c; UN, *Monthly Bulletin of Statistics*; IMF, *International Financial Statistics*.

was clearly a trade account problem. The fourth period, 1978-82, separates itself out for the huge increase in the trade deficit, on average almost four times greater than in the previous period. Again, capital flows were positive (though smaller absolutely). Thus, for nine years, 1974 to 1982, Sierra Leone experienced a growing balance-of-payments crisis, arising in the trade account. The last period, 1983-7, proved quite different. In this case the external account deficit was associated with a near equality of imports and exports, with the overall deficit arising solely from the non-trade account. The substantial drop in exports and rise in imports in 1988 sets this year apart from the previous five. Until later figures came forth, it would not be possible to judge if this year represented a return to chronic trade deficits or a transitory phenomenon.

The table suggests that in the mid-1980s Sierra Leone resolved (at least temporarily) its problem of the current account. Inspection of Table 8.1 shows that in 1983, for the first time since independence the capital account showed a deficit, which continued through 1988 with the exception of 1987. After 1982 a spectacular decline in the trade deficit began: US\$ -150 million in 1982, -26 million in 1983, and continuing to fall until achieving a surplus in 1986 and another in 1987, with these

being the largest surpluses since independence. This dramatic improvement in the trade balance would not seem to qualify for economic mismanagement. Nor would the reversal from deficit to surplus seem consistent with a 'grossly overvalued' exchange rate. But the question naturally arises, why would a country be suffering from chronic balance-of-payments pressure when the trade balance was improving? The professionals at the Bank of Sierra Leone pointed out the answer: the huge devaluations of the Leone after 1982, combined with liberalization of foreign exchange dealings, resulted in massive capital outflow, quite legal and under the eyes of a central bank helpless to stop it. Later this point will be developed in more detail; stated briefly, the structural adjustment measures demanded by the multilaterals resulted in legalized capital flight and speculation on the national currency.

8.3 ROLE OF THE EXCHANGE RATE

For the World Bank and the IMF the key variable determining Sierra Leone's balance of payments was the exchange rate. This emphasis followed from a theoretical framework in which all problems derive from relative price distortions. Table 8.2 provides information to assess this approach. Here the trade balance is reproduced along with the nominal exchange rate and a calculation of the so-called 'real' exchange rate. In Table 8.2 1978 is taken as a convenient base for the indices, because in that year the Leone and US dollar exchanged virtually one-to-one. The last column offers a measure often used by the Fund and the Bank in judging the soundness of exchange rate policy, a calculation of inter-country purchasing power parity (PPP).⁴ A measure of purchasing power parity can be crudely approximated by multiplying a nominal exchange rate by the ratio of domestic prices to international prices. As is common practice, in the table international prices have been approximated by the US general price deflator. The simple logic of the measure is as follows: given the nominal exchange rate, if the world (US) price level rises less (more) than the domestic price level, then the

TABLE 8.2 A crude estimate of the purchasing power parity ('real') exchange rate

Year	X-M balance (US\$m)	Nominal exchange rate \$/Leone	Index	PPP rate Index	Comment on period
Period 1:					
1963	-2	1.400	139	99	Appreciation of 'real' exchange rate; increased trade deficit
1964	-1	1.400	139	110	
1965	-11	1.400	139	114	
1966	-9	1.400	139	114	
1967	-11	1.361	135	116	
Period 2:					
1968	12	1.208	111	104	Compared to previous period 'real' devaluation, worsening X-M
1969	7	1.200	111	102	
1970	-2	1.208	111	106	
1971	-5	1.304	130	108	
1972	8	1.251	124	108	
1973	-9	1.241	123	105	
Period 3:					
1974	-54	1.191	118	94	Compared to previous period 'real' devaluation, worsening X-M
1975	-40	1.258	125	108	
1976	-33	0.905	90	86	
1977	-20	0.907	90	88	
Period 4:					
1978	-71	1.007	100	100	Same 'real' exchange rate as period 2, huge X-M deficit compared to earlier surplus
1979	-139	1.014	101	103	
1980	-172	1.121	111	111	
1981	-130	0.905	90	102	
1982	-150	0.803	80	113	
Period 5:					
1983	-26	0.528	52	124	Large appreciation, sharp fall in X-M deficit, changing to surplus
1984	-17	0.414	41	159	
1985	-9	0.203	20	138	
1986	15	0.064	6	81	
1987	25	0.031	3	106	
Period 6 [?]:					
1988	-34	0.029	3	125	????

Table 8.2 continued

Averages	X-M	Nominal exchange rate \$/Leone	Index	PPP rate Index
1963-67	-6	1.392	138	111
1968-73	2	1.235	122	106
1974-77	-37	1.065	105	92
1978-82	-132	0.970	96	106
1983-87	-2	0.248	24	122

The purchasing power parity rate was approximated by multiplying the nominal exchange rate by the Freetown cost of living index and dividing by the US GNP price deflator.

Source: Nominal exchange rate and trade in US dollars: UN, *Monthly Bulletin of Statistics*, various issues; the 'international' rate of inflation is the US general GNP deflator, from USG, CEA, 1988.

national currency in question appreciates (depreciates or devaluates), and the country's exports become less (more) competitive. This is a crude measure in that it ignores any institutional relations which may govern trade (such as commodity agreements), as well as taking no account of trade determined by technological factors or special endowments of factors.⁵ Because the calculations usually use general price indices, no account is taken of the distinction between tradeables and non-tradeables, or the composition of trade of the country in question. Like many simple measures, familiarity in use has resulted in ignoring its limitations. These limitations do not weaken the argument that follows; rather, they strengthen it. The purpose is to use the measures of the multilaterals themselves to see if the conclusion about 'real' exchange rates and trade flows was supported by the empirical evidence.

From the early 1980s onwards the Leone experienced a series of nominal devaluations that could be described as astounding. In 1980 the trade-weighted exchange rate stood at US\$ 1.12 to the Leone; by 1987 it collapsed to US 3 cents. The most dramatic drop came in three catastrophic months in 1986 when the IMF 'clean float' (treated later) drove the Leone from 5.7 to the dollar to 30 (27 June to 26 September). If this represented sound economic policy, the government of Sierra Leone might have been well-advised to experiment with mismanagement.

Consider the mid-points of the two five year periods, 1978-82 and 1983-7: despite a nominal devaluation of 550 per cent, the purchasing power parity exchange rate *appreciated* by 15 per cent. One would think that when a policy so obviously failed to achieve its purpose ('real' devaluation), it would be abandoned. The great swings in PPP measure of the exchange rate lend support to the view that large devaluations generate general equilibrium effects which can be their own undoing, resulting in subsequent real appreciation. The sharp real depreciation in 1986 was followed by a real appreciation of 31 per cent in 1987, then in 1988 a return to the level of 1983 at 25 per cent above 1978.

Table 8.2 provides further evidence to cast doubt upon the effectiveness of devaluation. As the commentary in the last column summarizes, the behaviour of the trade balance with respect to the real exchange rate proves quite perverse if one follows the logic of the multilaterals. A substantial real devaluation characterized the second period compared with the first, but the trade balance worsened. Carrying on down the table, we see that the third period again brought a real devaluation, and again the trade balance deteriorated. In the fourth period the massive increase in the trade deficit was associated with real appreciation, but it is hard to attribute causality when one looks on to the fifth period. During 1983-7 the PPP rate appreciated by 15 per cent compared with the period before, and the trade deficit shifted from deficit to surplus. On the basis of the PPP calculations alone, one can agree with the Bank that the Leone was 'grossly overvalued' during the mid-1980s, and it is also true that the trade balance improved strikingly.⁶

These *ad hoc* criticisms of faith in the exchange rate adjustment can be made more rigorous by applying regression analysis. Using annual data from 1965 to 1985 and quarterly data for 1979 to 1988 (first quarter for both) the relationship between the exchange rate and trade flows can be estimated econometrically, and the results are reported in Table 8.3. The estimation is a crude one, but similar to statistical exercises carried out by professionals at the World Bank. For example, a 1988 World Bank working paper offered statistical results based

Table 8.3 Regression analysis of exports and imports and the 'real' (PPP) exchange rate

Variable (logarithmic)	Coefficient	Standard error	T-statistic	Regression statistics
1. Annual data, 1964-85				
depVar: deflated exports (level)				
real X-rate(t-1)	-0.656	0.533	-1.2	R2(adj) = 0.142
trend	-0.016	0.008	-2.0	DW = 1.97
constant	5.601	0.103	54.4*	DF = 19
depVar: deflated imports (level)				
real X-rate	-1.244	0.385	-3.2†	R2(adj) = 0.739
real GDP	2.284	1.045	2.2	DW = 1.53
trend	-0.096	0.029	-3.3†	DF = 19
constant	-6.556	5.886	-1.1	
2. Quarterly data, 1979-88				
depVar: deflated exports (level)				
real X-rate(t-1)*	-1.127	0.672	-1.7	R2(adj) = 0.009
	(-1.125)	(0.659)		(0.054)
1st Qt dummy	0.307	0.585	0.5	DW = 0.201
2nd Qt dummy	0.570	0.616	0.9	DF = 34
3rd Qt dummy	0.001	0.598	0.002	
constant	3.833	0.535	7.2†	
depVar: deflated exports (1st difference)				
real X-rate(t-2)	-0.072	0.058	-1.2	R2(adj) = 0.383
1st Qt dummy	0.576	0.206	2.8†	DW = 2.33
2nd Qt dummy	0.311	0.208	1.5	DF = 30
3rd Qt dummy	-0.408	0.202	-2.0	
constant	-0.040	0.143	-0.3	
depVar: deflated imports (level)				
real X-rate(t-1)	-0.505	0.221	-2.3	R2(adj) = 0.068
1st Qt dummy	-0.017	0.180	-0.09	DW = 2.58†
2nd Qt dummy	-0.226	0.179	-1.3	DF = 31
3rd Qt dummy	0.225	0.180	1.3	
constant	0.543	0.260	2.1†	
depVar: deflated imports (1st difference)				
real X-rate(t-1)	-0.736	0.226	-3.3†	R2(adj) = 0.221
1st Qt dummy	omitted, non-significant			DW = 2.11
2nd Qt dummy	omitted, non-significant			DF = 33
3rd Qt dummy	omitted, non-significant			
constant	0.091	0.059	1.5	

Table 8.3 continued

*Numbers in second row in parentheses are the statistics obtained using the real exchange rate only.

†The hypothesis that there exists autoregression cannot be rejected.

‡Significant at the 0.01 level of probability.

All equations are estimated in logarithmic form. In the case of first differences, the estimations are of the natural log of the ratio of successive periods.

Annual data: The exchange rate and real GDP are from previous tables. Deflated imports and exports are obtained by deflating dollar values by the unit value indices in World Bank, November 1974, Vol 5, Table 8.9; and World Bank, September 1985, p. 102; and SLG, CSO, 1987 (where indices refer to Leone prices and must first be adjusted for the exchange rate).

Quarterly data: Quarterly exchange rate figures are from IMF, *International Financial Statistics*, various years, multiplied by the ratio of the Freeborn cost of living index (Bank of Sierra Leone, *Economic Trends*, various numbers) to the US general price deflator (*Economic Report of the President*, various years). Quarterly dollar exports and imports are obtained by converting the Leone figures (*Economic Trends*) by the exchange rate. The exports and imports are then deflated by using the unit prices reported monthly, again in *Economic Trends*.

on cross-sectional data claiming to establish that real exchange rates had a major impact on the trade of SSA countries.⁷ The statistics in Table 8.3 offer little support for that view in the case of Sierra Leone. For the annual data the exchange rate is not significant for the level of exports, and while it is highly significant for real imports, it is not of the theoretically predicted sign (also the estimate seems afflicted by autoregression). Estimations on first differences yield no significant coefficients (except for the constant term) and lower R²'s, so they are not reported.

Use of quarterly data produces results marginally more encouraging for the role of the real exchange rate. Here, surprisingly, estimations using levels of variables are considerably less significant than using rates of change. The coefficient on the real exchange rate for deflated exports is of the predicted sign (negative), but non-significant. Some explanatory power is gained from quarterly adjustment by the dummy variables). For imports again the coefficient on the real exchange rate is significant but assumes the 'wrong' sign. It might be that the absence of the real GDP variable in the quarterly estimate produced the perverse coefficient for imports, were it not that

the negative sign was duplicated in the annual data. Certainly these regression estimates are crude; for example, they employ ordinary least squares. As mentioned, they follow the technique applied in World Bank empirical studies. One can conclude that preliminary econometric evidence does not confirm that trade flows respond to the exchange rate in the manner suggested by the World Bank, and leave it to the advocates of the power of exchange rates to establish the contrary.⁸

This discussion of trade flows would not be complete without reference to smuggling, for many alleged that a substantial portion of the country's trade went unrecorded. This allegation by its nature would not be easy to verify empirically. However, the existence and extent of smuggling would not affect our conclusion that the official trade balance improved dramatically with no apparent connection with the exchange rate. The Bank and the Fund primarily concerned themselves with the official figures, and only indirectly with unrecorded flows. They argued that what smuggling occurred resulted from a mismanaged exchange rate (and taxes on diamonds and gold). The discussion so far demonstrates that it is not obvious that the exchange rate was mismanaged.

To this point we have considered the question of government exchange rate mismanagement by considering only data from Sierra Leone. Perhaps the more constructive approach would be to ask, if purchasing power parity exchange rates are a measure of sound management, how did Sierra Leone compare with its trading competitors? This question is more relevant, because Sierra Leone's trading partners do not to any great extent produce the commodities which Sierra Leone exports (diamonds, coffee, cocoa and palm kernels). To an extent, it was irrelevant what happened to inflation and the nominal exchange rate in Sierra Leone compared with Europe and the United States; what happened to those variables in other countries which export similar products is highly relevant. In Table 8.4, purchasing power parity exchange rates have been calculated for five countries of West Africa in addition to Sierra Leone: Cote d'Ivoire, Ghana, Liberia, Nigeria and Senegal. In each case, the nominal exchange rate was multiplied by the ratio of the

domestic price level to the US price level. All of these countries exported the agricultural commodities that Sierra Leone did (or potentially could have done).⁹

Table 8.4 Crude measure of purchasing power parity exchange rates for Sierra Leone and five trade competitors, 1980-7

Year	Country				
	Liberia	Nigeria	Ghana	Cote d'Ivoire	Sierra Leone
1980	100	100	100	100	100
1981	99	121	253	99	97
1982	104	122	305	123	131
1983	106	134	61	161	181
1984	105	168	51	188	226
1985	104	144	48	155	207
1986	112	48	39	143	190
1987	114	41	30	122	147
Averages					
1980s	106	110	111	136	160
rank:	2	3	4	5	6
1980-84	103	129	150	134	147
rank:	1	3	6	4	5
1985-87	110	78	39	140	193
rank:	4	2	1	5	6

These statistics calculated in the same manner as in Table 8.2.

Source Exchange rates and inflation rates: IMF, *International Financial Statistics*, various issues.

The comparison suggests that the government of Sierra Leone was not flagrant in maintaining an overvalued exchange rate in the 1980s. At the bottom of the table are averages, for the eight-year period, and divided between 1980-84 and 1985-7 (the latter coinciding with Sierra Leone's massive nominal devaluations). Along with these averages is the rank ordering of the countries by reverse order of real exchange rate appreciation. For the

eight years as a whole, Sierra Leone had the smallest real appreciation compared with 1980, only 5 per cent. During 1980-84, Sierra Leone enjoyed the second lowest appreciation, exceeding only Liberia. In the latter period the country's currency depreciated in real terms by 3 per cent, with only Nigeria and Ghana doing better. That three countries in the table could not devalue nominally¹⁰ does not alter the conclusion that on the criterion of exchange rate management the exchange rate of Sierra Leone performed better than its competitors.

From this analysis of the balance of payments and the exchange rate emerge important conclusions for structural adjustment. First, while Sierra Leone suffered from an unmanageable trade and current account in the 1970s and early 1980s, by the mid-1980s trade flows produced a surplus, and this surplus was achieved with an appreciating real exchange rate. Second, the massive devaluations of the mid-1980s proved ineffective in achieving substantial real devaluation. Third, evidence indicates little support for the view that the trade account was responsive to the real exchange rate. Fourth, relatively to its competitor countries, Sierra Leone did not have an appreciating real exchange rate. Taken together, these conclusions imply that the heavy emphasis on exchange rate adjustment by the multilaterals had little justification.

8.4 THE FISCAL DEFICIT

If in the judgement of the Bank and the Fund the over-valued exchange rate qualified as the primary distortion in the Sierra Leone economy, a close second came the fiscal deficit. A key part of the World Bank story of the maladies of the economy involved an indictment of excessive spending:

In 1979, when the terms of trade drastically turned against Sierra Leone, instead of managing demand, the Government ... increased its expenditure program sharply. (World Bank, 1986b, p. 1)

The allegation is clear: after 1979 the government of Sierra Leone should have cut expenditure (or not increased it), and failed to do so. First, the ideology implicit in the statement should not be missed. 'Managing demand' could be achieved either by expenditure reduction or the increase of taxation. Considering only the former reflects dogma, not theory. Second, by any reasonable judgement the allegation was factually false. The government of Sierra Leone, either by intent or default, did cut expenditure. The factual incorrectness of the allegation is shown in Table 8.5, based upon data from the Bank itself, the IMF, the national accounts of the country, and government budget documents.¹¹ The figures in the first two columns refer to actual, *post-facto*, expenditures, not planned expenditures. The figures in the table are calculated in constant prices. When judging whether government expenditure 'rose sharply' and/or reached excessive levels, expenditure should be assessed in real terms, not nominal. While government expenditure itself might be contributing to inflation, it is none the less the case that expenditure in real terms measures the extent to which a government draws on real resources.

