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Working Paper

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ECONOMIC DEVELOPMENT AND THE ADAPTIVE ECONOMY

Tony Killick

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

Preface and acknowledgements

ODI Working Papers present in preliminary form work resulting from research undertaken under the auspices of the Institute. Views expressed are those of the authors and do not necessarily reflect the views of ODI. Comments are welcomed and should be addressed directly to the author.

This Working Paper is one of a series of draft chapters of a book currently under preparation by Tony Killick with the provisional title of The Adaptive Economy: Adjustment Policies in Low-income Countries. The purpose of this volume will be to discuss general principles of policies for what has become known as 'structural adjustment' and to set these in the context of longer-term economic development. Those who make or seek to influence policy are the chief target audience, although it is hoped that this work will also be useful for students and other members of the academic community. The complete set of papers to be issued in this series is as follows:

- 31 Economic development and the adaptive economy
- 32 Principles of policy for the adaptive economy
- 33 Exchange rates and structural adaptation
- 34 Markets and governments in agricultural and industrial adjustment
- 35 Financial sector policies in the adaptive economy
(provisional, forthcoming)
- 36 Problems and limitations of adjustment policies
(provisional, forthcoming)

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WORKING PAPER 31

**ECONOMIC DEVELOPMENT
AND THE
ADAPTIVE ECONOMY**

Tony Killick

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I. INTRODUCTION

In its economic dimensions, development is concerned with raising peoples' material welfare. This, in turn, can be thought of as the product of three interrelated factors: the efficiency with which existing resources are employed; the growth of productive resources over time; and the ways in which the resulting output and income are distributed among the factors of production and different income groups. Underlying - and influencing - these basic determinants of welfare is a certain social and economic structure. It is this structure, how it changes and the relationship of these changes to economic development that is the subject of the following pages.

I.1 The meaning of 'structure'

Given its central importance for this study, we ought perhaps to clarify this idea of structure. The three alternative ways of computing the national accounts provide an entry point. Thus we can think of the structure of production, represented by industrial origin accounts, which is probably the most common meaning given to the concept of the structure of an economy. In addition to the obvious sectors of agriculture and industry, we might mention the financial system as a sector of particularly large importance in an economy's structure. When focusing on the balance of payments, it can also be useful to re-classify the productive sectors into those producing tradeable and non-tradeable goods and services. Second, we can think of the factoral composition of value added, the availability at a given time of labour, enterprise, capital and natural resources. Thirdly, we can think of the composition of demand, or of the sources and uses of resources, as a dimension of structure, particularly the breakdown of resource uses as between consumption and investment.

National accounting aggregates, however, give us only part of the picture. There is a more elusive - but very important - aspect of an economy's structure which can be loosely called its institutional base. Included in this is the political system, the legal framework and the agencies for its enforcement, established patterns of social organisation and control (including the existence and freedoms of special-interest organisations like trade unions), the agencies of public administration, and the physical infrastructure, providing transport and communications. Demographic variables can be counted in too, including the age and dependency characteristics of the population, and the degree of urbanisation.

In short, when we talk of an economy's structure we are referring to aspects which are in some sense basic, long-lasting and under-pinning more transitory aspects of economic life. By implication, structural variables are mostly rather deep-seated and normally change only rather gradually.

Although we do not yet have an adequate theory to describe the connections, it is well established, both historically and through cross-country studies, that there are a number of long-term regularities in the way an economy's structure changes as per capita incomes rise. There are other types of change to which the economy must also respond.

This Working Paper therefore explores the relationships between development and structural change, the causes of these connections and additional claims upon the adaptability of an economy. It turns then to elucidate the features that contribute to an economy's flexibility, as a preliminary to the discussion in Working Papers Nos. 32 and 33 of ways in which economic policy may promote this attribute. Finally, it turns briefly to set present-day discussions of 'structural adjustment policies' in the rather broader context provided here.

II. LONG-TERM STRUCTURAL TRENDS

II.1 The structure of production

Much of what we know about the relationships between economic growth and structure is derived from the work of Simon Kuznets. His work on the patterns of 'modern economic growth' in the now industrial countries - meaning growth from about the middle of the eighteenth century - generated a series of historical generalisations about changes that occur during the process of modernisation that remain generally valid today. Kuznets' historical observations are strongly consistent with cross-country observations of the differences between countries at various levels of per capita income, with which the name of Hollis Chenery is also particularly associated. Table 1 summarises the results of some of his work and illustrates a number of the generalisations about structural change which emerge from the work of both these writers.¹

Some of the chief regularities that have been observed are that:

- [a] The share of agriculture in both total output and employment diminishes continuously as per capita incomes rise.
- [b] The share of industry (mainly mining and manufacturing) in output and employment rises and, within that, the share of manufacturing rises relative to mining.
- [c] Manufacturing tends to start with relatively simple consumer goods, such as processed foods and clothing, gradually shifts to the production of heavy capital goods, proceeding finally to microelectronics and other hi-tech products.
- [d] There is also a trend for the service industries to grow in importance relative to GDP and total employment.
- [e] Large trade dependence - high ratios of imports and exports to GDP - also tends to diminish with per capita income. This is a result of the enlargement of the national economy as development proceeds, rather than being intrinsic to development per se, for there is a strong negative correlation between economy size and openness. Since a high proportion of ldc's (and almost all African countries) have small economies they therefore tend also to be heavily dependent on trade.²

¹ The reader wishing to pursue this literature further should consult Kuznets, 1965 and 1966; Chenery, 1979 and 1988; and Chenery et al., 1986.

² When measurements are adjusted for economy size, cross-country comparisons actually suggest that a country tends to increase its trade relative to GDP as incomes rise. This explains the statistics in line 11 of Table 1 showing larger exports relative to GDP at higher per capita income levels.

Table 1 Quantitative indicators of structural change in the process of economic development

Structural Indicator	Normal Value of Structural Indicator at per capita GDP level of:						Proportion of change completed by per capita GDP of:		Timing classification
	\$50 (1)	\$100 (2)	\$200 (3)	\$400 (4)	\$800 (5)	\$2,000 (6)	\$200 (7)	\$400 (8)	
1. Gross National Saving as percent of GNP	7.8	11.0	14.1	17.1	19.9	23.4	40	78	Early
2. Gross Domestic Investment as percent of GDP	12.7	14.8	17.1	19.4	21.8	25.2	35	73	Early
3. Capital inflow as percent of GDP	4.9	3.8	3.0	2.4	2.0	1.8	61	93	Early
4. Government revenue as percent of GDP	12.2	14.2	17.0	20.6	25.1	32.4	24	42	Late
5. Primary and secondary enrolment ratio	17.5	36.2	52.6	66.9	78.9	91.4	48	67	Early
6. Adult literacy ratio	15.3	36.5	55.2	71.5	85.4	100.0	47	66	Early
7. Food consumption as percent of total consumption	61.9	56.1	49.9	43.0	35.9	25.6	33	52	Neither
8. Gross product of primary sector as percent of GDP	58.1	46.4	36.0	26.7	18.6	9.8	46	65	Early
9. Gross product of industry sector as percent of GDP	7.3	13.5	19.6	25.5	31.4	38.9	39	58	Early
10. Gross product of service sector as percent of GDP	29.9	34.6	37.9	39.9	40.5	39.3	85	100	Early
11. Exports as percent of GDP	16.5	17.1	18.2	19.7	21.6	24.8	21	39	Late
12. Industry exports as percent of GDP	0.0	0.8	3.7	6.9	10.5	15.7	24	44	Late
13. Birth rate	46.6	41.8	36.6	31.1	25.3	17.1	34	53	Neither
14. Death rate	20.5	15.2	11.4	9.3	8.9	10.9	93	114	Early
15. Urban population as percent of total population	6.9	20.0	33.8	45.5	55.3	65.1	49	68	Early
16. Primary employment as percent of total employment	84.2	74.0	57.4	43.9	29.0	7.1	35	52	Neither
17. Industry employment as percent of total employment	6.5	9.9	15.3	23.4	31.1	40.5	26	50	Neither
18. Service employment as percent of total employment	19.5	21.8	27.3	32.7	40.0	52.4	24	40	Late

Source: Yotopoulos and Nugent, 1976 p.288, based on Chenery, H.B., H. Elkington and C.Sims (1970), "A Uniform Analysis of Development Patterns", Economic Development Report No. 148 (July), Project for Quantitative Research in Economic Development. Cambridge: Harvard Center for International Affairs, Table G, pp.42-43.

[f] Parallel with the changes in productive structure, the share of primary products in total exports diminishes as development proceeds. This is perhaps implicit in the figures in lines 11 and 12 of the table but is more directly illustrated by World Bank statistics for 1986 which show primary commodities to make up 68% of the exports of low-income countries, 41% of upper-middle-income countries and only 20% for industrial market economies.³ This feature of international trade in turn affects the rate of transformation of the domestic economy, for the decline of primary production in GDP is slower in countries whose commodity exports are large relative to total production.

Two qualifications are necessary here. First, although there is some tendency for manufacturing to go through the phases mentioned in paragraph [c] above, the tendency is quite weak statistically because of the influence of exports and import-substitution. The pattern of manufacturing within any one country will be strongly affected by any comparative advantage which that country may have established on world markets, and by domestic policies relating to protection and import-substitution.

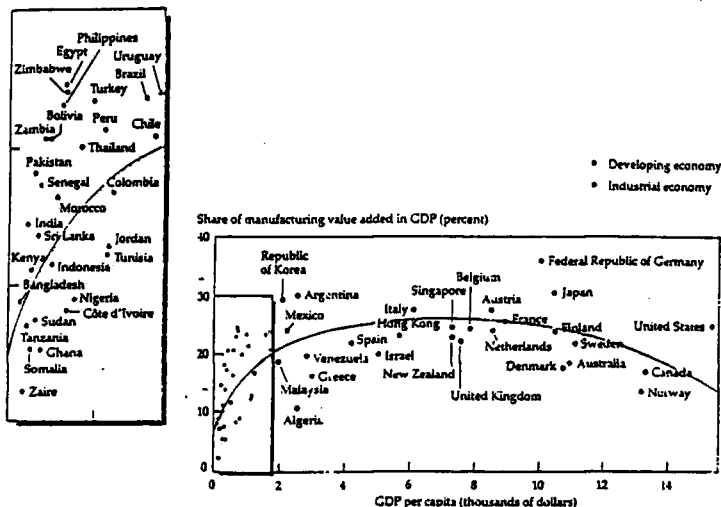
Second, there is in the late twentieth century some weakening of the tendency for the share of manufacturing to rise as incomes go up. A recent study by the World Bank suggests, in fact, an inverted-U relationship, with the share of manufacturing first rising then, after a per capita income of around \$8,000, falling. This is illustrated in Figure A. This study goes on to point out, however, that this result may be due, in part at least, to the classification as 'services' of a variety of activities associated with manufacturing which were formerly undertaken within manufacturing companies but are now contracted out to more specialised enterprises. In any case, among low-income countries Figure A reinforces the strong presumption that manufacturing will be of increasing importance as the economy develops.

What is implicit in these observed regularities is that growth is associated with a diversification of production. An increasingly wide range of manufactured products and services will augment a productive structure previously dominated by agriculture and, in some cases, mining. Specialisation will increase, in production and in distribution, as demands within the economy become more diverse. The same trends will be observed within agriculture itself. Output will become less dominated by the production of starchy foods and other basics, and resources will be shifted into the production of meat, horticultural and other 'luxury' foods, particularly to meet the needs of the towns as urbanisation proceeds. Also within the rural economy, off-farm activities of various kinds will become increasingly important as sources of income and employment, relative to income derived directly from farming.

Another approach to the analysis of changes in the structure of production during development is to classify output into tradeable and non-tradeable goods and services. Tradeables consist of all goods that do or can enter into trade as exports or imports; the domestic production of such goods therefore covers both exports and import substitutes. Non-tradeables consist of everything else. As a very rough approximation, tradeables can be thought of as largely made up of the total output of agriculture, mining and

³ From World Bank, World Development Report, 1988, Table 12. China and India excluded from low-income countries.

Figure A Relationship between GDP per capita and the share of manufacturing value added in GDP in selected economies, 1984



Source: World Bank, *World Development Report*, 1987, p.51

manufacturing, plus certain service industries such as tourism and shipping. Note that it is not necessary for a tradeable actually to be traded, it must merely be capable of being exported or imported. The most important non-tradeables are various government and other services, such as health, education, defence and domestic service.

This is a distinction of some importance for our study.⁴ As will be shown, balance of payments difficulties are the largest single motive for the adoption of adjustment policies in developing countries. Such adjustments almost certainly require the relative transfer of resources out of non-tradeable into tradeables - to boost exports and reduce import requirements. The ability to do so with reasonable speed is therefore an important attribute. At the same time, there is some evidence that the importance of tradeables in total output tends to diminish as development proceeds, chiefly as a result of the relative rise in services already noted.⁵

⁴ See Killick, 1986 pp.83-85, for a discussion of this distinction.

⁵ See Chenery *et al.*, 1986, especially Table 3-7. This shows an 8% increase in the share of non-tradeables in total value added between early and late stages of development, with a corresponding reduction in the share of tradeables.

It is the distinction between tradeable and non-tradeable goods that lies at the heart of the need for a separate theory of international trade, for it implies a difference between domestic and international markets. Transportability is the key quality. Non-tradeables are either not transportable by their intrinsic nature, or the cost of transporting them is so prohibitively high as effectively to preclude them from being traded between countries. Like many other distinctions, this one tends to break down on close examination, however. It is actually quite hard to think of a good or service which is not tradeable at all. Thus defence can be traded, as is illustrated by the use of mercenaries from other countries. Electric power is already traded between a number of adjoining countries. Education is traded, as evidenced by the large number of fee-paying students from developing countries studying in Western universities. And so on. Moreover, there are so many inter-sectoral linkages in a modern economy that the output of agriculture and industry will depend crucially on inputs from 'non-traded' sectors, thus further weakening the distinction. It is probably best to think of tradeability as a quality possessed by almost all outputs, but in varying degrees. So when we talk of shifting resources from non-tradeable to tradeables this should be interpreted as shifting from outputs which do not enter much into trade to those which make up the bulk of exports and imports.

