Chapter 1

Development and Underdevelopment

Current Interest in Development Economics

Current academic interest in development economics, and the study of development economics as a separate subject, are relatively recent phenomena. For the student today it will be difficult to appreciate that as recently as thirty years ago a course in development economics was a rare feature of an undergraduate programme in economics, and that textbooks on economic development were few and far between. Today no self-respecting department of economics is without a course in economic development; there are scores of texts; hundreds of case studies; and thousands of articles on the subject. And, as in medicine, the perceived ills seem to multiply as the diagnosis deepens.

The political and public concern with the poorer nations of the world is of equally recent origin. The majority of the national and international bodies to promote development that exist today, such as national development banks, the World Bank and its affiliates, and agencies of the United Nations, have all been established since the Second World War. Before the war, when most of today's poor countries were still colonies, there was very little preoccupation with the economic and social problems of the developing (dependent) economies that we are concerned with today. Perhaps the facts were not so well known, or perhaps it was that the attention of most people was focused on the depression and underemployment in the

developed countries. Whatever the reason for neglect, the situation today is very different. The development of the Third World (the collective name for the developing countries), meaning above all the eradication of primary poverty, is now regarded as one of the greatest social and economic challenges facing mankind.

What accounts for this change in attitude and upsurge of interest in the economics of development and in the economies of poor countries? A number of factors can be pinpointed, which interrelate with each other. First, in the wake of the great depression and in the aftermath of war there was a renewed academic interest among professional economists in the growth and development process and in the theory and practice of planning. Second, the poor countries themselves have become increasingly aware of their own backwardness, which has led to a natural desire for more rapid economic progress. The absolute numbers of poor people are considerably greater now than in the past, which has struck a humanitarian chord. Third, there has been a growing recognition by all concerned of the mutual interdependence of the world economy. The political and military ramifications and dangers of a world divided into rich and poor countries are far more serious now than they were in the past; at the same time the old Cold War led the major developed countries to show a growing economic and political interest in poor and ideologically uncommitted nations. The recognition of interdependence has been heightened in recent years by fears of shortages of basic raw materials produced primarily in Third World countries, and by the rising price of oil.

Academic Interest in Development

Academic interest in the mechanics of growth and development is a *renewed* interest rather than a new preoccupation of economists. The progress and material well-being of men and nations have traditionally been at the centre of economic writing and enquiry. It constituted one of the major areas of interest of the classical economists. Adam Smith, David Ricardo, Thomas Malthus, John Stuart Mill and Karl Marx all dealt at some length (with divergent opinions on many issues) with the causes and consequences of economic advance. It is entirely natural that thinkers of the day should comment on the contemporary scene, and there is perhaps an analogy here between the preoccupation of the classical economists at the time of Britain's industrial revolution and the concern of many economists today with the economics of development and world poverty, the nature of which has been brought to the attention of the world so dramatically in recent decades. Development also represents a challenge equivalent to that of depression and mass unemployment in the 1930s which attracted so many brilliant minds to economics, Keynes among them. But the nature of the challenge is of course very different. In the case of unemployment in the 1930s, there was an orthodox theory with which to grapple; the task was to formulate a theory to fit the facts and to offer policy prescriptions. As it turned out, the solution to the problem was to be costless: expand demand by creating credit and bring idle resources into play. Fancy, an economic problem solved costlessly! The challenge of development is very different. There is no divorce between theory and the observed facts. The mainsprings of growth and development are well known: increases in the quantity and quality of resources of all kinds. Countries are poor because they lack resources or the willingness and ability to bring them into use. The problems posed by underdevelopment cannot be solved costlessly. It would be reassuring to think, however, that advances in growth theory, coupled with more detailed knowledge of the sources of growth, and the refinement of techniques for planning and resource allocation, have all increased the possibility of more rapid economic progress than hitherto. Certainly particular theoretical models and techniques have been used extensively in some countries, presumably in this belief. For example, models for calculating investment requirements to achieve a target rate of growth invariably form an integral part of a development plan, and in some countries there have

been experiments in recent years with such techniques as input–output analysis, for the achievement of sectoral balance and the avoidance of bottlenecks, and linear programming for the achievement of efficient resource allocation.

The question is often posed as to what lessons, if any, the present developing countries can draw from the first-hand observations of the classical writers, or more directly from the development experience of the present advanced nations. One obvious lesson is that while development can be regarded as a natural phenomenon, it is also a lengthy process, at least left to itself. It is easy to forget that it took Europe the best part of three centuries to progress from a subsistence state to economic maturity. Much of development economics is concerned with the time scale of development, and how to speed up the process of development without causing problems as acute and worrisome as the primary poverty it is desired to alleviate. In the next millennium, when primary poverty in most countries will, it is hoped, have been eradicated, courses in development economics will undoubtedly take a different form. The emphasis will be on inter-country comparisons, rather than on the process of development as such and the growth pains accompanying the transition from a primarily agrarian to an industrial economy.

As far as classical theory is concerned, the gloomy prognostication of Ricardo, Malthus and Mill that progress will end ultimately in stagnation would seem to be unfounded. It has certainly been confounded by experience. Population growth and diminishing returns have not been uniformly depressive to the extent that Ricardo and Malthus supposed. Rising productivity and *per capita* incomes appear quite compatible with the growth of population and the extension of agriculture. Classical development economics greatly underestimated the beneficient role of technical progress and international trade in the development process. It is these two factors above all which seem to have confounded the pessimism of much of classical theory. With access to superior technology there is hope, and some evidence, that material progress in today's developing countries will be much more rapid than in countries at a similar stage of development one hundred years ago. The pool of technology on which to draw, and the scope for its assimilation, is enormous. Used with discretion, it must be considered as the main means of increasing welfare. The role of trade, however, is more problematic. A lot will depend on how rapidly the developing countries can alter their industrial structure and on movements in the terms of trade. Currently the developing countries are probably in an inferior position compared with the present advanced countries at a comparable stage of their economic history. The dynamic gains from trade are present but the static efficiency gains are less and the terms of trade in most commodities are worse. The gains from trade accrue mainly to the rich industrialised countries, notwithstanding the rapid increase that periodically takes place in some commodity prices. The fact that the gains from trade are unequally distributed does not destroy, of course, the potential link between trade and growth, or constitute an argument against trade. Rather, it represents a challenge for altering the structure of trade and the terms on which it takes place.

The greater knowledge and acceptance of planning may also mean that the development experience of the present developing countries will be less protracted and painful than in the past. Planning can potentially mobilise the prerequisites of development more expeditiously than the market mechanism, which takes time to operate, and provided attention is paid to income distribution, the sum total of sacrifice of present generations need be no more severe per individual. Classical economists were generally antithetical to interference with the market mechanism, believing that the free play of market forces would maximise the social good. But fashions change in economics, and after the Second World War, there was a much greater acceptance of interference with the market mechanism, and planning in developing countries was seen by many as one of the main means by which development may be accelerated. The experience of planning in many countries, however, has not been favourable, and planning has come into disrepute, not the least because of the economic disarray of the rigidly planned economies of the

old Soviet Union and Eastern Europe. It should never be forgotten, however, that no country in the world made such swift economic advance in such a short space of time as the Soviet Union after 1918, through the planned allocation of resources which favoured investment at the expense of consumption. The fact that planning may be operated too rigidly, or for too long and go wrong, should not be allowed to obscure the fact that it also has merits, and that unfettered free enterprise can also lead to economic disaster and social deprivation. What is required in most developing countries is a judicious mix of public and private enterprise, of the use of markets combined with different types of planning, for the maximisation of social welfare.

Planning requires a certain amount of model-building and this, too, has been inspired by economists. The most common type of model, which forms the basis of much of the model-building that developing countries indulge in, is to calculate the investment requirements necessary to achieve a target rate of growth of *per capita* income – commonly referred to as a Harrod–Domar model. Neither the models of Harrod (1948) or Domar (1947) were designed for the purpose to which they are now put in developing countries, but their growth equations have proved to be an indispensable component of macro-economic planning. We shall consider later the strengths and weaknesses of using this type of aggregate model in development planning, and the pros and cons of planning in general.