Table 8.5 is divided into the same periods as in the analysis of the balance of payments, reflecting a correspondence between the two deficits, fiscal and trade (refer to Table 8.1). The fiscal deficit (second column of Table 8.5) tended to rise and fall when the trade balance did the same. This resulted from two factors at work: first, much of the government's revenue derived directly and indirectly from trade; and second, a deterioration of revenue sources occurred in the 1970s when iron ore production (all of which is exported) ceased. However, the five periods in Table 8.5 could also be divided into only two: 1964-79, when expenditure in real terms increased almost continuously; and 1980-7 when except for 1986 it decreased almost continuously. Over precisely the period for which the World Bank accused the government of having 'increased its expenditure program sharply', recurrent expenditure fell dramatically in real terms. Identifying the 1980s as a period of rising expenditure reflected in most flagrant form the notorious 'money illusion', in which nominal changes are confused with real ones.

Table 8.5 Current expenditure and deficit in 1977 Leone and as percentage of GDP, 1964-83*

Year	Current expenditure† (million 1977 Le)	Current account surplus/ deficit	Current expenditure/ GDP (percentages)	Current account deficit/ GDP
1964	85.0	6.2	13.2	1.0
1965	76.7	5.9	11.7	0.9
1966	74.0	17.0	11.4	2.6
1967	76.4	5.7	12.4	0.9
1968	76.4	37.1	11.1	5.4
1969	90.1	32.5	11.8	4.2
1970	98.3	18.6	13.9	2.6
1971	105.7	16.5	14.4	2.2
1972	116.4	5.1	15.6	0.7
1973	164.7	-5.6	19.7	-0.7
1974	202.9	-57.3	23.4	-6.6
1975	142.2	-22.2	18.3	-2.9
1976	151.8	-25.5	18.8	-3.2
1977	220.3	-62.0	25.9	-7.3
1978	223.1	-70.3	25.1	-7.9
1979	246.2	-108.6	27.2	-12.0
1980	233.7	-104.8	25.8	-11.6
1981	202.1	-77.4	22.3	-8.5
1982	160.1	-80.5	19.1	-9.6
1983	110.3	-65.2	14.9	-8.8
1984	71.6	-36.2	10.5	-5.3
1985	52.0	-24.6	9.1	-4.3
1986	141.3	-138.1	24.4	-13.6
1987	68.4	-28.1	11.7	-4.8
Averages				
		1964-67	12.1	1.4
		1968-73	14.8	2.2
		1974-77	21.8	-5.1
		1978-82	23.3	-9.9
		1983-87**	14.1	-6.8
			(11.4)	(-5.0)

Table 8.5 continued

* Fiscal years, with 1986-7 money GDP estimated by assuming no growth and GDP deflator equal to Freetown cost of living index.

† Includes the category 'extra-budgetary expenditure', and therefore differs from figures given in World Bank (1985a, p. 4), which include only normal recurrent expenditure.

‡ Percentages in parentheses omit 1986, when the Leone was devalued massively.

Source: Government expenditure - 1964-71, World Bank, 1974, Table 6.1; 1972-8, World Bank, 1981, p. 162; 1979-85, SLG, BSL.a, SLG, BSL.b, and SLG, CSO, 1987; 1986 and 1987, GSL, n.d. See also World Bank (1985a, p. 4), where the 1978-84 figures are from SLG, BSL and Ministry of Finance sources.

From 1964 (the year after independence) to 1979, current account real expenditure grew at a least-squares-estimated annual rate of 8.5 per cent,¹² or at about 5 per cent per capita. This rate of per capita expenditure growth was not high by comparison with other SSA countries. Then, the level of real expenditure dropped sharply, from an average of Le 213 million for 1978-82, to Le 101 million for 1983-7 (these measured in 1977 prices). It was quite possible that no other sub-Saharan country during the 1980s matched this draconian real reduction in government expenditure. In addition to declining in real terms, the programming of government expenditure became increasingly chaotic in the wake of massive devaluations. The catastrophic fall of the Leone during 1986 and subsequent devaluations resulted in a collapse in the purchasing power of budgetary allocations. With each new descent of the exchange rate, ministries required new extra-budgetary allocations, such that supplemental funding represented 42 per cent of current expenditure in 1986 (BSL.a and BSL.b). The sudden increase in real expenditure in 1986 can be explained as the result of the government over-estimating the increase in nominal expenditure necessary to compensate ministries for the disastrous IMF-fostered float during June to September. By the next fiscal year the depreciating exchange rate had again done its work, and real expenditure fell by half.

In 1985 the World Bank judged that the government of Sierra Leone let recurrent expenditure spin of control. A quick

calculation from Table 8.5 shows that per capita expenditure for 1983-7 was 30 per cent below its annual level for 1964-7. The Bank had its conclusion backwards: during the 1980s government current expenditure in Sierra Leone was too low, not too high. Few were the countries of the world in which government expenditure claimed less than a fifth of GDP, and during the mid-1980s in Sierra Leone this share had dropped to 14 per cent. The deficit in this case (7 per cent of GDP in the last period) represented not an expenditure problem, but a revenue shortfall. In Sierra Leone public services – health, education,¹³ and general administration – were appallingly low, even by the standards of some of its neighbouring countries. The proper advice to the government of Sierra Leone in the 1980s would have been: tax more and spend more, for the public sector was being pauperized. Certainly the government could have spent more wisely and efficiently, but in addition to its failings in this regard, it also was culpable of not sufficiently funding the basic needs of its people. To suggest the opposite was false. This was exactly the position taken by the 1990 JASPA report:

The Sierra Leone government cannot be qualified as a big spender . . . It would, therefore, be unreasonable to exercise more restraint on total non-interest expenditure . . . [T]he improvement of the social situation in Sierra Leone will not be possible unless the debt burden is substantially reduced . . . The basic cause of the balance of payments imbalance lies with the capital account, not with the trade account. (ILO/JASPA, 1990, pp. xiii-xiv)

A comparison between this JASPA quotation and that from the World Bank at the beginning of this section shows the difference between analysis and ideology. For the Bank a budget deficit presented a *prima facie* case for expenditure reduction, which could only be a gain since governments represent the source of economic distortions. Unencumbered by this ideology, the JASPA mission drew the opposite and obvious conclusion: 'the impression is overwhelming that one of the primary needs of the Sierra Leonean economy is the urgent rehabilitation of the public sector' (ILO/JASPA, p. xv).

9 Mismangement or Maladjustment?

9.1 THE FUND MISMANAGES THE EXCHANGE RATE

In previous chapters it was demonstrated that the multilateral organizations got their analysis and recommendations for Sierra Leone consistently wrong. At this point we go beyond criticism to analyse what actually happened to the economy of Sierra Leone to produce such chronic instability in the 1980s. First, we again summarize the story the multilaterals told about Sierra Leone in the 1980s: after the economy suffered an external shock in the late 1970s, the government unwisely expanded expenditure which worsened the balance of payments and provoked inflation; the inflation resulted in overvaluation of the exchange rate; the overvalued exchange rate depressed exports, which fed back to make a bad balance-of-payments situation even worse; and compounding these problems was a foolish policy of intervention in domestic agricultural markets which discouraged production, as well as worsening the rural-urban income gap. As we saw, there was little fact and much fiction to this story:

- (1) from the late 1970s onwards the Government cut real expenditure, it did not raise it;
- (2) compared with other currencies of the region, the Leone was not overvalued;
- (3) when the Leone appreciated in the 1980s, the trade balance improved;
- (4) with regard to agricultural policy,
 - (a) the policies of the Rice Board seem to have had little negative effect on production;
 - (b) producer prices for the major export crops closely followed the trend in world prices; and

(c) there is no evidence that export crop output correlated with the gap between the producer price and the export price;

(5) had a shift in income toward urban areas occurred (and the opposite happened), it would have probably improved income distribution, not worsened it.

But what of inflation? Certainly that part of the story was true: from 1980 to 1988, the general consumer price index increased by over 40 times, and beginning in 1982 the annual rate of inflation exceeded 50 per cent. If the multilateral story was false, how does one account for inflation? The acceleration of inflation occurred in part because the multilateral story was false. That false story led the experts of the Bank and the Fund to conclude that the problems of the Sierra Leonean economy were the result of 'price distortions', and that the key 'price distortion' the exchange rate. They then compounded this analytical mistake by the measure taken to correct that 'distortion', through a 'clean float'. By a 'clean float' the Fund meant a process of exchange rate determination in which the government did not intervene; a 'market determined' exchange rate, as it were.

When devaluation is called for, there are a number of ways to bring it about. When considering the alternatives, there are many reasons to doubt the wisdom of an unregulated exchange rate for any country. This, one might presume, was why no developed country practised such a policy after the breakdown of the Bretton Woods accords in the early 1970s. This in and of itself should cause pause for doubt: if the countries of the world with much more technical expertise in economic management and much more stable economies regularly send their central banks into foreign exchange markets to dampen fluctuations, would it be wise for a small, open economy buffered by terms of trade shocks to do otherwise?

There are a number of considerations that suggest that an unregulated exchange rate is especially foolhardy for small underdeveloped countries. These were stressed by the officials of the Bank of Sierra Leone in discussions with the Fund, but to

TABLE 9.1 Average trade flows and their variation by quarter, 1979-87

Category	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
(Flows in US\$ m)				
Exports				
average	39.2	50.5	29.4	26.7
coefficient of variance	0.24	0.38	0.34	0.27
Imports				
average	56.2	50.1	53.3	53.0
coefficient of variance	0.57	0.50	0.46	0.45
Trade balance				
average	-17.0	0.04	-23.9	-26.3
coefficient of variance	1.58	39.71	0.89	0.87

SOURCE Bank of Sierra Leone, *Economic Trends*, various issues, with trade flows converted to US dollars.

no avail. First, agricultural exporters like Sierra Leone are characterized by large seasonal fluctuations in trade flows. This is demonstrated in Table 9.1, which gives the average trade flows by quarter for 1979-87. In the first row of the table one sees that the seasonal variation in exports over the nine-year period was quite large, about 90 per cent between the second quarter and the fourth (with monthly variations even greater), a variation resulting from the natural cycle of the growing season. For each quarter taken alone there was substantial fluctuation, as the coefficient of variation statistic in the second row shows. For example, in any year there was a two-thirds probability that export earnings in the second quarter might exceed those in the fourth by 250 per cent. As one would expect, imports were considerably more stable seasonally, with a maximum quarterly variation of only 12 per cent (between the first and second quarters). However, the combination of seasonal export variation and relative import stability resulted in an enormous fluctuation in the quarterly trade balance. The fourth quarter averaged a deficit of US\$ 26 million, compared with a slight surplus in the second. Even if the annual trade account had been

balanced, in two of the quarters there would certainly have been deficits.¹

Under any reasonable assumption about how agents form their expectations, the result of an unregulated exchange rate in the context of such seasonal variations would be a sharply fluctuating value of the currency. In some quarters (much less months or weeks) there would be a shortage of foreign exchange, and in others a surplus. Given that agricultural exports vary due to stochastic factors such as the weather, not even an extreme rational expectations assumption would produce traders who could correctly anticipate the course of trade flows. Further, in the developed market economies traders have much more complete information about currency markets and the state of the economy, yet governments are loath to allow exchange rates to be market-determined without constraints. In Sierra Leone information on the current state of the economy and the external account, which would have to include capital flows, was much harder to come by. Even were foreign exchange shortages and surpluses correctly anticipated, agents' responses would be seriously constrained by the imperfections of the narrow private foreign exchange market in the country. With these points in mind, one can see that it was quite foolish that the IMF initiated the 1986 'float' (read 'sink') of the Leone at the beginning of the third quarter. This represented the quarter during which nature itself assured that there would be a shortage of foreign exchange on the basis of trade flows. A worse moment for such a policy initiative could hardly have been chosen.

Second, the character of currency trading in small countries also suggests that unregulated exchange rates are unwise. In its 1986 report, the World Bank referred to the country's 'flexible, market-determined exchange rate system', and proceeded to describe this system as follows:

Under the exchange system . . . [the Leone] has a varying rate that reflects the supply and demand of foreign exchange in the economy. (World Bank, October 1986, p. 4)

This statement is incorrect, as well as glossing over the problem of seasonal variation. As introductory textbooks in

economics are careful to point out, 'market-determined' is not the same thing as reflecting 'supply and demand'. The supply curve for any commodity, including currencies, is constructed on the assumption of perfect competition, which is why one refers to the 'degenerate supply curve' of the monopoly firm. Only if agents are price-takers is there a supply curve as such. Otherwise, the price decision and the quantity decision are simultaneous, rather than price being derivative from quantity ('determined by supply and demand'). There was considerable reason to believe that the foreign exchange transactions during the float of the Leone involved considerable collusion, which along with seasonal variation explains why the Leone did not float but sank during the third quarter of 1986.

The mechanism for the float of the Leone which the IMF put in place, including its own representative in the Bank of Sierra Leone to manage it, virtually granted a licence to speculate. In June 1986 the Fund organized a currency trading system in which representatives of the Bank of Sierra Leone and commercial banks operating in the country would meet once a week to 'exchange positions in foreign exchange'. This exchange would occur with each agent arriving with bids for Leones or foreign currency, and then an offer-clearing exchange rate would be reached. The first important characteristic of this system was that it represented a closed cartel of a small number of traders. Industrialists, merchants, and individuals were not allowed into this bidding process. If there was competition at all, it was a very limited competition among members of a Fund-sanctioned cartel. It was not clear why the Fund preferred arbitrarily restricting market access in this manner rather than pursuing an open bidding system such as it had implemented in Somalia, for example.² Restricting the meetings to the commercial banks, a handful of expatriate concerns whose managers were in constant business and social contact, greatly facilitated collusion; indeed, it made it virtually impossible to avoid. As basic economics teaches, efficient competitive outcomes derive from the interaction of many buyers and sellers, none of whom alone or in combination with others can manipulate price. The design

of the currency trading system contradicted this neoclassical principle.

The collusive nature of the trading quickly became clear, and resulted in there being no market at all.³ At the first meeting of the action the cosy group of currency traders presented offers, all of which were to sell Leones and none to buy. Throughout the life of this Alice-in-Wonderland auction there appeared not a single offer to buy Leones. The Bank erred when it wrote that Sierra Leone during these months had a 'market-determined exchange rate system'. A market requires buyers and sellers, and this market had only sellers of Leones; there were no transactions. The commercial banks, all foreign controlled, sought Leones to send out of the country as capital flight. Simultaneously, the Bank of Sierra Leone also demanded foreign exchange, for reasons explained below.

The absence of transactions obviously created a difficulty in determining the exchange rate. What is the price of a commodity when no one wishes to buy it? At this stage the pragmatic person might have concluded that an unsuccessful experiment had been tried, and abandoning it might be well advised. The officials of the Bank of Sierra Leone took this view. Instead, the sham-market continued, with the average (not-accepted) offer price of the Leone taken as the indicative rate for bank transactions during the subsequent week. Taking the average bid as the market rate was totally *ad hoc* and arbitrary, having no technical justification. Because no exchanges had occurred, the exchange rates implied by the bids were completely notional.⁴ That is, there was little reason to believe that any of the bids represented a market-clearing rate, much less the average. Once it became obvious that there would be no buyers of Leones, the putative sellers of Leones were virtually unconstrained in what bids they made. With no market discipline operating (for there were no transactions), the speculative plans of the commercial banks determined the exchange rate.

The framework of the auction virtually assured that the Bank of Sierra Leone would have no foreign exchange with which it could enter into trading. Prior to the IMF-inspired 'float' of the Leone, the government, in response to multilateral condition-

ality, deregulated the import licensing regime and external account capital transactions (SLG, 1987, p. 33). As a consequence, foreign exchange no longer flowed into the Bank of Sierra Leone. This placed the central bank in the anomalous position of going to the currency trading meetings needing to *purchase* dollars to pay its obligations overseas, when the stability of the Leone required it to sell dollars. Once the Leone began to sink, it was in the interest of private agents to hoard dollars, not to sell them to the BSL. Capital account deregulation further ensured that the currency trading system would result in a collapse of the Leone.⁵

Given when the 'float' began (during a quarter when foreign exchange would be in short supply under the best of conditions) and the manner in which it was carried out (facilitating collusion), it is hardly surprising that the Leone sank like a rock, from 5.7 to the US dollar on 27 June, to 30 to the dollar on 26 September. On the latter date the sham-market discontinued and the central bank re-established a fixed rate. Because the Bank of Sierra Leone had no foreign exchange to support a fixed rate, further devaluations followed, with the rate rising to 38 to the dollar in late January 1987. During this period relations with the IMF rode a roller-coaster: in November 1986, the government and the Fund reached agreement on a one-year standby arrangement; in January the Fund cancelled disbursements. The cancellation of the agreement resulted from the government failing to meet conditionalities, among which were restrictions placed by the Fund on domestic credit expansion. Cancelling the agreement on the basis of conditionality targets not achieved added insult to injury, for the government failed to meet these targets as a consequence of the disastrous Fund-organized float of the Leone, which is the second part of the currency-collapse story.