In addition to those summarised above, generalisations can be made concerning financial development. This aspect has been examined by Raymond Goldsmith in a series of studies of relationships between the development of the financial and 'real' sectors of the economy. He too has employed both historical and cross-country methods. From these he has been able to establish another inverted-U relationship: that at the earlier stages of development the financial system grows substantially faster than both GDP and wealth before levelling off or declining beyond some level of per capita income. He uses a 'financial interrelations ratio' as a measure of this, defined as the ratio of the value of all financial instruments to the total value of wealth in the economy, and the following ratios illustrate the general pattern that he observed:⁶

<u>India</u>		<u>Japan</u>		<u>USA</u>	
1876-1913	0.15	1886-1913	0.62	1881-1912	0.77
1914-39	0.24	1914-40	1.41	1913-39	1.11
1951-75	0.39	1956-75	0.93	1940-55	1.18
				1956-75	0.92

Thus, all three countries revealed rising ratios in the earlier periods. This trend persists throughout in the case of India, a country with low per capita incomes, whereas the ratio declines in both Japan and the USA in the later years, when most modernisation had already been achieved. During the earlier stages, the value of agricultural land and livestock diminishes relative to the total value of all assets while bank deposits, holdings of government-issued debt and other financial claims increase their share. This process of 'financial deepening' starts with the commercial banks and the monetisation of economic activity. After a time, however, more specialised financial institutions - insurance companies, building societies, pension funds, savings banks, etc. - become of increasing importance and the financial

⁶ From Goldsmith, 1983.

sector thus experiences the diversification of output noted earlier for other parts of the productive structure.

II.2 Other trends

Aside from the regularities just described concerning the productive structure, there are others relevant to our purposes which should also be noted. First, and unsurprisingly, the ratio of domestic saving to GDP tends to rise with per capita income. At low levels of average income a high proportion of all income is consumed. This has a depressing effect on investment and hence on economic growth - what used to be called the poverty trap - but developing countries are generally able to augment their own saving by attracting finance from the rest of the world and are thus able to sustain higher investment levels. As incomes grow the savings ratio rises, the gap between saving and investment narrows and - in the general case - is finally reversed, so that the country ultimately becomes a net exporter of capital.⁷ Lines 1 to 3 of Table 1 show this trend at work, although it does not go far enough up the income scale to demonstrate the capital-exporting phase.

A related structural feature is the tendency for the availability of capital to rise relative to labour during the process of development. This is true both of inanimate capital - buildings, machines, the transport network, etc. - and of 'human capital', or the income-earning skills of the labour force. These capital:labour ratios are difficult to measure directly but one rough-and-ready proxy that is sometimes used for the employment of inanimate capital is energy use (although there is a large consumption element in that too). This is illustrated by the following 1986 statistics (expressed in kgs of oil equivalent), which show the industrial countries using nearly 60 times as much energy per head of the population as the low-income countries:⁸

Low-income economies	86
Lower-middle-income economies	346
Upper-middle-income economies	1527
Industrial market economies	4952

So far as human capital is concerned, the statistics in lines 5 and 6 of Table 1 give some proxy indicators of the spread of education and modern skills. Although these are only imperfect indicators, they do convey something of the rapid spread of modern knowledge during the course of development. Another feature that may be observed from the table (line 15) is the progressive urbanisation of the population, largely a result of the industrialisation noted earlier.

⁷ It is with this in mind that economists have referred to the heavy importations of capital by the USA in the 1980s as 'perverse'.

⁸ Figures are for 1986. India and China excluded from low-income countries. Source: as in footnote 1, Table 10.

III. EXPLAINING THE REGULARITIES

III.1 The sovereignty of the consumer

Our next task is to clarify the forces underlying the regularities we have observed above, particularly with respect to the productive structure. The preferences of the consumer provide the most obvious starting point. A now rather old-fashioned idea in economics is that the consumer is sovereign. This is a way of saying that, subject to technical and resource constraints, it is the preferences of consumers in the expenditure of their money incomes which ultimately determine what shall be produced. When there is a lively demand for a product consumers will be willing to pay a high price for it and this will induce supplies onto the market. The opposite will happen with a product which is no longer much desired. It is an old-fashioned idea because it over-simplifies reality, e.g. by ignoring the role of producers' advertising in manipulating demand, but it does go quite a long way towards providing an explanation for the long-run changes in productive structure noted earlier. It does so because there are observed regularities in patterns of demand which broadly match the shifts in the productive mix.

The best-known such regularity is expressed in Engel's Law. This states that the proportion of income spent on food diminishes as income increases, and is one of the most robust of empirical generalisations about economic life. It is reflected in line 7 of Table 1, which shows the share of food in total consumption to diminish steadily as per capita income rises. Given this, it is hardly surprising that there is also a long-run tendency for the share of agriculture to diminish in total output.

It is, moreover, possible to go beyond Engel's Law to offer a rather richer set of generalisations about consumption patterns. Various cross-country studies of consumption patterns reveal a remarkably universal pattern of consumer preferences, apparently valid across enormously varied economic and cultural differences⁹. Figure B sets out unweighted means of income elasticities of demand¹⁰ for various categories of consumption calculated from estimates for 30 countries on 1975 data. The countries varied from the very poor (India) to the very rich (the USA), and the use of unweighted means can be justified by the very limited dispersion of the country results around the means in Figure B.

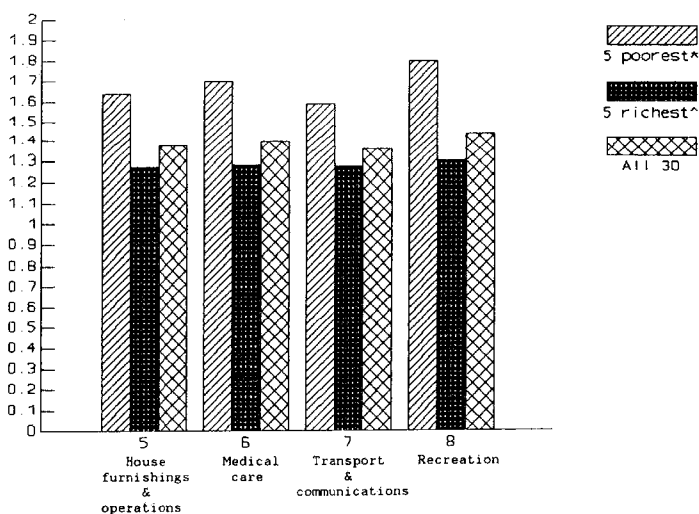
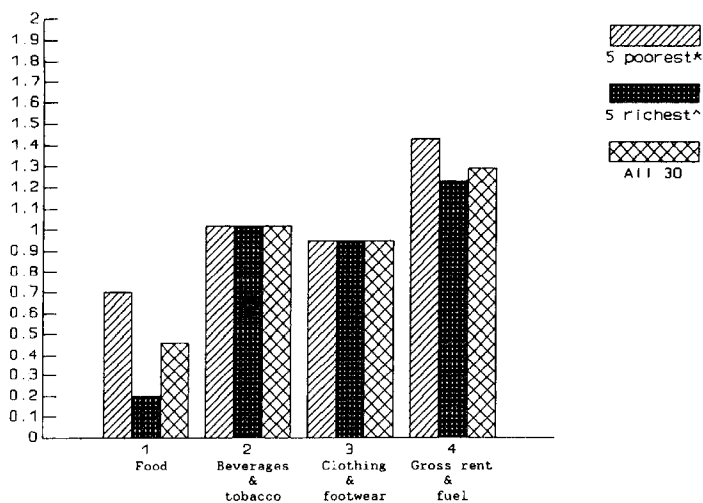
It will be seen from this that:

- [a] Engel's Law is confirmed, with an income elasticity for food of well below one. With a mean elasticity of 0.46, a 10% rise in income will induce less than a 5% rise in food expenditures.

⁹ For references on this see Clements, Suhm and Theil, 1979; Finke, Rosalsky and Theil, 1983; and Theil and Seale, 1987.

¹⁰ The income elasticity of demand measures the proportionate increase in demand for an item resulting from a given proportionate increase in income, holding all other variables constant. It is thus a measure of the sensitivity of the demand for an item to changes in income.

Figure B Mean income elasticities of demand for 30 countries, selected commodity groups, in 1975



Source: Finke, Rosalsky and Theil, 1983, Table 1.

Notes: * India, Pakistan, Sri Lanka, Philippines & Thailand;
 ^ Germany, France, Denmark, Luxembourg & USA.

- [b] The income elasticities for beverages and tobacco, clothing and footwear, and education are around unity, i.e. demand grows at about the same pace as income.
- [c] Housing (represented by 'gross rent and fuel'), household furnishings, medical care, transport and communications, and recreation all have income elasticities well above unity. Significantly, most of these items relate to the products of various service industries and this can be related to the long-run tendency for the share of services sector in GDP to grow. Unfortunately, the system of classification used does not bring out the general tendency for income elasticities for manufactured goods, taken together, also to have relatively large income elasticities.
- [d] Although the above generalisations are valid for the complete sample of countries, poor and rich, there are also some important differences between them. The income elasticity for food is much lower in wealthy countries than poor countries. The same tendency is true, in varying degrees, of housing, furniture, medical care, transport and communications, recreation and medical care. It may seem paradoxical that there are no examples recorded of an opposite tendency, for elasticities to rise with income. How can there be a general tendency for income elasticities to decline with income? The answer is that the income elasticity of household saving increases with income - a feature that can be related to the earlier observation of higher savings rates in rich countries than poor.

III.2 Other influences

Notwithstanding these regularities in demand patterns and their conformity to the shifts in the pattern of production noted earlier, statistically speaking they provide an only partial explanation of the relative rise of manufacturing and services, and the fall of the primary sectors. International trade patterns and policies provide a stronger explanation, for trade frees domestic producers of tradeables from the confines of the domestic market and the ability to import means that much demand is satisfied by production abroad. The explanatory power of trade is large partly because world trade has had a long-term tendency to grow faster than world output, as is shown by the following ratios of the growth of world trade relative to the growth of world GDP:

1960-70	1.56	1980-87	1.03
1970-79	1.51	1960-87	1.40

Paradoxically trade also provides an important negative explanation, for a country's pattern of industrialisation is also much affected by its policies and achievements in import substitution. With this the domestic economy expands to meet more of the demands of local consumers, as well as the demands of producers for capital goods for the expansion of productive capacity.

But while trade and the opportunities for specialisation within it do greatly loosen the ties between demand patterns and domestic production, in the end the demand patterns reassert themselves through their influence on world prices and the profitability of different categories of trade. Note the large differences in the rates of growth of world export volumes by commodity

group set out in Table 2. Although these are the joint outcome of technical, price and income changes, they do nonetheless conform to what would be expected on the basis of long-term trends in demand patterns. World trade in agricultural products is shown as expanding much less rapidly, and trade in metals and manufactures much more rapidly, than total world trade. Unfortunately, data on trade in services are less good and many services are essentially non-tradeable, but it is certainly the case that trade in services has become an important part of total commerce between nations. According to one estimate, world receipts in respect of service transactions in 1986 amounted to nearly \$1000 billion, equivalent to about half the value of merchandise trade.¹¹

**Table 2 Growth of world export volumes by commodity group
(percent p.a.)**

	<u>1965-73</u>	<u>1973-80</u>	<u>1980-87</u>	<u>1965-87</u> growth relative to all exports	
1. Food	5.0	6.6	2.4	4.7	0.89
2. Non-food agriculture	3.1	1.0	2.5	2.2	0.42
3. Metals and minerals	6.8	8.7	2.1	5.9	1.11
4. Fuels	8.6	0.0	-2.0	2.4	0.45
5. Manufactures	10.7	6.1	3.8	7.0	1.32
6. ALL EXPORTS	8.8	4.4	2.4	5.3	1.00

Source: Calculated from World Bank, World Development Report, 1988, Table A8.

Engel's Law and a similar tendency for other primary products to display small - and probably declining - income elasticities of world demand is, in fact, a grave problem for the countries with which this series of Working Papers is chiefly concerned, which are heavily dependent on primary product exports, as they are selling on markets with generally small income elasticities of demand.¹² It is healthier to specialise in items for which demand grows at least in line with income.

The increased diversity of demand and output, along with the influence of technical progress, have had the further effect of increasing the structural complexity of economies, the extent of inter-linkages between the various sectors of production and the increased use of intermediate goods within the economic system. Indeed, this increased demand by producers for intermediates has been found statistically to be an important reason for the relative growth of the industrial and some service sectors. Thus, both final and intermediate demand are important.

¹¹ See UNCTAD, 1988, chapter 11, box 12.

¹² See Bond, 1987, for estimates of income elasticities of demand for primary commodities.

There are other ways in which the variables traced in Table 1 interact with each other. We have already noticed from lines 1 and 2 of the table how saving and investment tend to rise proportionately to GNP as per capita income goes up, and the trend for inanimate and human capital to grow relative to unskilled labour. This too has implications for the productive structure, facilitating the development of activities that make intensive use of skilled labour and/or inanimate capital, and leading to a movement of resources out of traditional lines.

The growing availability of capital has implications too for a country's pattern of international trade. According to the standard trade theory, a country will have comparative advantage in goods requiring proportionately large inputs of factors of production which are in abundant supply (and therefore relatively cheap) within the economy.¹³ On the basis of this, a country might at the earliest stages of development be expected to export agricultural and other traditional products which require little capital and few modern skills, proceed to the export of the simpler types of manufactured consumer goods, on the basis of limited capital and plentiful semi-skilled labour, and then graduate to more sophisticated manufactured goods and services, which make heavy use of both physical capital and skills. Such a model is in line with the patterns of structural transformation observed earlier, and with the relative growth of industrial exports shown in line 12 of Table 1.

Another consequence of the increasing complexity and specialisation which marks the modern economy is the separation of the functions of saving and investing. In an economy dominated by small-scale agriculture, petty trade and other 'informal' enterprises, a large share of investment is undertaken directly by those who save for this purpose. As the demands of production grow more complex and require more capital, and as the saving capacities of other households grow with income, so there is an increasing need for banks and similar institutions to mediate between savers and investors. Hence the financial deepening recorded earlier as an aspect of economic growth, and the increasing diversity of financial institutions.