The New International Economic Order

A second major factor accounting for the upsurge of interest in the growth and development process has been the poor nations' own increased awareness of their inferior economic and political status in the world, and their desire for material improvement and greater political recognition through economic strength. This was precipitated by decolonisation and by increased contact with the developed nations, and has been strengthened from within by rising expectations as development has proceeded. Development is wanted to provide people with the basic necessities of life, for their own sake, and to provide a degree of self-esteem and freedom for people which is precluded by poverty. Wealth and material possessions may not provide greater happiness but they widen the choice of individuals, which is an important aspect of freedom and welfare. The developing countries in recent years have shown a marked determination to pull themselves up by their own bootstraps assisted, in the words of Professor Hicks, 'by such crumbs of aid as the richer countries are willing to spare, and as they themselves are willing to accept' (1966, p. 263). They have also called for a fairer deal from the functioning of the world economy which they view, with some justification, as biased in favour of countries already rich.

The official call for a **New International Economic Order** was originated by the Sixth Special Session of the United Nations General Assembly in 1974. The United Nations pledged itself 'to work urgently for the establishment of a new international economic order based on equity, sovereign equality, common interest and cooperation among all States, irrespective of their economic and social systems, which shall correct inequalities and redress existing injustices, make it possible to eliminate the widening gap between the developed and the developing countries and ensure steadily accelerating economic and social development and peace and justice for present and future generations.' The programme of action called for such things as: improved terms of trade for the exports of poor countries; greater access to the markets of developed countries for manufactured goods; greater financial assistance and the alleviation of past debt; reform of the International Monetary Fund and a greater say in decision making on international bodies concerned with trade and development issues; an international food programme, and greater technical cooperation.

The call for a New International Economic Order has been reiterated several times by various UN agencies. In 1975, the United Nations Industrial Development Organisation (UNIDO) pro-

duced the **Lima Declaration** which set a target for the developing countries to secure a 25 per cent share of world manufacturing production by the year 2000 compared with the share then of 10 per cent (and a present share of 15 per cent). This target will not be achieved since it requires a growth of manufacturing of 10 per cent per annum in developing countries compared with 5 per cent in developed countries, which is 3 per cent more than achieved from 1965 to 1990. On the monetary front, in 1980 there was the **Arusha Declaration** which demanded a UN Conference on International Money and Finance to create a new international monetary order 'capable of achieving monetary stability, restoring acceptable levels of employment and sustainable growth' and 'supportive of a process of global development'. And at the 7th Session of UNCTAD in Geneva in 1987, policy approaches were called for in four major areas: debt and development resources; commodities; international trade; and the problems of the least developed countries.

The Mutual Interdependence of the World Economy

The third major factor responsible for the growing interest and concern with Third World development has been the increasing awareness, particularly on the part of developed countries, that dependence is not one-way. The rich countries have been compelled out of economic and political necessity to rethink their economic relations with the poorer nations of the world. On the political front the old divide between East and West forced the Western capitalist and the Communist countries to compete financially for the favours of large parts of the Third World, and regretfully one of the unfortunate side-effects of the urgent desire of poor countries for improved living standards was that some allowed themselves to become a political battleground for the great powers in the Cold War.

On the economic front, the fortunes of countries, rich and poor, are locked together through trade and the balance of payments. There exists an interdependence in the world economy such that the malfunctioning of one set of economies impairs the functioning of others. This was no more evident than in the world economy in the 1980s which, owing to the rising price of energy and the debt crisis, displayed mounting economic chaos. The 1980 Brandt Report, entitled *North–South: A Programme for Survival* (1980), and its sequel *Common Crisis* (1983), stressed the mutual benefit to all countries from a sustained programme of development in the Third World, and documented the current adverse trends in the world economy which pointed to a sombre future if not tackled co-operatively: growing poverty and hunger in the Third World; rising unemployment with inflation; international monetary disorder; chronic balance of payments deficits and mounting debts in most Third World countries; protectionism, and tensions between countries competing for energy, food and raw materials. Development economics addresses itself to many of the issues contributing to disarray in the world economy.

There is not only a moral case for greater efforts to raise living standards in Third World countries, but a sheer practical case which would be in the self-interest of the developed countries themselves. The ability of poor countries to sustain their growth and development means a greater demand for the goods and services of developed countries, which generates output and employment directly and which also helps to maintain the balance-of-payments stability of these countries which is so crucial if there is to be a reciprocal demand for the goods of developing countries. Any constraint on demand in the system arising from, say, poor agricultural performance in poor countries, or a balance-of-payments constraint on demand in developed countries, will impair the functioning of the whole system and reduce the rate of progress below potential. Herein lies the importance of the transfer of resources to poor countries to maintain their momentum of development (global Keynesianism), and of international monetary reform to smooth the burden of balance-of-payments adjustment and to shift more of the burden of adjustment from the deficit to the surplus countries.

The Brandt Report called for a short-term emergency programme as a prelude to longer-term action, consisting of four major elements: a large scale transfer of resources to developing countries; an international energy strategy to minimise the dislocation caused by sudden and rapid increases in the price of oil; a global food programme; and a start on some major reforms in the international monetary system. Very little has been done.

In the longer term, the Brandt Report called for: a twenty-year programme to meet the basic needs of poor countries, involving additional resource transfers of $4 billion a year; a major effort to improve agricultural productivity to end mass hunger and malnutrition; commodity schemes to stabilise the terms of trade for primary commodities; easier access to world markets for the exports of developing countries; programmes for energy conservation; the development of more appropriate technologies for poor countries; an international progressive income tax, and levies on trade and arms production, to be used by a new World Development Fund (to fund development programmes rather than projects); a link between the creation of new international money and aid to developing countries, and policies to recycle balance-of-payments surpluses (as accumulated by the Arab oil export countries since 1973, for example) to deficit countries to remove balance-of-payments constraints on demand and to remove the risk of a slide into international protectionism. Many of these issues we shall be discussing in the course of this book.[1] Such a programme would be of mutual benefit to all parties, rich and poor. It would create investment confidence, which is the crucial ingredient maintaining the dynamics of any economic system; it would stimulate trade and investment, and help the prospects of sustained growth in the world economy.

It would be wrong to give the impression, however, that the developed countries' concern with world poverty is motivated exclusively by the selfish realisation that their own survival depends on economic and political harmony which cannot thrive in a world perpetually divided into rich and poor. There has also been an affirmation by many developed countries of a moral obligation towards poorer nations. Not all aid and development assistance is politically inspired. Particularly over the last three decades, the developed countries have shown a genuine humanitarian concern over the plight of Third World countries, which has resulted in the establishment and support of several institutions to assist developing countries, and which led the period 1960–70 to be named the First Development Decade. We are now in the Fourth Development Decade, and the pledge to assist developing countries out of humanitarian concern has been reaffirmed. The goal of a greater degree of income equality between the citizens of a nation seems to be gaining support, albeit slowly, as an objective among nations. Moreover, the propagation of this ideal is not confined to the supranational institutions that have been especially established to further it. Recent years have witnessed the spontaneous creation of several national pressure groups, in different parts of the world, whose platform is the abolition of world poverty; and the Church, which remained silent and inactive for so long, periodically makes its voice heard. Aid from voluntary agencies to developing countries now amounts to over $3.5 billion annually. But whatever the motive for concern, the reality of world poverty and underdevelopment cannot be ignored. Furthermore, primary poverty in developing countries is likely to persist for many years in the future. The economist has a special responsibility to contribute to an understanding of the economic difficulties which poor countries face and to point to possible solutions. This is a textbook devoted to that end. Let us start by considering the meaning of development and establishing the magnitude of poverty and of economic divisions in the world as precisely as the data will allow. Then we shall focus on conditions within the developing countries, particularly the employment situation, the income distribution, the level of nutrition, and other basic needs.

[1] For a discussion and appraisal of the Brandt Report, see the collection of articles in *Third World Quarterly*, October 1980, and Kirkpatrick and Nixson (1981).

The Meaning of Development and the Challenge of Development Economics

Development implies change, and this is one sense in which the term development is used; to describe the process of economic and social transformation within countries. This process often follows a well-ordered sequence and exhibits common characteristics across countries which we shall discuss later in the chapter. But if development becomes an objective of policy, the important question arises of development for what? Not so long ago, the concept of development, defined in the sense of an objective or a desired state of affairs, was conceived of almost exclusively in terms of growth targets, with very little regard to the beneficiaries of growth or to the composition of output. Societies are not indifferent, however, to the distributional consequences of economic policy; to the type of output that is produced, or to the economic environment in which it is produced. A concept of development is required which embraces the major economic and social objectives and values that societies strive for. This is not easy. Perhaps the best attempt to date is that by Goulet (1971) who distinguishes three basic components or core values in this wider meaning of development, which he calls **life-sustenance, self-esteem and freedom.**

Life-sustenance is concerned with the provision of basic needs, which we discuss later in the chapter. The basic needs approach to development was initiated by the World Bank in the 1970s. No country can be regarded as fully developed if it cannot provide all its people with such basic needs as housing, clothing, food and minimal education. A major objective of development must be to raise people out of primary poverty and to provide basic needs simultaneously.