9.2 DEVALUATION-LED CHAOS

Three months after 26 June 1986, the Leone had sunk by 525 per cent; after seven months the nominal devaluation reached

667 per cent. This out-of-control currency sink catastrophically destabilized the money economy. One of the most obviously destabilizing impacts was that on the financial operations of the Government.⁶ As part of the conditionality of the 'shadow programme' of good behaviour and the subsequent standby arrangement, the Fund had required that domestic credit expansion be limited to 34 per cent for fiscal year 1986-7, and current expenditure have a ceiling of Le 1800 million.⁷ Once the Leone began its plunge, these figures became irrelevant, because the domestic currency costs of government activities ballooned. The largest such item was debt service, which at the end of 1986 threatened to absorb the entire current account.

Confronted with a devaluation cost over-run, the government went to the commercial banking system to borrow. By no reasonable judgement could this increased government demand for credit be attributed to excessive expenditure. The collapse of the Leone, instantaneous upon the opening of the sham-market for foreign exchange, dictated increased Leone expenditures in order to meet budgeted real expenditures. Quickly the demands of the Government and the private sector brought credit expansion to the limit set by IMF conditionality. Once this limit was reached, *the commercial banks refused to accept deposits*. If they had accepted deposits the banks would have been obligated to pay interest; unable to lend and themselves earn interest, the banks could hardly pay it to others. With the Leone sinking and devaluation-induced inflation running at an annual rate of three digits, private agents would have been irrational to hold Leone.⁸ Since the Leone would not be accepted by the banks into interest-bearing accounts, capital flight and speculation in real property resulted.⁹ This, of course, put further downward pressure on the Leone, accelerating its sink.

The multilaterals had a story of how the economy of Sierra Leone came to such a disastrous state in the mid-1980s. That story had little empirical support. A different story can be told: under severe balance-of-payments pressure (primarily from the capital account), the government of Sierra Leone yielded to

pressure to initiate a currency trading system which by its nature resulted in the collapse of the Leone; the collapse of the Leone provoked accelerating inflation which led to increasing credit demands by the public and private sectors; when the IMF-set credit limits were reached, banks refused deposits and private agents turned to capital flight, which had been facilitated by the previous conditionality that currency exchange be deregulated; capital flight further sank the Leone and inflation raged out of control. In other words, multilateral conditionality destabilized the economy.¹⁰

9.3 EMPIRICALLY TESTING THE STORIES

We have two stories, one of which is inconsistent with the facts and the other derivative from the facts. The multilateral story essentially had at its analytical core the quantity theory of money: inflation is the result of increases in the supply of money, which in the Sierra Leone context resulted from a fiscal deficit. Excessive monetary expansion to finance expenditure ('monetizing' the deficit) simultaneously resulted in inflation and excess monetary demand, which depressed exports through real appreciation of the currency and drew in imports. This process allegedly went out of control in the case of Sierra Leone.

This is a very simple story, frequently subjected to empirical test, especially within what was once called the 'monetarist-structuralist debate' over inflation in Latin America. Below we specify our empirical tests following that literature, in so far as the Sierra Leonean data allow. We begin with the basic quantity equation:

$$vM = py$$

where v is the velocity of money, M is the autonomous money supply, p is the price level and y is the quantity of real GDP.

If one assumes the velocity of money to be constant and takes the total derivative of the quantity equation, one obtains the

following oft-estimated equation (where the letters in italics refer to percentage rate of change):

$$P_t = a_0 + a_1 M_t + a_2 Y_t$$

The prediction of the quantity theory is that a_0 would not be significantly different from zero (constant velocity of money), a_1 not significantly different from +1, and a_2 not significantly different from -1.¹¹ Frequently the equation is estimated with lags, reflecting the presumption that adjustment to equilibrium does not occur in one period. When the variable M appears more than once, the sum of its coefficients should not be significantly different from unity. Estimating such a very simple one-equation system and using it to explain inflation leaves much to be desired. Unfortunately, the arguments of the multilaterals in Sierra Leone were just this simple. It was alleged by the Bank and the Fund that inflation resulted from expansion of the money supply. Since neither reported testing that hypothesis, it was left for their critics to do so.

The expression was estimated for annual data for 1964-85, with the results reported in Table 9.2. A brief comment is required on the measurement of the money supply. Much debate in the empirical literature focuses upon what is the appropriate definition of M for empirical estimation. Here, we have used what might be called the 'basic' money supply, 'currency outside banks' plus 'demand deposits'. This was called the 'total money supply' in publications of the Bank of Sierra Leone (for example, SLG. BSL.b, p. 42). Other definitions, such as the inclusion of 'quasi-money', produced results with lower R^2 's and coefficients of lower significance. Other empirical estimates of the monetarist hypothesis have shown that there is frequently some *ad hoc* measure of the money supply which produces favourable results for the hypothesis. The purpose here was to select that measure of the money supply over which the government in principle had at least indirect control; otherwise, the model had little relevance to policy.

Two annual estimates are given, the first for the expression in its simplest form, and a second with the lag structure that

TABLE 9.2 Estimation of a simple 'monetarist' model of inflation for Sierra Leone

Variable (logarithmic)	Coefficient	Standard error	T-statistic	Regression statistics
Annual data, 1964-85				
depVar:				
Cost of living (1st difference)				
money supply [1]	0.524	0.214	2.44*	$R^2(\text{adj}) = 0.281$
real GDP	-0.759	0.781	-0.97	$DF = 21$
constant	0.074	0.051	1.46	$DW = 1.422$
depVar:				
Cost of living (1st difference)				
money supply [1]	0.135	0.186	0.73	$R^2(\text{adj}) = 0.471$
money supply [$t-1$]	0.062	0.021	3.00*	$DF = 20$
real GDP	-0.719	0.586	-1.23	$DW = 1.263^{\dagger}$
constant	-0.116	0.069	1.68	
Quarterly data, 1979-1988				
depVar:				
Cost of living (1st difference)				
money supply [1]	0.484	0.181	2.67†	$R^2(\text{adj}) = 0.418$
money supply [$t-1$]	0.469	0.180	2.60*	$DF = 29$
constant	0.021	0.024	0.84	$DW = 1.997$

Coefficients not 'starred' are non-significant.

For Durbin-Watson statistics not marked with '†', the hypothesis that there exists autoregression can be rejected at the 0.025 level of probability.

*Significant at 0.025 level of probability.

†Significant at 0.01 level of probability.

‡The hypothesis that there exists autoregression is inconclusive at the 0.025 level of probability.

Source: See appendix.

yielded the highest R^2 . In addition, results from quarterly data are presented. The quantity theory explanation of inflation does not fare well in the annual data. The insignificance of the constant terms is consistent with a constant velocity, but the quantity theory should explain virtually all of the variation in the price level, and the R^2 's in both cases are low (0.28 and 0.49). The coefficients are also disappointing. The elasticity of the price level with respect to the money supply should be unity, but in the first estimate it is about 0.5, and in the second 0.2 (the sum of the coefficients for $M[t]$ and $M[t-1]$). These low

elasticities indicate that while changes in the money supply provoke increases in the price level, money is not neutral, and inflation was not exclusively or even primarily a phenomenon of the money supply. The non-significance of the real output term also undermines the monetarist view of inflation, for it suggests that inflation was not necessarily associated with excess monetary demand.

The simple monetarist model was also estimated with quarterly data, shown at the bottom of the table. Here the results could be interpreted as more favourable to the hypothesis, since the sum of the money supply coefficients is not significantly different from unity. And as before, less than half of the change in the price level is explained by changes in the money supply. Overall, the results in Table 8.3 provide *prima facie* support for a 'structuralist' interpretation of inflation in Sierra Leone: yes, increases in the price level are correlated with increases in the money supply, but both may be responding to some third variable absent from the estimates in Table 9.2.

That missing variable from the quantity theory explanation is the nominal exchange rate. By monetarist logic it should not play an explanatory role to inflation, since its movement is treated as derivative from the stock of money: if the exchange rate is flexible, monetary expansion at full utilization of resources produces a devaluation which maintains domestic prices equivalent to world prices (the law of one price); failure of the exchange rate to adjust with perfect flexibility results in inflation due to excess monetary demand. In Table 9.3 an alternative theoretical approach is taken. Here the nominal exchange rate is introduced into a model which seeks to capture the behavioural dynamics of inflation in Sierra Leone. It tells the following story:

(1) in response to a nominal devaluation of the currency, producers of non-agricultural commodities for the domestic market and commercial intermediaries dealing in imports raise the prices of their commodities to maintain profit margins, which they are able to do because of their monopolistic position in a small market;

TABLE 9.3 Estimation of a 'structuralist' model of inflation for Sierra Leone

Variable (logarithmic)	Coefficient	error	Standard T-statistic	Regression statistics
Annual data, 1964-85				
depVar:				
Cost of living (1st difference)				
nominal Xrate [t]	-0.264	0.112	-2.34*	R2(adj) = 0.848
nominal Xrate [t-1]	-0.211	0.069	-3.08	DF = 18
period-dividing dummy	0.138	0.054	2.54*	DW = 1.589†
constant	0.109	0.020	5.46	
depVar:				
Money supply (1st difference)				
cost of living [t-1]	0.836	0.181	4.63	R2(adj) = 0.493
constant	0.064	0.034	1.88	DF = 20
				DW = 2.230†
Quarterly data, 1979-88				
depVar:				
Cost of living (1st difference)				
nominal Xrate [t-4]	-0.837	0.183	4.58	R2(adj) = 0.420
nominal Xrate [t-5]	-0.004	0.001	3.59	DF = 27
constant	0.208	0.201	1.03	DW = 2.008
depVar:				
Money supply (1st difference)				
cost of living [t-3]	0.467	0.155	3.01	R2(adj) = 0.197
cost of living [t-4]	0.003	0.001	2.87	DF = 27
constant	0.569	0.171	3.34	DW = 1.845

*Significant at 0.025 level of probability, all other coefficients except the constant term in the second equation significant at 0.01.

†The hypothesis that there exists autoregression is rejected at the 0.025 level of probability.

Source See appendix.

- (2) buyers of commodities, both public and private, then go to the commercial banks for credit to cover the increased monetary cost of their transactions;
- (3) the government then must choose between allowing the monetary accommodation or provoke a recession in the money economy;
- (4) since its instruments of monetary policy are relatively ineffective (especially in the context of liberalization of foreign exchange dealings), monetary accommodation

tends to be automatic unless purposeful action is taken, such as the government deciding not to maintain its own real expenditure.

The first of these steps is summarized in an equation which explains inflation in terms of the nominal exchange rate. The exchange rate is measured in US dollars per Leone, so the predicted sign on the currency rate is negative:

Inflation behaviour,

$$p = p(\text{nominal} \times \text{rate})$$

The monetary base responds to the inflationary pressure,

$$M = M(p)$$

And circularity in the arguments is avoided by the introduction of lags. Inspection of Table 9.3 shows that this simple model, which for want of a better term might be called 'structuralist', performs quite well for annual data. Three explanatory variables are used: the change in the current nominal exchange rate; the change in the nominal exchange rate lagged one period; and a dummy variable which divides the years between 1964-80 (when nominal exchange rate changes were relatively minor), and 1981-5 (when nominal devaluations were continuous and relatively large). The coefficients on the nominal exchange rate can be interpreted as follows: were there to be a repeated annual nominal devaluation of 10 per cent, this would result in the annual rate of inflation increasing by about 5 per cent. This relationship accounts for 85 per cent of the variation in the rate of inflation (compared with less than 50 per cent for the money supply). Further, the rate of inflation in the current year then explains half of the increase in the money supply in the subsequent year, with the coefficient on the rate of inflation significant at better than 0.005 probability. Finally, the coefficient on the dummy variable has an economic interpretation. Prior to 1981 (when the variable assumes a value of zero), the nominal exchange-rate was either fixed or fluctuated with no trend, so the rational expectation of agents would be for no exchange rate induced inflation on average. After 1981, the

exchange rate depreciated continuously, and the coefficient on the dummy variable can be interpreted as the inflationary expectation built in to agents' predictions of the coming price level. The significance of the money supply equation is especially important for the structuralist hypothesis. No structuralist argument claims to explain all of the change in the money supply by the rate of inflation. If money is not neutral, then one would not expect extremely high R^2 's, only a high degree of significance for explanatory variables.

The results using quarterly data produce in all cases coefficients of the predicted sign that are extremely significant, but lower measures of explanatory power (R^2 's). This is exactly what one would expect with a structuralist model. Structural influences - monopoly power and the government's limited control over credit expansion - manifest themselves systematically more in the medium term than in the short term. The estimates suggest that the lag between a nominal devaluation and the subsequent price inflation is four quarters, verifying the lag in the annual estimate. However, the coefficient on the lagged exchange rate changes seems rather too high, implying that a 10 per cent nominal devaluation provokes an 8 per cent increase in the price level. Close to the truth is probably the annual estimate of an elasticity of slightly under 0.5. For the 21 years as a whole, imports represented 33 per cent of GDP. The national accounts suggest that about 70 per cent of GDP was monetized, so that imports were 47 per cent of money GDP. The elasticity of the price level with respect to the nominal exchange rate as estimated on annual data is not significantly different from the share of imports in money GDP. This makes for a very simple story: devaluation was passed on completely to the domestic price of imports, with the resultant inflation equal to the share of imports in money national income.

The statistical results in Table 9.3 are quite rudimentary, employing the most simple of regression techniques, ordinary least squares. None the less, they are indicative that inflation in Sierra Leone resulted from nominal devaluations of the exchange rate, and sharp devaluations induced hyperinflation. As a result, the statistical evidence suggests serious mismanage-

ment of the exchange rate during the 1980s by those who pressed for a policy of a flexible, 'clean' float.

9.4 MACROECONOMIC MISMANAGEMENT

'Mismanagement' was a term much used by the World Bank and the IMF in its analysis of the African development crisis, an analysis that in effect amounted to a critique of African governments, holding them responsible for the misery of their peoples. Therefore, it would not be inappropriate to subject the recommendations of these multilaterals to the test of good or mal-management. Many critics pointed out the shortsighted and narrow focus of structural adjustment programmes, citing as evidence the failure of any general improvement in growth rates for the region.

The analysis of this chapter pushes that critique further. If one assigns to the multilaterals the narrow goal of economic stabilization, control of inflation being the most obvious measure of this, structural adjustment policies failed miserably in Sierra Leone, generating rather than dampening instability. In part this failure resulted from attempting to achieve adjustment over too short a time period with 'shock' techniques, as many critics have pointed out for other countries.¹² Sheer incompetence possibly also played a role, though the mis-design of Sierra Leone's adjustment programmes probably lay deeper than this. At the core of the multilateral mismanagement lay an economic analysis more derivative from ideology than sound theory. In this ideology the analysis of relative prices, which provided such insights in economic theory, was carried to its *reductio ad absurdum*. More worrisome still, the multilaterals seemed to learn nothing from the repeated failures of their programmes in Sierra Leone. Like faith-healers, they attributed the failure of their ideological laying-on-of-the-hands to the sins of the economically-ill patient.

10 Alternative Adjustment

Representatives of the World Bank and the IMF offered as the ultimate defence of structural adjustment programmes that flawed as they might be, no one had produced a viable alternative in practice. At one level this defence could be seen as the structural adjustment equivalent of the famous Catch-22:¹ to be viable a structural adjustment programme required funding; the main sources of funding for SSA countries were the Bank and the Fund, which had no intention of funding programmes other than of their own design; *ergo*, alternative adjustment policy packages invariably proved inviable.

First, let us consider what might be an appropriate adjustment strategy for Sierra Leone on the counter-factual assumption that it received significant multilateral lending to support it. Economics, for all its theoretical deficiencies and indeterminacy, is a science, in the sense that it derives conclusions for concrete circumstances from a process of analytical abstraction. Therefore, any alternative adjustment strategy for Sierra Leone must begin with a process of analytical abstraction that differs from that of the World Bank and the International Monetary Fund. Alternative policies would not arise from the cleverness or superior imagination of the critic of the multilaterals, but rather from an alternative theoretical framework.

This alternative theoretical frame of reference involves rejection of the general equilibrium framework in which the decisions of agents derive from a set of relative prices determined in efficient markets. This treatment of markets represents an invalid abstraction. The international markets which would impose their relative prices upon Sierra Leone under a free trade regime were highly distorted in the 1980s. The decision facing the country's policy makers was to chose that set of distortions that would best serve the interest of economic recovery.² Thus, the first characteristic of the alternative

adjustment framework would be to treat world markets as providing but one of many alternative sets of relative prices upon which to base domestic policy. Second, the alternative framework would view the Sierra Leonean economy as demand constrained, in the specific sense of export demand constrained. Some countries of Africa might have employed in the 1980s the position of being able to sell as much as they wished of their export commodities without affecting the world price. If so, Sierra Leone was not among them. Increasing its exports of coffee and cocoa would require Sierra Leone to cut prices to undersell its competitors, or join in a general expansion of these exports with other countries and suffer the same price decline. The two points, world market distortions and demand constraint, imply the need for interventionist policies on exports and imports. Third, and a point the multilaterals would not oppose except that it failed to go far enough, the government would minimize its interventions to those it could element effectively.