Overall, then, we see that economic structures alter radically in the course of development, responding to the opportunities - and warning signals - generated by changing patterns of demand by consumers and producers, evolving factor proportions and technologies, and shifting comparative advantages in trade. The key question that remains is whether these patterns are best regarded as more-or-less incidental and automatic outcomes of the development process or whether there is causality involved, running from structural change to development.

¹³ The reference here is to the well-known Heckscher-Ohlin theory. Although this has been subjected to a good deal of criticism as not explaining well the observed pattern of trade, the most thorough and sophisticated recent study of this concludes that it is possible to explain much trade by reference to the relative abundance of productive resources and that the theory "comes out looking rather well". See Leamer, 1984.

III.3 The question of causality

Lurking beneath this question is another: how do we perceive developing economies as working? In the neoclassical traditions of economists who stress the efficiency of market mechanisms structural change is better thought of as a consequence of growth, a gradual response brought about fairly smoothly through price signals, the mobility of factors between alternative uses and the ability of entrepreneurs to exert foresight and anticipate future needs in the search for maximum rates of return on their capital. After all, Engel's Law and such like are hardly secrets. The stress placed above on the power of final demand to determine shifts in the productive structure is consistent with this neoclassical view.

On the other hand, we have also drawn attention to the rather intimate interrelations between various aspects of structural transformation, which at least suggests that it will be difficult to disentangle cause from effect, and that it may be unwise to take too simple a view. We will also be referring later to features of developing economies which will stand in the way of smooth adaptation - imperfect information flows, dualistic markets, the influence of traditional value systems and social structures - creating bottlenecks and discouraging large responses to price incentives.

We have, moreover, already referred to the increased specialisation and diversification which is part of development and underlies the structural changes we have been examining. This specialisation further illustrates the difficulties of disentangling cause from effect as, while it might be seen as a more or less passive response to increasingly sophisticated demands by consumers and producers, specialisation has additional advantages. It permits greater exploitation of technical and managerial economies of scale and the development of purpose-designed equipment and skills, and generally creates larger benefits from learning-by-doing. It is precisely for reasons of this kind that trade has been seen as an 'engine of growth'. Depending on how important we believe such benefits to be, it becomes difficult to say whether production is responding to demand or demand is growing because of the benefits of specialisation.

So while much structural transformation doubtless is a more-or-less automatic response to changing demands and opportunities, it is also reasonable to believe that to some extent the causality runs in the opposite direction. Some changes, at least, can be thought of as 'enabling', as permitting and encouraging a rate of growth that otherwise would be frustrated.

Industrialisation belongs in the 'enabling' category, particularly if the alternative is seen as specialisation in agricultural production. Balance of payments considerations provide one reason for this. A country which tries to develop using agriculture as the leading sector must earn sufficient from its agricultural exports to meet through import the growing domestic demand for manufactures. It must do so, moreover, in the face of generally low world income elasticities of demand for agricultural products, leading as we have seen to only slowly expanding world demand and a declining share of agriculture in trade (Table 2). This is not an impossible task, and Australia and New Zealand are often cited as examples of countries which have successfully pursued such a path. In both of these, however, agriculture makes up only a modest part of total GDP (5% and 11% respectively in 1986) and manufacturing is much larger (17% and 24%). And even if this is not an

impossible development path, it is certainly a difficult one, as many struggling primary product exporting countries can attest.

In addition to the balance of payments case, manufacturing has recorded a superior ability to generate technological advances, to take advantage of the economies of scale which are such a feature of modern production economics, and to stimulate growth in other parts of the economy through its purchases of inputs and production of capital and intermediate goods.

None of these considerations is an argument for neglecting the primary sectors. For one thing, the well-being of agriculture and mining is likely to be crucial to the success of industrialisation. They will be supplying the raw materials for much of manufacturing; agriculture will also be a source of capital and labour; and, in countries where the bulk of the population still lives in rural communities, it will be the main source of domestic demand for the manufactured consumer goods being produced. And sluggish world demand notwithstanding, the performance of the mining and agricultural sectors is liable also to make a crucial difference to the availability of foreign exchange which manufacturing will need in the earlier stages of industrialisation, producing minerals and cash crops for export as well as foodstuffs that otherwise would have to be imported. The argument, then, is for a balanced expansion of the various sectors, not for a single-sector strategy. Moreover, the developmental advantages of manufacturing are likely to be reaped only if industry is efficient in international terms. They do not point towards a hot-house fostering of industry behind high protective barriers with scant regard to competitive efficiency.

A rising investment ratio may also be thought of as one of the 'enabling' aspects of structural transformation, including larger investments in human skills. In the sense that investment in productive capacity must precede output from that capacity, the causality must run from investment to growth, although it is also true that an expanding economy is likely to stimulate further investment. One of the advantages of economies with high investment rates is that they are better able to take advantage of technological advances, for much technology is 'embodied' in fixed or human capital. Quite apart from investments in factories, farms, wholesaling, retailing and the infrastructure, of at least equal importance are investments in education and training, and in the creation of research capacities. That development is investment-led is perhaps the least controversial of our 'enabling' changes, so long as we do not fall into the mistake of thinking that investment is the unique determinant of growth.¹⁴

Financial deepening is another of the structural changes which is best thought of as 'enabling' accelerated development. The financial system, and the money it creates, is unique in the extent to which it affects the rest of the economy, for money is the only product which trades against all other products; the interest rates which emanate from financial markets also have far-reaching effects on the economy as a whole [Shaw, 1973 p.3].

¹⁴ Some of the earlier literature on development, under the influence of the Harrod-Domar growth model or Rostow's historical model of development, tended to place undue stress on investment as the determinant of growth. As experience showed us that there was far more to it than that, so there has sometimes been a tendency for later writers to down-play investment too much.

There are a number of ways in which the development of the financial system may be expected to promote the expansion of the rest of the economy. By reducing risks and losses of liquidity and by offering a financial reward it will encourage saving. This, in turn, will encourage greater capital formation, as will the reduced risks and improved availability of capital in the quantities desired by intending investors. The same factors will also discourage capital flight - the exportation of domestic saving for investment overseas - and encourage inflows from the rest of the world. In addition to encouraging more saving, deepening may also attract into the financial system more of existing stocks of savings, held in hoards of cash, jewelry and other precious items, making it available for investment in the modern economy. And, if we agree that not everyone is equally equipped to put savings to productive use, it is likely to raise the average returns achieved from investment by providing a mechanism for making the savings of the many available for productive investment by entrepreneurs. Moreover, on the neoclassical model, a well-functioning capital market will ensure that investible resources will be put to the uses which promise the highest rates of return.

Some cautions are again in order, however. For one thing, there are well-known reasons why the workings of private markets may not maximise social rates of return, because of externalities, monopoly power and other conditions which drive wedges between private and social valuations. Another reason for caution is that the connections between financial deepening and the rest of the economy are complex, with various interactions, so that we need to be wary about imputing any one-way causality. Goldsmith's researches into the behaviour of the 'financial interrelations ratio', reported earlier (page 7), by no means indicate any rigid or simple relationship and he was very reticent about imputing causality. However, more recent econometric tests do provide some support for the view that causality runs from financial to 'real' development and that developing countries whose financial systems have been a leading sector in development have experienced more rapid growth than those with lagging financial systems.¹⁵ Interestingly, and consistent with the ratios on page 7, evidence was also found that beyond some level of income causality becomes reversed, with financial development becoming demand-led.

The trends described above place a premium on economies which have the flexibility to accommodate the structural transformations that accompany, and promote, long-run development. Before turning to explore how this flexibility might be promoted, however, there are additional reasons for placing value on this characteristic and it is to these we turn next.

¹⁵ See Jung, 1986. The references given in his article make up a valuable bibliography of the literature on this topic.

IV. COPING WITH THE UNEXPECTED

These additional reasons are often expressed in terms of the need for economies to adjust to 'shocks' of various kinds. We need to be careful about this language, however. A dictionary definition of a shock is 'a sudden and violent effect tending to impair the stability of something'. A number of the variables we discuss below fall well within such a definition but others do not. Some are more in the nature of trends. This is more than a quibble. If an economy is required to adjust to an adverse trend this necessity can be expected to persist over a period of years but, in most cases, will not involve very large changes in any one year. A shock, on the other hand, is likely to be more severe but of shorter duration.

IV.1 Influences from the outside world

In an increasingly interdependent world, developing countries cannot avoid being strongly influenced by what happens on the rest of the globe, particularly in the industrialised OECD countries. The pace of expansion of these economies strongly affects their demand (and tolerance) for imports from developing countries. Trends within the capital and foreign exchange markets of those countries, and on international markets, strongly influence the availability to developing countries of international capital, the terms upon which it can be provided and the degree of exchange rate stability that rules among the major currencies. A number of such influences have turned against developing countries in recent years, meaning that they must pursue their economic goals in a more hostile world environment. It is this, in particular, which has led to so much attention being paid to the need for 'adjustment' to these new realities by developing countries.

Table 3 brings together some of the evidence on these trends and on some of their effects. Line 1 records the growth rates of the industrial countries. We can see two things from this: [i] that growth in the 1980s has been a good deal slower than in the 1970s - 2.4% p.a. against 3.3% in the 1970s; [ii] that there have been large fluctuations around that trend in the 1980s, with a mean annual deviation of nearly 50%. The industrial world has been growing more slowly and in a less stable manner, and these facts have impinged strongly upon the developing regions. Moreover, the general opinion is that the faster growth of earlier periods is unlikely to be resumed. The reasons for this opinion are not always clear but if it is correct it has serious implications for developing countries.

The effect of these adverse developments has been magnified by a tendency during the same period for an even greater slow-down - as well as larger fluctuations - in the expansion of world trade (line 2), with trade in the 1980s, at 3.0% p.a., growing at less than half the rate of the 1970s. To put it another way, expansion in the OECD countries has become less potent as a stimulant to trade. One reason for this is a spread of protectionism by the industrial world. That there has been such a spread is widely acknowledged, although it is difficult to be precise because most of it has taken the form of a proliferation of 'non-tariff barriers' (NTBs), which are not readily amenable to quantification. It also seems highly likely that these NTBs have been applied in ways that discriminate against exports from developing countries. These chiefly affected manufactures but the high levels of

Table 3 External shocks in the 1980s - indicators for small low-income countries and sub-Saharan Africa^a

	Average 1970-79 (1)	1980 (2)	1981 (3)	1982 (4)	1983 (5)	1984 (6)	1985 (7)	1986 (8)	1987 (9)	Average 1980-87 (10)	Mean Annual Deviation (%) ^f (11)
1. GNP growth in industrial countries (% p.a.)	3.3	1.3	1.5	- 0.3	2.7	4.9	3.2	2.7	3.1	2.4	48.4
2. Growth in world trade volume (% p.a.)	6.2	1.2	1.0	- 2.3	2.9	8.8	2.9	4.6	4.9	3.0	77.5
3. Total capital flows (\$ bn) ^b											
a) small low-income countries	...	8.4	8.5	7.9	7.0	5.1	6.1	6.8	7.5	7.2	12.7
b) SSA	...	8.4	9.3	7.9	6.8	3.3	4.0	5.8	6.7	6.5	25.0
4. World real interest rates ^c , deflated by											
a) industrial country inflation rate	0.1 ^d	4.3	7.2	6.0	4.4	6.4	4.1	2.7	...	5.0 ^e	26.0 ^e
b) developing country export price changes	- 1.6 ^d	-23.0	12.0	18.0	17.0	12.0	13.0	- 5.0	...	6.0	117.0
5. Terms of trade changes (% p.a.)											
a) small low-income countries	10.1	1.5	-13.9	-11.0	8.9	9.7	-13.7	1.6	- 3.9	- 2.9	276.7
b) SSA	10.6	- 0.1	-17.9	- 8.5	8.0	5.1	- 8.7	3.4	- 2.3	- 2.9	237.1
6. Import volume changes (% p.a.)											
a) small low-income countries	2.0	3.5	- 3.2	0.7	- 2.7	5.9	1.8	- 2.5	2.3	0.7	378.6
b) SSA	3.3	5.5	- 0.1	- 4.1	- 8.0	- 1.1	0.1	- 2.9	0.7	- 1.4	204.5

Sources: Item 4: UN World Economic Survey, 1987, Table A.9, but with line 4(b) deflated by IMF index of developing country export unit values;
All other items: IMF, World Economic Outlook, April 1988, Statistical Appendix.

Notes: a) Sub-Saharan Africa (SSA) excludes Nigeria and South Africa;
b) Net external borrowings, as defined by IMF;
c) LIBOR;
d) 1975-79;
e) 1980-86
f) Mean annual deviations, 1980-87, from means in column (10), ignoring signs, expressed as percentage of mean in column (10).

agricultural protection also had an impact on commodity markets. According to UNCTAD, in 1987 NTBs affected nearly 25% of all imports by Western industrial countries of goods from developing countries, against 21% of imports from each other.¹⁶ Both proportions were higher than in 1981, although only marginally so in the case of NTBs against imports from developing countries. It is also likely that the greater volatility of major-currency exchange rates contributed to the dampened growth of world trade, by increasing costs and uncertainties and adding to protectionist pressures in industrial countries.¹⁷

The large movements in the price of petroleum since the early-1970s have been another major source of disturbance, and here the word 'shock' is wholly appropriate, for the major changes were both sudden and violent, as can be seen in Figure C. There was first a quadrupling in 1973-74. This was followed by a gradual decline in 'real' oil prices, i.e. when deflated by an index of manufactured good prices, before another major jump in 1979-81, when there was a further doubling. Finally, there was a major decline in 1985-86, leaving the real price at only about a third of the 1982 peak, but still two-and-a-half times the 1972 level. Not surprisingly, these swings had major implications for both oil importing and exporting countries. The second, 1979-81, shock hit oil importing ldc's particularly hard and many found a high proportion of their export earnings being used up by the cost of oil imports. They similarly were major beneficiaries of the subsequent oil price decline.