Self-esteem is concerned with the feeling of self-respect and independence. No country can be regarded as fully developed if it is exploited by others and does not have the power and influence to conduct relations on equal terms. Developing countries seek development for self-esteem; to eradicate the feeling of dominance and dependence which is associated with inferior economic status.

Freedom refers to freedom from the three evils of 'want, ignorance and squalor' so that people are more able to determine their own destiny. No man is free if he cannot choose; if he is imprisoned by living on the margin of subsistence with no education and no skills. The advantage of material development is that it expands the range of human choice open to individuals and societies at large.

All three of these core components are interrelated. Lack of self-esteem and freedom result from low levels of life sustenance, and both a lack of self-esteem and economic imprisonment become links in a circular, self-perpetuating chain of poverty by producing a sense of fatalism and acceptance of the established order – the 'accommodation to poverty' as Galbraith (1980) has called it.

Using Goulet's concept of development, therefore, and in answer to the question 'development for what?', we can say that development has occurred when there has been an improvement in basic needs, when economic progress has contributed to a greater sense of self-esteem for the country and individuals within it, and when material advancement has expanded the range of choice for individuals. The fact that many of these ingredients of development are not measurable does not detract from their importance: the condition of being developed is as much a state of mind as a physical condition measurable by economic indices.

The challenge of development economics lies in the formulation of economic theory and in the application of policy in order to understand better and to meet these core components of development. Clearly the range of issues that development economics is concerned with is quite distinctive and because of this the subject has developed its own *modus vivendi* (ways of doing things), although drawing liberally on economic theory as do other branches of economics. If it is to be useful, however, a great deal of conventional economic theory must be adapted to suit the conditions prevailing in developing countries, and many of

the assumptions that underly conventional economic models have to be abandoned if they are to yield fruitful insights into the development process. Static equilibrium theory, for example, is ill-suited for the analysis of growth and change and of growing inequalities in the distribution of income between individuals and countries. It is probably also true, as Todaro (1989) strongly argues, that economics needs to be viewed in the much broader perspective of the overall social system of a country, which includes values, beliefs, attitudes to effort and risk taking, religion and the class system, if development mistakes are to be avoided which stem from implementing policy based on economic theory alone.

The Perpetuation of Underdevelopment

The study of economic development helps us to understand the nature and causes of poverty in low-income countries, and the transformation of societies from being primarily rural to being primarily industrial, with the vast bulk of resources utilised in industrial activities and in service activities which serve the industrial sector. But why have some countries never participated in this process or got left behind? The first industrial revolution gave the present developed countries an initial advantage which they then sustained through the existence of various cumulative forces at work against those left behind. In the last forty years there has been a second industrial revolution which has propelled another bloc of countries (the so-called newly industrialised countries of South East Asia and Latin America) into a virtually industrialised state, and many others into a semi-industrialised state. But many countries are still left behind in a semi-feudal state, including the very poorest which have now become the prime focus of concern of the World Bank and other development agencies.

There are many theories of the perpetuation of underdevelopment but none seem to have universal validity. The state of agriculture is of foremost importance. It was, first of all, settled agriculture that laid the basis for the great civilisations in the past, and it was the increase in agricultural productivity in England in the eighteenth century that laid the basis for, and sustained, the first industrial revolution. If there is one overriding single factor which explains why some countries developed before others, and why some countries are still backward without a significant industrial sector, it lies in the condition of agriculture which in the early stages of development is the sector which must provide the purchasing power over industrial goods.

The condition of agriculture depends on many factors, institutional as well as economic, and physical conditions are also of key importance. Climate, particularly, affects the conditions of production. Heat debilitates individuals. Extremes of heat and humidity also deteriorate the quality of the soil and contribute to low productivity of certain crops. It cannot be coincidence that almost all developing countries are situated in tropical or subtropical climatic regions and that development 'took off' in the temperate zones.

The condition of agriculture has not been helped by what Lipton (1977) has called **urban bias** which has in many countries starved agriculture of resources. This has happened because ruling élites generally originate from, or identify with, the non-rural environment, and because policy-makers were led astray both by the empirical evidence which shows a high correlation between levels of development and industrialisation, and by early development models which stressed investment in industry.

Many other internal conditions have acted as barriers to progress in poor countries, which interacted in a vicious circle. In some countries population size presents a problem combined with low levels of human capital formation. The latter in turn perpetuates poverty which is associated with high birth rates and large family size. This is a form of 'accommodation to poverty' (Galbraith, (1980)) which then perpetuates low living standards in a circular process. In other countries there may not exist the psychological conditions re-

quired for modernisation built on individualism and the competitive spirit, coupled with a strong work ethic, rationalism and scientific thought, which characterised the industrial revolutions of eighteenth- and nineteenth-century Europe and which have played a large part in the emergence of the newly industrialised South East Asian countries in the latter half of the twentieth century.

External relations between countries also play a part in the poverty perpetuation process, which have given rise to structuralist and dependency theories of underdevelopment. It seems to be the general lesson of history that once one set of countries gains an economic advantage, the advantage will be sustained through a process of what Myrdal (1957) has called 'circular and cumulative causation', working through the media of factor mobility and trade. (For a full discussion, see Chapter 5.) Favoured regions denude the backward regions of capital and skilled labour, and they trade in commodities whose characteristics guarantee that the gains from trade accrue to them. Colonialism was an extreme form of dependency, which did exploit many countries that are still poor today. On the other hand there are a number of countries, such as Ethiopia and Thailand, that were never colonised, which are equally backward. Dependence takes more subtle forms, however, based on the international division of labour, for example, which then leads to unequal exchange relations between rich and poor with the poor dependent on the rich for capital and technical progress to equip their industrial sectors. The current indebtedness of the less developed countries, the 'increasing price' that poor countries have to pay for development inputs relative to the price they receive for their exports and the growing number of poor people are manifestations of this dependency. There are exceptions to the thesis of 'circular and cumulative causation', but it requires in most cases a strong exogenous shock to break out of a vicious circle of poverty and dependency. We take up some of these issues later in Part III of the book. Let us now turn our attention to the magnitude of poverty in developing countries and to the world distribution of income.

The Measurement of Poverty and the World Distribution of Income

By any standard one cares to take, the evidence is unequivocal that the world's income is distributed extremely unequally between nations and people, and that there exists in the world a broad north–south divide into rich and poor countries. The World Bank classifies the countries of the world into three broad categories: low-income countries; middle-income countries, and high-income countries. This classification for 1992 is given in **Table 1.2.** In later discussion, it is largely the low-income and middle-income countries that we shall refer to as the developing countries, and the high-income countries as the developed countries. There are several dimensions of the 'development gap', but focusing for the moment on income *per capita* and ignoring measurement difficulties, we see from column 3 that 37 countries are classified as low-income in a state of primary poverty with a weighted average level of income per head of only US $350 per annum. At the other end of the spectrum there are 24 high-income countries enjoying an average annual *per capita* income of close to US $20,000. This gives some idea of the range of income differences.

□ *Poverty*

The World Bank defines poverty as the inability of people to attain a minimum standard of living.[1] This definition gives rise to three questions. How do we measure the standard of living? What is meant by a *minimum* standard of living? How can we express the overall extent of poverty in a single measure?

The most obvious measure of living standards is an individual's (or household's) real income or

[1] The 1990 *World Development Report* published by the World Bank was devoted to a consideration of the measurement, magnitude and nature of poverty in the Third World.

Table 1.1 ***The Extent of Poverty in Developing Countries***

Region	*Extremely poor*			*Poor (including extremely poor)*			*Social indicators*		
	Number (millions)	*Headcount index (percent)*	*Poverty gap*	*Number (millions)*	*Headcount index (percent)*	*Poverty gap*	*Under 5 mortality (per thousand)*	*Life expectancy (years)*	*Net primary enrollment rate (percent)*
Sub-Saharan Africa	120	30	4	180	47	11	196	50	56
East Asia	120	9	0.4	280	20	1	96	67	96
China	80	8	1	210	20	3	58	69	93
South Asia	300	29	3	520	51	10	172	56	74
India	250	33	4	420	55	12	199	57	81
Eastern Europe	3	4	0.2	6	8	0.5	23	71	90
Middle East and North Africa	40	21	1	60	31	2	148	61	75
Latin America and the Caribbean	50	12	1	70	19	1	75	66	92
All developing countries	633	18	1	1116	33	3	121	62	83

Source: *World Development Report* 1990.

expenditure (with an allowance made for output produced for own consumption). The same level of real income and expenditure in different countries, however, may be associated with different levels of nutrition, life expectancy, infant mortality, levels of schooling etc. which must be considered as an integral part of 'the standard of living'. Measures of living standards based on *per capita* income, therefore, may need to be supplemented by other measures which include these other variables. We discuss later the attempt by the United Nations Development Programme (UNDP) to construct a Human Development Index which takes some of these factors into account.