The first step in the alternative adjustment programme would be economic stabilization. To achieve this, the government would fix the exchange rate, maintaining the rate with the postulated multilateral financial support. With a fixed exchange rate, inflation would be brought under control. After a period sufficiently long to depress inflationary expectations, the exchange rate instrument would shift from a tool of short-run stabilization to one of medium-term export-promotion. This would involve introduction of 'crawling-peg', periodic controlled devaluations.³

There are a number of reasons why the exchange rate, though quite ineffective as an instrument of short-term policy, could play a crucial role in the longer term. As an equilibrating price in the context of extreme balance-of-payments pressure in a small, open economy, the exchange rate usually proves a disaster.⁴ A large imbalance in the external account provokes a massive nominal devaluation. One effect of this, as we have seen in the case of Sierra Leone, is to generate inflation and destabilize inflationary expectations. Further, it causes 'the law of one price' to work against the goals of policy rather than in

favour. The massive devaluation, during the brief period before inflation wipes it out, can result in a sudden inflow of imports due to the momentary and artificial gap between domestic prices and international prices. On the other side of the trade flows, agricultural exports respond with a considerable lag due to the natural cycle of the growing season. A crawling peg, on the other hand, allows the policymakers to keep a step ahead of the convergence of international and domestic prices.

In the mid-1980s the balance-of-payments problem of Sierra Leone arose from the capital account, which made implementing a stabilizing policy much easier. Multilateral assistance could have been used to service the external debt, thus permitting maintenance of the fixed exchange rate. To avoid capital flight prompted by lingering inflationary expectations, the government would impose controls on capital movements. These measures taken together – a fixed exchange rate, financial assistance directed to debt service, and controls on capital movements – would achieve short-run stabilization.

Achieving recovery and growth would prove a much more difficult task. Essentially, short-run stability would have been achieved on the basis of the previous decline of the economy that brought down imports to roughly the level of exports. Thus, the successful stabilization of the economy would represent a low-level and stagnant equilibrium, since growth would regenerate an unsustainable trade deficit. Sustainable growth would require expansion of exports and selective import substitution, especially for rice. Neither of these would be achieved quickly.⁵ The country's problem of agricultural exports lay in lack of capacity, the stock of tree crops and the labour to manage that stock, and external demand. Increasing capacity required greater government investment, especially in transport, but also to improve the processing of coffee that must occur immediately after picking.

The problem of inadequate domestic food supply arose from demographic changes. Some short-term gain could be achieved through more efficient milling of rice,⁶ a relatively easy measure to implement compared with expanding land under cultivation or altering growing techniques. In the face of long-term

demographic changes that increase the ratio of food-deficit households in the population, no alternative existed to raising output per worker in rice production. Whether this would be achieved through land-intensive or land-extensive techniques remained an issue of contention. As noted in Chapter 7, the experience of schemes to increase rice production in Sierra Leone was singularly dismal. However, the 1989 FAO report on rice offered cause for optimism, through its emphasis upon small-scale production and a long time period for implementing improvements.⁷ Significant improvements in export agriculture and food production would require purposeful investment and intervention by the government.⁸ One necessary intervention would be tariff or non-tariff protection for rice, to partially insulate domestic producers against competition from world market rice heavily subsidized by the exporting-country governments. Also the key to food crop production would be directing the rice-expansion programme towards poor farmers, as the FAO recommended, an emphasis that would address the rural inequalities so assiduously ignored by the World Bank.

Income and wealth distribution might play a key part in a post-stabilization development strategy. If so, distributional policies should reject the empirically false allegation of a privileged urban population. Urban wages in Sierra Leone fell to a level far below subsistence in the 1980s. For the unskilled and the semi-skilled workers the situation went beyond the dire. At the upper salary levels real pay dropped so low that the government lost the skilled people necessary for effective economic management. An extended period over which real wages rise would be essential for achieving increases in labour productivity in the private and public sectors. Far from needing a cut in the allocation of wages and salaries in the fiscal budget, as demanded by the World Bank, the Sierra Leone government would be well advised to increase these. To the extent that over-staffing characterized ministries, public sector employees could be retrained and shifted to other activities where desperately needed. Social services in Sierra Leone were inadequate and under-funded. In the medium term, a redistribution of income from the private to the public sector through effective taxation

would be a rational policy, until the economy-average tax share reached the vicinity of 20 per cent.

The alternative adjustment strategy described above presumes the external finance to allow for a fixed exchange rate, the linchpin in the stabilization phase. Since the alternative programme violates many of the most cherished tenets of multilateral dogma, the likelihood of assistance would be virtually nil. Without funds to service them, debt obligations would be suspended. Since many underdeveloped countries failed to meet their debt payments in the 1980s, choosing not to do so could not be considered a radical departure from the norm of international behaviour.⁹ This step would balance the capital account. Heavy pressure would then be placed on the trade account to maintain the fixed exchange rate, perhaps implying further contraction of the economy until exports expanded in the medium term. Without external finance, the public investments necessary to facilitate expansion of agricultural output would be taken with agonizing slowness, and growth would be delayed considerably.

Competently designed, realistic adjustment in Sierra Leone under the alternative programme even with outside finance would be accompanied by severe strains and uncertainties. Unlike the Bank and the Fund, we do not claim a magic transubstantiation of stagnation into growth. Without outside finance adjustment would prove quite costly in human terms, especially for the poor. However, the cost might be no greater than that suffered under multilateral mismanagement in the 1980s.

Appendix

This appendix provides the numbers from which the statistics in several of the tables are calculated. Not included are those data easily accessible from published sources outside of Sierra Leone. Also included are numbers which are used instead of those published elsewhere.

National Accounts and population

The following national accounts and population estimates provided the basis for Tables 4.1, 5.1, 5.2 and 5.4. The sources are also given.

TABLE A1 GDP and primary sector value added (millions of Leone)

Years	GDP (nominal)	Agric & Mining (nominal)	Crops (nominal)	Agric & mining (real)*	Animal Hsbdry (nominal)	Crops & An Hsbd (nominal)
1963/4	219.9	73.4	56.0	95.4	3.4	59.4
1964/5	247.9	77.3	59.0	95.9	3.6	62.6
1965/6	267.6	80.6	61.8	96.2	3.8	65.6
1966/7	271.9	84.0	62.9	99.6	3.9	66.8
1967/8	271.7	86.4	63.6	99.1	3.9	67.5
1968/9	310.9	90.2	67.5	104.1	4.1	71.6
1969/70	353.5	89.9	68.3	104.2	4.2	72.5
1970/1	348.6	94.5	72.0	106.6	4.4	76.4
1971/2	355.8	97.4	77.1	105.7	4.7	81.8
1972/3	393.3	110.7	91.1	110.7	5.6	96.7
1973/4	477.8	129.9	106.9	112.8	6.6	113.5
1974/5	572.7	191.8	162.6	111.3	8.4	171.0
1975/6	613.5	220.0	185.0	117.4	9.4	194.4
1976/7	744.2	263.9	231.0	123.5	9.4	240.4
1977/8	850.0	281.7	242.7	126.0	9.0	251.7
1978/9	978.8	326.9	269.7	135.5	14.1	283.8
1979/80	1145.5	350.9	269.9	137.0	17.5	287.4
1980/1	1292.2	379.1	293.3	138.7	17.5	310.8
1981/2	1604.5	538.6	355.9	140.0	72.8	428.7
1982/3	1876.1	686.0	398.5	141.0	108.0	506.5
1983/4	2792.2	1052.6	526.9	142.9	118.1	645.0
1984/5	4309.8	1867.7	963.5	154.6	184.1	1147.6
1985/6	6352.7	2740.2	1162.4	152.9	302.0	1464.4

NOTES *1972/73 prices.

ABBREVIATIONS: Animal Hsbdry & An Hsbd. animal husbandry.

Table A2 Farm households and farm income

Year	Farm Households (thousands)	Household Income (current L)	(real)*	Population (thousands)
1963/4	230.9	257.4	334.5	2180
1964/5	237.2	264.0	327.5	2226
1965/6	243.7	269.2	321.3	2272
1966/7	250.3	266.7	316.3	2319
1967/8	257.2	262.5	301.1	2368
1968/9	264.2	271.2	313.0	2417
1969/70	271.3	267.2	309.7	2467
1970/1	278.7	274.2	309.3	2518
1971/2	286.3	285.9	310.2	2571
1972/3	280.4	344.8	344.8	2624
1973/4	274.7	413.1	358.7	2679
1974/5	269.1	635.6	368.8	2735
1975/6	263.5	737.7	393.6	2798
1976/7	258.1	931.3	435.8	2862
1977/8	252.8	995.5	445.3	2928
1978/9	247.7	1145.9	475.0	2996
1979/80	242.6	1184.8	462.6	3065
1980/1	237.6	1308.0	478.6	3136
1981/2	232.7	1842.0	478.8	3209
1982/3	228.0	2221.8	456.7	3283
1983/4	223.3	2888.6	392.2	3359
1984/5	218.7	5247.0	434.3	3436
1985/6	214.3	6833.4	381.3	3516

NOTES *1972/73 prices.

SOURCES TO TABLE A1 National accounts: SLG/CSSO, 1980 and 1987; World Bank, 1969, 1974, and 1981; and ILO/JASPA, 1990. All sources do not agree, in part due to subsequent revision of preliminary figures.

TABLE A3 Data by farm size, 1984/85

hectares	Area (hectares)										
	upRice	swpRice	blRice	RvRice	Millet	Grdnt	Cassava	Citrus	Cocoa	Coffee	Palm
under 0.5	3176	5624	15	3161	26	176	510	82	286	610	157
0.5 to 1	16421	13313	245	5543	277	244	1153	481	1829	2895	188
1 to 2	37284	22762	511	3341	1176	964	1520	686	4173	9329	35
2 to 4	49177	18880	243	319	1369	2436	1128	1920	11871	23147	1185
4 to 6	22751	3137	0	0	0	169	1225	12	7846	12899	254
over 6	17376	5700	2202	0	0	199	660	813	14589	19654	1326
total	146185	69416	3216	12364	2848	4188	6196	3994	40594	68534	3145

hectares	Yield (kilograms per hectare)						
	upRice	swpRice	blRice	RvRice	Millet	Grdnt	Cassava
under 0.5	0.9	3.0	2.9	3.0	0.7	0.8	10.7
0.5 to 1	0.9	3.0	3.0	3.6	0.8	0.7	7.8
1 to 2	1.0	3.1	2.0	3.5	0.8	0.6	5.4
2 to 4	1.0	3.4	2.9	2.5	0.9	0.6	7.0
4 to 6	1.1	3.6	-	-	-	0.7	2.7
over 6	1.0	4.0	2.6	-	-	0.9	3.5
Wght mean	1.0	3.2	2.6	3.4	0.9	0.6	5.8

hectares	Value by Crop (millions of Leone)							
	All Rice	Millet	Grdnt	Cassava	Citrus	Cocoa	Coffee	Palm
under 0.5	6.7	0.0	0.0	6.6	0.0	0.4	0.7	0.4
0.5 to 1	35.8	0.3	0.0	10.9	0.0	2.4	3.4	0.7
1 to 2	84.2	1.1	0.0	10.0	0.0	5.8	11.4	0.1
2 to 4	114.5	1.5	0.0	9.7	0.0	16.4	29.3	4.8
4 to 6	56.4	0.0	0.0	4.0	0.0	11.0	15.8	1.2
over 6	40.0	0.0	0.0	2.8	0.0	19.5	26.0	3.3
Total	337.6	3.0	0.0	44.0	0.0	55.6	86.5	10.4

NOTES

1. Rice production and yield refers to husk (non-milled).
2. For groundnuts, no reliable farmgate price could be found for 1984/85. Since value by any realistic price would have been proportionately small, it was decided to omit it.
3. For citrus crops no non-arbitrary procedure presented itself for the determining the harvest from the data on numbers of trees given in the farm survey. It was decided to omit this crop also.
4. For cocoa, coffee, and palm products, total value is based upon sales to the Sierra Leone Produce Marketing Board, with an estimated deduction for intermediate costs to obtain value added.

ABBREVIATIONS

upRice - upland rice
 swpRice - swampland rice
 blRice - boland rice
 RvRice - river rice
 grdnt - groundnuts
 wght weighted

Rice production simulations

Table 7.4 presents simulations of rice production on the presumption of a constant farm population. The simulated values were obtained by the following identities.

$$\begin{aligned} (\text{rice demand})_t - (\text{rice output})^* t &= (\text{rice imports})_t \\ (\text{rice demand})_t &= (\text{actual consumption per capita})_t \\ (\text{rice output})^* t &= (\text{output per farm})_t \times (\text{number of farms})_t \end{aligned}$$

Rice output was simulated by the following steps:

1. using an estimate of the number of farms (see Table A2) and data for rice output, output per farm was calculated for each year; and
2. the average number of farm families over the period 1963-1984 was used as the value for number of farms.

Quarterly Data

Because data on a quarterly basis were not for the most part available outside of Sierra Leone, there follow the numbers used in Tables 9.1-9.3

TABLE A1.4 Quarterly data for Sierra Leone

Quarter	(Leone, millions)		Xch rate	(US\$, millions)		Money supply	SL COL index	USA GNP deflator	'real' Xch rate*
	Exports	Imports		Exports*	Imports*				
1979.1	38	66	0.9414	35.8	62.1	111	40	73	0.514
1979.2	71	59	0.9447	67.1	55.7	129	44	77	0.541
1979.3	41	81	0.9639	39.5	78.1	130	47	80	0.568
1979.4	39	83	0.9637	37.6	80.0	131	47	82	0.550
1980.1	58	137	0.9175	53.2	125.7	132	47	87	0.497
1980.2	90	116	0.9724	87.5	112.8	147	49	89	0.535
1980.3	42	102	0.9610	40.4	98.0	139	50	91	0.528
1980.4	22	92	0.9441	20.8	86.9	142	51	93	0.518
1981.1	58	115	0.8947	51.9	102.9	150	53	96	0.493
1981.2	52	76	0.8393	43.6	63.8	160	61	99	0.519
1981.3	43	91	0.8415	36.2	76.6	142	64	99	0.542
1981.4	25	93	0.8516	21.3	79.2	145	64	99	0.549
1982.1	45	109	0.8118	36.5	88.5	151	67	100	0.544
1982.2	41	91	0.7962	32.6	72.5	168	77	100	0.615
1982.3	14	86	0.7843	11.0	67.4	196	85	100	0.667
1982.4	35	90	0.8113	28.4	73.0	223	89	100	0.724
1983.1	38	43	0.7872	29.9	33.8	253	100	100	0.787
1983.2	63	73	0.7811	49.2	57.0	256	133	100	1.036
1983.3	53	90	0.3984	21.1	35.9	302	140	101	0.552
1983.4	41	81	0.3984	16.3	32.3	336	167	102	0.655
1984.1	68	107	0.3984	27.1	42.6	344	183	102	0.713
1984.2	117	93	0.3984	46.6	37.1	372	217	103	0.838
1984.3	59	115	0.3984	23.5	45.8	393	223	103	0.861
1984.4	80	103	0.3984	31.9	41.0	440	229	103	0.887
1985.1	165	104	0.1718	28.3	17.9	541	283	103	0.474
1985.2	237	232	0.1761	41.7	40.9	618	355	103	0.609
1985.3	139	250	0.1851	25.7	46.3	671	409	102	0.740
1985.4	108	203	0.1920	20.7	39.0	812	431	102	0.809
1986.1	197	216	0.1987	39.1	42.9	947	461	101	0.910
1986.2	253	141	0.0831	21.0	11.7	1121	554	99	0.466
1986.3	590	639	0.0356	25.7	22.7	1314	754	98	0.274
1986.4	916	1026	0.0281	21.0	28.8	1747	903	98	0.259
1987.1	1461	1071	0.0230	33.6	24.6	2281	1330	99	0.309
1987.2	1874	1479	0.0237	44.4	35.1	3111	2046	101	0.480
1987.3	769	862	0.0423	32.5	36.5	3070	2033	102	0.841
1987.4	562	1009	0.0434	24.4	43.8	3023	2114	103	0.889
1988.1	820	751	0.0356	29.2	26.7	3203	2011	105	0.682

Notes *Calculated by author.

Exports and imports are of commodities only.

The money supply is currency plus demand deposits. 'Real' exchange rate obtained by dividing the nominal rate by the USA GNP deflator, then multiplying by the SL COL.

Abbreviations: Xch rate - exchange rate; SL COL - Sierra Leone cost of living, using Freetown consumer index; USA GNP deflator - United States Gross national product deflator.

