



Overseas Development Institute

**ECONOMIC INFLEXIBILITY
IN AFRICA:**

EVIDENCE AND CAUSES

Tony Killick

Library

Overseas Development Institute

FOR REFERENCE ONLY

Working Paper 73

Results of ODI research presented in preliminary form
for discussion and critical comment

ODI Working Papers

- 28: Trade and Financing Strategies for the New NICs: the Peru Case Study,** *Jurgen Schuldt L*, 1988, £3.00, ISBN 0 85003 118 4
- 29: The Control of Money Supply in Developing Countries: China, 1949–1988,** *Anita Santorum*, 1989, £3.00, ISBN 0 85003 122 2
- 30: Monetary Policy Effectiveness in Côte d'Ivoire,** *Christopher E Lane*, 1990, £3.00, ISBN 0 85003 125 7
- 31: Economic Development and the Adaptive Economy,** *Tony Killick*, 1990, £3.50, ISBN 0 85003 126 5
- 32: Principles of Policy for the Adaptive Economy,** *Tony Killick*, 1990, £3.50, ISBN 0 85003 127 3
- 33: Exchange Rates and Structural Adjustment,** *Tony Killick*, 1990, £3.50, ISBN 0 85003 128 1
- 34: Markets and Governments in Agricultural and Industrial Adjustment,** *Tony Killick*, 1990, £3.50, ISBN 0 85003 129 X
- 35: Financial Sector Policies in the Adaptive Economy,** *Tony Killick*, 1990, £3.50, ISBN 0 85003 131 1
- 36: Problems and Limitations of Adjustment Policies,** *Tony Killick*, 1990, ISBN 0 85003 132 X*
- 37: Judging Success: Evaluating NGO Income-Generating Projects,** *Roger Riddell*, 1990, £3.50, ISBN 0 85003 133 8
- 38: ACP Export Diversification: Non-Traditional Exports from Zimbabwe,** *Roger Riddell*, 1990, £3.50, ISBN 0 85003 134 6
- 39: Monetary Policy in Kenya, 1967–88,** *Tony Killick and F M Mwega*, 1990, £3.50, ISBN 0 85003 135 4
- 40: ACP Export Diversification: Jamaica, Kenya and Ethiopia,** *Christopher Stevens*, 1990, £3.50, ISBN 0 85003 136 2
- 41: ACP Export Diversification: The Case of Mauritius,** *Matthew McQueen*, 1990, £3.50, ISBN 0 85003 137 0
- 42: An Econometric Study of Selected Monetary Policy Issues in Kenya,** *F M Mwega*, 1990, £3.50, ISBN 0 85003 142 7
- 43: Differences in Econometric Performance between Franc Zone and other Sub-Saharan African Countries,** *Christopher E Lane and Sheila Page*, 1991, £3.50, ISBN 085003 148 6
- 44: Monetary Policy Effectiveness in Indonesia, 1974–1990,** *Christopher E Lane, David C Cole and Betty F Slade*, 1991, £3.50, ISBN 0 85003 150 8
- 45: Monetary Control in Ghana: 1957–1988,** *Nii Kwaku Sowa*, 1991, £3.50, ISBN 0 85003 152 4
- 46: The IMF in the 1990s: Forward to the Past or Back to the Future,** *Graham Bird*, 1991, £3.50, ISBN 0 85003 153 2*
- 47: What Can We Know About the Effects of IMF Programmes?,** *Tony Killick, Moazzam Malik and Marcus Manuel*, 1991, £3.50, ISBN 0 85003 154 0*
- 48: Country Experiences with IMF Programmes in the 1980s,** *Tony Killick with Moazzam Malik*, 1991, £3.50, ISBN 0 85003 155 9*
- 49: Evaluating the Impact of NGOs in Rural Poverty Alleviation: India Country Study,** *Mark Robinson*, 1991, £5.00, ISBN 0 85003 157 5*
- 50: Evaluating the Impact of NGOs in Rural Poverty Alleviation: Bangladesh Country Study,** *Sarah White*, 1991, £5.00, ISBN 0 85003 158 3

WORKING PAPER 73

**ECONOMIC INFLEXIBILITY IN AFRICA:
EVIDENCE AND CAUSES**

.Tony.Killick

October 1993

ISBN 0 85003 205 9

**Overseas Development Institute
Regent's College
Inner Circle, Regent's Park
London NW1 4NS**

© Overseas Development Institute 1993

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of the publishers.

Acknowledgements

This paper is a contribution to a project directed by the author on the 'Nature, significance and determinants of the flexibility of national economies', principally funded by the Ford Foundation. I should like to thank the Foundation for its support, Stephen Bailey-Smith for valuable assistance in preparing materials for this paper and Walter Elkan for helpful suggestions on an earlier draft. The usual disclaimers apply.

Contents

I - Inflexibility Amidst Responsiveness	7
Prima facie indicators of inflexibility	7
The paradox of responsiveness	9
II - Evidence of Inflexibility	11
The ability to take advantage of trading opportunities	11
The ability to take advantage of modern technologies	15
Elasticities of supply in agriculture	21
Interactions	24
III - Constraints on Flexibility	26
Information flows	26
Inadequate incentives	28
(A) World prices	28
(B) Domestic impairments of producer incentives	30
Weak technological capabilities	36
Unresponsive political systems	38
The effects of personal rule	39
The influences of history and social structure	41
IV - Conclusions	44
References	47

Tables

1 Comparative economic structures, 1965 and 1991	8
2 Productivity of arable land and agricultural labour, 1975-90	17
3 Comparative average yields for selected export crops, major African and other producers	18
4 Summary of agricultural supply elasticities	21
5 Some econometric estimates of agricultural sector price response	22
6 Comparative indicators relating to dissemination of information	27
7 Comparative human resource indicators, 1987	37

Figure

1 Real non-oil commodity prices, 1948-92	29
--	----

I - Inflexibility Amidst Responsiveness

Prima facie indicators of inflexibility

If it is postulated that economic flexibility is a rising function of the level of development, with the least developed the most inflexible, since Africa is the least developed of all major developing regions this leads us to predict that the economies of sub-Saharan Africa (abbreviated hereafter to 'Africa') will display greater inflexibility than other developing regions. The evidence bearing upon this is considered in Part II but we may already provide some *prima facie* indicators in support.

Some are presented in the statistics relating to structural change in Table 1. This shows an, at best, halting progress with economic modernisation. Comparing these trends with observed regularities of structural change during economic development, we see only gradual moves towards industrialisation and away from primary production. We see gross saving and investment rates remaining in 1989 about where they were in 1965 (if we can rely on the statistics), again in contrast to other developing regions. Partly in consequence of low saving rates, we see a far heavier dependence on aid receipts, relative to GNP, than in the rest of the developing world.¹ Perhaps the most significant indicators in the table, however, are those relating to the composition of exports (line 8). Africa's export record will feature prominently later but note now the unchanged reliance on primary product exports, a record which contrasts starkly with the other regions.

A further indication of Africa's comparative inflexibility can be obtained by examining its record with the 'structural adjustment' programmes of the World Bank, that have been so widely adopted since the early 1980s. This is highly pertinent information because it relates specifically to progress with strengthening economic structures and institutions, and with reforming policies to these ends. The most pertinent evidence is contained in the most recent World Bank report on the Bank's experiences with lending in support of structural adjustment programmes (World Bank, 1992c). Overall, this gives a rather up-beat evaluation - but it differentiates sharply between the results obtained in middle-income and low-income (including African) countries. Overall, it found its programmes were associated with a recovery in growth; improvements in various policy indicators; a recovery, after a lag, in private saving and investment; reductions in inflation; and improvements in export performance.

¹ See Killick (1991, Table 1) showing that in 1980-88 aid to Africa was equivalent to 33% of investment (ten times as high as the average proportion for other developing countries) and 26% of imports (five times as high).

Table 1

Comparative economic structures, 1965 and 1991

	<i>Sub-Saharan Africa</i>		<i>East Asia</i>		<i>South Asia</i>		<i>Latin America & Caribbean</i>		<i>All low & middle income countries</i>	
	1965	1991	1965	1991	1965	1991	1965	1991	1965	1991
1. Average GDP size (\$ billion)	0.8	5.5	-	-	-	-	-	-	4.6	41.0
2. Agriculture as % GDP	41	31	42	19	44	31	16	-	30	19*
3. Manufacturing as % GDP	8	12^b	27	33	15	17	23	-	21	-
4. Gross domestic investment as % GDP	14	16	22	35	17	19	20	19	20	24
5. Gross domestic saving as % GDP	14	14	23	36	14	17	21	24*	20	27*
6. Aid receipts as % GNP	-	10.0	-	0.7	-	2.1	-	0.5	-1.1	1.5
7. Total external debt as % GNP	-	108	-	28	-	36	-	41	-	42
8. Share of primary products in exports	92	92	89	28	63	28	93	66	74	52
9. Urban population as % of total	14	29	19	52	18	26	53	72	24	46

Source: *World Development Reports*, 1991 and 1993.

Notes: ^a 1989 figure

^b Unweighted mean

However, in respect of each of these except the last the response was far weaker in African (and other low-income) countries: only slight recovery of growth; smaller improvements in policy (and lower programme implementation rates); stagnation at low levels of private saving and investment; no reduction in inflation. Moreover, the differences in outcome can only partly be explained in terms of the superior policy and implementation record of the middle-income adjusting countries. More fundamental structural obstacles stand in the way of improved performance so that (with apologies for the Bank-speak), 'The evidence to date for low-income countries suggests that adjustment lending is a necessary - but not sufficient - condition for transition to a sustainable growth path.'²

Other econometric tests point to similar conclusions, with Elbadawi (1992, p.45) finding substantially weaker results from Bank adjustment programmes in Africa than for other developing countries. In a separate paper, Elbadawi *et al.* (1992) take the analysis further to compare the results of adjustment programmes in Africa with those in other low-income countries, producing results strongly adverse to Africa. With export performance again an important exception, results with respect to growth, saving, investment and inflation were a good deal worse for Africa, where programmes were associated with deteriorations in these variables.³ Programme execution was worse too.

A *prima facie* case therefore exists. So does a presumption that this revealed inflexibility has contributed importantly to the well-known relative economic decline of Africa in recent decades, which has left it, alone among the major developing regions, largely outside the remarkable economic growth and development of the past four decades.⁴

The paradox of responsiveness

At the same time, this evident inflexibility appears to be contradicted by the well-established responsiveness to pecuniary incentives of Africans as consumers and producers. The colonial view of the prevalence of a backward-bending supply curve of labour, with 'target' workers reducing their hours of work in response to higher wages, has long been abandoned, to be replaced by Harris-Todaro or job-search

² World Bank (1992c, p.3). The above discussion has been based on the results summarised at pp.1-5 and chapter 1.

³ See Elbadawi *et al.* (1992, Table 5.8 and pp.28-29).

⁴ See Killick (forthcoming) for a review of the evidence on economic performance in sub-Saharan Africa and explanations of this. See also Easterly and Levine (1993) who find that Africa has under-performed relative to other developing countries, in terms of the predictions of standard growth models.

models based on the postulate of maximising behaviour, subject to constraints.⁵

Similarly in agriculture, the notion that Africa's traditional smallholder farmers do not respond 'normally' to price incentives has been rejected in the face of overwhelming evidence to the contrary.⁶ There have been episodes of what looked like a perverse agricultural supply response in African countries experiencing acute shortages of imported goods. Upon analysis, however, this can be explained as an optimising response to the rationing of imported incentive goods.⁷

The responsiveness of Africans as consumers and producers has been more dramatically demonstrated by their resourcefulness in the periods of economic decline and hardship that many of them have experienced. MacGaffey and her associates (1991) have shown this for Zaïre - a country whose economy has been systematically pillaged by a kleptocratic regime and whose citizens have responded by creating, as a means of survival, a 'second' or parallel economy they estimate to be twice as large as the officially recorded one (p.11). Fuel stolen from the copper industry keeps food supplies open to the towns. Roadside workshops keep vehicles on the road against all the odds. The profits of the second economy are used to finance the provision of public goods that the state fails to provide: health facilities, schools, road maintenance. Or take the following account by Mukohya in the same study (pp.65-66):

. . . the expansion of the second economy and the rush into its activities is a spectacular phenomenon which shocks and amazes the observer. Rural and urban marketplaces are inundated daily with persons of both sexes who buy and sell at prices arrived at by haggling and impossible to control. In Butembo, a rough census of households in the center of town reveals that at least 132 out of 200 sell goods from their houses, in the street, or in one of the eight markets . . . A significant number of the young, most of them illiterate, have left their villages to establish themselves permanently in the forest and dig for gold. Poachers, usually young and better armed than the rangers, ravage the national park of Virunga.

We may also cite the vigour of the smuggling trade in much of Africa, in response

⁵ See Bond's 1987 survey, which finds no evidence to support the hypothesis of a backward-sloping supply curve for labour in Africa.

⁶ A large number of empirical studies have found positive, sometimes large, supply elasticities. See the evidence summarised for a number of cash crops in World Bank (1986, Table 4.4), also Bond (1987).