To separate the poor from the not so poor, an arbitrary *per capita* income figure has to be taken which is sufficient to provide a minimum acceptable level of consumption. In theory, a consumption-based poverty line can be thought of as comprising two elements: firstly an objective measure of expenditure necessary to buy a minimum level of nutrition, and secondly a subjective additional amount that varies from country to country reflecting the cost of individuals participating in the everyday life of society. What is regarded as an acceptable standard of living in the United Kingdom will be different (and higher) from that regarded as acceptable in Nigeria. In practice, however, for the measurement of poverty in the Third World, the World Bank takes just two figures for *per capita* income: one to classify the total poor, the other to measure the extremely poor. In 1990, the figures taken were $370 per annum and $275 per annum, respectively.

Once the poverty line has been calculated, the simplest way to measure poverty is by the **head count index** which simply adds up the number of people who fall below the poverty line (sometimes expressed as a proportion of the population). By this measure, the World Bank calculated that the number of poor people in the developing countries is just over **one billion**, and the number of extremely poor is just over 600 million. The numbers by continent are shown in **Table 1.1.**

One weakness of the headcount index, however, is that it ignores the extent to which the poor fall below the poverty line, so that crude comparisons between countries, or over time, may be misleading. To overcome this weakness, the concept of the **poverty gap** may be used which

measures the transfer of income required to bring the income of every poor person up to the poverty line. In **Table 1.1**, it is measured as the aggregate income shortfall of the poor as a percentage of aggregate consumption.

Both the headcount index and the poverty gap index are insensitive to the extent of inequality amongst the poor. For example, if income is transferred from a poor person to someone who is even poorer, neither of the measures changes, but poverty will be more evenly spread, and represent a social improvement in some sense. This consideration has implications for judging the claims of public policy because clearly if the headcount index is taken as the measure of poverty, the easiest way to reduce the head count index would be to focus all attention on those just below the poverty line, but this would not be socially just. We need measures of poverty which also take account of movements in the distribution of income between the poor.

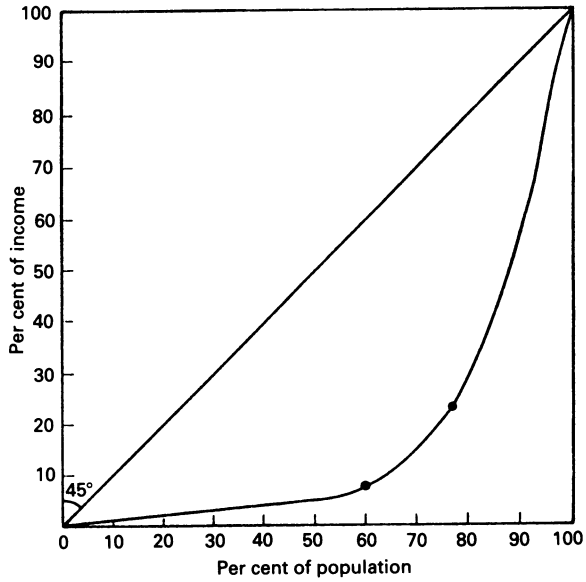
It is interesting to note that despite the massive numbers of people in absolute poverty, the transfer needed to leave everybody above the poverty line ($370) is relatively small – only 3 per cent of total consumption in developing countries.

The focus of the World Bank is now very much on poverty eradication. In May 1992, the President of the World Bank, Mr Lewis Preston, declared that poverty reduction will be 'the benchmark by which our performances as a development institution will be measured'. This represents a shift of emphasis away from the Bank's traditional emphasis on project lending for economic efficiency to secure an economic rate of return from projects which may have done nothing to improve the lot of the poor.

□ *Distribution of World Income*

Turning now to the consideration of the distribution of world income in relation to the population, and using the three-fold classification of low-income, middle-income and industrial countries, we find that the low-income countries contain approximately 60 per cent of the world's population and receive only 6 per cent of the world's income; the middle-income countries contain 15 per cent of the world's population and receive 17 per cent of world income, and other rich industrialised countries contain 25 per cent of the world's population yet receive 77 per cent of world income. Income distribution data of this type (for individual countries as well as for groups of countries) can be represented graphically on a so-called **Lorenz curve diagram** as shown in **Figure 1.1**. The 45° line represents a perfectly equal distribution of income across the population. The bowed curve is the Lorenz curve showing graphically the degree of inequality. To draw the curve, first rank countries or groups of countries in ascending order according to the ratio of the percentage of income they receive in relation to the percentage population they contain; then cumulate the observations, and plot on the diagram. Taking the data given above, our ranking is obviously low-income, middle-income and 'high'-income. The cumulative distribution of income is 6/60 then 23/75 when the middle-income country figures are added to the first observation figures for the low-income countries, and 100/100 when the 'high'-income figures

Figure 1.1



are added. Plotting these distributions gives the Lorenz curve shown. If historical data are available, changes in the distribution of income through time can be shown. It is possible, however, that two (or more) Lorenz curves may cross, precluding a definite conclusion on whether the distribution has narrowed or widened from a visual inspection of the curves alone. In this case a more precise measure of distribution is required. One measure is to express the area enclosed between the Lorenz curve and the 45° line as a ratio of the total area under the 45° line. This is the **Gini coefficient of distribution** which varies from 0 (complete equality) to 1 (complete inequality). Calculation of this ratio for the world economy would give a Gini coefficient of approximately 0.6.

There is little evidence that the distribution of world income has been narrowing over time. According to Kuznets (1965, pp. 142–75), if Lorenz curves are plotted for the years 1894, 1938 and 1949 there is no indication that the curves have been shifting closer to the 45° line. Andic and Peacock (1961) reach the same conclusion in a comparison of 1949 and 1957. Their estimate of the Gini ratio, taking 62 countries, is approximately the same for both years (0.637 and 0.636, respectively). What this suggests is that while *per capita* income may have been growing in the low-income countries, it must have been growing almost as fast in the high-income countries. This is certainly true of the period since 1965 as column 4 in **Table 1.2** indicates. Average *per capita* income growth in the developing countries has been 2.5 per cent, and 2.4 per cent in the developed countries.

It is easily forgotten that the rich–poor country divide is a relatively recent phenomenon. All countries were once at subsistence level, and as recently as 200 years ago, at the advent of the British industrial revolution, absolute differences in living standards between countries on average cannot have been great. The average *per capita* income of the developing countries today is approximately $1200 per annum and this was about the average level of real *per capita* income in Western Europe in the mid-nineteenth century measured at current prices. If we regard $1200 as only barely above subsistence, the major part of present income disparities between developed and developing countries must have arisen over the last century. Some countries, through a combination of fortune and design, have managed to grow much faster than others. The overriding influence has been industrialisation and the technological progress associated with it. The close association between industrialisation and living standards spells out the clear policy message that to base a development policy on agricultural activities *alone* would be misguided, however attractive such aphorisms as 'back to the land' and 'small is beautiful' may sound to those disillusioned with the recent industrialisation experience of the developing countries. Sutcliffe (1971) is right when he argues:

> It is understandable that vague memories of the oppression of the working class in 19th century Britain, the contemporary horrors of American machine-age society, and the Stalinist attack on the Russian peasantry, should arouse feelings which are hostile to industrialisation. Yet to oppose machines altogether, like Gandhi, or to argue that a long run rise in the standard of living is possible without industrialisation, are no more than forms of sentimentalism, especially when the condition of most of the population of the non-industrialised world is now both terrible and worsening. It is not sentimentalism to demand that the process of industrialisation should be made as humane and as painless as possible and that the long term aims of equality at a higher standard of living should be constantly borne in mind as the process goes on.