Source: Quarterly data are found in *Economic Trends and Annual Report of the Bank of Sierra Leone*.

Notes

1 Introduction

1. The World Bank makes its policy reports available to researchers, for which it should be commended. The Fund does not make its country documents public. Therefore, the survey by necessity stresses the policies of the Bank.

2 The African Crisis and the Ideology of Structural Adjustment

1. 'Sub-Saharan Africa' is an unfortunate term due to its redundancy: all sub-Saharan countries are in Africa. Preferable would be 'Africa south of (below) the Sahara'. Further, some countries frequently included in this category partly overlap the great desert. Given the universal usage of the term, it is employed in this book.
2. Countries with rising per capita incomes during 1980-7 were: Chad, Guinea-Bissau, Burkina Faso, and The Gambia. Malawi had a zero rate of growth (World Bank, 1989, p. 221).
3. Middle-income countries in which per capita income increased were: Mauritius, Cape Verde, the Seychelles, Swaziland, Botswana, Senegal, People's Republic of the Congo, and Cameroon. The World Bank reported no growth figures for Equatorial Guinea, Angola, and Djibouti (World Bank, 1989, p. 221).
4. The index of per capita food production increased in Benin, Burkina Faso, Ghana, Guinea Bissau, Kenya, and Senegal (FAO, 1990a, p. 93). The World Bank (World Bank, 1989, p. 235) shows increases for 14 of 41 countries for 1985-7 compared to 1979-81. The difference is a result of the years chosen (the World Bank figures are from the FAO). The average for the years reported by the World Bank include two when weather conditions were particularly favourable for the region, 1985 and 1986. The average for the region for 1983-4 and 1987-9 from the FAO estimates is 93 (1979-81 = 100), and 1985-6 averaged 97.
5. The charters of neither organization preclude rescheduling, but this proved the practice of the multilaterals.

6. The increase in the variability of cereal prices was particularly pronounced during the 1980s (Hazell, 1988).
7. This explanation is offered by the Economic Commission for Africa in its critique of World Bank and IMF structural adjustment programmes (Economic Commission for Africa, 1989, p. 2).
8. Which is judged as 'a brutal but necessary adjustment' (World Bank, 1989, p. 29). Actually, the fall was considerably more than this. See Jannal and Weeks (1988).
9. See Clower (1965) and Leijonhufvud (1968), where Clower's analysis is elaborated.
10. The analysis which follows is developed in more detail in Weeks (1989a, Chapter 11).
11. 'The recent combination of loose fiscal and tight monetary policy [in the United States] combines the burden of high interest rates with depressed demand for exports from developing countries . . .' (Streeter, 1989, p. 6).
12. Casares concluded that policy distortions in the United States substantially depressed the level and growth of national income in Honduras (Casares, 1992).
13. 'The programmes of structural adjustment and reform now being undertaken by about 30 countries in Sub-Saharan Africa are the precondition for growth' (Serageldin, 1989, p. v).
14. 'The [SSA] countries that have persisted with [World Bank and IMF] reforms since the mid-1980s are showing the first signs of improvement. These give grounds for believing that recovery has started (World Bank, 1989, p. 1).'
15. To quote from Condos, ' . . . if it can be argued on empirical grounds - *no theoretical grounds exist* - that reducing or eliminating distortions, somehow increases the overall saving rate, it can be concluded that a higher rate of accumulation and growth can thereby be sustained' (Condos, 1989, p. 104, emphasis added).
16. In the same vein, 'The evidence points to better overall economic performance in countries that pursue strong reform programs than in those that do not' (UNDP/World Bank, 1989, p. iii).
17. See World Bank (1988), where the conclusion is reached that for low-income countries little difference could be found between 'adjusting' and 'non-adjusting' countries on the basis of key indicators of economic performance. If the quotation refers to this document, then it misrepresents the conclusions. Since the

18. The analytical validity of the dichotomy is cast further into doubt by the practice of the Bank in some of its empirical work to distinguish between 'strong adjusting' and 'weak adjusting' countries, with the latter including countries that implemented at least for a while under the period in review Bank-Fund programmes. Once the Bank-sponsored empirical work begins to eliminate countries involved in Bank programmes, on the grounds that Bank experts judge the reform efforts as 'weak', expediency would seem to have replaced objectivity in the research method. The 1988 report employed the 'weak/strong' division (World Bank, 1988).
19. This is not the 'recent study' referred to in the quotation above from Serageldin, though he presents this table on the page prior to the quotation.
20. The growth rate for Somalia is highly suspect. The JASPA report on Somalia concluded that growth in the 1980s was largely an illusion of mis-measurement (ILO/JASPA, 1989, Chapter 1).
21. The position in which African governments found themselves *vis-à-vis* the World Bank and IMF was described by the OAU as follows: 'the policy dialogue between multilateral financial institutions and the various [African] Governments have been time consuming and African countries have been in a weak and vulnerable bargaining position because they are cash-poor and face huge trade and budget deficits' (Organization of African Unity, 1988, p. 22).
22. This assessment of the impact of adjustment on the poor is in contrast to the sanguine view of the World Bank in Serageldin (1989, pp. 5-7).
23. To quote the full passage:
The poor results achieved thus far [by structural adjustment programmes], however, leave open the question of the sufficiency, even appropriateness, of the measures taken; problems include neglect of long-term goals as compared to short-term adjustment targets; ineffectiveness of a commodity-based export drive in depressed world commodity markets; limitations of foreign exchange devaluation in countries, such as

LDCs, facing serious supply rigidities; pro-cyclical, deflationary nature of stabilization policies; and lack of response from the private sector. (UNCTAD, 1989, p. 2)

24. An FAO assessment of the impact of adjustment programmes on agriculture, including African countries, is found in the 1990 edition of the *State of Food and Agriculture* (FAO, 1990b, special chapter).
25. One finds this argument repeated even by critics. For example, in her excellent survey of adjustment programmes in Africa, Saigal writes, 'The structural policy reforms, therefore, did not have any significant impact on economic recovery in the eighties, though it is difficult to predict how far the region would have been worse off in the absence of such reforms' (Saigal, 1990, p. 25).
26. That the Bank and the Fund apply similar policies in virtually all countries should not be controversial. Serageldin, in his report for the World Bank, verifies this point, albeit with an off-hand reference to the specifics of each country:

Although adjustment programs vary depending on country conditions, in most cases, structural adjustment has three basic components. First is the reform of the system of economic incentives. . . . Second is streamlining of the public sector by cutting the excessive size and costs of civil services. . . . An important feature of such programs is the freeing of domestic resources for private sector investment and production. Third is comprehensive restructuring of external debt. (Serageldin, 1989, p. 5)

3 Multilateral Intervention in Sierra Leone

1. This IMF programme is analysed in the excellent study by Lisk (1974), in which he argues that it played a central role in bringing about a rejuvenation of the economy.
2. I wish particularly to thank Mr Jim Funna, West African representative to the World Bank, and officials of the Bank of Sierra Leone for their helpful discussions on multilateral programmes.
3. See discussion in ILO/JASPA, 1990, pp. 20-21.

4. The pre-funding conditionality was quite explicit. In a 1984 report one reads,

[Bank] assistance should be closely linked to further policy reform, such as improvements in the allocation of budget and foreign exchange resources to [agriculture], and to the maintenance of an incentive structure for agricultural production (World Bank, 1984, p. viii)

Some conditionality for the 'pre-programme' or 'shadow programme' was quite specific. For example, a government document of 1987 notes that tractor services must be privatized, and the failure to do so would 'jeopardize the SAL negotiations' (GSL, 1987, p. 24).

5. As in other SSA countries, because of the agricultural cycle national accounts in Sierra Leone are not calculated on the basis of the calendar year. Here the convention is adopted of giving in the text the first year of the relevant twelve month period, i.e. 1981 refers to 1981/82. In tables both years are given, and when only one appears the reference is to the calendar year.
6. The loan was for US\$ 33 million from the Standard Chartered Bank (GSL, 1987, p. 18).
7. 'As mineral wealth has been depleted, the country has no longer been able to maintain its earlier living standards. . . .' (World Bank, 1981, p. ii).
8. In various reports of multilateral agencies and the government it is occasionally suggested that diamonds will make a strong comeback by the opening of Kimberlite mines. To date there is no sign of this occurring. Various explanations are offered for the lack of interest by foreign investors. One common explanation was that the Kimberlite concessions were under legal dispute by various claimants. The less optimistic explanation was that production costs would not be competitive with the Republic of South Africa. The latter judgement was made in a World Bank report:

First, the [Kimberlite] project is risky and may not be profitable. Second, even if successful, it will provide only 240,000 carats a year for approximately ten years, a level that will not fully compensate for the decline in alluvial diamond production. . . . Under no circumstances can the Kimberlite project

bring the volume of Sierra Leone's diamond exports back to the level of the early 1970s. (World Bank, 1985a, pp. 100-101)

A supplementary document to the one above concluded: '[S]ubstantial uncertainty persists as to the amount of Kimberlite available and the diamond content and quality. Thus, the total risks remain high' (World Bank, 1985b, p. 19)

9. '[I]ncome generated by mining exports has only modestly stimulated agriculture and manufacturing; instead, it induced imports and other remittances abroad. Sierra Leone thus has a divided economy with an enclave mining sector and a large and underdeveloped agricultural sector' (World Bank, 1969, p. i).

10. Referring specifically to the balance of payments, a World Bank report puts it well:

Adjustments to external shocks differ depending on the nature of the shock and the structure of the economy. The more advanced and integrated the internal productive structure is, the easier it is for the economy to adjust. However, in [no] case can the shift restore the balance of payments without undue hardship.

The structure of Sierra Leone's economy, like that of other African countries, is not integrated enough to permit internal adjustments without severe deflation. (World Bank, 1985, pp. 97-8)

11. For example, one reads, 'The lack of competition appears to exacerbate the wide spread between producer prices and final consumer or export prices' (World Bank, 1981, p. vii).
12. 'So far only slow progress has been made toward effectively raising the incomes of the poor or adequately taxing the incomes of the rich. Both are necessary' (World Bank, 1981, p. iii).
13. In this context, it is worth noting that the country report of 1976 gave an endorsement to government price policy towards agriculture:

These farm price changes [after 1974] dramatically turned the terms of trade in favour of the rural population, provided the

much needed production incentives, and since 1974 there are signs that agricultural production is showing significant gains for the first time in years. (World Bank, 1976, p. 1)

Thus, the positive judgements of the 1981 report should not be seen as an anomaly.

14. 'Sierra Leone has significant problems of equity and income distribution . . .' (World Bank, 1981, p. vii).
15. The issue of subsidies is dealt with in Chapter 7, in the discussion of rice policy.
16. 'It seems clear that regardless of the progress made in promoting the production of rice, demand would then have to be curtailed to a considerable extent, either through rationing or measures which increase price' (World Bank, 1984, p. 27).
17. 'Recurrent expenditures have grown too fast relative to GDP and, more importantly, have developed a significant imbalance in favour of wages and salaries' (World Bank, 1985a, p. ii).
18. For example, a 20 per cent cut in government wages and salaries in real terms was set as conditionality (World Bank, 1985a, p. vii).
19. 'The role of the Government in designing and overseeing mining contracts should be limited' (World Bank, 1985a). This comment and others by the World Bank after 1981 might give the impression that Sierra Leone had rather strict laws on foreign investment. Quite the contrary was the case:
- The 'laissez faire' policy of the government has so indulged managers and proprietors and that 'to ask for information is often to annoy or displease' them . . . In general . . . Sierra Leone adopts an open-door, free-enterprise policy. There are no restrictions on the level or locations of MNEs [multinational enterprises] (Iyanda, n.d. [c. 1983], pp. 8, 11).
20. The Bank presented its position in World Bank (1986), and the conditionality for an adjustment loan was detailed in two government documents (Sierra Leone, 1985 and Sierra Leone, 1987).
21. The JASPA report did repeat the World Bank's judgement that price policy for rice had been mistaken (ILO/JASPA, 1990, p. xxi). This issue is treated extensively in Chapter 7.

4 The Decline of an Economy

1. The following table demonstrates the decline, giving three-year averages:

Years	Diamonds		Iron ore	
	(carats, thds)	(US\$, m)	(tons, thds)	(US\$, m)
1968-70	1835	64	2371	12
1971-73	1724	72	2402	14
1974-76	1425	80	1153	10
1977-79	789	102	0	0

(World Bank, 1981, pp. 153-4).

2. Export values in Leonees were converted to US dollars using the trade-weighted exchange rate.
3. The disbursed external public debt was US\$ 59 million at the end of 1971, down 6 per cent from 1969, and debt service payments only US\$ 8.3 million. By the end of 1979, disbursed debt reached US\$ 278 million, and debt service over US\$ 20 million for that year (World Bank, 1981, p. 160).
4. With rich mineral, water and land resources, Sierra Leone has good potential for export diversification in mining and agriculture and import substitution in energy and processing industries' (World Bank, 1981, p. ii).
5. The means, standard deviations, and coefficients of variation (ratio of the latter to the former) were:

Decade	Mean	Standard deviation	Coefficient of variation
1960s	-4.6	7.1	1.50
1970s	-2.6	7.7	2.96
1980s	-1.1	9.8	9.23

6. The terms of trade were calculated from international prices in US dollars, thus not affected by Leone devaluation.
7. Recall that the World Bank report of 1981 stressed the immediate need for new investment: '... domestic savings and investment in both the public and private sectors will need to be stepped up considerably' (World Bank, 1981, p. ii). Note the explicit recommendation that *public* sector investment be increased.

6. Government expenditure and revenue are analysed in detail in Chapter 8.
7. Some of these infrastructure needs were expansion of port facilities to reduce waiting time of ships and investment to improve the ferry service across the bay from the airport road to Freetown, to facilitate tourism.

5 Rural and Urban Incomes

1. This literature is surveyed briefly in Jamal and Weeks (1988).
2. Calculations can be found in JASPA (1981) and Jamal and Weeks (1988).
3. Okai referred to the 'general low level of wages which holds back increases in purchasing power' (Okai, 1983, p. 8). See also the discussion in Rimmer (1984, pp. 87ff).
4. Recall that in the text the national account year is given as one number, i.e., 1963/64 is reported as 1963. Exceptions to this practice occur when reference is made to particular surveys or documents, such as in the sentence in the text that follows this footnote. The calculations end at 1985/86 because the detail required for the calculations was not available from the national income accounts for 1986-8 at the time this study was completed.
5. If one doubts that the number of farm families fell (and all statistics are open to some doubt), it should be kept in mind that the 1984/85 farm survey was probably the most accurate of the three. This implies that if there is a measurement bias, it involves an under-estimation of incomes for the earlier years. In any event, the falling trend in wage earner incomes is so extreme that no reasonable adjustment of the farm population would alter the conclusions which appear below. The finding of the 1984/85 survey supports inferences drawn elsewhere. For example, Harvey noted that 'the most revealing changes in rural employment is [sic] the increasing proportion of self-employed and unpaid household workers' (Harvey, 1981-2).
6. The data and statistics from which this table is derived are presented in the data appendix.
7. Jamal incorporated this price differential into his calculations, obtaining a narrower wage earner-farmer gap for the 1970s than in the table here (Jamal, 1982).

8. The national income accounts provide data on total wage payments in the economy, which the JASPA report used along with an estimate of total wage employment. That approach was not used in this study because of the difficulty of obtaining accurate data on employment for the 1980s.
9. Manufacturing pay exceeded that in mining during the 1970s.
10. This poverty line calculation is also used in Jamal (1982), and is lower than that found in Lisk and van der Hoeven (1979).
11. The largest value of the ratio does not coincide with the highest real wage. This is because in some years the cost of living declined. When the cost of living declines, the value of the poverty line also declines, which can offset a fall in real wages when the ratio is calculated.
12. Over the years non-farm, non-wage income per head was about eight to nine times that for the average of farm and wage incomes. The former series has not been reported because it includes such different groups as to be meaningless: urban entrepreneurs, informal sector operators, rural non-farm workers, etc.
13. This argument was made for Sierra Leone, but is found in more explicit form in a 1983 World Bank report on Kenya:

The [present] policy of wage restraint should probably be maintained for the foreseeable future . . . [I]n so far as wage restraint moderates increases in domestic prices, this policy has beneficial effects on real rural incomes . . . Thus, this policy effectively redistributes income from urban to rural households. (World Bank, 1983, p. 23)
14. This conclusion coincides with that found in Longhurst, Kamara and Mensurah (1988, no pagination): 'The SAP [structural adjustment programme] is likely to widen inequality of overall income distribution . . . and . . . the limited evidence available does suggest that [the SAP measures] have worsened rather than improved the precarious position of the poor.'