⁷ There is a growing body of evidence on this. See especially Berthelemy and Morrisson's 1987 study of 12 African economies. Also Bevan *et al.* (1987) who find this in Tanzania; and Guillaumont and Bojean (1991) showing how price responses in agriculture can be largely nullified by shortages of imported incentive goods.

not merely to the usual trade barriers but to distortions in exchange rates and administered producer prices. There may be a well-established smuggling of cash crops from A to B (say of cocoa from Ghana to Côte d'Ivoire) but that will quickly be reversed (as it has been with these countries) if movements in relative prices make it favourable to do so.

People all over Africa have responded no less vigorously to other opportunities for capturing rents created by import restrictions, price controls and other forms of market restrictions - contributing to the widespread corruption so widely complained of. In fact, the response has been so vigorous that in some countries the state is in crisis, with only the most tenuous hold on economic life and forced by its scale and superior efficiency to tolerate a parallel economy which decimates the tax base.

So there is a paradox. How can it be that the economies of Africa collectively display the symptoms of inflexibility while their peoples are so resourceful, responsive and enterprising? The answer must lie in the constraints on these peoples, so that the results of their efforts do not result in flexible *national* economies. These constraints are explored in Part III. The next step, however, is to examine in more detail the evidence relating to flexibility. We marshal evidence on three aspects: the revealed ability to take advantage of trading opportunities; to take advantage of modern technologies; and elasticities of supply in agriculture.

II - Evidence of Inflexibility

The ability to take advantage of trading opportunities

With the partial exception of Nigeria, the economies of Africa are small.⁸ This means that they are heavily reliant on trade with the rest of the world - and, therefore, that welfare is highly sensitive to their ability to take advantage of

⁸ They are tiny when measured by the value of economic activity. I have estimated for African and similar developing countries that the average market for industrial goods is only about one three-hundredth of that of an average-sized industrial economy (Killick, 1993, pp.91-92). The 1991 dollar value of the GDP of Africa's economic 'giant', Nigeria (\$34.1bn), was smaller than that of Ireland (\$39.0bn); and the aggregate GDP of the whole of sub-Saharan Africa (\$164.3bn) was about the same as that of Austria (\$164.0bn) (World Bank, 1993a, Table 3).

newly-developing trading opportunities.⁹ However, of all the developing regions, Africa suffers most from a chronic tendency for unviable balance of payments deficits. This cannot be reduced to any single statistical demonstration but note the following:

- It was necessary to resort to large cuts in imports during the 1980s, with volumes falling by an average of 37% in 1980-90, or 21% if major oil exporters are excluded (Baban and Greene, 1992, p.1).
- Its African members have had frequent recourse to IMF assistance, with no less than 33 African countries having had Fund programmes during FY1991/92 alone (with a further three ineligible because they were in arrears with repayment of earlier credits).¹⁰
- Despite the import cuts, Africa's current account deficit in 1973-92 averaged 23% of export earnings - a proportion far higher than for any other developing region - and ended the period higher than it began.¹¹
- Africa was far more reliant on aid receipts than other developing regions, with receipts in 1991 equivalent to nearly 10% of GNP, against 0.7 and 2.1% respectively for eastern and southern Asia and 1.5% for all developing countries taken together (Table 1, line 6).
- Even though the average interest and maturity terms on which it had borrowed were relatively favourable, and despite substantial debt write-offs, many African countries had large debts relative to GNP and, with few exceptions, were unable to maintain scheduled service payments.¹²

⁹ Thus, Matin (1992) undertakes econometric tests on four alternative indicators of openness and obtains the result, robust for all four measures, of a statistically strong association between openness and African economic growth.

¹⁰ From IMF *Annual Report, 1991/92*, Table 5 and Tables II.3, 4 and 5.

¹¹ Calculated from IMF (1992, Table A35). The average for 1988-90 was an estimated 25%.

¹² See World Bank (1992d) which shows that sub-Saharan Africa had in 1991 a far higher debt to GNP ratio than any other region. The extent to which African countries were unable to maintain scheduled service payments may be gauged from the fact that during 1980-92 there were no less than 535 Paris and London Club rescheduling agreements in a total of 39 African countries (calculated from World Bank, 1992a, Table A1.5, and 1992d, Appendices II and III; and *Annual Reports* and other publications of the IMF).

- Africa's international reserves are far lower than for any other region, averaging only 13% of annual imports in 1983-91.¹³

Underlying these symptoms of distress was an exceptionally weak export performance. The growth of export earnings has been very slow by comparison with other developing countries, increasing by only 13% in 1980-90, against 92% for all developing countries together (Baban and Greene, 1992, p.1). In consequence, Africa's importance in world trade, as measured by market share, has declined steadily, from 4.7% of world exports in 1980 to 1.9% in 1991 (UN, 1993, Table A.16). Over the same period, its share in developing-country exports went down from 16% to 8% (*ibid.*).

Although, in common with other developing countries, Africa suffered from worsening world prices for its traditional exports in this period, poor volume performance has been the chief source of the relative decline just described. Thus, while developing countries as a whole expanded their export volumes at the annual rate of 4.1% in 1980-90, African export volumes expanded at only 2.7% (World Bank, 1993a, Table 14).¹⁴

While a host of factors contributed to the outcomes just described, we will for the moment confine ourselves to one aspect which relates to the relative inflexibility of the economies of Africa, namely their revealed inability to take advantage of trading opportunities arising from changes in the composition and geography of world trade. (We will later take up two further aspects, relating to responsiveness to devaluations and technological advances.)

There is a well-known trend in world trade in favour of manufactures at the expense of primary products. During 1965-90 world trade in manufactures grew three times as fast as trade in raw materials and more than two-thirds faster than trade in food, accounting for three-quarters of total world exports by the end of the period (World Bank, 1992b, pp.13-14). Moreover, this change has been amply signalled by the movement of relative prices, with particularly large falls in world commodity prices relative to manufactures since the late 1970s.

Developing countries as a group have responded to this and, indeed, have played

¹³ Calculated from IMF (1992, Table A43). The comparable averages for other developing regions were:

Asia	32%
Western Hemisphere	26%

¹⁴ See also Svedberg (1991, pp.20-22) showing how the decline in African export performance in the 1980s was dominated by volume performance rather than declining prices.

a prominent part in it, with the East Asian 'Tigers' particularly vigorous. Africa, however, has been almost entirely left out. As much is indicated by the statistics in Table 1 showing an unchanged predominance of primary products in total exports (at 92% in 1991, in sharp contrast with all developing countries taken together). Moreover, the commodity concentration of exports remains extraordinarily high in most African countries. From data on 43 African countries, in only seven did the two most important export commodities make up less than half of total earnings in 1987-89 (Baban and Greene, 1992, Table 10). The top two exports made up an average of 73% of total exports for African countries taken together.

Of course, diversification is not desirable for its own sake - it all depends in which directions the diversification occurs.¹⁵ No doubt the most significant feature of Africa's trading record is its failure to participate in the relative growth of trade in manufactures, and developing-country participation in this. This is shown by the estimate that between 1960 and 1985 Africa's share of total developing-country manufactured exports fell from 9.3% to 0.4% (Riddell *et al.*, 1990, Table 2A.3). Some African countries have achieved a degree of success with manufactured and other 'non-traditional' exports, with signs of accelerating progress in the most recent years.¹⁶ Overall, however, Africa's failure to participate in the great expansion in trade in manufactures has been so complete that it has virtually fallen off the statistical screen.

A similar story of inflexibility emerges when we examine the *destination* of Africa's exports. This too must be viewed against the background of global change, with developing countries constituting a quarter of total world demand for manufactured exports and the countries of Eastern and Southern Asia offering markets of rapidly growing importance.¹⁷ However, the European Community and other OECD countries remain overwhelmingly Africa's most important markets, comprising in 1987 an estimated 69% of the markets for its major exports (the

¹⁵ Both Ali *et al.* (1991) and Svedberg (1991, pp.26-31) caution that there is no necessary connection between African export diversification and improved export earnings growth or stability. This, it may be surmised, is because the limited amount of diversification that has occurred has largely been into different 'non-traditional' primary commodities.

¹⁶ For valuable detailed country studies see Riddell (1990) on Zimbabwe; Stevens (1990) on Ethiopia and Kenya; and McQueen (1990) on Mauritius. See also McQueen and Stevens (1989) for further evidence on ACP export diversification to European Community countries under the Lomé IV arrangements.

¹⁷ See World Bank (1993b, Tables 12 and 13).

same proportion as ten years earlier).¹⁸ Although the data base for generalising about this is weak, it appears that African exporters have failed to take full advantage of the emergence of major new markets.

This failure to respond to emerging trading opportunities has contributed in a major way to the region's balance of payments difficulties. In turn, the payments difficulties have imposed a major constraint on growth and development, with the resulting poor import capacity leading to shortages of capital goods and producer materials. In consequence both investment and capacity utilisation have declined, further reducing the continent's international competitiveness and ability to respond to new opportunities.¹⁹ As already mentioned, it also seems likely that shortages of imported goods have had adverse effects on output as well as living standards in some African countries by blunting incentives.²⁰ Its revealed inflexibility in trade has cost Africa dear.

The ability to take advantage of modern technologies

In manufacturing, the importance for international competitiveness of keeping abreast of modern technological advances scarcely needs stating. Electronic and information technologies have revolutionised many production and inventory control processes. They have made possible a proliferation of product varieties and large improvements in quality. They have speeded up the generation of new designs - and the obsolescence of old ones - and have permitted more differentiated products and shorter product cycles. Moreover, access to up-to-date technologies is by no means an exclusive preserve of advanced industrial countries, as witness the success of several Asian countries in industries utilising relatively high-tech processes.

When we turn to agriculture the case is a little less axiomatic in the African

¹⁸ This is an unweighted mean for nine commodity categories estimated by Kox (1990) from UNDP and World Bank data and reproduced by Baban and Greene (1992, Table 11).

¹⁹ See Khan and Knight (1988) for strong econometric evidence of the adverse effects of import compression on export performance, based on data from 34 developing countries. See also the studies cited in footnote 8, showing adverse production effects from shortages of imported 'incentive goods'. At a more microeconomic level, Mbelle and Sterner (1991, see Table 2, p.343) show for two Tanzanian manufacturing industries that, on a range of alternative production function formulations, the elasticity of output is far greater with respect to the availability of imported materials than of labour or capital.

²⁰ See Killick (1993, pp.38-39) for a discussion of the evidence on this.

context. It is widely noted that Africa has been little affected by the 'green revolution' technologies widely adopted in the Punjab and elsewhere in southern Asia in the 1960s; nor has it enjoyed any other comparable breakthrough in cultivation techniques. In much of the continent cultivation techniques today differ little from those that have been in use for many decades,²¹ although there is increased use of improved hybrid varieties such as maize.

On the other hand, most of Africa is still free of the high population densities which mark much of Asia. There is a case to be made that improvements developed and introduced by farmers under the spur of rapid population growth may be sufficient to keep abreast of needs in the low densities and extensive cultivation typical of Africa.

However, this is not an argument that stands up well to scrutiny. First, urbanisation is proceeding apace and this increases the rate at which it is necessary to increase agricultural output to keep pace with demand. Urbanisation also makes the acceleration more difficult because a disproportionate part of the growth of urban populations is of young men from rural communities. Second, Africa's heavy reliance on agricultural exports means that it cannot turn its back on technological advances in the rest of the world if its cash crops are to remain competitive and profitable. Nor can it afford large food imports resulting from lagging agricultural performance at home.

Third, country- or continent-wide statistics of low population densities can give an impression of land abundance which is highly misleading once cultivability is taken into account. The UN Economic Commission for Africa estimates that population densities on *arable* land in Africa are nearly twenty times the overall average,²² and on the best land there can be very high densities indeed. In much of the forested area of West and Central Africa there is still an abundance of cultivable land but elsewhere on the continent land is emerging as a scarce resource - to be augmented, therefore, through improved methods of husbandry. Even where land is not a binding constraint agricultural labour often is, particularly at times of peak seasonal demand, so that departures are necessary from traditional labour-using methods to raise productivities. Finally, the accelerating development of biotechnology looks set to revolutionise much of agriculture and the continent which relies most upon this sector cannot afford to be left behind in taking advantage of this, nor to leave it all to Western-based multinationals pursuing their own interests.

²¹ Thus, Lele, Christiansen and Kadiresan (1989, p.5): 'In many parts of Africa over 80% of the value added in smallholder agriculture comes from a production process where the hand-hoe is frequently the only other major input besides labour.'

²² Calculated from data in UN ECA *African Socio-economic Indicators, 1990/91*, Tables 1 and 19 (Addis Ababa, 1991).

In short, in both the industrial and agricultural realms that aspect of economic flexibility which relates to the ability to absorb and adapt modern technology is of great importance to Africa. Although the evidence is scrappy and unreliable, it points to only slow rates of technological advance in Africa by comparison with other regions. We can present only parts of the jigsaw but the results are quite persuasive.

First, FAO estimates presented in Table 2 indicate both for the value of yields per hectare and of output per person (a) that the African averages are far below those of other regions and (b) that they are rising more slowly. Given the notorious unreliability of African agricultural data, such estimates need to be treated with caution but they are broadly consistent with other information about the agricultural situation in Africa.