The concentrated impact of industrialisation on living standards in the Western world is dramatically emphasised by Patel's illustration (Patel (1964)) that if 6000 years of man's 'civilised' existence prior to 1850 is viewed as a day, the last century or so represents little more than half an hour; yet in this 'half-hour' more real output has been produced in the developed countries than in the preceding period. It is true that living stan-

Table 1.2 ***Basic Indicators***

	Population (millions) mid-1990	*Area (thousands of square kilometers)*	*GNP per capita*		*Average annual rate of inflation (percent)*		*Life expectancy birth (years)*
			Dollars	*Average annual growth rate (percent)*			
			1990	*1965–90*	*1965–80*	*1980–90*	*1990*
Low-income economies	**3 058.3 *t***	**37 780 *t***	**350 *w***	**2.9 *w***	**8.0 *w***	**9.6 *w***	**62 *w***
China and India	**1 983.2 *t***	**12 849 *t***	**360 *w***	**3.7 *w***	**3.2 *w***	**6.8 *w***	**65 *w***
Other low-income	**1 075.1 *t***	**24 931 *t***	**320 *w***	**1.7 *w***	**17.3 *w***	**15.1 *w***	**55 *w***
Mozambique	15.7	802	80	..	..	36.6	47
Tanzania	24.5	945	110	–0.2	9.6	25.8	48
Ethiopia	51.2	1 222	120	–0.2	3.4	2.1	48
Somalia	7.8	638	120	–0.1	10.2	49.7	48
Nepal	18.9	141	170	0.5	7.8	9.1	52
Chad	5.7	1 284	190	–1.1	6.2	1.2	47
Bhutan	1.4	47	190	..	..	8.4	49
Lao PDR	4.1	237	200	..	..	..	49
Malawi	8.5	118	200	0.9	7.4	14.7	46
Bangladesh	106.7	144	210	0.7	15.9	9.6	52
Burundi	5.4	28	210	3.4	5.0	4.2	47
Zaire	37.3	2 345	220	–2.2	24.7	60.9	52
Uganda	16.3	236	220	–2.4	21.4	107.0	47
Madagascar	11.7	587	230	–1.9	7.7	17.1	51
Sierra Leone	4.1	72	240	0.0	7.9	56.1	42
Mali	8.5	1 240	270	1.7	9.0	3.0	48
Nigeria	115.5	924	290	0.1	14.6	17.7	52
Niger	7.7	1 267	310	–2.4	7.5	2.9	45
Rwanda	7.1	26	310	1.0	12.5	3.8	48
Burkina Faso	9.0	274	330	1.3	6.3	4.5	48
India	849.5	3 288	350	1.9	7.5	7.9	59
Benin	4.7	113	360	–0.1	7.4	1.9	50
China	1 133.7	9 561	370	5.8	–0.3	5.8	70
Haiti	6.5	28	370	0.2	7.3	7.2	54
Kenya	24.2	580	370	1.9	7.2	9.2	59
Pakistan	112.4	796	380	2.5	10.3	6.7	56
Ghana	14.9	239	390	–1.4	22.9	42.5	55
Central African Rep.	3.0	623	390	–0.5	8.2	5.4	49
Togo	3.6	57	410	–0.1	7.1	4.8	54
Zambia	8.1	753	420	–1.9	6.3	42.2	50
Guinea	5.7	246	440	..	..	..	43
Sri Lanka	17.0	66	470	2.9	9.4	11.1	71
Mauritania	2.0	1 026	500	–0.6	7.6	9.0	47
Lesotho	1.8	30	530	4.9	6.7	12.7	56
Indonesia	178.2	1 905	570	4.5	35.5	8.4	62
Honduras	5.1	112	590	0.5	5.7	5.4	65
Egypt, Arab Rep.	52.1	1 001	600	4.1	6.4	11.8	60

Table 1.2 ***Basic Indicators*** **(*continued*)**

	Population (millions) mid-1990	*Area (thousands of square kilometers)*	*GNP per capita*		*Average annual rate of inflation (percent)*		*Life expectancy birth (years)*
			Dollars	*Average annual growth rate (percent)*			
			1990	*1965–90*	*1965–80*	*1980–90*	*1990*
Middle-income economies	**1 087.5 *t***	**41 139 *t***	**2 220 *w***	**2.2 *w***	**21.1 *w***	**85.6 *w***	**66 *w***
Lower-middle-income	**629.1 *t***	**22 432 *t***	**1 530 *w***	**1.5 *w***	**23.6 *w***	**64.8 *w***	**65 *w***
Bolivia	7.2	1 099	630	–0.7	15.9	317.9	60
Zimbabwe	9.8	391	640	0.7	5.8	10.8	61
Senegal	7.4	197	710	–0.6	6.3	6.7	47
Philippines	61.5	300	730	1.3	11.4	14.9	64
Côte d'Ivoire	11.9	322	750	0.5	9.4	2.3	55
Dominican Rep.	7.1	49	830	2.3	6.7	21.8	67
Papua New Guinea	3.9	463	860	0.1	8.1	5.3	55
Guatemala	9.2	109	900	0.7	7.1	14.6	63
Morocco	25.1	447	950	2.3	7.0	7.2	62
Cameroon	11.7	475	960	3.0	9.0	5.6	57
Ecuador	10.3	284	980	2.8	10.9	36.6	66
Syrian Arab Rep.	12.4	185	1 000	2.9	7.9	14.6	66
Congo	2.3	342	1 010	3.1	6.8	0.5	53
El Salvador	5.2	21	1 110	–0.4	7.0	17.2	64
Paraguay	4.3	407	1 110	4.6	9.3	24.4	67
Peru	21.7	1 285	1 160	–0.2	20.6	233.9	63
Jordan	3.2	89	1 240	..	..	..	67
Colombia	32.3	1 139	1 260	2.3	17.5	24.8	69
Thailand	55.8	513	1 420	4.4	6.2	3.4	66
Tunisia	8.1	164	1 440	3.2	6.7	7.4	67
Jamaica	2.4	11	1 500	–1.3	12.8	18.3	73
Turkey	56.1	779	1 630	2.6	20.8	43.2	67
Romania	23.2	238	1 640	..	..	1.8	70
Poland	38.2	313	1 690	..	..	54.3	71
Panama	2.4	77	1 830	1.4	5.4	2.3	73
Costa Rica	2.8	51	1 900	1.4	11.2	23.5	75
Chile	13.2	757	1 940	0.4	129.9	20.5	72
Botswana	1.3	582	2 040	8.4	8.4	12.0	67
Algeria	25.1	2 382	2 060	2.1	10.9	6.6	65
Bulgaria	8.8	111	2 250	..	..	2.2	73
Mauritius	1.1	2	2 250	3.2	11.8	8.8	70
Malaysia	17.9	330	2 320	4.0	4.9	1.6	70
Argentina	32.3	2 767	2 370	–0.3	78.4	395.2	71
Iran, Islamic Rep.	55.8	1 648	2 490	0.1	15.5	13.5	63
Nicaragua	3.9	130	..	–3.3	8.9	432.3	65
Upper-middle-income	**458.4 *t***	**18 706 *t***	**3 410 *w***	**2.8 *w***	**19.3 *w***	**102.1 *w***	**68 *w***
Mexico	86.2	1 958	2 490	2.8	13.0	70.3	70