Figure C also shows a particularly steep decline in the real price of non-oil primary products on world markets during the 1980s. The slower growth among the OECD countries was probably the strongest influence on this but there were other factors too. As we noted in the previous section, structural changes are occurring in the patterns of industrial-country production and demand. These are tending to reduce their income-elasticity of demand for primary products, most notably Engel's Law and the shift away from industrial production in favour of the service sectors discussed earlier. Technological change is also tending to dampen demand in many cases, by reducing the primary material content of finished output. On the supply side, there was great balance of payments pressure on many exporting countries to expand export volumes and there were some more specific influences increasing supplies on various markets.¹⁸

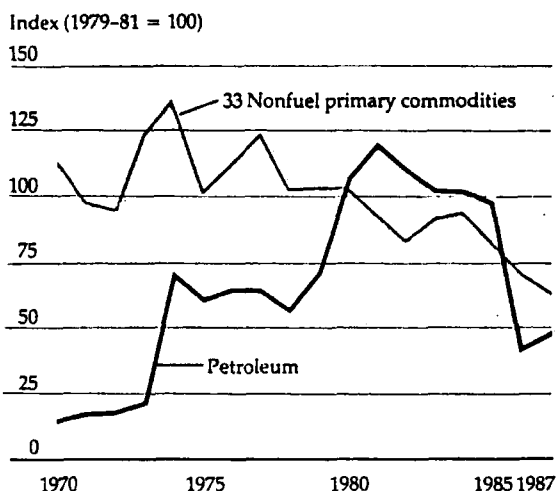
These developments on world commodity markets illustrate the danger of thinking in terms of 'shocks', however, for there is now rather wide recognition that there is a long-term trend for real commodity prices to fall. By 1987 these had fallen to their lowest point since at least the 1870s.

¹⁶ See UNCTAD, 1988, annex table 3. See also World Bank, World Development Report, 1987, Table 8.3. For a general survey of trends in protection since 1974 see Page, 1987.

¹⁷ See de Grauwe, 1988, who found that close to 20% of the observed slow-down in trade among industrial countries since the early-1970s could be attributed to increased exchange rate variability.

¹⁸ See ODI, 1988, for a succinct discussion of these and related developments. For fuller treatments see the special issue of World Development, May 1987; and MacBean and Nguyen, 1987.

Figure C Real commodity prices, 1970 to 1987



Note: Real prices are annual average nominal prices in dollars, deflated by the annual change in the manufacturing unit value index (MUV), a measure of the price of industrial country exports to developing countries.

Source: World Development Report, 1988, Figure 1.6.

They revived sharply in 1988 but, although the position varies greatly from commodity to commodity, a recent study concluded that during the twentieth century real non-oil commodity prices, taken together, have declined at a trend rate of 0.6% p.a.¹⁹

It is clear, then, that on the side of trade there have been many major changes in recent years, generally in the direction of making life harder for non-oil developing countries. There have also been adverse changes affecting the capital account. Item 3 in Table 3 records inflows of capital to small low-income ldc's and to African countries during the 1980s. We can see there the very substantial fall that occurred in 1981-84. In the case of sub-Saharan Africa this was by almost two-thirds during these years, although for both country groups there was then a substantial revival. The decline was, of course, a result of the 'debt crisis' that surfaced during 1982. Although severe, the impact of this on the countries which are the special interest of this series of Working Papers was smaller than for the Latin American and other countries which had been borrowing heavily from commercial banks. They

¹⁹ Grilli and Yang, 1988. For other recent contributions to this debate see Spraos, 1983; and Sapsford, 1985.

experienced a traumatic and more lasting decline in access to the world's savings.

In addition to the adverse trade developments just described, another factor which contributed to the debt crisis was the very large increase that occurred in world real interest rates during the 1980s, as recorded in item 4 of the table.²⁰ From having been negative or negligible in the 1970s, real interest rates rose steeply in the early-1980s, especially when deflated by changes in export prices, and were also highly variable year by year. This too was a 'shock', hitting hardest at those countries which owed large accumulations of variable-interest debt to commercial banks, and which unexpectedly found the real cost of their debt to have greatly increased. This was less the position of most small low-income and African countries, few of which had borrowed heavily on commercial terms, but it nevertheless still had an appreciable impact upon them.

Table 3 also records some of the consequences of the developments just described. Note first the contrast between the experiences in the terms of trade as between the 1970s, when they were on an improving trend, and the 1980s, when they deteriorated, with very similar results for both groups of countries. Given the large falls that occurred in petroleum prices in the mid-eighties, it is remarkable that this did not result in an improvement in the terms of trade for these countries, but declining commodity prices were more than enough to outweigh the favourable movement of oil prices. We should note too the particularly large year-to-year variability in the terms of trade, as shown by the column (11) statistics.

A further consequence of increased balance of payments difficulties in the 1980s has been that developing countries had to cut back on imports, often severely. This too is shown in the table, in item 6. In the case of small low-income countries taken together, the extent of the import compression was relatively moderate, but it nevertheless cut the import volume growth rate by almost two-thirds (compare the column (1) and (10) entries). Taking sub-Saharan Africa by itself, the cuts were more severe, with imports by 1987 well below their 1979 levels, especially if expressed in per capita terms. With this variable too the fluctuations around the trend were very large - a point of significance as we will see later.

An additional way of approaching this matter is to add up the combined effects of all the adverse developments described above. This has been done for sub-Saharan Africa, for which it has been estimated that the size of terms of trade losses, higher interest costs, reduced credit and private investment flows in 1980-86 amounted to \$6.5 billion p.a. even after allowing for

²⁰ A 'real' interest rate is one that has been adjusted for changes in the price level. Two alternative measures are given in the table. In principle, it would be preferable as a measure of the real cost of borrowing to deflate nominal interest rates by an index of the export prices of the borrowing countries. Line 4[b] does this. However, this procedure gives highly variable results. Line 4[a] deflates by a measure of inflation in industrial countries, which is less appropriate but which gives results that are better behaved.

enlarged aid grants.²¹ This was equivalent to nearly a half of export earnings and about a third of total imports. By any standards, these are very large magnitudes.

IV.2 Troubles at home

Quite apart from the influence of the world economy, there are also more domestic difficulties which are largely outside the control of economic policy-makers (although they are sometimes worsened by the actions of mankind) but with which their policies must cope. Climatic difficulties are the chief of these and these too can be divided into shocks and trends. Perhaps the most spectacular example of a country plagued by an unreliable climate is Bangladesh, chronically prone to floods and cyclones. Indeed, during 1960-81 Bangladesh experienced no less than 17 major floods and 37 cyclones, leading to a recorded loss of life of nearly 800,000 people, probably far more if the full facts could be known²² and culminating in especially devastating floods in 1988. The Sahelian zone of Africa is another region deeply affected by an unreliable climate, where average rainfall is not only slight but annual variability is 30% to 40% around the mean. This brings with it vulnerability to droughts, making farming something of a lottery, greatly increasing its riskiness. The famine that ravaged much of Africa in 1983-84 was a dramatisation of the unreliability of its rainfall.

It may have signified more than that, however. There is now a growing consensus among scientists that a gradual warming-up of the earth's atmosphere is under way - what is known as the 'hothouse' or 'greenhouse' effect.²³ The 1983-84 African drought was actually the culmination of 16 years of gradually diminishing mean rainfall in the Sahel, beginning in the late 1960s. Thus, rainfall statistics for Mali indicate a 25% decline in mean rainfall, comparing 1968-83 with 1934-68, from 774 millimetres a year to 577. The same trend is apparent in Senegal, Burkina Faso and Niger.

The hothouse effect, resulting principally from accumulations of carbon dioxide in the earth's atmosphere, may have dramatic effects on future rainfall patterns by changing flows of moisture-bearing air, even though it may affect average temperatures by only a few degrees. It seems probable that the earth's temperature may within the next 50 years be caused to rise by an average of 1.5° to 4.5° centigrade. Even a global warming of 1.5°C over so brief a period could alter the earth's climate to an extent outside the range of experience during the last 10,000 years! The rainfall implications of such developments are not yet fully understood but, for example, are thought to place the Sahelian zone particularly at risk.

²¹ UN, 1988 Table 4 and *passim*. In some respects the impact was even more severe on the heavily-indebted countries - see Selowky and van der Tak, 1986, who emphasise the long-term nature of any possible economic recovery by the heavily-indebted countries.

²² World Resources Institute *etc.*, 1986 Table 9.4. The following paragraphs are largely based on chapter 8 of this publication and on ODI, 1987.

²³ See, for example, Mintzer, 1987.

Awareness that the problem is not so much the familiar risk of occasional climatic shocks but rather a far more protracted deterioration is only gradually dawning, however, and the countries at risk remain poorly prepared to cope with a succession of bad years. Not the least of the dangers is that in such situations the affected peoples will, left to fend for themselves, be forced to destroy their own productive resources - cattle and trees - in their attempts to survive, thus creating a vicious circle. If indeed there is a hothouse effect it represents an enormous challenge to which policy-makers must respond.

Two other sources of domestic disturbance may be mentioned. One is organised violence, by which is meant civil and international wars, border incursions and the forcible overthrow of governments. The world is full of such events and they feed through to economic performance in many ways. An econometric study of sub-Saharan Africa found a highly significant negative correlation between the incidence of violence and economic growth, with causality running from violence to slower growth [Wheeler, 1984]. Clearly an invasion or a coup d'état is a 'shock', but since the government is itself a protagonist it strains the language to talk of the need to 'adjust' to such a shock, so we will not consider it further here.

What should also be mentioned, however, is that both organised violence and the climatic events mentioned earlier can result in major migrations of people, often across international boundaries, seeking peace and sustenance.

There are large populations of refugees in many countries. Africa has been described as 'the continent of refugees', with at least 2.5 million refugees scattered across many African countries. Pakistan, the Lebanon and Thailand are among other large-scale recipients. The need to care for these large, sometimes sudden, influxes amidst indigenous populations often already poor can also impose major economic strains, to say nothing of the political and security complications.

Some writers [e.g. Balassa, 1981 p.4] talk of "economic disruptions resulting from government policies" as an internal shock. There is no doubt that policy deficiencies can aggravate problems or cause new ones of their own but here again it seems artificial to talk of these as shocks. This is the main subject of Working Paper No. 32, where we consider ways in which policy can be changed from being part of the problem to part of the solution, and we defer this topic until then.

IV.3 The special importance of the foreign exchange constraint

The external shocks and trends described above feed themselves through to the domestic economy principally through their effects on the balance of payments. In addition, some of the climatic and other domestic shocks are liable to have adverse balance of payments implications, due for example to an increased need to import food. As a result of developments of the type summarised in Table 3, shortages of foreign exchange became acute for many developing countries during the 1980s, which is why they had to embark upon the import compression already described.

Because it is so important, it is worth spending a little time to consider how shortages of foreign exchange can act as a constraint upon economic progress. We will analyse this from two viewpoints.

The first of these focuses on the connections between imports and economic performance. In the type of economy on which this series of Working Papers is concentrating there are likely to be rather strong structural links between imports and output.²⁴ Probably the strongest of these will be with respect to **capital goods**. Small, low-income economies where much of GDP is derived from primary production are unlikely to have much capacity for the production of modern capital goods, nor are they likely to be able to create such a capacity at levels of efficiency even remotely close to international prices. So a high proportion of investment will depend upon the availability of foreign exchange for the importation of such goods, as also will much of the maintenance of the existing capital stock. To put it another way, there will be little substitutability between imports of capital goods and local products.

The position with regard to **raw materials and other intermediate inputs** is likely to be more complex - and more amenable to policy. It is the industrial sector, in particular, which is liable to depend upon imported inputs although, as a general proposition, industries are more likely to be competitive internationally if they are based upon local supplies. Past policies which fostered import substitution through indiscriminate protection from overseas competition and maintained over-valued exchange rates have commonly resulted in industrial sectors which depend almost entirely upon imported supplies, however. Particularly in the short- to medium-term, there are likely to be severe technical constraints on the extent to which it is possible to substitute locally-produced intermediate goods for imported ones; and, as with many capital goods, it would not be economic to produce locally some of industry's needs. These considerations thus also point to a strong connection between the abilities to import and produce, particularly in the shorter term. Over a longer period there are greater possibilities of introducing locally-produced alternatives.

Taking these two variables together, we might expect there to be strong correlations between imports and economic growth. However, other factors mitigate this connection. For one thing, much depends on the sectoral source of the growth. Agriculture and many service activities are fairly economical in their requirements for imported producer goods; it is manufacturing and other industrial activities which are particularly vulnerable. Moreover, and as already hinted, the relationship is not independent of policies. Exchange rate policy, for example, will make a key difference to the relative cost of imported and domestically produced supplies, as also might commercial and interest rate policies. Also, rising world prices will encourage a search for domestic substitutes. For the purposes of statistical testing, quantitative restrictions and fluctuations in inventory levels on imports may further weaken the relationship, as also may the choice of period for study.

As a result of such influences, econometric tests of the relationship between imports and growth, although finding the expected positive relationship, found other variables also to have important explanatory power, and that output

²⁴ See Mirakhor and Montiel, 1987, for a valuable discussion of this issue, from which the following paragraphs borrow heavily.

growth alone could only 'explain' a modest part of changes in imports.²⁵ However, three other types of connection may also be mentioned.

One relates to the **stability** of import volumes, for there is evidence that growth is adversely affected by import instability [Helleiner, 1986]. The reason why this might be so is not entirely clear, but presumably relates to the difficulties of production planning and of maintaining an even flow of output in the face of volatile supplies of imported producer goods.

A further connection may exist in the form of a type of vicious circle in which **import scarcity interacts with export performance**. This is really a special case of the import-output connections just discussed. In this case, imports are required as inputs into export activities. In conditions of import compression even the export sectors may not be able to maintain supplies and will hence be forced to reduce output. This, in turn, reduces foreign exchange earnings, leading to further import cuts, and so a vicious circle is under way. Khan and Knight, 1988, tested a model along these lines for a sample of 34 developing countries and found a large and highly significant correlation between export volumes and the availability of imported inputs. The obvious implication here is that it is self-defeating for governments to starve their exporters of needed imports and that high priority should be given to keeping them supplied. A further lesson is that IMF-style 'stabilisation' programmes that necessitate large reductions in imports are liable to be self-defeating.