6 Rural Income Distribution

1. Many of the points made in this section are treated for sub-Saharan Africa as a whole in Jamal (1989).

2. 'This overriding traditional emphasis on security helps to explain the lack of specialized production . . . why all producers tend to grow the same staple crops regardless of agronomic conditions . . .' (Johnny, 1981, p. 16).
3. ' . . . [T]here also exists a great potential for expanding the cultivated area . . . However, costs of development of new swamp areas are generally high and can only be recovered if yields are substantially increased and appropriate techniques adopted' (FAO, 1989b, p. 4).
4. This is the general thrust of the 1984 agricultural sector report, most explicitly with regard to tree crops, but also rice. For tree crops, the report predicts a substantial and immediate increase in output from increased producer prices through improved maintenance (World Bank, 1984, p. 25). It should be noted that the FAO stressed that increased cultivated swampland would require application of significantly different techniques of production: 'Development of new areas for swamp land cultivation should thus always be combined with the introduction of modern cropping techniques' (FAO, 1989b, p. 4).
5. 'Expansion of the area of upland rice under the present system of Rotational Bush Fallow is not possible' (FAO, 1989b, p. 4).
6. 'Once population density increases, the cropping periods have to be lengthened and fallow period shortened . . . Clearly the situation is untenable in the long run' (JASPA, 1981, p. 141). The FAO came to the same conclusion a decade later: 'The situation at district level is however quite different. In most of the more densely populated upland districts the process of soil degradation is already in an advanced stage' (FAO, 1989b, p. 6).
7. 'It is essential, therefore, that major emphasis be placed on intensification of swamp development where potential rice yields may be several times larger than under rain-fed upland conditions', and 'less than 10% of the potentially arable swamplands are cultivated' (World Bank, 1984, pp. iv, 13). A more modest view is found in a government document written in support of a request for a structural adjustment loan. 'There is room for expansion of cultivation by greater utilization of swamps for food crops . . .' (GSL, 1985, p. 1).
8. A survey of the unsuccessful schemes for expanding wetland rice in the 1970s and 1980s is reviewed in FAO (1989b).
9. 'Labour shortages are the main constraints on rice production . . .' (Richards, 1986, p. 74).

10. The Richards book is the definitive work on rice cultivation in Sierra Leone, providing a historical background, as well as meticulous field work.
11. 'As the consumption figures . . . indicate, seriously inadequate calorie levels characterize the low-expenditure [rural] households' (ON, USAID, 1978, pp. xiii). See also Dahniya and Kangbai (1986) and FAO (1988a).
12. The information from the 1965/66 survey is not included, since it is not strictly comparable. In that survey just over 10 per cent of farms were listed as being of unknown size, while in the later two surveys all farms were assigned to a distributional category.
13. The total rural population rose by 8 per cent, which was accommodated by an increase in size of household from 5.6 to 6.8 (SLG, CSO, 1972; and SLG, MAF, 1986; see especially 1988, pp. 1-2; and SLG, CSO, 1986). Over the same period farm households also increased, from 7 to 7.9. The increase in size of household is consistent with the rapid population growth over the period. The increase in household size is verified by Spencer and Byrlee in their survey, in which they found an average farm family to be 7.4 persons in 1974-5 (Spencer and Byrlee, 1977).
14. In support of the labour constraint argument of the previous section, we can also quote Blair: 'it would appear . . . to be the case that by the early 1970s, many Sierra Leonean upland rice farming households had reached a critical minimum level of male labour to maintain subsistence production' (Blair, 1975, p. 17). Upland rice farming is characteristic of the poorer farm families. See also Johnny (1981, p. 10), who argues that upland rice farming was characterized by land being the relatively abundant resource, and access to credit, for working capital, prevented intensive cultivation.
15. It is assumed that farmers receive 60 per cent of the urban market price, except in the case of regulated export crops (coffee, cocoa and palm kernels). The 60 per cent figure was obtained from interviews with Ministry of Agriculture and Forestry officials.
16. The survey (Spencer and Byrlee, 1977) collected detailed information on output, inputs, and cash income from the most important agricultural areas of the country.
17. The 1984/85 survey reported farm sizes in hectares, while the earlier two used acres. For Table 6.1 ranges were combined in order to express both the 1970/71 and 1984/85 results in the same

18. The two estimates were obtained independently of each other, at least here: the estimate of intermediate production was taken from Spencer and Byrlee (1977); the crop prices from the Agricultural Statistical Bulletins; and the discount for farm-gate prices from Ministry of Agriculture and Forestry estimates.
19. Unlike with the World Bank, the IMF reports are not available to researchers. But in an interview in Washington with the author of this paper on 6 January 1989, a Fund official with responsibility for West Africa stressed the importance of increasing agricultural prices.
20. It was estimated that in the mid-1970s rice accounted for over 50 per cent of the total quantity of food available in Sierra Leone, that it was grown by over 80 per cent of farmers, and represented at least a third of the value of agricultural trade (Spencer, May-Parker, and Rose, 1976). The 1984/85 survey confirmed these estimates for the 1980s.
21. The calculations apply the figure used by the Sierra Leone Ministry of Agriculture, of 115 kilograms per year for an adult. It is this amount that the government used to calculate aggregate rice requirements for the country (see SLG, MAF, 1987b and 1988). One reader of this book in manuscript form considered this amount too low. However, it was greater than the per capita rice requirement used in other sources. The FAO in its 1989 study used 100 kilograms (FAO, 1989b, p. 1, footnote), and estimated actual consumption per head to be 90 kilograms in the 1980s (*ibid.*, p. 3-4). The Ministry of Agriculture and Forestry figure (115 kilograms) was based on estimated per capita consumption in the 1970s. Confusion over figures might arise from use of the term 'requirement'. It might well have been the case that for adequate nutrition Sierra Leoneans should consume considerably more than 115 kilograms of rice, but this is not our interest here. The purpose is to estimate actual on-farm rice consumption, in order to arrive at a calculation of marketed rice.
22. In the absence of survey data, there was no alternative to this assumption that seemed less arbitrary.
23. Such apparently strange behaviour might have been common in Sierra Leone. Richards (1986) reported that heavy indebtedness forced smallholders to sell their rice crop prior to harvest. As a result, they had subsequently to purchase rice for consumption.

- In such an arrangement the pre-harvest sale price was below the post-harvest purchase price (otherwise creditors would have made no loans). Obviously, any gain to smallholders of increased rice prices would be minor at best.
24. Borrowing rice for repayment in kind after the next harvest is the main safety net against farm failure. Farmers in a position to make rice loans are often more concerned to use such loans to build up or strengthen their networks of patron-client relations than to make a profit in straight financial terms. This is why so much rice fails to reach the open market even when prices are relatively high' (Richards, 1986, p. 115).
 25. Although the absolute indebtedness of farmers is estimated at only 15 per cent of the total volume of rice production, such debts amount to 60 per cent of marketed production. Therefore, with such indebtedness and obligation to sell, farmers are forced to sell their paddy surplus at depressed prices... (FAO, 1989, p. 30).
 26. The bulk of rice is transported to the village market as head-loads... Especially during periods of slack demand, farmers tend to accept whatever price they can get for their produce in order to avoid carrying the load back and forth' (FAO, 1989, p. 30).
 27. Palm oil would be the exception to this rule.
 28. The coefficient of variation is the ratio of the standard deviation to the mean. Here the standard deviation is unweighted, derived from the averages of the ranges. However, since the distribution of households (the weights) does not change in the table, this calculation of the standard deviation is satisfactory for current purposes.
 29. The same conclusion probably applies to most of Africa: 'The distribution of the sale of crops [in SSA countries] is very skewed. A large share of total marketed surplus originates with a small proportion of the farmers. Therefore, the argument that higher agricultural prices will benefit the large majority of the rural poor is not supported by empirical evidence' (Pinstруп-Andersen, 1989a, p. 32).
 30. The number of non-farm households is given in each farm survey. The level of urbanization is interpolated from census years. Food-deficit farm families had to be estimated in a manner consistent across the three, and only the last provided data on production and yields by size category. Further, the smallest

- category for the first two censuses was less than one acre, not one-half hectare as in 1984/85. As an approximation, the 1984/85 distribution of households by farm size was converted to acres (see Table 6.1). Then, it was assumed that only households in the lowest size category (less than an acre) were food deficit. See Malton *et al.* (1979), in support of this estimate of food-deficit households. Referring to that study, Pinstруп-Andersen wrote, 'in Sierra Leone, 50 per cent of the incomes of rural households with one acre or less come from non-farm sources, falling to 23 per cent for households with 1-5 acres, and about 15 per cent for larger farms... ' (Pinstруп-Andersen, 1989a, p. 12). An estimate of the proportion of food-deficit families in the total population for about 60 countries can be found in FAO (1990b).
31. Pinstруп-Andersen has generalized this conclusion to most of Africa: 'A large share of food insecure Africans are net buyers of food. The majority of them are farmers without access to sufficient land and/or other resources to produce sufficient food to meet family requirements' (Pinstруп-Andersen, 1989a, p. 32).

7 Performance of Agriculture

1. 'While relative price shifts may engender a set of area substitutions with added weight given to tradeables, the aggregate supply response... will tend to be considerably lower than for individual crops, particularly in the absence of complementary actions, such as infrastructure investment' (Commander, 1989b, p. 236). Along the same line, Streeten referred to the 'illusion' of price stimulants: 'The illusion that higher prices by themselves will lead to a large response in supply derives from an illegitimate extension of what happens if the price of one crop rises relatively to others to the case where the agricultural terms of trade as a whole improve. All the evidence shows that supply response is much lower for total output' (Streeten, 1989, p. 8).
2. In his review of agricultural supply response in underdeveloped countries, Chhibber wrote, 'The results of this survey of the aggregate supply response indicate that changing the incentive structure faced by farmers is an important, but not the only, component of a balanced policy package to raise agricultural productivity' (Chhibber, 1989, p. 66).
3. 'In this context the simple-minded notion that price adjustments will lead to the economy unconstrained, and to a higher equili-

- trium level of output, is not enough. The provision of public goods and services – non-price factors – must play a key role in the adjustment process' (Chhibber, 1989, p. 66).
4. Again to quote Chhibber, 'It is important to emphasize [public expenditure] because adjustment operations are often undertaken during the period when public expenditure budgets are highly constrained The results of this survey show that if these cuts are large they can negate the expected supply response from improvements in price incentives' (Chhibber, 1989, p. 66).
 5. It was surprising that the 1990 JASPA report seemed also to think that government price policy had a major impact on the rice market: 'The government should review price policy for rice with a view to increasing domestic rice production in order to reduce the growing dependence on imported food' (ILO/JASPA, 1990, p. xxi).
 6. 'The regulation of imports has had the greatest effect on producer prices, which have been depressed by the subsidized retail price in towns Imported rice, which has had a resulting artificially low price, has therefore continued to depress the domestic price of rice' (World Bank, 1985b, p. 5). 'Producer' price must here refer to price received by the farmer, not the Rice Board producer price.
 7. 'The overall picture is of a world cereals economy dominated by domestic conditions in a small number of countries. Policies in these countries determine the extent of transmission of domestic production variations to other countries . . . and thus influence the impact on global food security' (FAO, 1985, p. 23).
 8. Up to 1974, the source is Levi (1976, p. 142), described as 'actual monthly retail' for Freetown. From 1976 through 1987 the source is the Ministry of Agriculture and Forestry *Agricultural Statistical Bulletin*. These last prices are measured per 10 ounce container ('buttercup'), the common unit of sale for milled rice. A note to the table in *Bulletin III* states:

Obtained as part of the consumer Price Index exercise. Due to budget constraints, figures are no longer obtained from sample purchases, instead the trader is asked to lend a sample purchase to the [Central Statistics Office] for weighing. The quoted price rather than the actual price is used. (SLG, MAF, 1986, p.41)

- Since this note appears first in No. III, it can be assumed that prices through 1984 were collected on the basis of sample purchases. Finally, the price for 1975 is taken from the consumer price index, as reported in SLG, CSO (1982).
9. Unfortunately, data on rice subsidies were not available from any source. Total subsidies to all state enterprises (one of which was the Rice Board) averaged US\$ 12.5 million per year from 1973 through 1983 (SLG, CSO, 1980; and 1987). Rice subsidies would have been less than half of this. In 1986 IMF conditionality required that rice subsidies be limited to Le 45 million for the second half of the year, which converted to US\$ 2.9 million (SLG, 1987, p. 31).
 10. It is beyond the scope of this study to investigate the impact of food aid on the economy of Sierra Leone. However, consistent with the argument made here, recent research indicates that the disincentive effect of food aid to underdeveloped countries tended to be exaggerated:

Although it is widely believed that food aid distorts incentives to increase agricultural production, detailed empirical country studies conducted in recent years suggest that the disincentive effect of food aid has been over-emphasized. An analysis of sixteen developing countries that achieved particularly high growth rates in food production of 3.9 per cent during 1961-76 shows that they also received about 80 per cent more food aid per capita than the average food aid recipient country (von Brian and Huddleston, 1989, p. 252).

Countries were Brazil, Ghana, Iran, Cote d'Ivoire, Malaysia, Mexico, Morocco, Pakistan, the Philippines, Sri Lanka, Sudan, Thailand and Tunisia.
 11. Indirect evidence that rice prices in Sierra Leone were not far below world prices in the 1980s is found in a 1986 FAO report. When converting nominal producer prices to CFA Francs for cross-country comparison, the calculations showed the rice price in Sierra Leone for 1980-2 to be the third highest among eleven countries of West Africa (FAO, 1986b, p. 44).
 12. This explanation was suggested by Levi in the 1970s, who attributed the increase in rice imports to the boom in alluvial mining which drew labour away from agriculture (Levi, 1976, p. 143).

13. The trend line is:
- | | | |
|--------------------|----------------|---------------------------------|
| ln(output/farms) = | 4.938 + 0.025t | Adjusted R ² = 0.852 |
| t-statistics | (336.0) (11.3) | N = 23 (1963-85) |

14. In other words, there is no evidence to support the following statement by the Bank, and much evidence to the contrary.

Government's policies with respect to the incentive framework have had a serious effect on agricultural production. The overvalued leone imposed low producer prices . . . [and] imports at the low rate of exchange depressed the domestic urban market price [of rice]. (World Bank, 1984, p. vii)

- We have shown this to be false: the domestic market price in most years was above the import price converted to US dollars.
15. Pinstrup-Andersen makes this point:

One of the key modifications needed in African government policies is a change from a goal of short run maximization of agricultural production expansions to a goal of maximization of real incomes of the poor (both rural and urban). The former leads to policies and programmes which are likely to benefit larger, better-off farmers who control better production environments, while ignoring food-insecure farmers due to their lower short-run potential for expanding the marketed surplus. (Pinstrup-Andersen, 1989a, pp. 27-28).

16. These results cannot be dismissed as statistical illusion. As explained before, the annual estimates of the number of farm families are derived from the farm surveys of 1965/66, 1970/71 and 1984/85. The rice output figures are arrived at independently of this by annual sample surveys. The farm number estimates for the inter-survey periods (1963-5 and 1976-80) may be somewhat off mark because they are extrapolated. However, they should be of the right magnitude.

17. See particularly World Bank (1984, p. 25).

18. An FAO study reached the following conclusions:

The policy prescriptions deriving from [this study] are plain and reflect the position that most LDCs have long been taking in international forums. First, developing countries should be

actively concerned about deteriorating terms of trade and instability. Second, LDCs should strive to take effective group actions, both to give a consistent framework to domestic policies without unwilling transfers of welfare and implicit free-ridership, and to increase market power towards large industrial purchasers. (Scandizzo and Diakosawas, 1987, p. 167)

19. This term is incorrect because a proper calculation of the terms of trade would (1) have to include the cost of farm inputs (which the consumer price index does not); and (2) the consumer price index would need to be re-weighted to reflect rural consumption patterns rather than urban ones. The most obvious example of a difference in consumption patterns is that rural Sierra Leoneans do not for the most part pay rent.

20. The results are so poor that they do not bear reporting. The price variables are all non-significant and the *R*-squares less than 0.1 (negative when adjusted for degrees of freedom in the case of coffee and the ratio of the producer price to the export price).

21. For example, this might be demonstrated by calculations of purchasing power parity. Such calculations can be found in Chapter 8.

8 Aspects of Macroeconomic Adjustment

1. It has already been shown that the empirical evidence offers no support for the view that low producer prices discouraged production of export crops (Chapter 7), and this argument will not be repeated.

2. The scepticism of the local officials about the success of a 'float' was reported in interviews conducted by the author at the Bank of Sierra Leone and the Ministry of Finance. The consequences of the float are discussed below in more detail.

3. Though probably not in the short run, since investments are long-gestating. Investors would presumably attempt to anticipate the movement of the exchange rate over some future time period. Such is not the case for perishable commodity exports sold on a spot market.