Table 1.2 ***Basic Indicators (continued)***

	Population (millions) mid-1990	*Area (thousands of square kilometers)*	*GNP per capita*		*Average annual rate of inflation (percent)*		*Life expectancy birth (years)*
			Dollars	*Average annual growth rate (percent)*			
			1990	*1965–90*	*1965–80*	*1980–90*	*1990*
South Africa	35.9	1 221	2 530	1.3	10.3	14.4	62
Venezuela	19.7	912	2 560	–1.0	10.4	19.3	70
Uruguay	3.1	177	2 560	0.8	58.2	61.4	73
Brazil	150.4	8 512	2 680	3.3	31.3	284.3	66
Hungary	10.6	93	2 780	..	2.6	9.0	71
Yugoslavia	23.8	256	3 060	2.9	15.2	122.9	72
Czechoslovakia	15.7	128	3 140	..	..	1.9	72
Gabon	1.1	268	3 330	0.9	12.8	–1.7	53
Trinidad and Tobago	1.2	5	3 610	0.0	13.7	6.4	71
Portugal	10.4	92	4 900	3.0	11.7	18.1	75
Korea, Rep.	42.8	99	5 400	7.1	18.4	5.1	71
Greece	10.1	132	5 990	2.8	10.3	18.0	77
Saudi Arabia	14.9	2 150	7 050	2.6	17.9	–4.2	64
Libya	4.5	1 760	..	*3.0*	15.4	*–0.2*	62
Oman	1.6	212	..	6.4	19.9	..	66
Low- and middle-income	**4 158.8 *t***	**78 919 *t***	**840 *w***	**2.5 *w***	**16.7 *w***	**61.8 *w***	**63 *w***
Sub-Saharan Africa	**495.2 *t***	**23 066 *t***	**340 *w***	**0.2 *w***	**11.4 *w***	**20.0 *w***	**51 *w***
East Asia & Pacific	**1 577.2 *t***	**15 572 *t***	**600 *w***	**5.3 *w***	**9.3 *w***	**6.0 *w***	**68 *w***
South Asia	**1 147.7 *t***	**5 158 *t***	**330 *w***	**1.9 *w***	**8.3 *w***	**8.0 *w***	**58 *w***
Europe	**200.3 *t***	**2 171 *t***	**2 400 *w***	..	**13.9 *w***	**38.8 *w***	**70 *w***
Middle East & N. Africa	**256.4 *t***	**11 334 *t***	**1 790 *w***	**1.8 *w***	**13.6 *w***	**7.5 *w***	**61 *w***
Latin America & Caribbean	**433.1 *t***	**20 397 *t***	**2 180 *w***	**1.8 *w***	**31.4 *w***	**192.1 *w***	**68 *w***
Other economies	**320.9 *t***	**22 634 *t***	..	..	..	..	**71 *w***
Severely indebted	**455.2 *t***	**21 048 *t***	**2 140 *w***	**2.1 *w***	**27.4 *w***	**173.5 *w***	**67 *w***
High-income economies	**816.4 *t***	**31 790 *t***	**19 590 *w***	**2.4 *w***	**7.7 *w***	**4.5 *w***	**77 *w***
OECD members	**776.8 *t***	**31 243 *t***	**20 170 *w***	**2.4 *w***	**7.6 *w***	**4.2 *w***	**77 *w***
†Other	**39.6 *t***	**547 *t***	..	..	**13.8 *w***	**26.1 *w***	**75 *w***
Ireland	3.5	70	9 550	3.0	11.9	6.5	74
Israel	4.7	21	10 920	2.6	25.2	101.4	76
Spain	39.0	505	11 020	2.4	12.3	9.2	76
Singapore	3.0	1	11 160	6.5	5.1	1.7	74
Hong Kong	5.8	1	11 490	6.2	8.1	7.2	78
New Zealand	3.4	269	12 680	1.1	10.3	10.5	75
Belgium	10.0	31	15 540	2.6	6.6	4.4	76
United Kingdom	57.4	245	16 100	2.0	11.2	5.8	76
Italy	57.7	301	16 830	3.0	11.3	9.9	77
Australia	17.1	7 687	17 000	1.9	9.5	7.4	77
Netherlands	14.9	37	17 320	1.8	7.5	1.9	77
Austria	7.7	84	19 060	2.9	5.8	3.6	76

Table 1.2 ***Basic Indicators (continued)***

	Population (millions) mid-1990	*Area (thousands of square kilometers)*	*GNP per capita*		*Average annual rate of inflation (percent)*		*Life expectancy birth (years)*
			Dollars	*Average annual growth rate (percent)*			
			1990	*1965–90*	*1965–80*	*1980–90*	*1990*
France	56.4	552	19 490	2.4	8.4	6.1	77
United Arab Emirates	1.6	84	19 860	..	..	1.1	72
Canada	26.5	9 976	20 470	2.7	7.1	4.4	77
United States	250.0	9 373	21 790	1.7	6.5	3.7	76
Denmark	5.1	43	22 080	2.1	9.3	5.6	75
Germany	79.5	357	22 320	2.4	5.2	2.7	76
Norway	4.2	324	23 120	3.4	7.7	5.5	77
Sweden	8.6	457	23 660	1.9	8.0	7.4	78
Japan	123.5	378	25 430	4.1	7.7	1.5	79
Finland	5.0	338	26 040	3.2	10.5	6.8	76
Switzerland	6.7	41	32 680	1.4	5.3	3.7	78
Kuwait	2.1	18	..	–4.0	15.9	–2.7	74
World	**5 283.9** *t*	**133 342** *t*	**4 200** *w*	**1.5** *w*	**9.2** *w*	**14.7** *w*	**66** *w*

t means total.
w means weighted average.
Source: *World Development Report*, 1992.

dards in the developing countries have been rising faster since 1950 than at any time in the past; but so, too, have the living standards in the developed countries, and the gap between rich and poor countries continues to widen. Although development consists of more than a rise in *per capita* incomes, income disparities are the essence of the so-called 'development gap'. Let us examine the nature and magnitude of this gap more closely.

■ The Development Gap

The statement that 'the rich countries get richer and the poor countries get poorer' has become a popular cliché in the literature on world poverty, but without much discussion of the facts or the precise magnitude of the development task facing the developing countries if the *per capita* income gap between rich and poor nations is to be narrowed. Indeed, the statement itself is not unambiguous. Since living standards in all countries tend to rise absolutely over time, it obviously refers to the *comparative* position of poor countries, but is the comparative position being measured taking absolute or relative differences in *per capita* income? How should the 'development gap' be assessed? Unfortunately there is no easy answer to this question, yet the answer given has a profound bearing on the growth of *per capita* income that poor countries must achieve either to prevent a deterioration of their present comparative position or for an improvement to be registered. Relative differences will narrow as long as the *per capita* income growth rate of the developing countries exceeds that of the developed countries; and this excess of growth is a precondition for absolute differences to narrow and disappear in the long run. In the short run, however, a narrowing of relative differences may go hand in hand with a widening absolute difference, given a wide absolute gap to start with, and thus the rate of

growth necessary to keep the absolute *per capita* income gap from widening is likely to be substantially greater than that required to keep the relative gap the same. But suppose the relative gap does narrow, and the absolute gap widens, are the poor countries comparatively better or worse off?

There is a tendency in economics to measure phenomena, especially dispersions of income, in relative rather than absolute terms – to compare differences in the rates of change of variables, as with Lorenz curves, rather than absolute differences. In comparing rich and poor countries, however, it is not difficult to argue that even if a relative *per capita* income gap is narrowed, the comparative position of the poor may have worsened because the absolute gap has widened. Take for illustration the case of the average Indian living on the equivalent of $350 per annum compared with the average American living on approximately $22 000. Suppose the Indian's income rises by 20 per cent and the American's income by 10 per cent. The Indian is now relatively better off, but is he not comparatively worse off? The American's increased command over goods and services (i.e. 10 per cent of $22 000) far exceeds that of the Indian (i.e. 20 per cent of $350), and unless marginal utilities differ radically, divergences in total utility and welfare will widen in favour of the American. On welfare grounds there would seem to be a case for paying as much attention to absolute differences in *per capita* income between rich and poor countries as to rates of growth of *per capita* income.

As it happens, both the absolute and the relative gap between rich and poor countries has widened in the last thirty years. Research by Dowrick (1992) shows that between 1960/64 and 1984/88, average *per capita* income growth in the rich countries was 2.49 per cent per annum; in the middle-income countries 2.16 per cent per annum, and in the poor countries 1.36 per cent per annum. There is no evidence of living standards converging in the world economy. In 1960, the richest 20 per cent of the world's population had incomes 30 times greater than the poorest 20 per cent of the world's population. In 1990, this ratio was 60 times greater. Taking account of income inequality within countries, the top 20 per cent of the richest people in the rich countries had incomes 150 times higher than the incomes of the poorest 20 per cent of people in poor countries.

Now let us turn to the *future* comparative position of the poor countries, and the magnitude of the development task as far as more equitable world living standards are concerned. To avoid the issue of whether strategy and assessment should be concerned with absolute or relative *per capita* income differences, and to facilitate quantification, matters will be made simple by assuming that the desirable goal is to narrow and eliminate both the absolute and the relative gap. We shall take as a target the average *per capita* income of the industrialised countries and attempt to answer four specific questions as reliably as the data will allow:

1. Given the recent growth experience of the poor countries, how long would it take for them to reach the current average level of *per capita* income in the industrialised countries?
2. Given the recent growth experience of the poor countries relative to the industrialised countries, how many years would it take for the *per capita* income gap to be eliminated?
3. Given the rate of growth of the industrialised countries from now until the year 2010 (say), how fast would the poor countries have to grow for *per capita* incomes to be equalised by that date?
4. Given the rate of growth of the industrialised countries, how fast would the poor countries have to grow merely to prevent the absolute *per capita* income gap between rich and poor countries from being any wider in the year 2010 than now?