The final connection relates to imports of **consumer goods**. In certain circumstances such imports can have productive value, by acting as incentives for effort and output. Where there is an acute scarcity of imports and these are rationed by quantitative restrictions the effect may not merely weaken the incentives of farmers and other workers to produce because there is "nothing to spend our money on"; it may in certain circumstances induce actual reductions in domestic output. Offered higher producer prices, farmers may reduce their output of cash crops because the fixed supply of desired imported consumer goods which are available can now be purchased from a smaller output.²⁶ The circumstances described are admittedly rather special but there is evidence that there was such a process in Tanzania and similar behaviour is widely regarded to have occurred in other import-starved countries, such as Ghana.²⁷

So-called two-gap models provide a more formal way of analysing the nature of a foreign exchange constraint. A crucial issue here is the ease with which resources, and demand, can be switched between tradeables and non-tradeables.

²⁵ See Mirakhor and Montiel, 1987, pp.78-81. See also Helleiner, 1986, who did not find any statistically significant relationship between GDP growth and changes in the share of imports to GDP in samples of low-income and African countries.

²⁶ See Bevan *et al.*, 1986 and 1987.

²⁷ Given the rather restricted circumstances in which we would expect imports to have a measurable incentive-goods effect, it is perhaps not surprising that Wheeler, 1984, did not find general econometric evidence of this, although he did call for more refined testing of this hypothesis.

Imagine first a flexible economy in which it is easy for demand to shift between domestically produced and imported goods, for producers to shift between the production of tradeable and non-tradeable goods and services, and in which the exchange rate moves freely in response to changes in the supply and demand for foreign currency. Imagine also that companies, households and the government find it relatively easy to switch between saving and consumption. Such an economy is unlikely ever to experience a foreign exchange constraint, except temporarily. If a balance of payments problem begins to emerge this will set in train income, monetary and exchange rate movements which will reduce the demand for imports and investment, and increase the incentives for the production of exports and import substitutes, and for saving. The balance of trade will be improved, the savings-investment gap will be narrowed and before long the payments situation will be back in equilibrium.

Now take the case of an economy with more rigid structures of production and demand, while retaining the assumption of an elastic supply of savings. If the balance of payments - and therefore the saving-investment gap - deteriorates, perhaps because of a sudden worsening in the terms of trade, it will be feasible to raise savings but it may not be possible to convert this into foreign exchange. It will be difficult to switch resources from non-tradeables to tradeables; foreign protection or depressed world demand might hamper export expansion, as might shortages of imported inputs. Import demand may be price inelastic, at least in the shorter term, because of the inability of domestic producers to supply local substitutes. In such a situation the payments problem will persist, even though there may be excess savings capacity in the economy.

It is this latter type of situation that is analysed in two-gap models.²⁸ It envisages either (*ex ante*) savings or the availability of foreign exchange to be the binding constraint on the growth of the economy. In the situation just described it is foreign exchange which holds back the economy. As a formal approach such models have gone out of fashion. They depend on some rather restrictive assumptions, for example about import requirements, the fixity of exchange rates and the productivity of investment. In practice, it is difficult to distinguish between saving and foreign exchange constraints and it is easy to mistake the former for the latter. Thus, while it seems obvious on casual observation that many African economies are being crucially held back by shortages of foreign exchange, it is also the case that saving in such economies has generally fallen to very low levels.²⁹ It is for reasons such as this that economists from the IMF are apt to trace balance of payments deficits to large budget deficits, *i.e.* to dis-saving by governments. Nevertheless, the two-gap model does offer a useful insight into the nature of the growth and payments problems of the poor, structurally rigid economies that we are concentrating on in this series of Working Papers.

²⁸ See Joshi, 1970, for an account and critical assessment of such models, together with the references in his bibliography.

²⁹ Note that the World Bank's World Development Report, 1988, Table 5, shows the gross domestic saving of low-income countries (other than China and India) to have fallen to only 7% of GDP by 1986, against 12% in 1965.

What emerges from the foregoing, then, is that the structural imbalances, shocks and adverse trends discussed earlier are likely to place particularly large burdens on a country's balance of payments and that this, in turn, will hamper future growth and development. When, in succeeding Working Papers, we consider policies to adapt the economy to changing conditions, therefore, measures directed at the balance of payments will receive much attention. Next we briefly describe the experiences of three countries to provide more concrete illustrations of the difficulties analysed above.

IV.4 Three country illustrations

. **External shocks for Malawi**³⁰

During the 1970s Malawi was regarded as an African success story. Per capita income grew rapidly, buoyed by a strong agricultural export performance. The balance of payments was strong, with modest current account deficits comfortably covered by capital inflows. The 'second oil shock' of 1979-80 changed all that, however. During those years import prices rose by an average of 54% and the balance of payments deteriorated sharply despite a two-thirds expansion in the quantity of exports in the three years to 1981 and a policy of maintaining a competitive exchange rate. By 1986 the country's terms of trade were 40% worse than in 1978. The increased need to finance payments deficits and rising world interest rates caused a rapid growth in the cost of external debt servicing, which doubled from under 13% of exports in 1973-78 to nearly 25% in 1979-84, and was as high as 40% in the latter year.

For a time the problems were compounded by a drought and subsequent crop failure and the position was also made worse by South Africa's destabilisation policies in the region. As a landlocked country, Malawi had traditionally moved almost all its imports and exports by rail through Mozambique. Since disruption of this rail link by the South African-backed Mozambique National Resistance Movement Malawi has been forced to divert traffic to other routes. The economic cost of this is estimated to be at least \$50 million p.a. - equivalent to about a fifth of the value of exports. There has also been an influx of refugees from Mozambique, imposing further economic costs.

Associated with the deterioration in the balance of payments was a severe economic recession. Having grown at over 3% a year in 1965-80, per capita income has since fallen back by nearly 1% a year. Both saving and investment ratios have fallen, and the government has been forced to impose severe import cuts.

. **Bolivia: the perils of commodity concentration**³¹

Bolivia was another country which experienced a boom in the 1970s, funded mainly by foreign borrowing but rooted in favourable world markets for its exports. Tin made up over half of total exports in the early-1970s but natural gas became important during that decade and surpassed tin as a source

³⁰ See Kydd, 1988, and works cited there.

³¹ See annual reports on Economic and Social Progress in Latin America by the Inter-American Development Bank, Washington.

of export earnings in the early-1980s. By 1985 these two products made up 90% of all exports.

In the belief that past loans had not been wisely invested, international lenders became increasingly reluctant to extend new credits at the beginning of the 1980s, and at the same time world tin prices began to weaken. The value of Bolivia's tin exports fell by 46% in 1981-85 and although this decline was partly offset by the emergence of natural gas as a major export the high cost and physical difficulties of piping this from a landlocked country to an Argentinian port imposed limits.

Thus by 1985 the economy was already in decline, with a large debt servicing problem, major reductions in imports, four-digit inflation, rising unemployment and severe reductions in average incomes. In 1986 a large further external shock was heaped onto this misery and mismanagement: a decline in realised tin prices from an index of 71 in 1985 (1980 = 100) to 34 in 1986, with only a slight recovery in the following year. The price of natural gas also plummeted in 1985-87, by nearly two-fifths. Not surprisingly, this combination led to huge increases in the balance of payments deficit, with all the consequences that was bound to have for the domestic economy. By 1986 per capita income was 25% down on the 1981 level.

Without doubt, these problems have been compounded by past domestic mismanagement in Bolivia, although important policy reforms were introduced in the latter part of the decade, but its heavy dependence on exceptionally volatile world markets which became generally weak in the mid-1980s has also imposed a considerable cost in recent years.

• Climatic and other shocks in the Sudan³²

Although some have seen a potential for Sudan to become 'the bread-basket of the Middle-East', and agriculture dominates as a source both of livelihood for four-fifths of its population and of over nine-tenths of export earnings, the country has experienced acute agricultural difficulties in recent years. There was a prolonged drought in 1981-85, when half the population was affected by famine. It is estimated that, in value terms, between 60% and 65% of the country's livestock perished in this period. This resulted in large-scale unemployment, displacements and mass movements of people in search of new sources of livelihood.

The effects of this natural catastrophe were multiplied by the civil war in the country, forcing the national government to devote large resources it could ill afford to fight a secessionist movement in the south. In addition to large numbers of southern Sudanese fleeing the civil war, the government had to cope with the influx of an estimated 1.5 million refugees from wars and famines in neighbouring countries, and to do so with an extremely weak system of transport and communications. A coup in 1985 added further to the disruption and uncertainties, although it replaced a government which had become notoriously unable to cope with the economic and social problems confronting it. Then, to cap it all, in 1988 there was abnormal rainfall, resulting in extensive flooding, leaving many thousands homeless and causing much disease and death.

³² Culled from various sources, including Ati, 1988.

SURVIVING FAVOURABLE SHOCKS

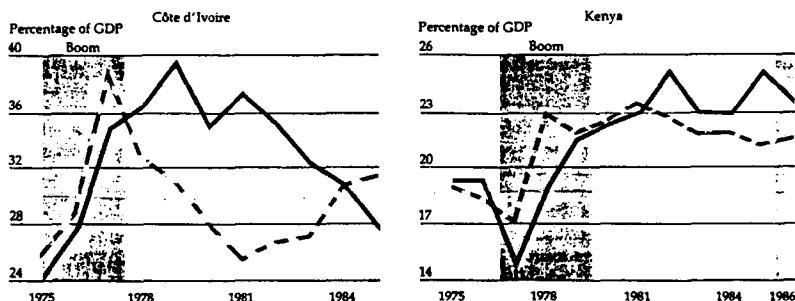
Not all shocks are adverse. Good weather can bring bumper harvests. World interest rates can go down as well as up. Commodity prices can boom as well as slump. But economies and policies ought to react to these favourable changes no less than to the adverse ones - and failure to do so can turn the good news into an unwanted gift.

Take the example of an unexpected but temporary increase in the world price of a country's chief commodity export, such as the boom in coffee prices in the latter 1970s.³² Such a development will commonly raise tax revenues, either directly, as in the case of export taxes, or indirectly, as a result of the higher level of economic activity which the commodity boom will generate. Faced with an unexpected bonus of larger revenues the government will be tempted to step up its own spending, by raising civil service salaries, expanding various activities, or starting new capital projects. The larger export earnings will increase the liquidity of the banking system and enable them to expand their lending to domestic borrowers. There may also be increased willingness by foreign banks to provide new credits, increasing external indebtedness.

Increased spending in both the public and private sectors will suck in additional imports, weakening the beneficial effects to the balance of payments of the higher export prices and putting pressure on the price level, and these effects may be magnified by a diversion of resources out of other exports and goods for the home market in response to the higher commodity price.

When the boom ends and commodity prices go back down again the government and private sectors alike will find it much harder to cut back than it was to expand. As Figure D illustrates for Côte d'Ivoire and Kenya, any cut in government spending will likely lag well behind the declines in revenue, leaving it with an enlarged budget deficit that will threaten both inflation and the balance of payments. Moreover, experience suggests that the new projects which were quickly embarked upon during the boom will often not have been carefully considered and will do little for economic development. It is likely also that the monetary authorities will have difficulty in cutting back adequately on credit to private borrowers, thus further adding to excess demand in the economy. In the worst case - of which there are examples - the economy ends up in a weaker state than it was at the beginning of the boom. Without careful management - to neutralise much of the expansionary fiscal, monetary and income effects and husband the windfall gains for use when world prices slump - 'favourable' shocks can be bad news!

Figure D Government revenues and expenditures during commodity booms



Note: Both revenues and expenditures exclude transfers, so their difference is not equal to an overall public sector balance. Figures for Kenya are for central government only.

Source: World Development Report, 1988, Figure 3.6.

³² For fuller discussions of this topic see World Bank, 1988, p.71-74; Garcia and Llamas, 1988; and Killick, 1984, pp.260-61.

IV.5 Recapitulation

Let us recapitulate. We have explored a number of reasons for regarding the flexibility of economies - and policies - as an important attribute. We have shown that major structural change is intrinsic to long-run economic development. The pattern of this change is powerfully influenced by worldwide regularities in consumer preferences, by technological and other influences on the side of supply and by the composition of international trade. This suggests that an economy with a flexible structure, which can more readily adjust to the changing needs of the time, is liable to achieve faster development. Conversely, an economy with a rigid structure, incapable of meeting new needs, can expect retarded development, with disjunctures between demand and supply creating bottlenecks and balance of payments strains, inflationary pressures and other economic dislocations.

These observations are born out by econometric tests of correlation between the growth of an economy and its 'balance', *i.e.* its ability to grow in conformity to income elasticities of demand. These show a consistent and uniform negative correlation between unbalance and growth, and also that the more advanced economies have tended in the past to grow in a roughly balanced manner³³. We furthermore suggested that some kinds of structural change are of particular importance, enabling more rapid progress elsewhere in the economy. These included industrialisation, financial deepening, high levels of human and fixed capital formation, and political modernisation. Structural rigidity, then, is bad for development, flexibility a plus.

We then turned to consider other reasons for valuing this attribute. These are often expressed in terms of various external and domestic shocks, such as sudden changes in world prices and capital market conditions, and natural disasters. However, we have also pointed out the existence of a variety of longer-lasting trends to which adjustment is also necessary, including long-term adverse trends in the markets for primary commodities, a possible long-term slowing-down in the growth of the OECD economies, and the adverse consequences of a warming-up of the world's atmosphere. Our country illustrations have shown just how severe the effects of these various factors can be.

These considerations thus constitute further reasons for placing a premium on the flexibility of an economy and of the policies which influence that. Taken together, the various arguments create a powerful *prima facie* expectation that countries blessed with such adaptability will be much better able to satisfy the material aspirations of their citizens than those which are not. But what actually are the determinants of economic flexibility? To clarify this is our next step. This has not been one of the traditional questions in economics, however, and so our search for an answer must be rather tentative.

V. THE ADAPTIVE ECONOMY

Expressed in its broadest terms, an adaptive economy is one in which ends and means are readily adjusted to changing constraints and opportunities. This includes flexibility in the institutional base of the socio-economic system, as well as flexibility by the government in adapting policies to changing conditions. It implies an economy in which there is a relatively frictionless and costless movement of resources among alternative employments, leading to changing factor proportions, technologies and composition of output. On the side of demand, it implies responsiveness to changing relative scarcities, and comparative ease of substitution in the disposition of income as between consumption and saving.