4. A real effective exchange rate index is defined broadly as a nominal effective exchange rate adjusted for relative movements in national price or cost indicators of the home country and its

- partner- or competitor-countries.' IMF, *International Financial Statistics* (January, 1989), pp. 6-7. The 'real' rate in Table 7.5 is a partner rate.
5. The measure presumes that all commodities are traded (or could be) by all countries. Otherwise, using a general price index in both the numerator and denominator would not be justified.
 6. In a 1985 report on public expenditure, the Bank notes, 'Overall, the Fund program [of 1983 and 1984] brought about visible movement toward an overall macroeconomic balance in which both the government deficit and the trade deficit are *fully under control*.' (World Bank, 1985a, p. 108, emphasis added). As we see below, one can harbour doubt as to whether the fiscal deficit was 'wholly under control', but what the Bank neglects to say is that the improvement in the trade deficit occurred with an appreciating (mismanaged?) exchange rate.
 7. One reads:

The results [of this study] conflict with popular notions, according to which changes in the real exchange rate would have less of an effect on the exports of Sub-Saharan African countries than in countries at higher levels of development. But, they are consistent with the observation that African countries, which let their exchange rate become greatly overvalued, experienced considerable losses in export market shares. (Balassa, 1988, p. 1)

Somewhat surprisingly, the paper neglects to offer the well-recognized warning that cross-sectional relationships imply nothing about changes over time. Other characteristics of the study also give pause for doubt. The dependent variable is not real exports, but the share of exports in GDP. If exports have a real multiplier effect and the marginal export share differs from the average in GDP, then interpretation of the results is ambiguous. In any event, the results are hardly robust. A number of equations are estimated and in only one case is the R^2 over 0.27. For agricultural exports treated separately, the highest R^2 is 0.127, and in two of the six equations the coefficient on the real exchange rate is non-significant. The results would seem to confirm scepticism about the exchange rate, for they show that it is significant, but explains a very small portion of the variation in export shares.

8. Many question the multilateral obsession with exchange rates: 'Generation of satisfactory trade surpluses continues to be impaired by deteriorating external terms of trade and poor medium-term prospects for the major exportables of the [SSA] region. Thus, even with some noticeable depreciation in the real exchange rate (in the case of the low-income countries), the positive effect on export revenues has been offset not only by restricted supply responses but by external market constraints' (Commander, 1989b, p. 234).
9. Before the oil boom Nigeria was a major exporter of cocoa and palm products.
10. Liberia used the US dollar as currency, and Cote d'Ivoire and Senegal were tied to the *franc*.
11. The table excludes development expenditure (the capital account). This exclusion is for two reasons. First, in real terms capital expenditure falls much more than current expenditure, so to include it would only reinforce the conclusion reached below. In the 1980s it declined as a proportion of total expenditure as government finances came under increasing pressure. Second, and more important, it is generally agreed that development expenditure, by creating capacity for the future, should be judged on different criteria than recurrent expenditure. In general, governments of developing countries should save on the current account to spend on the capital account.
12. The least-squares regression line for current expenditure, 1964-79, in 1977 Leones is:

$$\ln(\text{CrExp}) = 4.084 + 0.085t \quad R^2(\text{adj}) = 0.870$$

$$(t = 49.8) \quad (t = 10.1)$$

13. The Bank offered an imaginative solution to the low quality and limited availability of public education in Sierra Leone:

[Priority should be given to primary education . . . To achieve [this] . . . the following policy initiatives should be emphasized. (1) Take measures to improve resource use in primary education. More specially, consider reducing the duration of primary education from seven to six years and increase the student/teacher ratio. (World Bank, 1985a, p. 93)

Educational specialists throughout the world would no doubt find interesting the proposition that education can be improved

by reducing its duration and increasing the number of students each teacher supervises.

9 Mismanagement or Maladjustment?

1. The annual average deficit in the table is US\$ 66.8 million. If one arbitrarily balances the trade account by dividing this by four and subtracting the result (-16.7) from each quarter, the result is a near-zero figure for the first quarter, a large surplus in the second, and deficits in the third and fourth.

2. In Somalia in 1986, the Fund supervised an auction in which anyone could tender bids. Further, in cooperation with the World Bank, the Fund provided the government of Somalia with foreign exchange to sell in the auction, which was not the case in Sierra Leone. The more lenient treatment of Somalia might have been related to the strategic interest of the United States in that country, including a military installation. The result of the two different auctions proved much the same. The Somali shilling collapsed with almost the same rapidity as the Leone (ILO/JASPA, 1989).

3. The following description of the operation (or non-operation) of the currency trading system represents a summary of interviews with officials at the Bank of Sierra Leone, the Ministry of Finance, and the IMF.

4. In terms of general equilibrium theory, using the unaccepted offer rate as the trading rate represented 'false trading' with a vengeance.

5. It should not be thought that this analysis only represents 20-20 hindsight. Prior to the float officials of the government of Sierra Leone warned that a severe devaluation could result from the IMF's currency trading system.

6. A 1987 government report summarises the impact as follows:

There is no doubt that the magnitude of the devaluation has seriously affected not only Government's capacity to continue its recurrent as well as development programmes, but has also impaired the capacity of the society to absorb the impact of the programmes. (SLG, January 1987, p. 40)

7. The precise figure was Le 1789.5 million, as reported in (SLG, 1987, p. 31).

8. 'Given the continuous slide of the Leone [in 1986], it has become uneconomic to hold idle balances and farmers are aware of this.' (SLG, 1987, p. 32).

9. This process is briefly recounted in (SLG, 1987, p. 32). Further details were obtained in interviews with bankers and business people in Freetown.

10. And not only in Sierra Leone: '... [R]ecent experience points to no clear or optimal means for exchange-rate management. Premature and uncontrolled movement to foreign-exchange auctions in Uganda and Zambia merely stimulated inflation and political dissent' (Commander, 1989b, p. 236).

11. These last two predictions result from money's property of being 'neutral' in the quantity theory; i.e., at full employment changes in the quantity of money leave all real variables unchanged.

12. Solutions to very severe foreign-exchange problems have frequently been attempted over an unrealistically short period of time using policy measures that have had severe disruptive effects on the economy and caused excessive hardship for the poor... (Pinsstrup-Andersen, 1988, pp. 99-100).

10 Alternative Adjustment

1. The term comes from Joseph Heller's famous novel about Second World War bomber pilots, and it applies to the multilateral argument about alternatives in the strictest sense. From the source:

... Yossarian ... decided right then and there to go crazy.

'You're wasting your time,' Doc Daneeka was forced to tell him.

'Can't you ground someone who's crazy?'

'Oh, sure, I have to. There's a rule saying I have to ground anyone who's crazy ... But first he has to ask me to ...'

'You mean there's a catch?' [Yossarian]

'... Catch-22. Anyone who wants to get out of combat duty isn't really crazy.'

'... That's some catch, that Catch-22.' [Yossarian] observed.

'It's the best there is,' Doc Daneeka agreed.

(Heller, 1961, pp. 46-7).

2. While this point might seem obvious, Valdéz and Stamwalha allege the contrary: 'We do not claim that the price quoted in

- the world market for a commodity is a reflection of the world's opportunity cost of producing it. But for the national policy maker, the question is irrelevant' (Valdez and Siamwalla, 1988, p. 103). They go on to argue that countries will gain for adhering to 'border' prices even if world markets are distorted. This is a quite strange position. Imagine the case in which a major producer of a commodity so subsidizes its export that the world price is driven down close to zero. Would then all other producers of that commodity be well-advised to accept that price as their domestic price, thus driving their own producers out of operation?
3. This coincides with the recommendation of the JASPA report: 'A crawling-peg system whereby the exchange rate is constantly adjusted so as to stabilize the real effective exchange rate may be more efficient than the drastic devaluations that are administered at irregular intervals' (JASPA, 1990, p. xiv).
 4. The disastrous effects of uncontrolled devaluation in a country of another region, Nicaragua, are treated in Weeks (1992).
 5. 'It would be unrealistic to expect, after a decade of unsuccessful attempts, the economic distortions can be rectified overnight The crisis is deep-rooted and will require a gradual and long-term approach to heal' (ILO/JASPA, 1990, p. xv).
 6. See the discussion of the loss rate with prevailing milling techniques in FAO (1989, p. 32).
 7. 'In the long-run, if the market does not ensure increasing supplies of domestically produced rice, the government should impose more direct controls along the lines of the Green Revolution Programme [launched in 1968], but with a more realistic time frame . . .' (ILO/JASPA, 1990, p. xii). The FAO recommended a programme to extend over seven years, with output gains obtained from a combination of increases in yields and expansion of land in cultivation (FAO, 1989, p. 40).
 8. Streeten makes this point, in the context of price policy: ' . . . [C]orrect pricing policies often . . . work best in conjunction with action in the public sector' (Streeten, 1989, p. 8).
 9. However, it would be important not to announce that debt would not be paid, for this brings down the wrath of the commercial banks and multilaterals, as Alan Garcia of Peru discovered in 1985.

Bibliography

- Bela Balassa (1988) 'Incentive Policies and Agricultural Performance in Sub-Saharan Africa', PPR Working Papers (Washington: World Bank, August)
- Robert Bates (1989) 'The Reality of Structural Adjustment: A Sceptical Appraisal', in Simon Commander (ed.), *Structural Adjustment and Agriculture: Theory and Practice in Africa and Latin America* (London: Overseas Development Institute)
- J. A. Binns (1987) 'Inequality and Development in Rural West Africa', *Geographical* 14, 1
- (1982) 'Agricultural Change in Sierra Leone', *Geography*, 67, 2
- James A. S. Blair (1975) 'Migration of Agricultural Manpower in Sierra Leone', paper presented at the Conference on Manpower, Planning and Utilization in West Africa, Institute of Statistical, Social and Economic Research of the University of Ghana at Legon, March
- Avishay Braverman, Jeffrey S. Hammer, and Erika Jorgenson (1983) *Agricultural Taxation and Trade Policies in Sierra Leone* (Washington: World Bank, December 23)
- Derek Byrlee, Joseph L. Tommy, and Habib Fatoo (1976) 'Rural-urban Migration in Sierra Leone: Determinants and Policy Implications', University of Sierra Leone and Michigan State University, African Rural Economy Paper No. 13
- Ajay Chhibber (1989) 'The Aggregate Supply Response', in Simon Commander (ed.), *Structural Adjustment and Agriculture: Theory and Practice in Africa and Latin America* (London: Overseas Development Institute)
- R. W. Clower (1965) 'The Keynesian Counter-Revolution: A Theoretical Appraisal', in Frank Hahn and F. P. R. Brechling (eds.), *The Theory of Interest Rates* (London: Macmillan)
- Simon Commander (1989a) *Structural Adjustment and Agriculture: Theory and Practice in Africa and Latin America* (London: Overseas Development Institute)
- (1989b) 'Prices, Markets and Rigidities', in Simon Commander (ed.), *Structural Adjustment and Agriculture: Theory and Practice in Africa and Latin America* (London: Overseas Development Institute)

- Apostolos Condos (1986) *External Debt, Structural Adjustment, and the Agricultural Sector of Developing Countries*, (Rome: FAO, September)
- Florence N. Dahniya and B. S. Kangbai (1986) 'Broadening the Food Base with Traditional Food Plants: Case study - Sierra Leone', paper presented at the West African Inter-Country Workshop on Traditional Crops, Ibadan, Nigeria, 15-17 December 1986
- Franz Donhauser (1985) 'Agricultural markets and prices: incentives or disincentives for increasing agricultural production in Sierra Leone?', *Studien zur intergrierten landlichen Entwicklung* 14
- Economic Commission for Africa (1989) *African Alternative Framework to Structural Adjustment Programmes for Socio-Economic Recovery and Transformation* (Addis Ababa: Economic Commission for Africa)
- Food and Agricultural Organisation of the United Nations (FAO) (1985) *Impact of National Grain Policies on World Grain Supplies and Prices* (Rome: FAO)
- (1986) *Agricultural Price Policy Experience in the ECOWAS Region* (Rome: FAO)
- (1988a) 'Nutrition Country Profile: Sierra Leone' (Rome: typescript, November)
- (1988b) *Semi-Annual Report No. 19, January-June 1988* (Free-town: FAO)
- (1989a) *Agricultural Market Intervention and Pricing Policies in Africa* (Rome: FAO)
- (1989b) *Unified Programme for Increased Rice Production by Small-Scale Farmers* (Rome: FAO, December)
- (1990a) *Production Yearbook 1989, Vol. 43* (Rome: FAO)
- (1990b) *State of Food and Agriculture 1990* (Rome: FAO)
- M. Hardiman and J. Midgley (1982) 'Social Planning and Access to Social Services in Developing Countries: The Case of Sierra Leone', *Third World Planning Review*, 4
- Milton E. Harvey (1981-82) 'Rural Development in Sierra Leone: Two Decades of War on Rural Poverty', *Rural Africana*, 12-13 (Winter-Spring)
- Peter B. R. Hazel (1988) 'Changing Patterns of Variability in Cereal Prices and Production', in John W. Mellor and Raisuddin Ahmed (eds), *Agricultural Price Policy for Developing Countries* (Baltimore: Johns Hopkins University Press)
- Joseph Heller (1962) *Catch 22* (New York: Dell Publishing Company)
- Paul Hesp (1985) *Producer Prices in Tropical Africa: A review of*

- official prices for agricultural productions, 1960-1980* (Leiden: African Studies Centre), Research Reports No. 23/1985
- International Labour Office, (1987) *Yearbook of Labour Statistics 1987* (Geneva: ILO)
- ILO/JASPA (1981) *Ensuring Equitable Growth: A Strategy for Increasing Employment, Equity and Basic Needs Satisfaction in Sierra Leone* (Addis Ababa: ILO/JASPA)
- (1982) *Rural-Urban Gap and Income Distribution: The Case of Sierra Leone* (Addis Ababa: JASPA)
- (1986a) *The Challenge of Employment and Basic Needs in Africa* (Nairobi: Oxford University Press)
- (1986b) *Women's Employment Patterns, Discrimination and Promotion of Equality in Africa: The Case of Sierra Leone* (Addis Ababa: JASPA)
- (1989) *Generating Employment and Incomes in Somalia* (Addis Ababa: JASPA)
- (1990) *Alleviating Unemployment and Poverty under Adjustment: Issues and Strategies for Sierra Leone* (Addis Ababa: ILO/JASPA)
- International Monetary Fund (various numbers) *Government Finance Statistics Yearbook* (Washington: IMF)
- (various numbers) *International Financial Statistics* (Washington: IMF)
- IMF)
- Oukunkle Iyanda (n.d.) *Multinationals and Employment in a West African Sub-region: Liberia and Sierra Leone* (Geneva: ILO, nd)
- Working Paper No. 29
- Vali Jamal (1986) 'Taxing the peasants in Sierra Leone', in JASPA, *The Challenge of Employment and Basic Needs in Africa* (Nairobi: Oxford University Press)
- (1989) 'Getting the Crisis Right', *International Labour Review*, 127, 6
- Vali Jamal and John Weeks (1988) 'The Vanishing Rural-Urban Gap in Sub-Saharan Africa', *International Labour Review*, 127, 3
- Michael Johnny (1981) 'Agricultural Change and Peasant Farmer Resistance: The Case of the Traditional Upland Rice Farmer in Sierra Leone', *Rural Africana* 10 (Spring)
- Omolunde E. G. Johnson (1989) 'The Agricultural Sector in IMF Stand-by Arrangements', in Simon Commander (ed.), *Structural Adjustment and Agriculture: Theory and Practice in Africa and Latin America* (London: Overseas Development Institute)
- Peter Kilby and Carl Liedholm (1988) 'The role of nonfarm activities in the rural economy', in M. Rukuni and R. Bernstein (eds),

- Southern Africa: Food Security Policy Options* (Harare: University of Zimbabwe & Michigan State University Food Security Research in Southern Africa Project)
- Robert P. King and Derek Byerlee (1977) 'Income Distribution, Consumption Patterns and Consumption Linkages in Rural Sierra Leone', University of Sierra Leone and Michigan State University, African Rural Economy Paper No. 16
- Axel Lejohndufvud (1968) *Keynesian Economics and the Economics of Keynes* (Oxford: Oxford University Press)
- John Levi (1976) *African Agriculture: Economic Action and Reaction in Sierra Leone* (London: Commonwealth Agricultural Bureaux)
- Franklyn A.N. Lisk (1974) *The political economy of Sierra Leone, 1961-1971, with special reference to the IMF stabilisation programme of 1966 to 1969* (Birmingham: Centre for West African Studies, March)
- Franklyn A.N. Lisk and Rolf van der Hoeven (1979) 'Measurement and Interpretation of Poverty in Sierra Leone', *International Labour Review*, 118, 6 (November-December)
- Richard Longhurst, Samura Kamara and Joseph Mensurah (1988) 'Structural Adjustment and Vulnerable Groups in Sierra Leone', *IDS Bulletin*, (January)
- P. Malton, *et al.* (1979) 'Poor Rural Households, Technical Change, and Income Distribution in Developing Countries: Two Case Studies from West Africa', African Rural Economy Working Paper No. 29 (East Lansing, Michigan: Department of Agricultural Economics, Michigan State University)
- John W. Mellor and Raisuddin Ahmed (eds.) (1988) *Agricultural Price Policy for Developing Countries* (Baltimore: Johns Hopkins University Press)
- P. Mosley, J. Harrigan and P. Tove (1991) *Aid and Power: The World Bank and Policy-based Lending* (London: Routledge)
- Nutrition Economics Group, US Department of Agriculture (1984) *Summaries of Consumption Effects of Agricultural Policies in Selected African Countries: Sierra Leone* (Washington: USDA, April)
- Office of Nutrition, Development Support Bureau, Agency for International Development (1978) *Sierra Leone: National Nutrition Survey* (Washington: USAID)
- Matthew Okai (1983) 'Rural Poverty and Alleviation Measures in Sierra Leone', In-depth Studies Series: No. 6 (Rome: FAO)
- Organization of African Unity (1988) *Africa's Mid-term Assessment of the Implementation of the United Nations Programme of Action for*