By asking the first two questions some idea can be obtained of the time scale of the catching up process by the poor countries given their recent growth performance. The answers to the latter two questions give some idea of the growth task facing the poor countries in their struggle not only for parity of living standards, but also in simply preventing the absolute gap from widening.

Given the basic data, the answers to the ques-

tions posed involve little more than simple manipulation of the formula for compound interest:

$$S = P\,(1 + r)^n$$

where P is the principal sum and S is the sum to which the principal grows at an annual rate of growth, r, over n years. For illustration:

Let Y_{Dt} be the current level of *per capita* income in the industrialised countries = *$20 000*;

Y_{DCt} be the current level of *per capita* income in the poor countries = *$1200*;

r_D be the *per capita* income growth rate in the industrialised countries from 1990 to the year 2010 = 3 per cent (say);

r_{DC} be the actual *per capita* income growth rate in the poor countries = 2 per cent;

Y^*_D be the assumed level of *per capita* income in the industrialised countries in the year 2010 = *$36 000* at today's prices (assuming 3 per cent growth);

and r^*_{DC} be the required *per capita* growth rate of the poor countries.

The solution to the first question is then obtained from the formula:

$$Y_{Dt} = Y_{DCt}(1 + r_{DC})^n$$

from which

$$n = \frac{\log \dfrac{Y_{Dt}}{Y_{DCt}}}{\log\,(1 + r_{DC})}$$

Applying the assumed values above gives:

$$n = \frac{\log \dfrac{20\,000}{1200}}{\log\,(1.02)} \simeq 95 \text{ years}$$

In other words, at a growth rate of 2 per cent, it would take the average poor country, with a *per capita* income of $1200, 95 years to reach the *current* living standards enjoyed in the industrialised countries.

The solution to the second question is obtained from the expression:

$$Y_{Dt}(1 + r_D)^n = Y_{DCt}(1 + r_{DC})^n$$

from which we can find how long it would take (n) for the *per capita* income gap to be eliminated between rich and poor countries, as long as the rate of *per capita* income growth in poor countries is greater than in the industrialised countries – otherwise, of course, the absolute gap would widen for ever.

$$n = \frac{\log \dfrac{Y_{Dt}}{Y_{DCt}}}{\log(1 + r_{DC}) - \log(1 + r_D)}$$

A calculation can be made for any individual country whose average *per capita* income growth was in excess of that of the industrialised countries. Korea, for example, has a *per capita* income of approximately $5000 and *per capita* income has been growing at approximately 7 per cent per annum. How long would it take Korea at this rate to catch up the present industrialised countries growing at 3 per cent? The answer is:

$$n = \frac{\log \dfrac{20\,000}{5000}}{\log(1.07) - \log(1.03)} = 36 \text{ years}$$

This is a relatively short space of time, but clearly the lower the initial level of *per capita* income and the smaller the excess of growth above 3 per cent, the longer the time it would take to catch up. For a country starting with an average level of *per capita* income of $1000 and growing at 4 per cent, it would take 309 years!

The solution to the third question is obtained from the expression:

$$Y^*_D = Y_{DCt}(1 + r_{DC})^n$$

where Y^*_D is the assumed level of *per capita* income in the industrialised countries in the year 2010. We can then solve for the required growth rate of

the poor countries between the base period (1990) and the year 2010($n = 20$) to equalise *per capita* incomes.

$$r^*_{DC} = n\sqrt{(Y^*_D/Y_{DCt})} - 1$$

Applying the assumed magnitudes of the variables gives:

$$r^*_{DC} = 20\sqrt{(36\,000/1200)} - 1$$
$$\simeq 18 \text{ per cent}$$

The required growth rate is 18 per cent per annum and hardly feasible. The magnitude of the development task is clearly colossal if defined in terms of achieving roughly comparable living standards throughout the world by the beginning of the next century. For most of the poor countries *per capita* income growth would have to increase six-fold, necessitating a ratio of investment to national income of 50 per cent or more. Investment ratios of this order are simply not feasible, and in any case the countries themselves could not absorb such investment.

The solution to the fourth question is obtained from the expression:

$$Y_{Dt} - Y_{DCt} = Y^*_D - Y_{DCt}(1 + r_{DC})^n$$

where the left-hand side represents the base level *per capita* income gap and n is 20 years. Solving for the growth rate that would have to be achieved to prevent the *present* gap from widening gives:

$$r_{DC} = n\sqrt{[Y^*_D - (Y_{Dt} - Y_{DCt})]/Y_{DCt}} - 1$$

Applying the assumed magnitudes of the variables gives:

$$r_{DC} = 20\sqrt{[36\,000 - (20\,000 - 1200)]/1200}$$
$$- 1 \simeq 14 \text{ per cent}$$

This again is a growth rate not feasible, with the implication that the *per capita* income gap between rich and poor countries will almost certainly be wider in the year 2010 than now, given the assumed 3 per cent average growth rate of the industrialised countries.

All the above calculations are sensitive to the assumed future growth rate of the industrialised countries, the choice of the target year in the future, and the base year level of *per capita* income taken for the poor countries. No one can possibly know with precision what the future rate of advance of the industrialised countries will be, and 3 per cent *per capita* income growth – the historical average from 1950 to 1990 – would seem to be as reasonable an assumption as any. But the lower the growth rate, the less formidable the growth effort of the poor countries to achieve parity of living standards. No special significance should be attached to the year 2010 as the choice of target year. Some year has to be taken to make these 'catching up' calculations – not too close to the present to give no hope and not too far away for the goal to be lost sight of. As far as the base year level of *per capita* income in the poor countries is concerned, a note of caution is in order. To the extent that income statistics invariably understate the value of production in poor countries (see later), the calculations of the catching-up time and the growth rate required for parity of living standards will be exaggerated. The degree of overestimation, however, is not likely to be so great as to invalidate the conclusion that the growth rates required for parity of living standards by the year 2010 are not feasible, and that on current growth performance some countries will never catch up. It can be argued, of course, that world income equality is an impracticable ideal, and that the primary aim is not equality of living standards throughout the world but 'tolerable' living standards in all countries, which is a very different matter. The problem is to define 'tolerable' living standards, and especially to guarantee a reasonably equitable distribution of that average level of real income. The time scale involved to reach 'tolerable' living standards is clearly less than that required to eliminate the gap entirely, but even so, if the average level of *per capita* income now enjoyed in the industrial countries is regarded as the tolerable level, we estimate it will take almost a century for the average poor country on current

performance to attain it. Can these countries wait that long?

Per Capita Income as an Index of Development

Having considered the world distribution of income, and used *per capita* income figures as a measure of the 'development gap', we come now to the question of the use of *per capita* income figures as an index of development and for making a distinction between developed and developing countries, as well as between rich and poor. While there may be an association between poverty and underdevelopment and riches and development, there are a number of reasons why some care must be taken in using *per capita* income figures alone as a criterion of development (unless underdevelopment is *defined* as poverty and development as riches). Apart from the difficulties of measuring income in many countries and the difficulties of making inter-country comparisons, which will be considered in the next section, a single *per capita* income figure to divide developed from developing countries must inevitably be somewhat arbitrary, ignoring such factors as the distribution of income within countries, differences in development potential and other physical indicators of the quality of life. It is not so much a question of whether or not low-income countries should be labelled 'underdeveloped' or 'developing', but what income level should be used as the criterion for separating the developed from the developing countries, and whether all high-income countries should be labelled 'developed'. In many ways it should be the nature and characteristics of the countries that decide the income level which is used as the dividing line. It also makes sense to categorise separately the oil rich countries which have high *per capita* incomes but by no stretch of the imagination can be regarded as developed. Within the countries outside the industrialised bloc, the *per capita* income level dividing the low and middle-income countries is arbitrary, but none are fully industrialised and all are developing in this sense. Acronyms abound to describe the different stages of development. Perhaps the most amusing set is attributable to the Brazilian economist, Roberto Campos, who distinguishes five categories of countries: the HICs, PICs, NICs, MICs and DICs. These stand for hardly industrialised countries, partly industrialised countries, newly industrialised countries, mature industrialised countries and decadent industrialised countries! The HICs and the PICs would certainly cover all the low-income countries and at least the lower half of the middle-income countries. The NICs cover most of the latter half of the middle-income countries – Brazil, Mexico, Hong Kong, Singapore being prime examples. The MICs and DICs cover most of those countries classified as industrial market economies with the exception of Ireland, New Zealand and Australia which have become rich through agriculture. The United Kingdom is a prime example of a DIC which has lost over four million jobs in manufacturing industry since 1966.