A similar story emerges from (rather more firmly-based) data on selected export crops. Table 3 sets out average physical yields for coffee, cocoa and cotton - three of the continent's most important agricultural exports - comparing African values

Table 2 Productivity of arable land and agricultural labour, 1975-90 (measured in international dollars)

	1975	1990	Growth rate 1975-90 (% p.a.)
A. Median yield per hectare			
Africa	267	390	2.5
Asia	412	716	3.7
Europe	783	1,297	3.4
South America	480	810	3.5
B. Median output value per person			
Africa	328	410	1.5
Asia	442	779	3.8
Europe	3,631	10,665	7.3
South America	1,477	3,172	5.1

Source: Median values of country data, computed from FAO *Data Series*, 1993.

Table 3 Comparative average yields for selected export crops, major African and other producers

		<i>Coffee</i>		<i>Cocoa</i>	<i>Cotton</i>	
		<i>1970/71</i>	<i>1985/86</i>	<i>1985/86</i>	<i>1970/71</i>	<i>1985/86</i>
Average yields per hectare (kilogrammes)						
Means:	Africa	506	544	378	286	416
	Others	671	849	690	562	757
Medians:	Africa	409	461	-	270	459
	Others	564	722	-	614	835
African yields as % of others						
	Means	75	64	55	51	55
	Medians	73	64	-	44	55
Highest-yielding African country as % of highest yielding 'other' country						
		72	67	74	62	59

Source: Computed from Akiyama and Larson cited in Baban and Greene (1992, Table 9).

with those of the other chief developing-country exporters of the same products. Here too yields are well below those of competing exporters, with African yields in the later period typically only a half to two-thirds of other producing countries. For cotton and coffee the absolute size of the yield gap increased over the fifteen years, and also relatively in the case of coffee. There is a sizeable spread in the yield figures for individual countries but Table 3 also shows that the results of the highest-yielding African exporting countries were consistently below the best-performing of their competitors, again with an apparent tendency for the gap to widen.

While it is true that statistics of yields and productivities can provide only indirect evidence on technological progress, Tables 2 and 3 nevertheless suggest a lagging pace of change, and there is a certain amount of more direct evidence of this. For

example, evidence on fertiliser use points in the same direction, as indicated by the following estimates of kilograms of plant nutrient per hectare of arable land:²³

	1970/71	1990/91	growth rate
sub-Saharan Africa	33	90	5.1
South Asia	135	740	8.9
all developing countries	256	867	6.3

On this evidence too the gap between Africa and other developing regions is enormous, and widening absolutely and relatively.

Binswanger and Pingali (1988, p.90) similarly note little progress with mechanisation:

Generally speaking, tractors have been cost-effective where land is abundant and labor scarce (as in North America). Following that logic, many agricultural experts once thought tractors would be appropriate for Africa, too. But many tractorization projects failed, and Africa today is less mechanised than even the land-scarce, labour-abundant countries of South Asia.

They go on to cite a study showing that ten out of fourteen tractorisation projects in Africa had failed to raise yields. Ruttan and Thirtle's 1989 study of technological and institutional change in African agriculture express concern that the new seed-fertiliser technology which has made so much difference in Asia has had much less impact in Africa and note (p.34) a 'gross underinvestment in the human capital needed to invent, diffuse and effectively utilize new agricultural technology'.

Evidence relating to trends in industrial technology in Africa is even more patchy but also points towards lagging progress. The most general (indirect) evidence is summarised in the following statistics of mean labour productivity in African manufacturing as a percentage of the North American average:²⁴

1970	15.7
1980	12.6
1990	10.0

(The figures for average wages given in the same source show a slower relative decline and imply a 30% increase in African manufacturing unit labour costs over

²³ From World Bank (1992a, Table 4 and 1993a, Table 4).

²⁴ From UNIDO *Industry and Development Report, 1992/93*, Table II.42.

these twenty years.) In only three of the 28 specific manufacturing industries covered by the UNIDO data did Africa's relative productivity improve between 1970 and 1990, of which wood and rubber products were the most important. Some experienced calamitous declines: petroleum refining (down 82%); tobacco products (-75%); paper (-62%).

Although there is no systematic evidence with which this can be demonstrated, it is probably accurate to characterise a high proportion of existing manufacturing firms in Africa as based on long-outdated technologies, struggling (often with great ingenuity in the face of shortages of imported spares) to keep obsolete machinery going, unable or unwilling to invest adequately in needed new plant, confined by their own uncompetitiveness to producing for the local market and able to compete even on this market only as a result of high protective barriers (DeRosa, 1990, 1991). Sanjaya Lall (forthcoming) appears to take a similar view, drawing attention to the minuscule base of industrial skills in Africa and extremely low levels of industrial R&D.²⁵

If this characterises the general case, there are best-case exceptions. The results of Mbelle and Sterner's (1991) research on two Tanzanian manufacturing industries are probably quite widely valid - that best-practice African manufacturers are efficient by international standards, but that many other firms in the same industries fall far short of the standards of the best-practice firms. If so, competition must be highly imperfect for such a situation to persist.

To provide a few more pieces of the jigsaw, a slow pace of technological progress is implicit in estimates which show no improvement at all in total factor productivity in Africa during 1960-87, against a trend increase of 0.6% p.a. for all developing countries, and a substantial decline in Africa in 1973-87 (Boskin and Lau, 1990). Finally, there are the following suggestive figures on patenting in 1962-87.²⁶

Asia	18.17
Latin America	9.59
sub-Saharan Africa	0.91

²⁵ See also Lall (1992) where he also suggests that firm-level R&D is very rare in Africa (p.120).

²⁶ The statistics record the mean accumulated number of external patents granted in the USA in 1962-87 per million of the 1980 population for a sample of developing countries in each region. *Source: UNCTAD (1993) Analytical Report by the Secretariat to UNCTAD VIII Conference, Table III-2.*

Elasticities of supply in agriculture

The concept of the price elasticity of supply is the dimension of economic flexibility which is most familiar in economics and the easiest to measure. So far as Africa is concerned, most information relates to agriculture. There is a substantial literature investigating the influence of prices on agricultural output, and also non-price influences.

Much of this research has been conducted at the level of agricultural supply aggregates but Table 4 brings together average elasticities from surveys of specific crops. The lower end of each entry represents the average short-term response and the upper end gives the long-run average (although there are special doubts about the reliability of these latter). We see that all the results are positive and that the values for Africa tend to be larger than for other developing countries, further attesting to the responsiveness of African producers described earlier.²⁷ However, most of the values are below 1.0. Also, the time-lags before the elasticities take on their maximum values can be long, particularly for tree crops.

Table 4 Summary of agricultural supply elasticities

<i>Crop</i>	<i>Africa</i>	<i>Other developing countries</i>
Wheat	0.31 - 0.65	0.10 - 1.00
Maize	0.23 - 2.43	0.10 - 0.30
Sorghum	0.10 - 0.70	0.10 - 0.36
Groundnuts	0.24 - 1.62	0.10 - 4.05
Cotton	0.23 - 0.67	0.10 - 1.62
Tobacco	0.48 - 0.82	0.05 - 1.00
Cocoa	0.15 - 1.80	0.12 - 0.95
Coffee	0.14 - 1.55	0.08 - 1.00
Rubber	0.14 - 0.94	0.04 - 0.40
Palm oil	0.20 - 0.81	—

Source: World Bank (1986, Table 4.4). Based on Askari and Cummings (1976); Scandizzo and Bruce (1980).

²⁷ Readers should be cautioned, however, that the results of elasticity estimates are highly sensitive to the period chosen and model specification so that no great reliance should be placed upon the specific values reported in the table. There are particularly large questions about the long-run elasticity estimates.

Lower supply elasticities can be predicted when we turn to the responsiveness of the agricultural sector as a whole, for the option of increasing output by switching resources between crops is largely ruled out. Some increases in total output can be won by greater applications of fertilisers, insecticides and the like, but if we see the output of a sector as fundamentally determined by factor inputs and technologies, then agriculture can increase output in response to an improvement in its terms of trade chiefly by raising the utilisation of previously under-employed land and labour, attracting factors from other sectors and/or by improving cultivation techniques. In the short run both techniques and factor supplies will be relatively immutable; it is only after a period of years that much can be done about these things.

Table 5 reproduces the results of Binswanger's (1990) survey of estimates of sectoral supply elasticities for African countries by various authors, showing positive but generally low values. Cleaver (1985) has studied the influence of policy interventions on aggregate agricultural supply in Africa. He concluded that policies depressing producer prices reduced output - but that the influence of these price-depressing policies was 'considerably less than is generally thought' (with a coefficient value of only 0.2) and that non-price factors were 'much more important'.

A related area which has been the subject of a good deal of empirical research is the supply responsiveness of agriculture to exchange rate depreciations. Perhaps the most useful study for our purposes is that undertaken by Faini and de Melo (1990)

Table 5 **Some econometric estimates of agricultural sector price response**

<i>Country or region</i>	<i>Short-run estimate</i>	<i>Long-run estimate</i>	<i>Period</i>
Burkina Faso	0.22	0.24	1963-81
Côte d'Ivoire	0.13	0.13	1963-81
Ghana	0.20	0.34	1963-81
Kenya	0.10	0.16	1963-81
Liberia	0.10	0.11	1963-81
Madagascar	0.10	0.14	1963-81
Senegal	0.54	0.54	1963-81
Tanzania	0.15	0.15	1963-81
Uganda	0.05	0.07	1963-81
SSA average	0.18	0.21	1963-81

Source: Binswanger (1990, Table 2).

because it contrasts the responses of exporters of manufactures with (mainly African) exporters of non-oil primary products. Although they found a positive response to devaluation in both groups, the observed improvement was considerably larger for the manufacturing countries, where a given depreciation resulted in a 2.1 percentage point improvement in the trade balance, against only 0.8 among the primary producers (pp.13-14). They also found substantial short-term losses of output following devaluation and concluded that use of this instrument 'appears to be ineffective' in commodity exporting countries.

Other research on the effects of exchange rate changes focuses more specifically on African agriculture. This too tends to find limited supply responses to devaluations, although results vary according to whether the products are annual or tree crops. Jaeger's (1991) research suggested that the real exchange rate does have a significant effect on total agricultural supply in Africa but short-run elasticities are often small and occasionally perverse, while data problems prevent reliable estimation of longer-run elasticities.

Cleaver (1985) also investigates the influence of the exchange rate on the growth of agricultural output in Africa, concluding that, 'currency over-valuation does agriculture no good. Currency depreciation will have a significant, but not very large, impact on agricultural growth' (p.20). Diakosavvas and Kirkpatrick (1990) take agricultural exports as their dependent variable. They group African countries according to their exchange rate histories and agricultural export trends, as well as undertaking regression tests, with results similar to Jaeger's and Cleaver's: there is evidence of the expected association but it is generally not large and there are various exceptions to the general relationship.

In fact, of the researchers surveyed, only Balassa finds a strong agricultural response to the exchange rate. He tests for the effects of currency over-valuations in 1965-82, obtaining coefficient values of >1.0 , significant at the 1% level, with particularly strong results for 1974-82. It is possible, however, that this outlier result is due to a regression equation which includes only one other explanatory variable (foreign income), so that his exchange rate variable may be picking up the results of other influences. His R^2 s are very small.

There is one other noteworthy piece of evidence that should be mentioned. We reported above Faini and de Melo's contrasting results for exporters of manufactures and (non-oil) primary products. Unfortunately, there is not enough of a history of African manufacturing exports to be able to test this at the regional level but we may report the findings of Newman *et al.*'s (1990) investigation of the export price responsiveness of manufacturers in the Côte d'Ivoire. They found these to be highly sensitive to relative prices, and also to changing levels of domestic demand, with exports responding positively to improved export prices, negatively to higher import prices and negatively to increases in domestic demand.

This result suggests that one of the determinants of the responsiveness of the productive system is the ease with which it is possible to switch between production for the home and foreign markets. This is a greater possibility for manufacturing firms than for most agricultural exporters, even less so for most mining concerns. With only a few exceptions (e.g. coffee in Ethiopia), there is typically little home demand for Africa's primary product exports. In principle, cash crop farmers have the option of switching their land to the cultivation of foodstuffs but it is easy to exaggerate the ease with which this can be done.²⁸ Even where the land is suitable for such conversions, there are usually substantial costs involved and this is only likely to occur over a period of years and in response to strong, persistent signals.

In brief, this survey again draws attention to the relative inflexibility of Africa's agricultural and export sectors. While producers do generally respond positively to improved relative prices, the magnitude and speed of their response are muted. Part of the problem, just mentioned, is the difficulty of switching between the satisfaction of home and foreign demand, which is typical of early-stage developing countries reliant upon primary production. Virtually all the commentators surveyed above mention the importance of non-price influences too, and we discuss these shortly.

Interactions

We have now reviewed three major aspects of inflexibility in African economies: limited ability to take advantage of opportunities created by the changing structure of demand in international trade; limited ability to incorporate the fruits of modern knowledge in productive systems; and low supply elasticities. We should now note interactions between these.