- African Economic Recovery and Development* (Addis Ababa: OAU)
- S. R. Pearson *et al.* (eds) (1981) *Rice in West Africa: Policy and Economics* (Stanford: Stanford University Press)
- Wim Pelupessy and John Weeks (eds) (1992) *Maladjustment in Central America* (London: Macmillan)
- Per Pinstrup-Andersen (1988) 'Food Subsidies: Consumer Welfare and Producer Incentives', in John W. Mellor and Raisuddin Ahmed (eds), *Agricultural Price Policy for Developing Countries* (Baltimore: Johns Hopkins University Press)
- (1989a) 'Government Policy, Food Security and Nutrition in Sub-Saharan Africa', PEW/Cornell Lecture Series on Food and Nutrition Policy, Cornell, October 11
- (1989b) 'The Impact of Macroeconomic Adjustment: Food Security and Nutrition', in Simon Commander (ed.), *Structural Adjustment and Agriculture: Theory and Practice in Africa and Latin America* (London: Overseas Development Institute)
- Paul Richards (1986) *Coping with Hunger: Hazard and Experiment in an African Rice-Farming System* (London: Allen & Unwin)
- J. Barry Riddell (1985) 'Urban Bias in Underdevelopment: Appropriation from the Countryside in Post-colonial Sierra Leone', *Tijdschrift voor Economische en Sociale Geografie*, 76, 5 (1985)
- Douglas Rimmer (1984) *The Economies of West Africa* (New York: St. Martins)
- J. D. Rogers (1985) *Patterns of Rural Development and Impact on Employment and Income: The Case of Sierra Leone* (Addis Ababa: ILO/JASPA)
- M. Rukuni and R. Bernsten (eds) (1988) *Southern Africa: Food Security Policy Options* (Harare: University of Zimbabwe & Michigan State University Food Security Research in Southern Africa Project)
- Reshma Saigal (1990) *Policy Reforms in Sub-Saharan Africa in the 1980s and Implications for the Agricultural Sector* (Rome: FAO)
- R. G. Saylor (1967) *The economic system of Sierra Leone* (Durham: Duke University Press)
- Pasquale L. Scandizzo and Dimitris Diakosawas (1987) *Instability in the Terms of Trade of Primary Commodities, 1900-1982* (Rome: FAO)
- Ismael Serageldin (1988) *Beyond Crisis Management: The World Bank's Comprehensive Program for Promoting Sustained Growth with Equity in Africa* (Washington: World Bank)
- (1989) *Poverty, Adjustment and Growth in Africa* (Washington: New York)

- Sierra Leone, Government of (SLG) (1985) *Sierra Leone: A Programme for Rehabilitation and Economic Recovery 1985/86-1987/88, Volume 1 Main Report* (Freetown: Ministry of Development and Economic Planning, September)
- (1987) *Sierra Leone: A Programme for Rehabilitation and Economic Recovery 1986/87-1988/89, Volume 1 - Supplement Report* (Freetown: Ministry of Development and Economic Planning, January)
- (1988) *The 1988/89 Budget Speech* (Freetown: Government Printing Department, 24 June)
- (n.d.) *Estimates of Revenue and Expenditure, 1988-89* (Freetown: Ministry of Finance)
- Sierra Leone, Government of: Bank of Sierra Leone (SLG, BSL) (n.d.) *Balance of Payments (1984-1986)* (Freetown: Bank of Sierra Leone)
- *Annual Report and Statement of Accounts, for the Year Ended June 30, 1986* (Freetown: Bank of Sierra Leone)
- (n.d.) *Economic Trends, July-September 1987* (Freetown: Bank of Sierra Leone)
- (n.d.) *Economic Trends, October-December 1987* (Freetown: Bank of Sierra Leone)
- (n.d.) *Economic Trends, January-March 1988* (Freetown: Bank of Sierra Leone)
- Government of Sierra Leone, Central Statistics Office (SLG, CSO) (1967) *Agricultural Statistical Survey, 1965/66* (Freetown)
- (1971) *Agricultural Statistical Survey of Sierra Leone, 1970/1971* (Freetown, Central Statistics Office)
- (1972a) *Household Survey of the Rural Areas of the Provinces, February, 1969-June 1969* (Freetown: Central Statistics Office, January)
- (1972b) *Agricultural Statistical Survey, 1970/71* (Freetown)
- (1978) *Annual Statistical Digest 1977* (Freetown: Central Statistics Office)
- (1980) *National Accounts of Sierra Leone (1974/75 to 1978/79)* (Freetown: Central Statistics Office, June)
- (1981a) *Report on the General Survey First Round (June 1976-July 1977) Volume I: Demographic Characteristics* (Freetown: Central Statistics Office, February)
- (1981b) *Report on the General Survey First Round (June 1976-July 1977) Volume II: Household Expenditure* (Freetown: Central Statistics Office, March)

- (1982) *Annual Statistical Digest 1980* (Freetown: Central Statistics Office, July)
- (1983) *Report on the First Annual Survey of Industries (1980-81) Volume 1, Summary Results* (Freetown: Central Statistics Office, March)
- (1986) *The Preliminary Report on the 1985 National Population Census* (Freetown, August)
- (1987a) *Report on Establishment Surveys (1980-81, 81-82, 84-85 & 85-86) Volume 1: Manufacturing Establishments* (Freetown: Central Statistics Office, February)
- (1987b) *National Accounts of Sierra Leone (1984-85 and 1985-86)* (Freetown: Central Statistics Office, December)
- (1988a) *Annual Statistical Digest 1986* (Freetown: Central Statistics Office, January)
- (1988b) *Report on Pilot Labour Force Survey* (Freetown: Central Statistics Office, July)
- (1988c) *Report on Pilot Consumption and Expenditure Survey* (Freetown: Central Statistics Office, August)
- Sierra Leone, Government of: Ministry of Agriculture and Forestry (SLG, MAF) (1983) *Agricultural Statistical Bulletin, Number 1* (Freetown: February)
- (1986a) *1984/85 Sample Census of Agriculture of Sierra Leone* (Freetown)
- (1986b) *Report on the 1984/85 Large-Scale & Institutional Farm Census* (Freetown, April)
- (1987a) *Report on Area, Yield and Production of Groundnuts, Rice and Maize for the 1986/87 Crop Production Season in Sierra Leone* (Freetown, March)
- (1987b) *Agricultural Statistical Bulletin, Number III* (Freetown: June)
- (1988) *Agricultural Statistical Bulletin, Number IV* (Freetown: August)
- Sierra Leone Labour Congress (1986) *Research Assistants Training Courses Details* (Freetown: SLLC, November)
- (1987) *Workers Conditions and the Sierra Leone Economy* (Freetown: SLLC)
- Dunstan S. C. Spencer (1975) *The Economics of Rice Production in Sierra Leone, I: Upland Rice* (Freetown: University of Sierra Leone)
- (1979) 'Labour Market Organisation, Wage Rates and Employment in Rural Areas of Sierra Leone', *Labour and Society*, 4, 3 (July)

- Dunstan S. C. Spencer (1981) 'Rice Policy in Sierra Leone', in S. R. Pearson *et al.* (eds), *Rice in West Africa: Policy and Economics* (Stanford: Stanford University Press)
- Dunstan S. C. Spencer and Derek Byerlee (1977) 'Small Farms in West Africa: A Descriptive Analysis of Employment, Incomes and Productivity in Sierra Leone', African Rural Economy Program, Department of Agricultural Economics, Njala University College, Njala, Sierra Leone, Working Paper No. 19 (February)
- Dunstan S. C. Spencer, Ibi I. May-Parker and Frank S. Rose (1976) 'Employment, Efficiency and Income in the Rice Processing Industry of Sierra Leone', University of Sierra Leone and Michigan State University, African Rural Economy Paper No. 15
- Paul Streeten (1989) 'A Survey of the Issues and Options', in Simon Commander (ed.), *Structural Adjustment and Agriculture: Theory and Practice in Africa and Latin America* (London: Overseas Development Institute)
- United Nations (various numbers) *Monthly Bulletin of Statistics* (New York: United Nations)
- UNCTAD Secretariat (1989) *Self-Sustained Growth and Accelerated Development for the Least Developed Countries during the 1990s: Issues for Consideration*, Second United Nations Conference on the Least Developed Countries, Geneva, 2 April
- UNDP/World Bank (1987) *Energy Assessment Program, Sierra Leone: Issues and Options in the Energy Sector* (Washington: World Bank, October)
- (1989) *Africa's Adjustment and Growth in the 1980s* (Washington: World Bank)
- United States Government, Council of Economic Advisors (USG, CEA) (1988) *Economic Report of the President* (Washington: US Government Printing Office)
- Roberto Valdez and Ammar Siamwalla (1988) 'Foreign Trade Regime, Exchange Rate Policy, and the Structure of Incentives', in John W. Mellor and Rausuddin Ahmed (eds), *Agricultural Price Policy for Developing Countries* (Baltimore: Johns Hopkins University Press)
- Joachim von Braun and Barbara Huddlestone (1988) 'Implications of Food Aid for Price Policy in Recipient Countries', in John W. Mellor and Rausuddin Ahmed (eds), *Agricultural Price Policy for Developing Countries* (Baltimore: Johns Hopkins University Press)
- John Weeks (1989a) *A Critique of Neoclassical Macroeconomics* (London and New York: Macmillan and St. Martin's)

- (1989b) 'Losers Pay Reparations, or How the Third World Lost the Lending War', in John Weeks (ed.), *Debt Disaster* (New York: New York University Press)
- (1990) chapters on structural adjustment in FAO, *State of Food and Agriculture 1990* (Rome: FAO)
- (1992) 'The Nicaraguan Stabilization Programme of 1989', in Wim Pelupessy and John Weeks (eds), *Maladjustment in Central America* (London: Macmillan)
- World Bank (1969) (IBRD/IDA) *The Current Economic Position and Prospects of Sierra Leone* (Washington: IBRD, February 28)
- (1974) *Sierra Leone: Current Economic Position and Prospects* (Washington: World Bank, November 27)
- (1979) *Sierra Leone: Country Economic Memorandum* (Washington: World Bank, June 26, 1979)
- (1981) *Sierra Leone: Prospects for Growth and Equity* (Washington: World Bank, July 31)
- (1983) *Kenya: Growth and Structural Change*, vol. 1 (Washington: World Bank)
- (1984) *Sierra Leone: Agricultural Sector Review, Main Report* (Washington: World Bank, March 7)
- (1985a) *Sierra Leone: Review of the Public Expenditure Program* (Washington: World Bank, September)
- (1985b) *Sierra Leone: Sectoral Programs and Expenditures of the Government* (Washington: World Bank, September)
- (1986a) *Report and Recommendation of the President of the International Development Association to the Executive Directors on a Proposed Credit of SDR 4.6 million to the Republic of Sierra Leone for a Health and Population Project* (Washington: World Bank, April 22)
- (1986b) 'Sierra Leone: Economic and Financial Policy Framework, 1986/87-1988/89' (Washington: typescript, October 1986)
- (1988) *Report on Adjustment Lending* (Washington: World Bank, August)
- (1989) *Sub-Saharan Africa: From Crisis to Sustainable Growth* (Washington: World Bank)
- M. Yudelman (1967) *Africans on the Land* (Cambridge: Harvard University Press)

Index

- adjustment programmes
 - adjusting and non-adjusting countries 22-4
 - characterised 2, 17-18
 - 'consensus' on 20-1, 156, 157, 158
 - counterfactual outcomes 26
 - and ECA 24-6
 - empirical assessment 21-4
 - and FAO 26
 - and growth 19-20
 - and IMF 27
 - and OAU 25-6
 - and the poor 157, 164, 172
 - and UNCTAD 22-4
- Africa south of the Sahara
 - compared with other regions 10-11
 - capital flows 12
 - debt 11
 - economic decline 7-9
 - external shocks 9-12, 21
 - food imports 9
 - terms of trade 10, 14, 15
- agriculture
 - 'inverse size rule' 74-5
 - monetisation 69
 - price policy 77, 80-2, 85, 168
 - sectoral policy 35, 143, 160-1
 - supply response 80, 85-6, 169-70
 - terms of trade 101, 173
- balance of payments
 - analysis of 108-22, 174
 - chronology 43, 109 11
 - seasonal variation 127
- balance of trade *see* balance of payments
- capital flight 132-3, 177
- capital-output ratio 14-15
- cocoa *see* tree crops
- coffee *see* tree crops
- conceptual categories 43
- conditionality 2, 161 (*see also* adjustment programmes)
- demand constraint
 - and adjustment 142
 - and exports 18
 - theoretical implications 14, 18-19
- debt 86, 145, 162 (*see also* balance of payments)
- distortions 18, 20 (*see also* mismanagement)
- environmental degradation 71
- exchange rate
 - and Bank of Sierra Leone 126, 130, 173-4, 176
 - 'crawling peg' 142, 178
 - chronology 114-15
 - and commercial banks 132
 - collapse of 131-2
 - floating 19, 108, 114, 126, 129-31, 176, 177
 - impact on trade 116-18
 - and incentives 35, 108-9, 112, 174-5
- purchasing power parity 112 15, 118-20

- exchange rate (*cont.*)
 - role of 19, 102, 104, 109, 128-9, 142
 - tree crops 103
 - uncertainty and expectations 128
- export crops *see* tree crops
- exports *see* balance of payments; tree crops
- external shocks 21, 47
- FAO *see* adjustment programmes; rice
- farm households 57, 78-9, 163, 166, 172
- fiscal policy 120-4, 144, 174, 175
- food aid 171
- food deficit households 78-9, 82-3, 168-9
- food production (in Africa) 9, 155
- foreign exchange 130 (*see also* exchange rate; balance of payments)
- foreign investment 37
- Harrod-Domar model 14
- ILO/JASPA 33, 38, 124
- IMF 129-31, 140 (*see also* exchange rate)
- incentives 99-100, 102, 104, 172 (*see also* adjustment programmes; exchange rate; World Bank)
- indebtedness, rural 79-80, 167-8
- inflation 44, 46, 47, 126, 133-40, 142
- infrastructure 50
- investment
 - and the African crisis 13-15
 - in Sierra Leone 50
- labour shortage *see* rice land
- land
 - distribution 74-5, 166-7
 - fallow period 71, 73
 - supply of 70-4, 154, 166
 - utilisation pattern 71
 - law of one price 142
- marketing boards 100 (*see also* tree crops; rice)
- markets 36
- minerals and mining *see* Sierra Leone
- mismanagement 37, 41, 107-8, 120, 139-41, 145
- money supply 134, 139
- nutrition 73
- palm products *see* tree crops
- political participation 39-40
- poverty line 61-2
- price signals 18 (*see also* incentives)
- profits 65-7
- public sector 34, 36, 39, 162, 175 (*see also* fiscal policy)
- quantity theory story 133-6 (*see also* inflation)
- quarterly data 152-3
- rationality (of smallholder) 69, 70, 165
- rice
 - consumption 78, 167
 - and exchange rate 36, 90, 93
 - FAO 70, 144

- imports 86, 89, 94-8, 170, 171
- incentives 35, 90-2
- international market 90, 93, 170, 171
- labour constraint 72, 75, 165
- marketed surplus 77-9, 97
- prices 36, 88, 90-2, 98
- production
 - performance 87-8, 96
 - rice board (SLRC) 88, 92
 - simulation of demand 94, 8, 151
- subsidies 34, 171
- swampland 71-2
- World Bank views 36, 86, 89, 98, 178
- rural inequality 74-7, 144
- rural-urban distribution and adjustment
 - programmes 53, 67, 8
 - basic data 147-51
 - defined 53-6
 - farm income 60-1, 64, 75-7
 - farm/wage earner compared 57-61, 63, 4
 - measurement 55-9
 - and price policy 80-1
 - summarised 67
 - World Bank view 64, 5
- shadow programme 32, 132, 159
- Sierra Leone
 - adjustment lending 29, 31
 - economic performance 31, 2, 48, 50, 1
 - minerals and mining 31, 2, 37, 42-3, 49, 159-60, 162
- multilaterals *see* IMF; World Bank; and policy entries
- per capita income 44, 5
- population 29
- smuggling 118
- structuralist story 136-40
- subsidies 34 (*see also* fiscal policy)
- taxation 34 (*see also* fiscal policy)
- terms of trade 46, 48, 9, 162
- tree crops 49, 69-71, 80, 98-104 (*see also* exchange rate)
- urban growth 83
- US economic policies 156
- wage earners 35-6, 54, 57, 59-60, 64, 163, 164 (*see also* rural-urban distribution)
- World Bank
 - diagnosis of Sierra Leone 35-6, 41, 48, 107, 120-1, 125-6, 128-9, 160-1, 174
 - failure of development projects 13
 - on equity 33-4, 160
 - on exports 16
 - on government 34, 36
 - on wages in Africa 16-17
 - on world demand 15-16
 - see also* adjustment programmes; fiscal policy; rice
 - world markets 14-15, 99, 141, 142, 172, 177, 8
 - world recession 48