The extent to which an economy possesses adaptability of this type depends, in turn, on two sets of conditions. First, there must be efficient informational and incentive systems. There have to be adequate data on changes in economic conditions to which the economy must adapt and there also has to be a way of giving people incentives to bring about those changes which the data indicate to be desirable. Given the information and incentives, the second set of conditions relates to the reactions of people to these stimuli, their responsiveness to economic signals. We will discuss these two sets of conditions in that order.

V.1 Information and incentives

Even the least developed economy is complex, with many linkages between its various parts. A huge number of decisions has to be taken - about how incomes should be used, what should be produced and in what quantities, about investment, employment, and so on. In addition, these decisions must somehow be co-ordinated, so that the preferences of purchasers and sellers are made consistent, and human needs and economic aspirations can be satisfied. In theory, there are two chief alternative ways of achieving this co-ordination: through the market mechanism or through planning, although in practice it is always through some combination of the two.

Starting with the market mechanism, a market may be said to exist when there are buyers and sellers for some commodity or service who are in sufficiently close touch with each other to be aware of, and affected by, the actions of the rest. The market price will be the outcome of the interacting preferences of buyers and sellers, who will respond to the positive and negative incentives offered them by prices. Of particular interest for our purposes, however, is that markets may also be viewed as means of processing very large amounts of information about the preferences of buyers and sellers, disseminating this in the form of price signals.

There should be such a market for every good and service. These markets will be influenced by each other and will thus constitute an interdependent network. Such a network is called 'the price system' or a 'market economy'. Its distinguishing features are a high degree of decentralisation of decision-making through the impersonal workings of myriad markets, in which enterprises and persons pursue their own interests by responding to the incentive signals of market prices and in which the interactions between markets can be thought

of as a mechanism of co-ordination. In a pure market economy, the role of the state is restricted to providing the framework of law and order essential if markets are to work efficiently, and of intervening to ensure that the system works as it ought.

A centrally planned economy stands at the opposite end of the spectrum, for it is characterised by a high degree of centralisation, with decision-making powers concentrated in the planning authorities of the state. Planners receive and process information about the economy and take the most important decisions. It is they who play the co-ordination role but this is achieved through the conscious exercise of forethought rather than through the 'invisible hand' of the market. Individuals have a more restricted role, with their freedom of choice subordinated to planning decisions.

There is, of course, much long-standing controversy about the relative merits of market and planned economies, although in practice the choices are about the balance that should be struck between market and non-market mechanisms, not about pure forms. We cannot go into the relative merits of alternative systems here but what can be said is that there has been a clear shift in professional opinion during the last two decades. Economists now tend to place greater emphasis on the efficiency of market mechanisms and stress the sometimes high costs of planning and other forms of state intervention.³⁴

Politicians have moved in the same direction, either as part of the 'conservative revolution' that has been a feature of the 1980s or - as in some socialist countries - as a pragmatic response to revealed weaknesses. There is also a greater tendency for planning and other state interventions to be designed to work through market processes, rather than in opposition to them, if only because market forces have a way of successfully asserting themselves against the wishes of planners.

In practice, most countries have 'mixed' economies, in which most production is undertaken in the private sector and the basic allocative mechanism is a market system, modified in greater or lesser degree by government 'interventions'. In what follows we will take the mixed economy case. But however the balance is struck between the market and the state we should note the importance of adequate information flows. The adaptive economy needs good intelligence: about changing conditions in world trade and finance; about developments within the domestic economy; about scientific matters, e.g. as they bear upon technological progress and climatic changes; and about how these and other variables interact with each other.

This sounds so obvious that it can be taken for granted, but in many countries economic data are still sparse, unreliable and out-of-date. In such circumstances neither private nor government decision-makers can operate efficiently. Thus, not a few governments have lurched into a debt problem simply because they did not know the rate at which debts were being accumulated; businessmen have over-invested because they did not know about investments elsewhere; governments and their citizens have experienced famines because 'early warning' information systems were not in place. There are, moreover, reasons why it cannot be assumed that market incentives will throw up necessary information, or make it available to all who need it. Governments everywhere thus include information-gathering as among their

³⁴ The relevant literature is surveyed in Killick, 1988.

tasks. There is little controversy about the desirability of this but in developing countries data flow often remains woefully inadequate. Flexibility is bound to be limited in the face of severely limited knowledge of the changes in circumstance to which the economy must adapt.

Information is not enough, however. It must then be fed into decision systems and translated into rewards and penalties that will induce appropriate responses. It is here that markets generally excel. Their decentralised nature, their ability to translate information into price incentives and to co-ordinate a huge number of individual decisions through an interacting network of markets are usually well in advance of what central planners can hope to achieve. Quite apart from the huge volume of information that planners need to be able to receive and absorb, one problem is that controls often create incentives for misinformation. State enterprises exaggerate their output or efficiency in order to secure larger allocations of supplies. Private firms exaggerate their costs in order to persuade the government to raise controlled prices. Exporters understate the value of their sales in order to retain some of the foreign exchange they earn. Borrowers mis-state the uses for which they require a loan to get access to funds earmarked by government policy for other uses. And so on.

In short, a well-functioning market system is conducive to economic flexibility when compared with one dominated by planning and controls. The key expression, however, is "well-functioning", for there are many factors which prevent markets from achieving maximum efficiency, particularly when viewed from a social viewpoint. It is the existence of such market failures which constitutes the case for state intervention in a mixed economy, always assuming that the costs of the interventions are smaller than the benefits produced. We return to this topic of market failure shortly.

V.2 Responsiveness

Turning now to consider the responsiveness of economic agents to information and incentives, it is useful to consider two related aspects: receptivity to change; and demand and supply elasticities.

[i] Receptivity to change

The influence of tradition provides a natural starting point. The adaptive economy requires a population which is receptive to change and is marked by willingness to take action to maximise whatever material benefits may be derived from changing conditions (or to minimise the costs). This implies an individualistic welfare-maximising approach, and mobility in pursuit of this objective. These attributes may clash with traditional values, which often place more stress on the value of collective well-being and erect a number of obstacles to mobility.

The pursuit of economic self-improvement, for example, requires some faith that advancement will be on the basis of personal ability and effort. Traditional values may undermine such faith. Promotion may be more on the basis of seniority, or family, or caste. An attribute of a wide range of traditional societies is that they deny equality of opportunity to women, discouraging the education and weakening the economic incentives of over half the population. Equality of opportunity is often also denied on ethnic grounds, where a dominant tribe or race holds down the progress of others and gives preferment to its own members.

Traditional values may also be opposed to the self-regarding pursuit of material well-being. Extended family obligations, for instance, may weaken incentives, when a person may believe that there is little use in trying to improve his lot because the benefits will have to be shared among numerous, more-or-less distant, relatives. There may be similar traditional influences standing in the way of, or weakening the incentives for, public servants adopting the role orientation necessary for the efficient conduct of their duties. In short, traditional values may be at odds with the 'modernisation' of outlook which is necessary for the adaptive economy.

Education is of key importance in this context, both in its extent and its quality. The educated person will understand more of his or her environment and how he or she can influence and take advantage of it. He or she will be more knowledgeable about changing opportunities and more self-confident of being able to take advantage of them. It is from the well-educated that any upwardly-mobile middle class with capitalistic values is most likely to be created and it is from this group that most Western-style modernisation is likely to originate. It is they who may then come to serve as exemplars to the rest of the population, an implicit invitation for them also to shed the influence of tradition.

Religion is another potent force. Perhaps the key question here is what a religion teaches concerning man's relationship to his environment. Some faiths see man's fate as predetermined by God's will and acceptance of poverty in this world as a mere prelude to a better life to come in the next. Such is not a faith that is likely to encourage enterprising self-help in response to a changing environment. Passive fatalism is a more likely result, dulling responsiveness to economic challenges. The Buddhist and Hindu religions are perhaps most often associated with such teachings. Conversely, the Christian and Jewish faiths are viewed as emphasising the individual's responsibility for his actions and well-being, with the 'Protestant ethic' sometimes particularly associated with capitalistic values. The Islamic faith is given an intermediate ranking.

More generally, religion is often seen as a conservative force, a protector of traditional values, resistant to modernisation and materialism. Some religions have placed limited value on secular education; many have resisted scientific explanations of the world's workings as conflicting with religious teachings. The validity and influence of such considerations remains highly controversial, of course, not least because of large differences within all the main religions, and the sensitivity of this topic becomes immediately obvious as soon as one begins to mention particular faiths.

None of the above is intended to denigrate the influences of tradition and religion. The individualistic pursuit of maximum self-welfare that lies at the heart of the capitalist economy does not necessarily represent man's most elevated social or moral state. Moreover, some reject the 'modernisation' model of development that is implicit in the above. Our task here is not to argue the pros and cons of these viewpoints but the much narrower one of clarifying the nature of an adaptive economy. Similarly, our remarks on the influence of tradition should not be interpreted as suggesting that there are major societies which are unresponsive to material incentives. The evidence provides few such examples, indicating rather that 'economic man' populates all countries. The negative influences we have been referring to are best viewed as dulling responses, reducing elasticities, not usually as giving rise to 'perverse' responses.

The supply of entrepreneurship is another important influence on responsiveness to change. The most important characteristics of an entrepreneur for our present purposes is that he or she thinks ahead, takes an active interest in information about economic trends, looks for opportunities, moves quickly in order to be a step ahead of competitors, tries to anticipate future opportunities, is willing to take risks, to innovate, to embrace the unfamiliar. An economy with an ample supply of such dynamic characters should be a flexible one.

Unfortunately, enterprise of this kind is unevenly distributed within and across peoples. There is no assurance that there will be an adequate supply of this quality in an economy and there can result what has been called a 'creative' market failure, a failure to invest and innovate on an adequate scale.³⁵

Even more unfortunately, we understand little about the determinants of the supply of entrepreneurship, even less about how it may be encouraged by economic policy. The issue has strong links with the above discussion of the determinants of public attitudes towards change. Societies which value individuality and award status to the prosperous apparently provide an environment more conducive to the flowering of enterprise. Societies which are culturally rich are perhaps more likely to engender the self-confidence that the entrepreneur must possess. But it may be that entrepreneurship is rather a response of disadvantaged groups, those denied status by society at large, who cannot expect normal preferment to push them up the ladder [Hagen, 1962]. On this view, we would expect entrepreneurial groups to emerge particularly from minorities of various kinds, including immigrants. The important role of the Indian and Lebanese communities in commerce and manufacturing in Africa and the South Pacific is an example, as are the Chinese in South-east Asia.

An economy's maturity will be a further, negative, influence on an economy's receptivity to change. There is an analogy here with human beings. Beyond a certain age people tend to become more set in the old ways, more resistant to change, less adaptable. Flexibility is an attribute of youth. We need to be wary of simple biological analogies in economics but there is some logic to this one. The chief point here relates to the age-structure of the stock of physical capital and the technologies embodied in it. A mature economy, as we saw earlier, will be relatively capital-intensive. The volume of new investment will be small relative to the existing capital stock and that stock will hence tend to be relatively old. It is for this type of reason that it is reckoned to have been an advantage of the German and Japanese economies that much of their capital stock was destroyed during World War II, giving them today a more modern infrastructure than some of their European and North American competitors.

Conversely, an economy at an early stage of development will be adding to its capital at a faster rate and, at least in principle, will be in a better position both to alter the disposition of capital across activities and to incorporate technological advances. There are, of course, major

³⁵ Kaldor, 1972, as discussed in Arndt, 1988.

disadvantages to set against this, but it is as well to remind ourselves that low-income countries do possess some advantages.³⁶

Plunging yet further into the quicksands of amateur sociology, we come next to a variety of factors that influence receptivity to change and which relate to the nature and actions of governments. The influence of political systems was among the issues explored by Kuznets (1966, pp.445-53) in the 1960s. Comparing the political structures of developing and developed countries he saw the latter as unstable, ineffectual and ambiguous about the merits of modernisation; less representative, less tolerant of interest groups, with power more concentrated and more personalised. Kuznets noted that modern economic growth was achieved in the nineteenth and twentieth centuries by countries which by the 1960s had political structures quite different from those then prevailing in developing countries. But he went beyond that to suggest that the characteristics just noted constitute formidable obstacles to economic growth in many developing countries: "Political instability and nonrepresentativeness of the regimes, combined with an authoritarian structure dominated by personalist leaders and backed by familial and ethnic ties and the police, are hardly favourable conditions for economic growth" [p.453]. The influence of traditional values on governments and their resulting ambiguity about the desirability of modernisation observed by Kuznets is a situation which has been illustrated in the 1980s by the spread of an Islamic fundamentalism which appears to reject much of the modernisation model.

Of course, far from all developing countries have political systems with the characteristics mentioned above. Much has happened since the 1960s, particularly in Latin America. Moreover, there is no suggestion that there is some simple, mechanistic connection running from political modernisation to economic development. Indeed, economic development is itself likely to generate increasing pressures for political democratisation. Nevertheless, there are enough resonances between Kuznets' observations and the contemporary scene in Africa and elsewhere for us to take his comments seriously, and enough developing countries have experienced adjustment difficulties that emanate from the political system for his warning to be underlined.³⁷

Even if there is in power a modernising government which values flexibility that is far from being the end of the matter. Another factor bearing upon its ability to encourage adaptability will be the government's strength relative to other centres of power. Many developing societies are fragmented, with power widely dispersed and limited social cohesion. Various groups will be forces to be reckoned with, even by apparently authoritarian governments. In the general case, special interest groups are conservative, resistant to change, defensive of existing privileges of their constituents, whether they represent employers, organised labour, landowners or whatever. To bring about economic adaptation governments are likely to have to persuade such groups to accept change or to enforce it against their wishes, but they may not have the power to achieve the latter. A result of a fragmented society is that the state will tend to be 'soft', by which is meant a

³⁶ On this subject see Kuznets, 1965 pp. 186-90.

³⁷ See Sandbrook, 1986, for an exploration along these lines applied to sub-Saharan Africa, examining the implications of 'patrimonial' government for economic management.

situation in which policies decided upon are often not enforced and the authorities are reluctant to place obligations upon their citizens, including the obligation to pay due taxes.