It seems highly probable, for example, that technological obsolescence in much of African manufacturing is closely related to its exceptionally poor export record, by comparison with other developing regions. Similarly, the difficulties which Africa has had in applying modern knowledge to agriculture contribute to the modest supply elasticities just reported. The data in Table 3 suggest further that the lagging rate of change in agriculture is tending to undermine the competitiveness, or profitability, of the continent's agricultural exports - a particularly large problem for countries, like those of the Franc Zone, with fixed exchange rates. This too helps to explain low supply elasticities, as well as drawing attention to a disturbing

²⁸ Jaeger (1991, p.21-22) tested for the existence of a trade-off between the production of food and export crops and found no statistically significant evidence of this. Indeed, his results tended to suggest positive associations between the production of these two crop types.

long-term trend.

Agricultural backwardness has also reduced the continent's ability to feed itself, with food imports creating additional large claims on scarce foreign exchange. Thus, per capita food production is estimated by the World Bank to have declined at -1.0 percent p.a. in 1979-91 (contrasting with increases in all other developing regions) with deteriorations in 23 out of 33 African countries, while recourse to food aid and commercial imports of cereals had considerably increased (World Bank, 1993a, Table 4).²⁹ Moreover, the situation appears likely to worsen. Von Braun and Paulino (1990, p.516) conclude their survey of the food situation in Africa thus:

The food situation in sub-Saharan Africa can be expected to become increasingly serious as the end of the century approaches. Data reinforce earlier findings of the slowdown of the region's food production growth under conditions of fast-rising food demand that is largely driven by population increase. The rapid decline of non-cereal [food] exports and rapid increase of cereal imports in sub-Saharan Africa can combine to expand the region's net imports of basic food staples by the year 2000 to seven times the average yearly level in 1979-83.

At the same time, low export responsiveness and balance of payments weaknesses have held back technological progress. This has happened as a result of shortages of imported capital goods and other inputs embodying productive improvements. But it has occurred too as a consequence of the poor climate created for innovation and new investment by the all-pervasive shortages of foreign exchange and resulting uncertainties about domestic economic performance and policies.

Finally, we should note that the often-stated advantage of exposure to international trade as facilitating technology transfer appears not to have had a powerful effect, even though African countries are among the most trade-dependent in the world. Part of the explanation of this may be that the *type* of trade is at least as important as the volume for technology transfer. Also pertinent is that Africa has in recent decades attracted little direct foreign investment by comparison with other developing regions.

²⁹ Lele *et al.* (1989, Table 3) undertake three alternative measures of food self-sufficiency for a sample of six African countries and find that this diminished in 1960-69 to 1980-86 and found this to have unambiguously diminished in all except one of the countries (Malawi).

III - Constraints on Flexibility

Part II was largely taken up with a factual presentation of evidence on inflexibility and had little to say about the sources of this. I have argued elsewhere (Killick, 1993, chapter 3) that the flexibility of an economy is likely to be a function of (a) informational and incentive systems and (b) the factors bearing upon the responsiveness of economic agents to the information and incentives. In what follows we will follow this general scheme but concentrate on those aspects which appear to bear most crucially on the inflexibility of African national economies. We commence with information flows, move on to incentive systems and then proceed to examine various constraints upon the responsiveness of African producers and consumers.

Information flows

The standard of information available to producers and consumers is not readily amenable to measurement but one important aspect of this is the quality of government statistical services. On this we can do no better than to quote a late 1980s report by the UN Economic Commission for Africa. This complained of the failure of statistical systems in Africa to respond to data needs:³⁰

Data gaps affect every sector and every aspect of the African situation. In the field of demography, even the size and growth rate of population in some of the African countries cannot be unambiguously determined. In the field of social statistics, there are gaps relating to literacy, school enrolment ratios, the institutional status of the child and poverty levels. And in the field of economic statistics, basic economic series like GDP and resource flows are sometimes lacking. Data on natural resources and the environment are, if available, in a very rudimentary state.

Given the burden on UN agencies to be diplomatic, this report can scarcely be over-stating the position. That it is not is suggested by the results of a detailed comparison of import and export statistics by Yeats (1990). From this he concluded that official data on inter-African trade are useless for the assessment of either the level or the direction of trade, and of limited use on the composition of such trade and trends in it.

A further illustration of poor economic intelligence is provided in an account by Klitgaard (1991, pp.38-39) of how, following the decontrol of prices, the Zambian authorities found themselves without information on what was happening to prices. They thus conducted a special survey within Lusaka, discovering, *inter alia*, that

³⁰ As reported in Chander (1990, p.1).

within this rather small city there were cases of three-fold differences in the final prices of identical items - suggesting that traders and consumers were at least as ill-informed as the government.

The unavailability or unreliability of basic statistics is compounded by difficulties of dissemination. Table 6 pulls together some suggestive illustrations. In respect of each of the five indicators in the table Africa is at a large disadvantage relative to Latin America, although its position *vis à vis* Southern Asia is mixed. The contrast with the developed countries is, of course, stark.

Arguably the most important are the figures relating to adult literacy, where it can be seen that even now, a full three decades after independence in most countries, more than half the adult population remains illiterate - and unable, therefore, to receive information through the printed word. Proportionately, the newspaper readership figures are even more to Africa's disadvantage (to say nothing of the appalling quality of many of its newspapers), although this is partly compensated by a relatively high ownership of radios. The figures on telephone densities also

Table 6 Comparative indicators relating to dissemination of information

	<i>Sub-Saharan Africa</i>	<i>South Asia^a</i>	<i>Latin America</i>	<i>Industrial countries</i>
1. Adult literacy rate, 1990 (%)	47	42	85	96 ^a
2. Radios per 1,000 people, 1990	150	90	340	1,130
3. Televisions per 1,000 people, 1990	23	29	164	545
4. Newspaper circulation per 1,000 people, 1988-90	11	14	94	304
5. Telephones per 1,000 people, 1986-88	18	8	84	590

Source: UNDP, *Human Development Report, 1993*, Table 52.

Note: ^a From World Bank (1992a, Table 1).

point to poor communications and this is made worse by a generally poor quality of service, with average local call completion rates of under 30% (Moussa and Schware, 1992, pp.1738-39).

In short, there seem strong grounds for believing that the availability and dissemination of economic information are very poor in Africa, a condition which can only impede the responsiveness of economic agents to changing conditions and opportunities.

Inadequate incentives

Since the earlier discussion of supply elasticities concentrated on the responsiveness of Africa's export and agricultural sectors - and because most available evidence pertains to these sectors - we will retain this focus in what follows. The task here is to elucidate factors bearing upon the pecuniary incentives faced by Africa's exporters and farmers.

(A) World prices

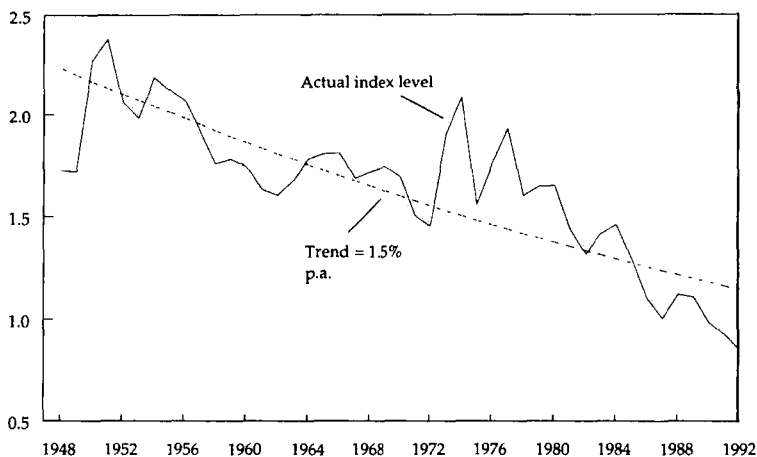
It is well known that, for reasons deeply embedded in the changing structures of world supply and demand, world price trends have been strongly adverse to exporters of primary products. This is clearly shown in Figure 1, which indicates a negative trend in real non-oil commodity prices since 1948. Indeed, there is accumulating evidence of an even longer-term deterioration.³¹ At least since the early 1980s, the trend has been particularly adverse for food, tropical beverages and vegetable oils.³²

With deteriorations of this severity, it is difficult for even the most effective governments to protect producers from these trends (even if it were desirable to do so). For an analysis of the long run, it is, in any case, open to question whether we should view African countries as merely passive recipients of world prices. In the short run the small-country assumption is appropriate but over 20-30 years the question becomes, why have those confronting long-run downward trends in the

³¹ See Grilli and Yang (1988) and Ardeni and Wright (1990), who, using different methods, both estimate a long-term trend rate of decline of 0.6% p.a. Subsequent articles by Boughton (1991) and Sapsford *et al.* (1992) also find a long-run trend decline.

³² See UN *World Economic Survey*, 1992, Table A.22. This, for example, indicates that world food export prices halved in real terms in 1981-91, i.e. when deflated by a price index of manufactures.

Figure 1 **Real non-oil commodity prices, 1948-92***
(index 1987=1)



Source: World Bank (1993b), Figure 6-1.

Note: * Index of 33 non-oil commodity prices deflated by an index of unit values of manufactures. 1987 = 1.0

real prices of their traditional exports not responded by diversifying? The adverse terms of trade experiences of low-income Africa is more a symptom of the inflexibility we are investigating than a cause of it. To put it another way, if many Asian countries had a better terms of trade experience over the same period this was because they reduced their dependence on commodity exports facing weak global demand. Thirty years later Kindleberger's 1962 (p.103) comment about countries which complain about adverse terms of trade seems highly pertinent: 'The complaint will be true, but the difficulty will lie not in the manipulation of its terms of trade by the world beyond its frontiers, but in its incapacity to transform.'

(B) Domestic impairments of producer incentives

If, instead, we search for domestic factors dampening producer incentives, the conventional consensus lays much of the blame on past policy interventions by African governments which reduced the prices received by producers. Exchange rate policies deserve particular mention. The extreme case is represented by Francophone West and Central African countries which are members of the Franc Zone and have had an unchanged nominal exchange rate against the French franc since 1948. While not going to this extreme, most other African countries maintained 'adjustable peg' policies which practice resulted in rather inflexible nominal rates during the 1960s and 1970s. At the same time (outside the Franc Zone) inflation was more rapid than in the rest of the world. This combination led to a major real exchange rate appreciation in most African countries during the 1970s.³³

The disincentive effect of exchange rate over-valuation for exporters (and import-substituters) was often compounded by other factors. The narrowness of the tax base and the difficulties of enforcing direct taxes led many African governments to rely upon taxes on international trade. Some taxed exports heavily, either overtly or covertly through state marketing monopolies offering producer prices far below the local-currency equivalent of world market levels. A World Bank report studied the extent to which export crops were being taxed or subsidised by African governments in 1976-80.³⁴ All but four of 29 separate estimates were negative, i.e. showed net taxation, with an estimated average tax rate of 35%. Other studies have produced comparable results. To take a recent example, Lele (1992, Tables 2.10 and 2.12) produces data relating to six countries in East and West Africa and finds for the sixteen crops studied that, after adjusting for currency over-valuation, farmers in 1984 (the latest year for which complete data were available) received a mere 36% of the international value of their crops.³⁵

³³ For substantiation see Killick (forthcoming, Table 5) showing a median currency appreciation of 40% during 1969-71 to 1978-80. The effect of over-valuation was in practice mitigated by the growth of parallel foreign exchange markets in many countries (although not in the Franc Zone because of currency convertibility), although this in turn gave rise to serious economic distortions. For example, in the early 1980s the parallel rate for foreign exchange in Ghana was 20 to 30 times the official rate and a high proportion of all foreign exchange transactions were conducted through the parallel market, but the huge profits that could be made from access to imports at the official rate led to widespread corruption and other forms of rent-seeking. Similar, if less extreme, situations existed in many other African countries.

³⁴ See World Bank (1981, Box D, p.56).

³⁵ On the implicit taxation of African agriculture see also Beynon (1989) especially Table 1; Krueger, Schiff and Valdés (1988) also provide valuable information, although

Quite apart from revenues accruing to the state through these means, there was additional 'taxation' in the form of excessively high marketing costs on the part of the marketing monopolies.³⁶ There was also implicit taxation of exporters resulting from high protection levels afforded local industry. DeRosa (1990 and 1991) shows low-income African countries to be exceptionally heavy protectors and estimates that liberalisation would, on average, raise the price of exports relative to non-traded goods by 15 to 34% (although he also found large inter-country variations). He estimates that the effects of this 'taxation' were to reduce exports by similar proportions and to discourage diversification.

With over-valued exchange rates, fiscal taxation, inefficiency by state marketing boards and price biases induced by protectionism, the disincentives against cash crops were severe. This helps to explain the poor African record with regard to agricultural production and exportation, and the low rates of investment in, and adoption of, improved cultivation methods reported earlier.

At the same time, we should not exaggerate the quantitative importance of interventions which impaired price incentives, for we saw in the previous section that supply elasticities with respect to price are commonly quite low. Moreover, not all the policy-induced price distortions work to the disadvantage of farmers, e.g. explicit or implicit subsidies on fertilisers, insecticides, farm equipment and other inputs. Overall, Cleaver (1985, p.16) found that policy interventions had commonly depressed producer prices but that the negative impact of these on output 'is considerably less than is generally thought', with other factors 'much more important'. We should also recall his conclusion, reported above, that devaluations were unlikely to make more than a small contribution to agricultural growth.

To put it another way, it is not only to price that output can respond. It is interesting to compare the price elasticities reviewed earlier with output responsiveness to non-price, or structural, variables, although only a little evidence

not confined to Africa.

³⁶ This could reach extreme levels. Thus, in Tanzania, where there was limited fiscal taxation of exports, escalating marketing costs (in combination with currency over-valuation) absorbed increasingly large shares of the total local currency proceeds of commodity exports. Rwegasira (1984) provides the following figures on the percentages of world price being passed on to Tanzania's farmers:

	1969	1980
cashew nuts	70	35
coffee	81	45
cotton	70	45
tobacco	61	48

is available on Africa. Work on India by Chhibber (1989, pp.65-66) found some tendency for responses to improved irrigation facilities to be larger than to improved prices in the short run but there was a much stronger result from long-run elasticities: '... in India in the period 1954-5 to 1977-8 the elasticity of aggregate output with respect to non-price factors, was approximately three times the elasticity with respect to inter-sectoral prices'.

This result is consistent with others surveyed by Binswanger (1990). He concludes that it is easier to show that structural variables have a positive impact on aggregate output than it is to show price effects. Access to irrigation again emerges as highly influential. So does education and health; and the quality and density of the rural roads network. Public research and extension services can have a powerful influence on the output of particular crops but much less on total agricultural output.

Further support is provided by Diakosavvas (1989). He investigates, for 35 developing countries in 1974-84, the impact on output of changing levels of government expenditures on agricultural services and infrastructure concluding that, on average, a 10% increase in government spending will induce an approximately 3% increase in output.³⁷ The more common case of declining government expenditures was associated with reducing agricultural output, which also reacted adversely to instability in the provision of government services.

Responsiveness to price and non-price variables are not independent of each other, however. For farmers to be fully responsive to price movements other conditions must be satisfied: supporting institutions and the basic infrastructure should be adequate; markets should be reasonably competitive and efficient; there should be ready supplies of raw materials and other inputs. In Africa all these probably deteriorated in the 1960s and 1970s (and in some cases, through the 1980s). Export promotion services were weak, as was technology policy. There was a widely-observed deterioration in the systems of transportation (particularly in road networks), communications and marketing.

The severe effects of the under-development of the rural infrastructure are well-illustrated in a study by Ahmed and Rustagi (1987, p.114). They compared the proportion of the final price of local food grains reflected in farm-gate prices in African and Asian countries, finding that in the African countries farmers received only about 40-60% of the final price, against around 80% in each of the Asian countries. Decomposition of these differences suggested that about two-fifths were the result of higher transportation costs in Africa, with much of the rest attributed

³⁷ Statistically the result was highly significant; the response was recorded as simultaneous (or very short-run) but lagged variables were not tried. Diakosavvas cites Elias (1985) as having reached similar conclusions.

to higher taxation and lower efficiency in marketing agencies. Part of the difficulty with transport costs, they pointed out, lay with the lesser extent of rural electrification in Africa, resulting in a concentration of grain milling in the towns, compared with more local processing in Asian countries.

The poor and deteriorating state of rural infrastructure in Africa almost certainly reduced market efficiencies, a decline further fostered by the protectionism just described, by financial sector repression, and by price controls and other interventions fostered by a general distrust of market forces.

The problem, then, has not so much been too much state interventionism but the wrong kinds of intervention. Many of the most common interventions had the effect of blunting incentives, through taxation, ill-chosen experiments with state farms, the domination of marketing and distribution by state-owned monopoly corporations, the mis-direction of research and extension services, and the like. It is therefore not surprising that Balassa (1990) should find evidence of negative correlation between state interventionism and agricultural export performance. At the same time there has by common consent been too little intervention by way of investments in, *and maintenance* of, rural roads and other infrastructure; or in the improved provision of agricultural research and extension services; or in spending on education, training and health.

Quite apart from specific measures and neglects, the overall policy environment has also often had the effect of dampening incentives. Of particular importance here are questions like whether the general orientation of policy encourages private enterprise and investment (e.g. by recognising the positive role of profits, or by the creation of an 'enabling' legal framework, or by policies which encourage the growth of efficient rural capital markets and credit institutions); whether the quality of macroeconomic management is sufficient to provide the *stability* of price signals so important if risk-averse smallholder farmers are to respond; and whether the government's own policy signals will have sufficient credibility to evoke strong responses.

In too many countries the answers to these questions have been negative: there has been insufficient fiscal and monetary control for producers to regard improved nominal prices as having more than a transitory effect on their real returns; laws and policies have sometimes been tilted in favour of the state or erratically enforced; the supply of imported inputs and incentive goods has been undependable.³⁸

³⁸ See Jaeger (1991, pp.39-43) for some illustrations along these lines. See also Helleiner (1986) for econometric evidence of an inverse relationship between export performance and import instability. See also Guillaumont and Bojean's 1991 study of Madagascar for evidence of stabilisation, *per se*, is associated with improvements in

It is evident, then, that there is a wide range of ways in which policy interventions - and neglects - have adversely affected farmer incentives, reducing the value and dependability of the prices they receive, increasing their transactions costs, discouraging investment and innovation. However, it would be a mistake to put it all down to the failings of governments, for not all governments have fallen into these errors, or have persisted with them. Beynon (1989) has suggested that the degree of taxation (broadly understood) of African agriculture has been gradually decreasing over time, so that this cannot easily explain continuing weak agricultural performance.

A number of other factors are discussed a little later but we should here remember that market failures can also reduce producer incentives. We are well advised not to take an idealised view of the efficiency of markets in the rural economy. Thus Lele (1988) writes of an 'absence of capital markets' as a major constraint on agricultural growth in Africa, of inaccessibility of markets and poor, costly communications (p.199). She refers to 'unintegrated food markets' (giving rise to large differences in the prices for the same products on markets in the same locality) and observes that 'Even where the private sector is allowed to operate freely in marketing and agro-processing as, for instance, in Nigeria, trade by licensed buying agents for cotton and rubber is often said to be far less than competitive' (p.202).

The pervasiveness of traditional, or informal, financial institutions in African rural economies, which is becoming increasingly well documented, itself attests to the imperfections of formal-sector financial markets mentioned by Lele, for they have expanded in response to the inadequacies of the latter.³⁹ The evidence suggests that informal financial institutions in Africa are typically large, broadly based and an important source of saving and credit for the groups using it. Informal institutions, such as local moneylenders, rotating credit co-operatives and community savings and loan associations, are more accessible, innovative and responsive to borrowers' needs, but they do not encourage any but the most short-term investments.⁴⁰

agricultural production.

³⁹ For excellent studies of relationships between formal and informal financial systems in Africa see Aryeetey (1992) on Ghana, and Chipeta and Mkandawire (1991) on Malawi.

⁴⁰ The example of the poorly-developed nature of the financial sector illustrates the difficulties of disentangling the failings of the public and private sectors, for the shallowness of the financial sector in most of Africa is partially the result of policies of financial repression but these policies may, in turn, be partly a response to the non-competitive nature of the formal financial system. Note that Easterly and Levine (1993, p.9) find growth in Africa to be strongly linked to the level of financial development.

Lele further develops her arguments on the limitations of market mechanisms in Africa in the conclusions of a study of liberalisation and privatisation efforts in agricultural marketing in six African countries (Lele and Christiansen, 1989, p.23):

The ability of the private sector to function effectively in the area of agricultural marketing depends on the environment in which traders must operate. This environment is defined by many of the elements whose absence in the past served as a rationale for public-sector intervention in the first place. These elements include:

- the presence of an entrepreneurial class able to undertake risk;
- competitive markets;
- adequate infrastructure, including transport and communication networks that allow the efficient movement of information, goods and services;
- food security.

The study by Ahmed and Rustagi (1987) cited earlier similarly found evidence of rural markets operating less efficiently in Africa than in Asia, with substantially larger price spreads between markets and marketing profit margins three times as large in the African countries studied. These contributed about a quarter of the total difference in the proportion of final price received by the African and Asian farmers (their Table 11.6), further impairing price incentives. Hence, despite highly adverse findings about the inefficiency of state marketing interventions, they urge only gradual state withdrawal from marketing, plus infrastructural investments and other measures to help the development of more efficient private marketing systems (p.115).

To sum up, a combination of explicit or implicit taxes, institutional inefficiencies and market failures have combined to reduce the prices received by farmers, relative to world or local consumer price levels and by comparison with other parts of the world.⁴¹ Other factors have operated to diminish the relevance of price incentives to farmers, namely poor market information, research, extension and other supporting services; bad or non-existent roads; uncertain input supplies; inadequate credit institutions; unstable economic environments or non-credible policies which reduce the reliability and real value of price incentives and place a premium on risk avoidance.

⁴¹ For a directly analogous analysis, see Mosley and Smith (1989, pp.337-43) for a detailed specification of a wide range of factors which reduce the proportion of the benefits of a currency devaluation from being passed on in farm-gate prices. Their conclusion is similar to ours: when these various factors are born in mind, it is not surprising if the evidence indicates only muted agricultural responses to devaluations.

Weak technological capabilities

In our considerations of Africa's limited ability to take advantage of modern technology (p.15) we argued the importance of technological progress in both industry and agriculture but presented evidence to suggest that progress in this area had lagged badly, by comparison with other developing regions.

Why might this be? An obvious line of explanation is to point out Africa's severe disadvantages in terms of the supply of modern skills. At the time of independence, the countries of Africa suffered from an acute shortage of educated and trained personnel, reflecting the slight development of the educational system until the last years of colonial rule. The number of people with advanced education was often negligible. There were few universities or even technical schools to provide industrial and managerial skills (Fieldhouse, 1986, p.35). In consequence of these neglects, the proportion of people enrolled in tertiary education relative to the population aged 20-24 was in 1960 less than half of one per cent in 16 of the 18 African countries for which estimates exist, compared to 2% for all low income countries taken together, 4% for middle income countries and 17% for industrialised countries (World Bank, 1981, Annex Table 38). At independence the new states were largely populated by illiterate and innumerate people.

Despite the large educational expansion that has occurred since, Africa's relative disadvantage persists, with substantially lower school enrolment rates than in any other developing region. Table 6 showed lower literacy rates than other developing regions; Table 7 suggests even larger disadvantages at higher and more technical levels of education. Moreover, while governments can point to rapid educational expansion this has probably been undermined by a decline in quality. Data on teacher-pupil ratios do not support this view, showing no deterioration, but the UN publication, *Africa Recovery* (April 1992, p.13), noted a decline in real government expenditures and commented:

The declines in educational spending have directly translated into an erosion in the quality of schooling in much of Africa. Severe shortages of textbooks and other school materials became even worse as funds available for their purchase dried up. In many African countries, the whole infrastructure of support services - school inspection and supervision, in-service teacher education, school health services, and the maintenance of schools' furniture, equipment and physical facilities - has deteriorated.

Governments can also point to expenditure levels on agricultural research and development at least comparable with other regions. Mosley (1992, pp.10, 13) reports that public-sector spending on agricultural research in Africa is above the developing-country average, relative to agricultural output, and that spending on extension services is also well sustained. Governments can also show that in recent years they have responded rather vigorously to the technology gap in the form of

Table 7 Comparative human resource indicators, 1987

	<i>Sub-Saharan Africa</i>	<i>Asia</i>	<i>Latin America</i>
1. Educational enrolment at 2nd level as % of age group	18	56	55
2. Enrolment at 3rd level, science and technology, per 100,000 population	19	411	435
3. Enrolment at 2nd level vocational training per 100,000 population	103	815	1,323

Source: UNCTAD (1993) *Analytical Report by Secretariat to UNCTAD VIII Conference*, Table III-3. The figures presented are means of the individual country entries provided in the source table, for 1987 or the closest available year.

newly-created agencies dealing with science and technology. Bwisa (1989, Table E) reports UNESCO data showing the number of such bodies to have risen in Africa from 69 in 1973 to 197 in 1986 (latest available).

However, the effectiveness of the institutions and the productivity of expenditure programmes and newly-educated graduates are more deep-seated problems. The weakness is less that of numbers of people and agencies than the framework within which they work. Thus, Lall (forthcoming) argues that industrialisation in Africa has been crucially held back by shortages of what he calls 'industrial capabilities', referring to the skills, institutions and organisational arrangements that will permit firms to utilise suitable technologies and deploy their resources efficiently. He further suggests that, given the minuscule base of skills and industrial experience in Africa, only countries with large non-African populations with access to necessary skills stood a chance of developing an efficient and flexible manufacturing sector.

Similarly in the agricultural area, Ruttan and Thirtle (1989, p.26) urge the importance of the 'institutionalisation of capacity to supplement indigenous knowledge with science-based knowledge and craft-generated technology with industrial inputs which embody advances in scientific and technological knowledge'. They complain that this has been neglected in Africa and join Lele (1992, pp.574-75) in complaining that the agricultural research agenda has been unduly driven by external aid donors.

Complaints about poor communications with potential users of research outputs - farmers and industrialists - are particularly common. Thus Mosley (1992, p.14):

The problem, then, at least in some countries, may be not that extension services do not exist at the requisite level, but rather that these services are unable to bridge the information gap between the farmer and the most productive technology that is available to him or her, either because the information is presented in the wrong way (e.g. without financial analysis) or because it is simply not credible because it is not adapted to local resource conditions, or because no opportunity to escape from the costs of a wrong decision exist for the farmer.