This issue of the power of government vis a vis traditional centres of influence and special interest groups is of particular importance because adjustment to the type of economic shocks described in the previous section involve tough decisions and substantial costs.³⁸ Given the inevitably painful and costly nature of adjustment, at least in the short term, the politics of adjustment are liable to confront the government with the interests of important groups, not the least of which will be its own bureaucracy. Adjustment policies are then only likely to prevail if the government can successfully evade such confrontation or assert its authority.

This consideration has led some observers to suggest that successful adjustment requires strong, authoritarian governments but this should be tempered by the consideration that the power of a government to implement and gain acceptance of its policies will be strongly influenced by what political scientists call its 'legitimacy' - a belief by the general public that it has a proper claim to exercise authority, derived from some constitutional or other principle. Authoritarian governments, often military, tend to be short on legitimacy. In fact, the evidence on the relationship between regime type and ability to implement major programmes of policy reform is indecisive. Indeed, it is not even clear that regime-type is a key determinant.³⁹

Finally under this heading we should mention a delicate **balance to be struck between flexibility and continuity in government policies.** Modern macroeconomic theory has taught us the importance of the ways in which people react to - and seek to anticipate - government actions, and of the techniques that people develop for frustrating government intentions.⁴⁰ Corruption and parallel (or 'black') markets are examples of the latter. To have maximum effect policies must be credible; people must believe they will be implemented and will stick. To go back to our earlier example, if the

³⁸ Thus, Wheeler's 1984 study of the sources of stagnation in Africa found that the most influential policy variable in his tests was an ability to engage in retrenchment in the face of economic deterioration. "Rationing systems which adhere tightly to previous levels of importation of capital or consumption goods during periods of foreign exchange reduction appear to have done substantially worse, ceteris paribus, than those which have retained more flexibility" [p.18].

³⁹ For a survey of the relevant literature see Nelson et al., forthcoming, chapter 1. See also Sheahan, 1980; Remmer, 1986; and Findlay, 1988. Unfortunately, much of this literature is confined to Latin American cases.

⁴⁰ It is 'rational expectations' theory which is particularly in mind here. Although the direct relevance of this theory in all its rigour and on all its necessary assumptions is limited, there is now wide acceptance of the importance of taking public reactions into account when devising macroeconomic policies. See Shaw, 1984, for a straightforward exposition of rational expectations theory and Corden, 1987, for discussion of its relevance to developing countries.

government embarks on a currency devaluation economic agents must take the new exchange rate as a reliable basis for decisions about the future. Signals have to be believed. This is a reason why 'soft' states have difficulty in improving the performance of the economy: citizens do not believe that their government means what it says, or can enforce its decisions. This is also a reason for valuing political stability, for who can plan on the reliability of some new policy signal if governments have only brief life expectancies?

Economic responsiveness will be much enhanced when these various conditions for receptivity to change are satisfied. To adopt now more the language of economics, satisfaction of these conditions will result in large price elasticities - which brings us to the second aspect of responsiveness to information and incentives.

[ii] Supply elasticities

We have seen earlier how the productive structure is required to change during the course of development. We have also seen the importance of flexibility on both the demand and supply sides in the face of adverse trends and shocks, including an ability to shift resources between tradeables and non-tradeables. These considerations have pointed to the desirability of economic flexibility and we have suggested that this will be an attribute of a well-functioning market economy. Either through the forces of supply and demand or as a result of government interventions, price signals should be generated that will provide incentives for structural change. Elasticities measure the extent to which supply or demand responds to a price signal and for the adaptive economy we want these elasticities to be as large as possible, particularly on the side of supply. Let us therefore now consider what determines elasticities of response to price changes additional to those already discussed. We will concentrate on supply elasticities as the most important.

Assuming that a price change is taken to be more than temporary, for the economy as a whole supply elasticities will be strongly influenced by the availability of factors of production and other inputs. Key factors will include:

- [a] **The prior existence of unutilised capacity.** This includes unemployment of both labour and capital. It is fairly evident that there is likely to be rapid and substantial response to improved profit opportunities if these can be reaped simply by bringing into production plant or labour that are unemployed. Industrialised economies will be at an advantage in this respect, for it is in manufacturing and mining that excess capacity is most likely to occur which can fairly readily be brought into production, as against agriculture where there are larger difficulties and longer time lags.⁴¹
- [b] **Factor mobilities.** The mobility of labour and capital refers to the ease with which it can move between alternative employments. In turn, this will be influenced by the efficiency of the factor markets, including the flexibility of wages and returns to capital and the speed with which these markets clear. It will also be influenced by the

⁴¹ See Schydowsky, 1982, for a discussion of economic management in the face of excess capacity.

degree of 'specificity' of the factors, i.e. the extent to which they are versatile or are trained or designed to perform a narrow range of tasks. In such situations an industry will not readily be able to put to productive use resources available elsewhere in the economy. This too works in favour of relatively industrialised economies, for factors tend to be particularly specific in the primary sectors of production - the human and physical capital employed in a coffee plantation or a bauxite mine cannot readily be used in other activities. Related to factor specificity is the extent to which technologies are 'embodied' in equipment and other fixed capital, or are available in the form of disembodied knowledge for a wide range of applications.

- [c] As a special case of factor mobility, we may mention access to **credit for working capital**. New or increased output will create a need for additional working capital, to finance the necessary additions to inventories and the time lags between production and receipt of sales proceeds. Unless the producer can finance this from his existing resources, he will look to the banks for credit and his ability to expand will thus be sensitive to his access to such credit and the terms upon which it is available. This is worth mention because during periods of 'structural adjustment' a country will commonly be undertaking a stand-by programme with the International Monetary Fund. These invariably incorporate restrictions on domestic bank credit, so that the pursuit of short-term balance of payments stabilisation with the IMF can come into conflict with the longer-term restructuring with which we are principally concerned here.⁴²
- [d] **The extent of competition.** Elasticities of supply are larger in competitive firms and tend to be so for competitive industries. Negatively, a firm which is a sole producer has no particular imperative to respond strongly to changes in market conditions, for its monopoly power can already earn it large profits. It can get away with unnecessarily high cost structures - what is known as 'X-inefficiency',⁴³ - and it can postpone the discomfort of change.
- [e] **Availability of raw materials and other intermediate inputs.** There are a number of considerations at work here. Where an industry utilises inputs from agriculture or elsewhere in the domestic economy, the issue becomes one of how large are their own elasticities of supply - a reason already mentioned for not neglecting the primary sectors of production. Where an industry depends upon imported supplies, for raw materials, spare parts or capital equipment, the key question becomes one of the economy's import capacity, including its access to international liquidity and capital. This has often been a particularly serious issue in the conditions of 'import strangulation' mentioned earlier (pp.24-25). We might also mention here the adequacy of the economy's basic infrastructure. If this is inadequate, it will be difficult to obtain ample and secure additional supplies. The state of the infrastructure also has direct bearing on the mobility of labour and, more generally, on the structural flexibility of an economy, for it helps to integrate markets and raise their efficiency.

⁴² See Killick et al., 1984, 291-92 and passim.

⁴³ On this see Leibenstein, 1966 and 1976.

Although it is related only indirectly to the elasticity of supply, we should also mention the elasticity of substitution. If we confine ourselves to labour and capital, this measures the proportionate change in the capital:labour ratio in response to a given change in the relative prices of these two factors. The size of this elasticity tells us things about the flexibility of the productive system in the face of changing conditions. In economies generally marked by under-utilised labour forces and scarcities of capital, the extent to which labour can be substituted for capital, and hence reduce unemployment, is an issue of much importance, particularly when it comes to policies which reduce real wages and raise the real cost of capital. There has been much controversy about the likely size of substitution elasticities in developing country conditions. Writers of the structuralist school have been pessimistic, emphasising technical and other constraints on factor substitution, while neo-classicists have been more optimistic. Elasticities of substitution are difficult to measure, and there are large differences between industries and countries, but to the extent that it makes sense to generalise, the truth seems to be somewhere down the middle: there is often scope for substitution but this is commonly subject to considerable limitations and complexities.⁴⁴

In addition to stressing the importance of being able to switch resources from non-tradeable to tradeable production in the face of a structural balance of payments problem, the earlier discussion drew attention to the key importance of export performance - but also the desirability of avoiding over-production of exports and of being able to withdraw from an export market in the face of unfavourable trends in price or comparative advantage. In addition to the general influences on supply elasticities discussed above, **the ease of substitution between production for the home and foreign markets** will be another important variable. Once again, this is a consideration which works to the advantage of more advanced economies. There will often be a sizeable domestic demand for manufactured goods which are also exported, making it easier to switch between production for domestic and foreign markets. Those concentrating on the exportation of primary products will not usually be in such a position because there will normally be little domestic demand for the commodities in question.

Time is another variable with a crucial influence on the size of supply elasticities. For supply to respond to altered price signals decisions have to be made - decisions by businessmen about whether to invest in additional capacity; by workers whether to change jobs, perhaps to undertake re-training or move to a new locality; by financial institutions whether to agree to credit requests. Time is needed for people to decide their response to new opportunities and for those decisions to take effect. Sometimes there are long gestation lags between a decision and the resulting change in production, as in the case of a major new investment or the re-training of labour. Even prices themselves are not completely flexible, particularly those which are settled contractually for fixed periods of time, so that markets may be slow to clear. Labour markets are particularly likely to clear only slowly, if at all. For all these reasons, elasticities are larger in the long run than in the short.

This, however, points to a dilemma. Often countries faced with severe payments or other disequilibria need quick results. Certainly, many of the

⁴⁴ See Bruton, 1987, for an authoritative survey of the evidence.

adjustment programmes with which the IMF and, to a lesser extent, the World Bank are associated are predicated on quick results. Elasticities and the responses they measure are generally small in the short term, however, which points to a danger in relying too greatly on market forces for rapid structural change.⁴⁵

Results may be reduced by other kinds of market failures too. Dualism is common in the type of economy with which we are mainly concerned. Dualism refers to various asymmetries of production and organisation which confront buyers and sellers with varying prices for the same good or service, preventing productivities from being maximised at the margin and obstructing the free movement of resources. For example, it is common for different lenders and borrowers to be faced with large differences in the rates of interest obtaining on different parts of the capital market, chiefly as between the organised and traditional segments of the market. There may similarly be exceptionally large and non-equalising differences in wages as between urban (or formal) and rural (or informal) employment.

Industry is liable to be marked by relatively high concentrations of monopoly power in poor economies with small domestic markets, depending on government policies of protection, for the market will not be large enough to support more than one or a small number of firms. The banking sector may also be marked by monopolistic or oligopolistic dominance by a few large banks. We have already mentioned the negative influence of labour market segmentation on the basis of sex or ethnic affiliation. Markets may also be less complete than in more developed economies, particularly in the rural economy, creating vacuums in such matters as food marketing and credit.⁴⁶ There are likely to be few forward markets, increasing risks and reducing the efficiency of investment.⁴⁷ It is because of the adverse consequences of these deficiencies that we earlier stressed the importance of a "well working" market system for economic flexibility.

⁴⁵ "Markets ... work incrementally. All required changes - in price signals, in people's responses to incentives, in shifts in resources - take time. These lags account for the fact that elasticities of supply and demand are larger in the long than in the short run. Even in Western market economies, it has been recognised that very large changes that have had to be accomplished quickly... cannot be left to market forces. The likelihood of market failure therefore is a function of the degree of urgency - or impatience - attached to a particular change". [Arndt, 1988 p.227].

⁴⁶ See Lele, 1988, for an interesting exploration of some of these issues.

⁴⁷ A forward (or futures) market is one where a good or service is contracted to be delivered at some future date at a price agreed today. It is a device chiefly used in order to reduce risks, for example when dealing in foreign currencies in the face of uncertainties about future exchange rates.

V.3 Adaptability, openness and development

Before concluding our exploration of the characteristics of an adaptive economy, there are two additional questions that deserve an airing.

The first takes us back to the relationship between adaptability and development. Even though we were cautious about attributing causality from structural transformation to development, the thrust of the earlier parts of this Working Paper was nonetheless to stress the beneficial effects of economic flexibility for long-term development. However, reconsidering what is written above about the nature of an adaptive economy it is equally clear that development aids flexibility. Consider the reasons for this.

First, the data base and flows of new information will be superior in a more developed economy, because it will be feasible to devote larger resources to this task and also because a larger part of economic activity will take place within the 'organised' sectors of the economy that are more amenable to measurement. Second, the hold of traditional values and modes is likely to be weaker, and modernising attitudes more the norm. Third, the economy will be more industrialised. For reasons already mentioned, this will give greater potential for rapid response of output to changing price relativities and factors of production will be less specific than in the primary sectors. Partly because the domestic market will be larger, there will be more competition among domestic producers, increasing their incentives to be responsive. Markets will be better integrated and dualism reduced, for dualism is particularly a feature of less developed economies. Markets can be expected to be more complete and in other respects we would expect the market mechanism to work better.

The larger size of developed economies is an advantage in other ways. They will be less vulnerable to shocks transmitted from the rest of the world. They will have more diversified patterns of demand and production, facilitating the movement of resources between activities.⁴⁸ It will also be easier to shift between production for the home and export markets. Finally, we would expect there to be at least some tendency for governments to be less 'soft', more effective, in developed countries, as suggested by Kuznets. The only disadvantage of more developed economies that we have found in our discussion was the greater difficulty they may have in modernising their capital stock (see page 35).

An implication of this is that small poor countries - the countries with which we are particularly concerned here - are liable to have inflexible economies. There is thus something of a vicious circle at work: inflexibility retards development but under-development retards flexibility. However, it would not be justified to go so far as to describe this as a low-level trap. The relationship between flexibility and development is not so strong as to determine completely outcomes, and there are things that governments of even poor countries can do to increase the adaptability of their economies. What is clear, however, is that they will face an uphill task and will require more

⁴⁸ Thus the United Nations World Economic Survey, 1985 [p.15] commented that the larger and more diversified economies with large production capacities were better able to adjust to external shocks, taking advantage of under-utilised manufacturing capacity and an ability to switch from home to foreign markets in order to expand their exports.

time for it than more advanced economies. It is for such reasons that there have been calls for the international financial institutions to recognise these special needs in their policies towards African and other low-income countries.