Similarly, in a study of industrial science and technology policy in Cameroon which illustrates a number of the institutional weaknesses described above, Forje (1990, p.234) complains of the absence of an infrastructure to link the research capabilities of higher education institutes to manufacturing industries. Kydd's (1989) study of the failure of maize research in Malawi draws attention to a further element in the complex of conditions which contribute to countries' technological capabilities: the disincentive effects of inadequate rural infrastructures and economic services. Over the 28 years during which high-yielding hybrid maize varieties have been available, their adoption by farmers has been closely correlated with waves of investment in rural infrastructure, which improved access to financial services, markets and reliable supplies of seeds and fertiliser.

In short, it seems that the organisational and institutional infrastructure has not developed in ways that diminish transactions costs and ease technological progress. Further symptoms of lagging institutional development are incompetent or corrupted police forces and judiciaries, outdated laws and hidebound or venal public administrations, introducing avoidable uncertainties and transactions costs in the definition and enforcement of property rights. We are thus once again led back to the failings of the state - in this instance, its inability to create an environment supportive of the adoption and adaptation of modern productive technologies.

Unresponsive political systems

Various policy weaknesses have now been identified. These were far from being restricted to Africa; many of the same mistakes were made in Asian and Latin America countries. What perhaps placed Africa in a special category was the slowness with which its governments responded to the clearly adverse consequences of the measures they had adopted. Why were dysfunctional policies kept in place for so long despite deteriorating economic results, even though governments' popularity, even legitimacy, was undermined by the resulting

economic decline?⁴² Why was it commonly left to the IMF and World Bank to initiate the eventual policy reforms? And why has progress with these been slow? To answer such questions we need to go outside the frontiers of economics, to examine political, historical and cultural factors.⁴³

The effects of personal rule

In a passage inserted at the prompting of its African advisers, the World Bank (1989, pp.60-61) sketched an answer to the question why African governments have apparently been so unresponsive to the shortcomings of policy:

Underlying the litany of Africa's development problems is a crisis of governance . . . Because the countervailing power has been lacking, state officials in many countries have served their own interests without fear of being called to account. In self-defence individuals have built up personal networks of influence rather than hold the all-powerful state accountable for its systemic failures. In this way politics becomes personalised, and patronage becomes essential to maintain power. The leadership assumes broad discretionary power and loses its legitimacy. Information is controlled, and voluntary associations are co-opted or disbanded.

Two competing models of the state in Africa are popular among political scientists. One is the *rational choice* model, of which the writings of Robert Bates are often cited as examples.⁴⁴ This model can be characterised as having a view of the state in which politicians, bureaucrats and other actors in political processes are presumed to act to promote their own interests, to maximise their own welfare, as distinct from - often in opposition to - the welfare of the wider population. In the absence of accountability and democratic checks and balances, political actors are free to use the resources of the state for the benefit of themselves and their supporters, constrained only by the necessity to maintain sufficient backing to be able to hold onto office.

⁴² In support of this proposition, el-Farhan (forthcoming, chapter 6) finds a statistically significant relationship which runs from GDP growth to political stability: the slower the growth the greater the incidence of instability.

⁴³ The following pages borrow heavily from Killick (forthcoming). They are much influenced by the work of my colleagues John Healey and Mark Robinson (1992), from which I have borrowed extensively. They provide an excellent survey of the literature on the political systems of Africa and their economic consequences.

⁴⁴ See especially Bates (1981 and 1991). However, see also the special section on his writings on the political economy of development in Africa in the June 1993 issue of *World Development*, pp.1033-81, from which it appears that he can only loosely be located in the rational choice school.

A second model sees the African state in terms of *personal rule* (e.g. Jackson and Rosberg, 1984; Sandbrook, 1985). This sees the position of the ruler and his government as maintained by patron-client relationships, based mainly on familial and ethnic loyalties. Followers are rewarded with preferential access to loans, import licenses, contracts and jobs. Institutional rules and constitutional checks and balances are swept aside by the competition for patronage and the struggle to maintain power. Rulers have themselves voted 'president for life'; the dubious virtues of one-party rule become the official ideology; open political competition is banned or carefully delimited; the distinction between the public and private domains becomes blurred.⁴⁵

Callaghy (1984) and MacGaffey (1988) have provided vivid accounts of the consequences of personal rule in the extreme form it has taken in Zaïre and the consequential decay of the state. MacGaffey:

In Zaire those with political position have used the power of their office to seize control of the economy . . . to acquire manufacturing, wholesale and retail businesses and plantations. However, they have neither managed their enterprises in a rational capitalist fashion nor invested their profits in expansion of their businesses and improved production . . . (p.175).

The ruling class is not a true economic bourgeoisie; it is one that loots the economy and collapses effective administration. It is thus unable to exercise the control over production necessary to maintain its dominance and must resort to consolidating its position by participating in the more lucrative activities of the second [parallel] economy (p.172).

Fortunately, only a minority of African countries have been driven to the benighted condition of Zaïre. Here especially we must beware over-generalisation and should remember that some African countries have established democratic traditions (Botswana, Gambia, Senegal, more recently Namibia).

Nonetheless, in the more typical situations of slight accountability and weak democratic traditions, both the rational choice and personal rule models are persuasive in illuminating various of the policy weaknesses described earlier. The proliferation of state enterprises and growth of the public sector; choice of direct and discretionary controls over policies which work impersonally through price incentives; a pro-urban, anti-smallholder bias; the politicisation of credit allocation and investment decisions are all explicable within the parameters of either of these models. For present purposes, this helps to explain the unresponsiveness of governments to anti-developmental policies long after their ill-effects have become apparent, because their primary function was to provide personal benefits and/or

⁴⁵ Thus, it has been said of Malawi that 'the private sector is alive and well - and owned by President Banda!' Pryor (1990, chapter 4) offers some supporting evidence.

rewards to supporters to maintain rulers in power, rather than to promote development.

Indeed, even democratic forms offer no assurance of responsive governments. Radelet's 1992 study of economic reforms in The Gambia finds (pp.1089-91) that the rational choice model gives 'a compelling set of answers' to the question why the Gambian government continued with discredited policies for so long (p.1090):

[The ruling party] was comfortable with its rural political base, and saw government expansion as a means of solidifying urban support and extracting resources for their own individual economic benefit. The government established several urban-based parastatals, increased public investment over 700% in six years, and doubled the size of the civil service. Urban-based businesses. . .reaped the benefits of "developing certificates" that gave generous tax breaks and loan guarantees. Urban residents also gained from low-interest government loans; the over-valued exchange rate; protective tariffs; and subsidized rice, utilities and transport fares.

In the end - and this is a story re-told in many African countries - emerging economic crisis and the palpable unsustainability eventually forced the government to turn to the IMF and World Bank. Reforms were embraced but late and reluctantly, and in the meantime the welfare of the population had been compromised.

The lines of explanation offered above are also consistent with the stress by Seddon and Belton-Smith (forthcoming) on the importance of the autonomy of the state in determining its freedom of choice and capacity for rapid response. Given the low level of development of the institutions of civil society in most African countries, it might appear that the state would typically enjoy a high degree of autonomy. However, the story told above is of states seeking to compensate for a lack of popular legitimacy by using the resources of the state to bribe the support of key groups: the armed forces; the bureaucracy; the urban labour force; the trading and industrial elites; key ethnic groupings. The state is hemmed in by the alienation of the people from it, and it is in no position - except through desperation - to get tough with key interest groups whose support is contingent on a continuing flow of favours.

The influences of history and social structure

Personal rule, self-serving politicians, weak states and clientelist-based politics are not, of course, confined to Africa but they do seem particularly pervasive there. Again, we must ask, Why? To take this further requires examination of the historical experiences and the social values and structures which underlie the political condition of the continent - treacherous territory for an economist. Various

questions arise. How did history and social structure influence the economic policy choices that were made after independence? How are they connected to the spread of anti-developmental political systems? Above all, how do they help us to understand why Africa's economies appear less flexible than those of other developing regions.

One feature which is different from, say, most of Asia is low population densities.⁴⁶ A number of writers see this characteristic as having far-reaching implications for contemporary political processes. In pre-colonial times, most Africans were either pastoralists or cultivators with few obligations to feudal overlords or landlords. They hence enjoyed an autonomy impossible in the highly regimented agriculture of pre-colonial Asian civilisations (Hyden, 1986, p.54) although this did not altogether prevent the development of centralised political systems, e.g. in pre-colonial Nigeria and Uganda. The favourable land-labour ratio and the low carrying capacity of much of Africa encouraged dispersed settlements and voluntary migration in search of food, pasture and trading opportunities (Hopkins, 1986, p.1479). These factors and the prevalence of pre-modern cultivation techniques meant low productivity in agriculture and the absence of a surplus with which to support a highly stratified and urbanised society. In most cases the political unit remained the village or clan, with social obligations determined by the ties of kinship.

Such social structures were, of course, modified by colonialism, for example through the alienation of land and forced commercialisation of agriculture, but they were rarely transformed by it.⁴⁷ A key feature of colonialism - covering Britain, France and other colonial regimes - was their insistence that colonies should pay their way and not become a burden on the metropolitan budget. This led in the British case to 'indirect rule', as a cost-effective way of governing an empire with few personnel. This committed the British authorities to support traditional rulers, and the relations of production on which they depended, often enhancing, even creating, ethnic divisions.⁴⁸

⁴⁶ As at 1960 population densities (per km²) were estimated as follows, although such averages of course conceal huge inter-country differences within each region (UN *Statistical Yearbook, 1975*, Table 2):

Africa	13
Asia	80
Latin America	15

⁴⁷ Fieldhouse (1986) and Hopkins (1986) both note this feature.

⁴⁸ In fact, ethnicity in modern Africa is viewed by some as a relatively modern creation, in which the experience of colonisation played an important part. For a survey of approaches to ethnicity in modern Africa see Vail (1986), who also presents case

In principle, the French colonial philosophy was different, embodying the notion of the 'assimilation' of colonial peoples, under which those who qualified became French citizens entitled to elect Deputies to the French National Assembly. In practice, however, only a tiny proportion of colonial peoples achieved this status, partly because of a financially-induced neglect of the educational system.⁴⁹ Many bureaucrats in the French territories still owed their position to the status they enjoyed in traditional society. The principle of the balanced budget was thus in conflict with the modernisation of French and British colonies alike. The position of territories colonised by Portugal was even worse, where tight budgetary restrictions were accompanied by little desire to modernise in any case (Mayer, 1990).

In the view of writers like Hyden, the survival of traditional social structures through the colonial period, and the superficiality of any social modernisation as a result of European rule, make Africa unique in the developing world and impart a special character to the nature of its political organisation. In urban areas immigrants continue to seek support from members of their tribe or village and as a result urban dwellers continue to behave in ways more akin to villagers than to an urban proletariat. Hyden calls this structure 'the economy of affection' and views the role of ethnicity in African politics as closely tied to this perpetuation of links to the countryside. It results, he argues, in the vertical (ethnic) and not horizontal (class) political groupings which characterise African society, and in structures hostile to formal bureaucratic principles.

Without the power and authority of their imperial overlords and as the cement of anti-colonialism lost strength, post-colonial rulers lacked adequate legitimacy to rule over the ethnically diverse communities that had comprised the colonial state. Despite the grafting-on of democratic forms during decolonisation, the colonialists left a dominant legacy of authoritarianism and group rights, derived from the tradition of indirect rule and the co-optation of traditional authorities (Young, 1986). Colonial borders which lacked geographical or ethnic integrity made matters worse, committing governments to the maintenance of artificial unions, sometimes in the face of considerable opposition. Expenditure on security was consequently an important component of the growing fiscal deficit, sometimes intensified by the impact of the Cold War.

Inexperienced political leaders were thus faced with the daunting task of maintaining their authority, and the integrity of their nations, in the face of divided societies and fragile states. In response, they often sought to maintain their positions through a concentration of power reinforced by a system of rewards.

studies.

⁴⁹ On this, see Fieldhouse (1986).

Returning to the question why governments have been so unresponsive in the face of demonstrated policy failures, the argument sketched here is that there was a conjuncture of demographic, social and historical influences that made the African continent particularly fertile ground for the spread of clientelist-based politics. Of course, political systems world-wide contain elements of clientelism; what we are discussing here is a matter of degree. The contention is that conditions in post-colonial Africa particularly encouraged this way of doing political business. That such systems came into being in fragile nation-states reinforced the incentive to use patronage and a centralised authoritarianism to hold the state together. These factors resulted in the persistence of many of the policy choices which hindsight shows to have been anti-developmental.

IV - Conclusions

While it is dangerous to offer continent-wide generalisations and Africa by no means offers a uniformly adverse situation, we have marshalled evidence here which indicates a generally low degree of economic flexibility: a slow pace of modernising structural change; a rather adverse record with 'structural adjustment'; a poor revealed ability to take advantage of trading opportunities; a similarly laggard response to technological advances; rather low supply elasticities in agriculture. Moreover, we have shown that these factors interact with each other, so that in combination they have a powerful sclerotic effect.

We have contrasted this evidence of inflexibility with the demonstrated responsiveness of African peoples to economic incentives and have sought to resolve this paradox by examining various constraints which prevent their responsiveness from resulting in adaptable national economies. We looked first at evidence on the quality of information flows, finding that such flows are relatively weak in Africa. Second, we found evidence of seriously deficient incentive systems, resulting largely from adverse policy interventions but aggravated by market failures and other domestic constraints.

We thirdly pointed up the importance of weak technological capabilities, flowing from Africa's particularly severe shortages of skills and knowledge, the weaknesses of its institutional base and the resulting depressed productivity of such skilled labour as does exist. Finally, since many of the deficiencies just mentioned may be attributed to past policies, we have examined why political systems have proved so unresponsive to the proven inadequacies of previous interventions - a task which led us also to examine the influences of history and social structures.

What conclusions might we now draw from this exploration?

First, that there has been value-added from the focus on flexibility. Admittedly, some evidence and diagnoses - particularly as they relate to the foreign exchange constraint, supply elasticities and the failings of policy interventions - have merely presented familiar materials in an unfamiliar setting. But some of the other discussion has covered less well-trodden ground, for example, that relating to technology lags and capabilities, and the responsiveness of political systems. In addition, the analysis has gained from being able to comprehend a wide range of materials that would not normally be considered in combination, to show the ways in which they interact and contribute to the overall problem of inflexibility.

On the negative side, the analysis is not rigorous. The concept of flexibility is too imprecise and multi-faceted, and the evidence too incomplete, for this essay to be more than an exploratory first attempt. It would, for example, have been highly desirable to explore the hypothesis that a relative absence of a modern entrepreneurial culture, of business people with access to the know-how necessary for modernisation, has been a further crucial factor holding back the adaptability of African economies. One view on this is that there is no such shortage, only an economic environment which provides poor access to important information and discourages the expansion of private enterprise⁵⁰ and direct foreign investment, but there is simply not enough evidence to bring to bear on that.

In any case, rigour is not the sole criterion by which research should be judged. There are also questions of relevance and richness, as much of the 'rigour' which afflicts present-day economics constantly reminds us. What this exercise has also shown is the importance of adopting a multi-disciplinary approach, of going beyond the boundaries of economics into the realms of the political scientist, sociologist and historian. This can be seen as a positive, enriching, virtue (although whether this writer's amateurish entry into this unfamiliar territory has been successful is another question). Nevertheless, it can be readily conceded that this paper would have been stronger had it been possible to assemble a larger amount of reliable evidence in a more systematic way.

A further conclusion that suggests itself is that flexibility matters: that the inflexibility of African economies has had powerfully negative welfare effects. For example, there is a direct and obvious link between the inability of Africa's exporters to take advantage of developing trade opportunities in the way that their counterparts in other developing countries have done and the severity of its foreign exchange constraint. There are similarly clear connections between the slow pace of technical progress, depressed productivities and lagging per capita incomes.

We are reminded here of North's (1990) suggestion that the growing specialisation, de-personalisation of transactions and complexity of economic structures which are

⁵⁰ For developments of this theme see Elkan (1988) and Marsden (1990).

intrinsic to development give rise to disproportionate increases in transactions and enforcement costs. The emergence of institutions which minimise these costs is thus imperative if economic development is not to be frustrated *but there is no necessary reason for this to occur*. Our arguments concerning the contribution of historical, political and social factors to the inflexibility of Africa's economies can be interpreted as pointing to a failure of the necessary institutional development and hence avoidably high levels of transactions costs which are a hallmark of an inflexible economy.

We commenced this paper with the hypothesis that there is a positive relationship between an economy's flexibility and its level of development. To a considerable extent, the African case supports this suggestion. In a variety of ways, Africa's economic inflexibility can be attributed to under-development: poor infrastructure and communications; weak institutions and markets; shortages of skilled and experienced labour, with resulting weak technological capabilities. To a considerable extent, Africa is inflexible because it is poor, as well as being poor because it is inflexible.

However, we should not take too deterministic a view of the influence of under-development. At various points above evidence has been marshalled which adversely contrasts the African experience with other developing regions, including countries which were severely under-developed two or three decades ago but have since made substantial progress. There has, in addition, been an 'Africa factor'. In finding this we are in agreement with the results of Easterly and Levine's more formal study of Africa's growth performance (1993, p.4):

. . . we find that even after controlling for policies, human capital endowments, terms of trade shocks, and 'catch-up' factors, Africa grows more slowly for reasons that the cross-country model does not explain. Africa is different.

They reject (p.15) as unscientific and unreliable the introduction of political, cultural and institutional factors to explain 'the mysteriously poor performance of Africa'. However, this seems to come close to saying that only quantifiable economic variables are 'real' evidence, which takes the claims of the economics discipline a bit far. While we admit the pitfalls and loss of rigour, we have sought to persuade that the influences of political systems, history and social structures *are* relevant to an understanding of the 'Africa factor'. It is this which we have particularly sought to explain in the sections dealing with the influences of political systems, history and social structures.

Finally, the paper has implications for the efforts of those African governments - and of the IMF, World Bank and donor governments which stand behind them - which are attempting to improve economic performance through programmes of structural adjustment. If the analysis above is accepted, it indicates that such

programmes *are* addressing major factors holding back the responsiveness of African economies, e.g. by addressing many of the policy deficiencies identified earlier as blunting incentives and weakening the institutional base.

At the same time, our analysis indicates that a focus on moving away from interventionist policy stances, and on 'getting prices right', is too narrow. It is important to attend to a wider range of factors, bearing upon technological capabilities, institutional development, information flows, the adequacy of the infrastructure and of the provision of other public goods. Indeed, to the extent that adjustment programmes are associated - as they are - with reduced public sector service provisions and investments, they will make it all the harder to adapt the economies of Africa to present-day realities.

References

- Ahmed, Raisuddin and Narendra Rustagi (1987) 'Marketing and price incentives in African and Asian countries: a comparison' in Dieter Elz (ed.), *Agricultural Marketing Strategy and Pricing Policy*. Washington, DC: World Bank.
- Ali, Ridwan, Jeffrey Alwang and Paul B. Sigel (1991) 'Is export diversification the best way to achieve export growth and stability?', *Working Paper WPS 729*, July. Washington, DC: World Bank.
- Ardeni, Pier Giorgio and Brian Wright (1990) 'The long-term behavior of commodity prices', *Working Paper WPS 358*, March. Washington, DC: World Bank.
- Aryeetey, Ernest (1992) 'The relationship between the formal and informal sectors of the financial market in Ghana', *Research Paper No. 10*, October. Nairobi: Africa Economic Research Centre.
- Askari, Hossein and J.T. Cummings (1976) *Agricultural Supply Responses: A Survey of Econometric Evidence*. New York, NY: Praeger.
- Baban, Roy C. and Joshua E. Greene (1992) 'The export performance of sub-Saharan Africa, 1970-90: a survey', *Working Paper No. 92/55*, July. Washington, DC: International Monetary Fund.
- Balassa, Bela (1990) 'Incentive policies and export performance in sub-Saharan Africa', *World Development* 18(3), March.
- Bates, Robert H. (1981) *Markets & States in Tropical Africa*. Berkeley, CA: University of California Press.
- Bates, Robert H. (1991) 'Agricultural policy and the study of politics in post-Independence Africa', chapter 9 in Douglas Rimmer (ed.) (1991) *Africa 30 Years On*. London: Royal African Society and James Currey.
- Berthelemy, J.C. and C. Morrisson (1987) 'Manufactured goods supply and cash crops in sub-Saharan Africa', *World Development* 15(10-11).
- Bevan, D.L., A. Bigsten, P. Collier and J.W. Gunning (1987) 'Peasant supply

- response in rationed economies', *World Development* 15(4), April.
- Beynon, J.G. (1989) 'Pricism v. structuralism in sub-Saharan African agriculture', *Journal of Agricultural Economics* 40(3), September.
- Binswanger, Hans (1990) 'The policy response of agriculture', *Proceedings of the World Bank Annual Conference on Development Economics, 1989*. Washington, DC: World Bank.
- Binswanger, H. and P. Pingali (1988) 'Technological priorities for farming in sub-Saharan Africa', *World Bank Research Observer* 3(1), January.
- Bond, Marion E. (1987) 'An econometric study of primary product exports from developing country regions to the world', *IMF Staff Papers* 34(2), June. Washington, DC: International Monetary Fund.
- Boskin, Michael and Lawrence Lau (1990) *Post-War Economic Growth in the Group-of-Five Countries*. Stanford, CA: Center for Economic Policy Research, Stanford University.
- Boughton, James M. (1991) 'Commodity and manufactures prices in the long-run', *IMF Working Paper 91/47*, May. Washington, DC: International Monetary Fund.
- Bwisa, H.M. (1989) 'Scientific co-operation for development in Africa', *African Development Review* 2(1), June.
- Callaghy, Thomas M. (1984) *The State-Society Struggle: Zaire in Comparative Perspective*. New York, NY: Columbia University Press.
- Chander, Ramesh (1990) 'Information systems and basic statistics in sub-Saharan Africa', *Discussion Paper 73*, February. Washington, DC: World Bank.
- Chhibber, Ajay (1989) 'The aggregate supply response: a survey', chapter 4 in Simon Commander (ed.) (1989) *Structural Adjustment and Agriculture*. London: James Currey and Overseas Development Institute.
- Chipeta, C. and M. Mkandawire (1991) 'Informal financial markets and macroeconomic adjustment in Malawi', *AERC Research Paper No. 4*. Nairobi: African Economic Research Consortium.
- Cleaver, Kevin (1985) 'The impact of price and exchange rate policies on agriculture in sub-Saharan Africa', *Staff Working Paper 728*. Washington, DC: World Bank.
- DeRosa, Dean A. (1990) 'Protection and export performance in sub-Saharan Africa', *IMF Working Paper No. WP/90/83*, September. Washington, DC: International Monetary Fund. See also article in *Finance and Development* 28(3), September 1991.
- Diakosavvas, Dimitris (1989) 'Government expenditure on agriculture and agricultural performance in developing countries', *New Series Discussion Paper No. 3*, April. Bradford: Development Project Planning Centre, University of Bradford.
- Diakosavvas, Dimitris and Colin Kirkpatrick (1990) 'Exchange-rate policy and agricultural exports performance in sub-Saharan Africa', *Development Policy Review* 8(1), March. London: Overseas Development Institute and SAGE.
- Easterly, William and Ross Levine (1993) 'Is Africa different? Evidence from growth regressions'. Washington, DC: World Bank, April (processed).

- Elbadawi, Ibrahim A. (1992) 'Have World Bank-supported adjustment programs improved economic performance in sub-Saharan Africa?', *World Bank Working Paper WPS 1001*, October. Washington, DC: World Bank.
- Elbadawi, Ibrahim A., Dhaneshwar Ghura and Gilbert Uwujaren (1992) 'Why structural adjustment has not succeeded in Africa', *World Bank Working Paper No. WPS1000*, October. Washington, DC: World Bank.
- El-Farhan, Hania (forthcoming) *Analysis of the Growth Performance of Sub-Saharan African Countries, 1960-85*. London: School of Oriental and African Studies (PhD thesis).
- Elias, J.V. (1985) 'Government expenditures on agriculture in Latin America', *Research Report No. 23*. Washington, DC: International Food Policy Research Institute.
- Elkan, Walter (1988) 'Entrepreneurs and entrepreneurship in Africa', *World Bank Research Observer* 3(2), July.
- Faini, Riccardo and Jaime de Melo (1990) 'Adjustment, investment and the real exchange rate in developing countries', *Working Paper WPS 473*, August. Washington, DC: World Bank.
- Fieldhouse, D.K. (1986) *Black Africa 1945-1980; Economic Decolonization and Arrested Development*. London: Allen and Unwin.
- Forje, John W. (1990) 'Small and poor countries in a world of big science and technology. The management of science and technology for industrial development in Africa: the case of Cameroon', *Science, Technology and Development* 8(3), December.
- Grilli, E.R. and M.C. Yang (1988) 'Primary commodity prices, manufactured goods prices and the terms of trade of developing countries: what the long run shows', *World Bank Economic Review* 2(1), January.
- Guillaumont, Patrick and Catherine Bojean (1991) 'Effects on agricultural supply of producer price level and stability with and without goods scarcity: the case of coffee supply in Madagascar', *Journal of International Development* 3(2).
- Healey, J.M. and M. Robinson (1992) *Democracy, Political Change and Economic Policy: Sub-Saharan Africa in Comparative Perspective*. London: Overseas Development Institute.
- Helleiner, G.K. (1986) 'Outward orientation, import instability and African economic growth: an empirical investigation', in Sanjaya Lall and Frances Stewart (eds), *Theory and Reality in Development*. London: Macmillan.
- Hopkins, A.G. (1986) 'The World Bank in Africa: Historical Reflections on the African Present', *World Development* 14(12), December.
- Hyden, G. (1986) 'African Social Structure and Economic Development', in R.J. Berg and J.S. Whitaker, *Strategies for African Development*. Berkeley, CA: University of California Press.
- International Monetary Fund (1992) *World Economic Outlook*. Washington, DC: International Monetary Fund, May.
- Jackson, Robert H. and Carl G. Rosberg (1984) 'Personal rule: theory and practice in Africa', *Comparative Politics* 16(4), July.
- Jaeger, William (1991) 'The impact of policy in African agriculture', *Working*