Since most low-income countries have small economies and small economies are almost invariably heavily dependent on international trade, the further question arises, is this openness good for economic flexibility? The answer is yes. One of the great advantages of trade is that it allows local manufacturers to escape the confines of domestic demand, to sell on world markets. This permits them to specialise more and achieve more economies of scale.⁴⁹ Openness also exposes local producers to more competition than could be sustained domestically, and we have suggested earlier that this is likely to make them more responsive to changing conditions and opportunities.

The high levels of imports which mark the open economy also have the advantage of giving lower-cost access to intermediate and capital goods that could be produced at home only very inefficiently, and to the technological advances incorporated in them. More generally, a society which is thoroughly exposed to commerce with, and investment from, the rest of the world is more likely to be aware of actual and prospective trends, and more receptive to new ideas. Finally, the economic policies that governments must adopt if they actively promote an outward-oriented development strategy will themselves probably lead to greater economic efficiency and better ability to adjust to external shocks.⁵⁰

Against these considerations, we must, however, set the fact that open economies are more vulnerable to shocks from the outside world, relative to the scale of domestic economic activity. The greater instability of world economic conditions over most of the last twenty years has increased the risks and costs associated with integration into it. In short, openness both facilitates flexibility and necessitates it! What, therefore, seems to be indicated is a judicious blend of policies intended both to protect the economy from the worst of these risks (for example, by opting for a measure of self-sufficiency in food production and by placing more weight on other forms of import-substitution) and to open it up to the opportunities of trade and investment.

⁴⁹ Kubo *et al.*, 1986 p.224, note this and that, in consequence, trade led to more rapid structural transformation than otherwise would have occurred in the countries they studied.

⁵⁰ "...an export-promotion strategy appears to place certain kinds of constraints upon economic policy and its implementation; those constraints, in turn, limit the magnitude and duration of policy mistakes and also tend to force policies to work through pricing, rather than quantitative, interventions...a growth strategy oriented towards exports entails the development of policies that make markets and incentives function better..." [Krueger, 1978, p.284].

V.4 The adaptive economy - summary

What, in summary, are the key characteristics of an adaptive economy? We have argued that one basic requirement is that there must be efficient informational and incentive systems, and we have suggested that a well functioning market system is conducive to flexibility because it can handle large volumes of information in a decentralised way and convert this into appropriate incentive signals. However, we have also stressed the important role of government in marshalling information, a task which markets cannot be relied upon to perform adequately.

The second basic requirement is that economic agents - in public and private sectors alike - must be responsive to the information and incentives, and we broke this responsiveness into [i] receptivity to change and [ii] elasticities. We suggested that receptivity will be strongly influenced by the balance in a society between traditional and modernising values, with education a particularly important factor; by the size and quality of the entrepreneurial class; and by the maturity of an economy and its capital stock. We suggested further that the ability of a government to promote an adaptive economy will be a function of the distribution of power between itself and society at large, particularly its ability to assert itself over organised interest groups; its perceived legitimacy and stability; and the credibility of its policies as enduring signals for decisions about the future.

We then considered the factors that promote the large supply elasticities that are conducive to flexibility, emphasising again the importance of market forces and drawing attention to various market failures which may stand in the way of adequate supply responses. Finally, we have suggested that flexibility is a rising function of the level of development and thus is not a natural attribute of poor countries; and that integration into the world system of trade and payments both increases an economy's vulnerability to adverse external developments and increases its ability to adjust to these.

VI. THE PLACE OF 'STRUCTURAL ADJUSTMENT'

VI.1 Adjustment as induced adaptation

During the 1980s 'structural adjustment' became one of the most commonly used expressions in discussions of the policies of developing countries and of the Bretton Woods institutions - the IMF and the World Bank. The question arises, therefore, how the above discussion relates to the term as it is used by these institutions. One large difficulty here is that structural adjustment is an expression that has been used far more often than it has been defined. Moreover, various definitions have been offered, these have changed over time and no consensus has emerged on a 'proper' meaning.⁵¹

In the light of the discussion of this Working Paper, how might we understand the term 'structural adjustment'? We can here usefully introduce a distinction between change which occurs naturally, as the autonomous response of economic agents to changing demands and opportunities, and change that is induced by the manipulation of policy. There is an ancient controversy among philosophers about whether we possess free will or whether what we do is predetermined. Do economies possess free will in the matter of structural adaptation? Although we have emphasised the largely autonomous or external nature of many of the trends and shocks to which economies need to respond, it should not be inferred from this that the pattern of change is beyond government influence. There is, in fact, much scope for choice, particularly in the longer term, and the quality of a government's response to the alternatives available to it can make all the difference between a laggard and a thriving economy. One such choice already touched upon is of the degree of openness of the economy, involving important decisions about policies towards exchange rates, protectionism, agricultural pricing and so on.

What if a government declines to make such decisions, refuses to recognise the need for hard choices in these matters? The answer is not that the economy will cease to respond but that its responses are likely to be sub-optimal and to impose large avoidable costs on its inhabitants. This is most easily explained when the balance of payments is the chief symptom of structural weakness. In this case, a shortage of foreign exchange imposes adjustment, and the only real choice is whether there is to be a planned or involuntary adjustment. In the latter case, *i.e.* in the absence of effective policies, import supplies will dry up, as international creditworthiness is eroded and the availability of foreign exchange to pay for imports diminishes. The economy will thus be forced to live with whatever reduced volume of imports can be afforded, and 'adjustment' will take the form of reduced output, income, employment and living standards.

Adjustment can hence be thought of as induced or planned adaptation. Adjustment policies are then the instruments deployed in order to achieve the desired adaptation and to enhance the flexibility of the economy. 'Structural' adjustment should logically be regarded as measures to adapt

⁵¹ See Killick, 1986 pp.64-75, for a discussion of the use of this term, although this is confined to its uses in connection with the strengthening of a country's balance of payments.

specifically structural variables, as discussed earlier, particularly the productive system and the physical and institutional infrastructure.

How does such an approach square with the usages within the Bretton Woods institutions?

VI.2 Fund and Bank approaches

'Structural adjustment' entered into international parlance when, in 1980, the World Bank introduced Structural Adjustment Loans (SALs) as a new type of credit. There were two principal reasons for this innovation:

- [a] a perception that the world environment had become markedly more hostile for most developing countries - remember this was the time of the second 'oil shock' and an associated recession in the industrial world - and that they stood in urgent need of a longer-term support for their efforts to cope with the resulting balance of payments dislocations than the IMF was designed to provide;
- [b] a growing perception that policy mistakes in developing countries were in some cases preventing an adequate response to the worsened environment and, more generally, were retarding economic development - as well as reducing returns on past Bank-financed projects.⁵²

SALs were thus to provide quick-disbursing loans to finance general imports over a period of years in support of an agreed set of measures intended to strengthen the balance of payments whilst maintaining a development momentum. During the course of the 1980s, however, the original emphasis in the Bank on the balance of payments gradually faded, with a corresponding increase in the stress it placed upon 'economy-wide programmes of reforms' intended to increase the efficiency of resource-use through 'changes in pricing and trade policies, in the size and structure of government expenditures, and in the extent of government controls on productive activity'. However, there was no attempt at a formal definition of structural adjustment *per se*, and even within the Bank the term is subject to a range of interpretations. In operational terms, the Bank in the most recent years has switched emphasis from SALs to Sectoral Adjustment Loans. The latter have narrower policy objectives, although the general policy thrust is similar.

The subject was further complicated when in 1986 a new Structural Adjustment Facility was set up within the IMF. This too was to provide medium-term balance of payments assistance to low-income countries facing protracted balance of payments difficulties for a programme of policy measures to be worked out with the staffs of the IMF and the Bank. This was replaced at the end of 1987 by an Enhanced Structural Adjustment Facility, with considerably greater resources than the original SAF. In some respects, the Extended Facility of the Fund (EFF), set up in 1974, was a precursor of the SAF, not least because, for the first time, it engaged the IMF in medium-term policy

⁵² For an account of the early history of SALs and an espousal of this type of lending by the Bank, see Please, 1984 chapters 3 and 4.

programmes addressed to the strengthening of the productive structure.⁵³ Given the nature of the Fund, the chief objective in each of these facilities was to help a country achieve balance of payments viability. In most cases, the supply-side measures written into their programmes were in addition to the Fund's traditional emphasis on short-term demand management, involving credit restrictions, reduced budget deficits and exchange rate depreciations. Like the Bank, the Fund has not offered a formal definition of structural adjustment.

As is apparent from the above, there are large areas of overlap between the ways in which the Bretton Woods institutions interpret structural adjustment and our own definition offered above. Common to them all are the ideas that it is a response to shocks and other changes in the economic environment; that it involves policy changes, *i.e.* is a planned adjustment; that it is not a short-term process; and that it involves attention to an economy's basic structure. Important differences may be noted, however, concerning breadth and length.

As regards breadth, our own approach has stressed a wider range of influences to which economies must adapt than those to which, understandably, the Fund and the Bank confine themselves. We agree with them about the special importance of the foreign exchange constraint but also bring in factors such as changing climatic conditions, technological progress and long-term shifts in the pattern of demand.

The point about length is more important. It has to do with the speed with which economies are able to respond to changing circumstances and to the period over which such responsiveness is necessary. It is a long-standing complaint about the IMF's policies towards developing countries that its programmes are too short-term to be able to cope with the often deep-seated nature of their payments weaknesses. The EFF and SAF were responses to this complaint. Even the Bank's longer-term programmes have been criticised along similar lines, and its own evaluations of SALs have drawn the conclusion that structural change takes longer than it had earlier envisaged. No less significantly, there is a desire in both institutions, at least in their governing bodies, for the phase of structural adjustment lending to be concluded as quickly as possible, so that each can return to its more traditional roles, whereas our own treatment has shown adaptation to change as a continuous necessity, inseparable from development, not at all as a discrete phase.

In other words, we can think of the structural adjustment programmes of the Fund and Bank as an important sub-set of our own understanding of the term: more confined in time and coverage but nevertheless addressed to some of the most pressing of the problems of economic adaptation. Difficulties are, however, created in reconciling these various approaches by the differing time spans in which 'adjustment' can be set. There is difficulty, too, in reconciling policies for the control of aggregate demand with those for the restructuring of the productive system. There was an echo of this in our earlier discussion of the effects of import compression (page 25). We will return to these matters in Working Paper No. 34.

⁵³ See de Vries, 1987, for the Fund's official account of the EFF and SAF; and Killick *et al.*, 1984 pp.247-50, for an evaluation of the EFF.

VII. SUMMARY

In this Working Paper we have considered reasons why the flexibility of an economy, and of economic policies, is an important attribute; the nature of an adaptive economy; and the relationship between our view of these matters and the 'structural adjustment' policies of the IMF and the World Bank.

As regards the reasons for flexibility, we have shown that major structural change is intrinsic to long-run economic development. The pattern of this change is powerfully influenced by worldwide regularities in consumer preferences, by technological and other influences on the side of supply and by the shifting composition of international trade. We have suggested that an economy with a flexible structure, which can more readily adjust to the changing needs of the time, is liable to achieve faster development. Conversely, an economy with a rigid structure, incapable of meeting new needs, can expect retarded development, with disjunctures between demand and supply creating bottlenecks and balance of payments strains, inflationary pressures and other economic dislocations.

These observations are borne out by econometric tests of correlation between the growth of an economy and its 'balance', *i.e.* its ability to grow in conformity to income elasticities of demand. We furthermore suggested that some kinds of structural change are of particular importance, enabling more rapid progress elsewhere in the economy. These include industrialisation, financial deepening, high levels of human and fixed capital formation, and political modernisation. Structural rigidity, then, is bad for development, flexibility a plus.

We then turned to consider other reasons for valuing this attribute. These are often expressed in terms of external and domestic shocks, such as sudden changes in world prices and capital market conditions, and natural disasters. However, we pointed out the existence of a variety of longer-lasting trends to which adjustment is also necessary, including long-term adverse trends in the markets for primary commodities, a possible secular slowing-down in the growth of the OECD economies, and the adverse consequences of a warming-up of the world's atmosphere. Country illustrations were provided to show how severe the effects of these various factors can be.

These considerations thus constitute further reasons for placing a premium on the flexibility of an economy and of the policies which influence it. Taken together, the various arguments create a powerful prima facie expectation that countries blessed with such adaptability will be better able to satisfy the material aspirations of their citizens than those which are not. We turned next to clarify the determinants of economic flexibility. We argued that one basic requirement was that there must be efficient informational and incentive systems and that a well functioning market system is conducive to flexibility.

This is because it can handle large volumes of information in a decentralised way and convert this into appropriate incentive signals. However, we also stressed the important role of government in marshalling information, a task which markets cannot be relied upon to perform adequately.

The second basic requirement is that economic agents - in the public and private sectors alike - must be responsive to the information and incentives,

and we broke this responsiveness into receptivity to change and elasticities. We suggested that receptivity will be strongly influenced by the balance in a society between traditional and modernising values, with education a particularly important factor; by the size and quality of the entrepreneurial class; and by the maturity of an economy and its capital stock. We suggested further that the ability of a government to promote an adaptive economy will be a function of the distribution of power between itself and society at large, particularly its ability to assert itself over organised interest groups; its perceived legitimacy and stability; and the credibility of its policies as enduring signals for decisions about the future.

We then considered the factors that promote the large supply elasticities that are conducive to flexibility, emphasising again the importance of market forces and drawing attention to various market failures which may stand in the way of adequate supply responses. We further suggested that flexibility is a rising function of the level of development and thus is not a natural attribute of poor countries; and that integration into the world system of trade and payments increases both an economy's vulnerability to adverse external developments and its ability to adjust to these.

Finally, we defined structural adjustment as induced adaptation, and adjustment policies as the instruments employed by governments to bring this about. This discussion served to provide a broader context within which to set the 'structural adjustment' policies of the Bretton Woods agencies. We suggested that their approaches were more confined than ours, in breadth of coverage and the treatment of time. Nevertheless, their programmes do address crucially important aspects of the task of economic adaptation, particularly as it relates to the foreign exchange constraint.

Having defined adjustment in this way, the next task is to consider the role of economic policy in the process. We have referred at a number of points to ways in which government policies may actually make things worse and to the task, therefore, of ensuring that policies are part of the solution rather than part of the problem. The role of policy is the subject of Working Papers Nos. 32 and 33.

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