- Paper WPS 640*, March. Washington, DC: World Bank.
- Khan, Mohsin and Malcolm D. Knight (1988) 'Import compression and export performance in developing countries', *Review of Economics and Statistics*, May.
- Killick, Tony (1991) 'The developmental effectiveness of aid to Africa', in I. Husain and J. Underwood, *African External Finance in the 1990s*. Washington, DC: World Bank. See also World Bank *Working Paper WPS 646* (1991).
- Killick, Tony (1993) *The Adaptive Economy: Adjustment Policies in Small, Low-Income Countries*. Washington, DC: World Bank, and London: Overseas Development Institute.
- Killick, Tony (forthcoming) 'Explaining Africa's post-independence development experiences', in E. Grilli and D. Salvatore (eds.), *Handbook of Comparative Economic Development*. Westport, CT: Greenwood Publishing. Earlier version published as *Working Paper No. 60* (1992), Overseas Development Institute.
- Kindleberger, Charles P. (1962) *Foreign Trade and the National Economy*. New Haven, CT: Yale University Press.
- Klitgaard, Robert (1991) *Adjusting to Reality*. San Francisco, CA: ICS Press.
- Kox, Henk L.M. (1990) 'Export constraints for sub-Saharan growth: the role of non-fuel primary commodities'. Amsterdam: Vrije Universiteit, December (mimeo).
- Krueger, Anne O., Maurice Schiff and Alberto Valdés (1988) 'Agricultural incentives in developing countries: measuring the effects of sectoral and economywide policies', *World Bank Economic Review* 2(3), September.
- Kydd, Jonathan (1989) 'Maize research in Malawi: lessons from failure', *Journal of International Development* 1(1), January.
- Lall, Sanjaya (1992) 'Structural problems of African industry', in F. Stewart, S. Lall and S. Wangwe (eds.) *Alternative Development Strategies in Sub-Saharan Africa*. London: Macmillan.
- Lall, Sanjaya (forthcoming) 'Industrial Adaptation and Technological Capabilities in Developing Countries', in Tony Killick (ed.), proceedings of a conference on the 'Nature, significance and determinants of the flexibility of national economies', Marlow, UK, July 1993 (forthcoming).
- Lele, Uma (1988) 'Comparative advantage and structural transformation: a review of Africa's economic development experience', in Gustav Ranis and T. Paul Schultz (eds.) *The State of Development Economics: Progress and Perspectives*. Oxford: Basil Blackwell.
- Lele, Uma (ed.) (1992) *Aid to African Agriculture*. Baltimore, MD: Johns Hopkins.
- Lele, Uma and Robert E. Christiansen (1989) 'Markets, marketing boards and co-operatives in Africa', *MADIA Discussion Paper 11*. Washington, DC: World Bank.
- Lele, U., R. Christiansen and K. Kadiresan (1989) 'Fertiliser policy in Africa: lessons from development programs and adjustment lending, 1970-87', *MADIA Discussion Paper 5*. Washington, DC: World Bank.
- MacGaffey, Janet (1988) 'Economic disengagement and class formation in Zaire', chapter 7 in Donald Rothchild and Naomi Chazan (eds.) *The Precarious Balance: State and Society in Africa*. Boulder, CO: Westview Press.

- MacGaffey, Janet and associates (1991) *The Real Economy of Zaire*. London: James Currey.
- Marsden, Keith (1990) 'African Entrepreneurs: Pioneers of Development', *Discussion Paper 9*. Washington, DC: International Finance Corporation.
- Matin, Kazi M. (1992) 'Openness and economic performance in sub-Saharan Africa'. *Working Paper WPS 1025*. Washington, DC: World Bank, November.
- Mayer, Jean (1990) 'Development problems and prospects in Portuguese-speaking Africa', *International Labour Review* 129(4).
- Mbelle, Ammon and Thomas Sterner (1991) 'Foreign exchange and industrial development: a frontier production function analysis of two Tanzanian industries', *World Development* 19(4), April.
- McQueen, Matthew (1990) 'ACP export diversification: the case of Mauritius', *Working Paper No. 41*, August. London: Overseas Development Institute.
- McQueen, Matthew and Christopher Stevens (1989) 'Trade preferences and Lomé IV: non-traditional ACP exports to the EC', *Development Policy Review* 7(3), September. London: Overseas Development Institute and SAGE.
- Mosley, Paul (1992) 'Obstacles to the spread of the Green Revolution in Africa: some initial thoughts', *IDPM Discussion Paper 32*. Manchester: Institute of Development Policy Management, University of Manchester.
- Mosley, Paul and Lawrence Smith (1989) 'Structural adjustment and agricultural performance in sub-Saharan Africa, 1980-87', *Journal of International Development* 1(3), July.
- Moussa, Antoun and Robert Schware (1992) 'Informatics in Africa: lessons from World Bank experience', *World Development* 20(12), December.
- Newman, John L., Victor Lavy, Raoul Salomon and Philippe De Vreyer (1990) 'Firms' responses to relative price changes in Côte d'Ivoire', *Working Paper WPS 550*, December. Washington, DC: World Bank.
- North, Douglass C. (1990) *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.
- Pryor, Frederic L. (1990) *Malawi and Madagascar*. New York, NY: Oxford University Press.
- Radelet, Steven (1992) 'Reform without revolt: the political-economy of economic reform in The Gambia', *World Development* 20(8), August.
- Riddell, Roger C. (1990) 'ACP export diversification: the case of Zimbabwe', *Working Paper No. 38*, June. London: Overseas Development Institute.
- Riddell, Roger C. and associates (1990) *Manufacturing Africa*. London: James Currey and Overseas Development Institute.
- Ruttan, Vernon and Colin Thirtle (1989) 'Induced technological change in African agriculture', *Journal of International Development* 1(1), January.
- Rwegasira, Delphin G. (1984) 'Exchange rates and the management of the external sector in sub-Saharan Africa', *Journal of Modern African Studies* 22(3), September.
- Sandbrook, Richard (1985) *The Politics of Africa's Economic Stagnation*. Cambridge, MA: Cambridge University Press.
- Sapsford, D., P. Sankar and H.W. Singer (1992) 'The Prebisch-Singer terms of

- trade controversy revisited', *Journal of International Development* 4(3), May-June.
- Scandizzo, Pasquale L. and Colin Bruce (1980) 'Methodologies for measuring agricultural price intervention effects', *Staff Working Paper* No. 394. Washington, DC: World Bank.
- Seddon, David and Tim Belton-Smith (forthcoming) 'The political determinants of economic flexibility, with special reference to East Asia' in Tony Killick (ed.), proceedings of a conference on the 'Nature, significance and determinants of the flexibility of national economies', Marlow, UK, July 1993 (forthcoming).
- Stevens, Christopher (1990) 'ACP export diversification: Jamaica, Kenya and Ethiopia', *Working Paper* No. 40, September. London: Overseas Development Institute.
- Svedberg, Peter (1991) 'The export performance of sub-Saharan Africa', in Jonathan Frimpong-Ansah, S.M. Ravi Kanbur and Peter Svedberg (eds.) (1991) *Trade and Development in Sub-Saharan Africa*. Manchester: Manchester University Press.
- United Nations (1993) *World Economic Survey 1993*. New York: United Nations.
- Vail, L. (1986) 'Introduction: Ethnicity in Southern African History', in L. Vail (ed.), *The Creation of Tribalism in Southern Africa*. London: James Currey.
- Von Braun, Joachim and Leonardo Paulino (1990) 'Food in sub-Saharan Africa: trends and policy challenges for the 1990s', *Food Policy* 15(6), December.
- World Bank (1981) *Accelerated Development in Sub-Saharan Africa*, 'The Berg Report'. Washington, DC: World Bank.
- World Bank (1986) *World Development Report 1986*. Washington, DC: World Bank.
- World Bank (1989) *Sub-Saharan Africa: From Crisis to Sustainable Growth*. Washington, DC: World Bank.
- World Bank (1992a) *World Development Report, 1992*. Washington, DC: World Bank.
- World Bank (1992b) *Global Economic Prospects and the Developing Countries, 1992*. Washington, DC: World Bank.
- World Bank (1992c) *The Third Report on Adjustment Lending: Private and Public Resources for Growth*. Washington, DC: World Bank.
- World Bank (1992d) *World Debt Tables, 1992-93*, volume 1. Washington, DC: World Bank.
- World Bank (1993a) *World Development Report, 1993*. Washington, DC: World Bank.
- World Bank (1993b) *Global Economic Prospects and the Developing Countries, 1993*. Washington, DC: World Bank.
- Yeats, Alexander J. (1990) 'On the accuracy of economic observations: do sub-Saharan trade statistics mean anything?', *World Bank Economic Review* 4(2), May.
- Young, C. (1986) 'Africa's Colonial Legacy', in R.J. Berg and J.S. Whitaker, *Strategies for African Development*. Berkeley, CA: University of California Press.

- 51: **Evaluating the Impact of NGOs in Rural Poverty Alleviation: Uganda Country Study**, *John De Coninck*, 1991, £5.00, ISBN 0 85003 159 1
- 52: **Evaluating the Impact of NGOs in Rural Poverty Alleviation: Zimbabwe Country Study**, *Ann Muir*, 1991, £5.00, ISBN 0 85003 160 5
- 53: **Environmental Change and Dryland Management in Machakos District, Kenya: Environmental Profile**, edited by *Michael Mortimore*, 1991, £4.00, ISBN 0 85003 163 X
- 54: **Environmental Change and Dryland Management in Machakos District, Kenya: Population Profile**, *Mary Tiffen*, 1991, £4.00, ISBN 0 85003 164 8
- 55: **Environmental Change and Dryland Management in Machakos District, Kenya: Production Profile**, edited by *Mary Tiffen*, 1991, £4.00, ISBN 0 85003 166 4
- 56: **Environmental Change and Dryland Management in Machakos District, Kenya: Conservation Profile**, *F N Gichuki*, 1991, £4.00, ISBN 0 85003 167 2
- 57: **Environmental Change and Dryland Management in Machakos District, Kenya: Technological Change**, edited by *Michael Mortimore*, 1992, £4.00, ISBN 0 85003 174 5
- 58: **Environmental Change and Dryland Management in Machakos District, Kenya: Land Use Profile**, *R S Rostom and Michael Mortimore*, 1992, £4.00, ISBN 0 85003 175 3
- 59: **Environmental Change and Dryland Management in Machakos District, Kenya: Farming and Income Systems**, edited by *Mary Tiffen*, 1992, £4.00, ISBN 0 85003 176 1
- 60: **Explaining Africa's Post-Independence Development Experiences**, *Tony Killick*, 1992, £4.00, ISBN 0 85003 177 X
- 61: **The Informal Financial Sector: How Does It Operate and Who Are the Customers?**, *J J Thomas*, 1992, £4.00, ISBN 0 85003 178 8
- 62: **Environmental Change and Dryland Management in Machakos District, Kenya: Institutional Profile**, edited by *Mary Tiffen*, 1992, £4.00, ISBN 0 85003 179 6
- 63: **Environmental Change and Dryland Management in Machakos District, Kenya: Tree Management**, *Michael Mortimore*, 1992, £4.00, ISBN 0 85003 180 X
- 64: **IMF Lending: The Analytical Issues**, *Graham Bird*, 1992, £4.00, ISBN 0 85003 182 6
- 65: **The Seed Sector in Developing Countries: A Framework for Performance Analysis**, *Elizabeth Cromwell, Esbern Friis-Hansen and Michael Turner*, 1992, £6.00, ISBN 0 85003 183 4
- 66: **The Performance of the Seed Sector in Zimbabwe: An Analysis of the Influence of Organisational Structure**, *Esbern Friis-Hansen*, 1992, £4.00, ISBN 0 85003 184 2
- 67: **Political Regimes and Economic Policy Patterns in Developing Countries, 1978–88**, *John Healey, Richard Ketley, Mark Robinson*, 1992, £4.00, ISBN 0 85003 185 0
- 68: **The Impact of NGO Poverty Alleviation Projects: Results of the Case Study Evaluations**, *Roger Riddell and Mark Robinson*, 1992, £4.00, ISBN 0 85003 192 3
- 69: **Continuity and Change in IMF Programme Design, 1982–92**, *Tony Killick*, 1992, £4.00, ISBN 0 85003 194 X
- 70: **IMF Lending: The Empirical Evidence**, *Graham Bird*, 1993, £4.00, ISBN 0 85003 197 4
- 71: **Issues in the Design of IMF Programmes**, *Tony Killick*, 1993, £4.00, ISBN 0 85003 199 0
- 72: **Food Aid Programmes of the European Community and its Member States: A Comparative Statistical Analysis**, *Edward Clay and Charlotte Benson*, 1993, £4.00, ISBN 0 85003 200 8
- 73: **Economic Inflexibility in Africa: Evidence and Causes**, *Tony Killick*, 1993, £4.00, ISBN 0 85003 205 9

* currently out of print

**Overseas Development Institute
Regent's College
Inner Circle
Regent's Park
London NW1 4NS
UK**

**Telephone: 071-487 7413
Fax: 071-487 7590
Telex: 94082191 ODIUK
odi @ gn.apc.org (GreenNet)
10074: SKK1133 (Dialcom)**

£4.00