Because of the arbitrariness and potential deficiencies of *per capita* income as a measure of development, other criteria are often suggested. We have already mentioned the level of industrialisation as one. Another might be an index of the quality of life based on such indices as the level of infant mortality; life expectancy; literacy and food consumption per head. Furtado (1964, pp. 141–3) has attempted a structural definition of underdevelopment which stresses imbalances between factors of production, and factor underutilisation: '**Underdevelopment is a state of factor imbalance reflecting a lack of adjustment between the availability of factors and the technology of their use, so that it is impossible to achieve full utilisation of both capital and labour simultaneously**'. An underdeveloped structure is therefore a situation in which 'full utilisation of available capital is not a sufficient condition for complete absorption of the working force at a level of productivity corresponding to the technology prevailing in the dynamic sector of the system'. By this criterion, Kuwait is obviously not a developed country, and Australia and Canada may be classified as totally developed even though they have underutilised natural resources and

great development potential. But bearing in mind the arbitrariness of *per capita* income, it is still very convenient to have one readily available, and easily understandable, criterion for classifying countries, and perhaps *per capita* income is the best single index we have. It also has one positive advantage, namely that it focuses on the *raison d'être* of development, which is the raising of living standards and the eradication of poverty. And in the last resort *per capita* income is not a bad proxy for the social and economic structure of societies. If developing countries are defined on the basis of a *per capita* income level so as to include most of the countries of Asia, Africa and South America, striking similarities are found between the characteristics and development obstacles of many of the countries in these continents. These characteristics include a high proportion of the labour force engaged in agriculture and low agricultural productivity, a high proportion of domestic expenditure on food and necessities; an export trade dominated by primary products and an import trade dominated by manufactured goods; a low level of technology; high birth rates coupled with falling death rates; and savings undertaken by a small percentage of the population. There may, of course, be some countries which on a *per capita* income basis are classified as developed and which possess most of the above-mentioned characteristics, but the exceptions will be few, and the reverse of this situation is almost inconceivable. Also these countries have many social problems in common, such as growing unemployment in urban areas; inegalitarian income distributions, and poor health and standards of education – about which we shall say more later. In general, therefore, we conclude that *per capita* income may be used as a starting-point for classifying *levels* of development, and can certainly be used for identifying the *need* for development. The only major reservation that we shall have to make later concerns the case of geographically dual economies where an aggregate *per capita* income figure can disguise the need for the development of a sizeable region as great as the need for the development of a country itself, e.g. southern Italy.

It should be emphasised that we are not at this stage implying any causal relation between the characteristics of low-income countries and the extent of their poverty or underdevelopment. Low *per capita* incomes do seem to go hand in hand with such characteristics as high birth rates and an absence of industry, but it is always dangerous to equate association with causation, and in this context what is cause and what is effect cannot be deduced without adequate theorising. As Kuznets (1961, p. 9) reminds us, 'it is easy to translate close statistical association into significant causal relationships . . . [but] in view of the continuous interplay of income levels and these associated characteristics this simple translation is a logical trap that should be avoided lest it lead to intellectual sterility and to a dangerously mechanistic approach to policy implications'. A simple mechanical argument ascribing poverty to such factors as low savings and primary product production ignores the fact that countries may be at different stages of their economic history and may differ radically with respect to past history and future prospects. In this respect, four main categories of low-income countries need distinguishing: first, those countries with low *per capita* incomes but which are progressing rapidly and with enormous future potential based on indigenous resources; second, those countries with rising *per capita* incomes but with less hope of rapid self-sustaining growth because of resource limitations; third, those countries rich in resources but with *per capita* income still relatively stagnant; and last, those countries with a stationary *per capita* income and with little prospect of raising living standards owing to a sheer lack of resources. A low-income country may fall into any one of these four broad categories and it would clearly be misleading, without further information, to ascribe low *per capita* income in a particular country at any particular point in time to characteristics it shares with other low-income countries. Association between low incomes and certain development characteristics is all that one is really entitled to claim.

There is a difference, however, between using *per capita* income as a guideline for classifying countries into developed and underdeveloped at a point *in time* and using the growth of *per capita*

income as an index of development *over time*. The difficulty of using *per capita* income for the latter purpose is the obvious one that if, in a particular period, *per capita* income did not grow because population growth matched the growth of a country's total income, one would be forced into the odd position of denying that a country had developed even though its national product had increased. This is an inherent weakness of linking the concept of development to a measure of living standards.

This leads on to the **distinction between growth and development.** Development without growth is hardly conceivable, but is growth possible without development? If *per capita* income is rejected as an index of development over time, an answer to this question is not possible without defining terms more precisely.

The difficulty is defining 'development'. The meaning of 'growth' is fairly unambiguous; most economists would accept the definition of a rise in *real* national income, i.e. a rise in money income deflated by an index of prices. **But 'development' is an elusive term meaning different things to different groups of social scientists.**[1] Most would agree that development implies more than just a rise in real national income; that it must be a sustained, secular rise in real income accompanied by changes in social attitudes and customs which have in the past impeded economic advance (see our earlier discussion). But at this point agreement on what constitutes development would probably end. But whatever definition of development is given, growth is clearly possible without the broader societal changes referred to. The upswing of the trade cycle is the most obvious example of the possibility of growth without development, and examples of abortive 'take-offs' are not hard to find where countries have grown rapidly for a short time and then reverted to relative stagnation. Historically, Argentina is a case in point. On the other hand, development is hardly possible without growth; but development is possible, as we have suggested, without *per capita* income rising. It would be a strange, rather purposeless, type of development, however, which left *per capita* income unchanged, unless the stationary *per capita* income was only temporary and a strong foundation was being laid for progress in the future. For the ultimate rationale of development must be to improve living standards and welfare, and while an increase in measured *per capita* income may not be a sufficient condition for an increase in individual welfare, it is a necessary condition in the absence of radical institutional innovations, such as the distribution of 'free' goods.

An increase in income is not a sufficient condition for an increase in welfare, because an increase in income can involve costs as well as benefits. It may have been generated at the expense of leisure or by the production of goods not immediately consumable. **If development is looked upon as a means of improving the welfare of present generations, probably the best index to take would be consumption per man-hour worked.** This index, in contrast to an index of *per capita* income, focuses directly on the immediate utility derivable from consumption goods in relation to the disutility of work effort involved in their production.

The Measurement and Comparability of *Per Capita* Incomes

We turn now to the difficulties of measuring real *per capita* income and comparing living standards between countries. These difficulties cannot be ignored any longer and must be continually borne in mind in using *per capita* income figures both for classification purposes and for comparing the rate of development in different countries over time. The difficulties of obtaining meaningful and accurate measures of real *per capita* income relate more to the measurement of real income than to population, and we shall thus concentrate briefly on some of the problems of national income

[1] For semantic entertainment on the meaning of 'development' and 'underdevelopment', see Machlup (1967). Machlup himself defines economic development as 'those changes in the use of resources that result in potentially continuing growth of national income per head in a society with increasing or stable population'.

accounting and the uses of national income statistics in developing countries.

The first point to bear in mind is that if no allowance is made for the non-monetary sector in the national income accounts of a developing country, any long-term growth estimates are bound to have an upward bias owing to the gradual extension of the money economy and the shift of economic activities from the household to the market-place. Furthermore, if no allowance is made for the subsistence sector in some countries, it may be misleading to compare periods in these countries' history and to compare growth rates between countries, especially between the developed and the developing countries.

Growth rates may also be biased upwards by using prices as weights in compiling national income totals from the output statistics of different sectors of the economy (unless the weights are revised frequently), since goods with high prices, which subsequently fall, are usually the fastest growing. This is more of a danger in developing countries than in developed countries because of less sophisticated accounting techniques, the greater difficulty in revising price weights, and the more widespread introduction of new goods with high initial prices.

A consideration of prices is also necessary in deciding what price index to use as a deflator of money national income in order to obtain an index of real income. The task of converting money income statistics into real income raises all the difficulties, not peculiar to developing countries, connected with the use of index numbers, such as which base year should be taken, how to take account of changes in the quality of products, which weighting system to employ, and so on. These are conceptual issues to be sorted out by the national income statistician rather than by the development economist, but it is important for the economist to know how figures for real national income, or *per capita* income, have been arrived at prior to analysis.

But apart from the problem of bias and the choice of price deflator there is the sheer practical difficulty of measuring money national income in a rural economy where communications are bad, illiteracy rife, and in which many goods produced and consumed do not exchange for money. Differences in the extent of the subsistence economy between developing countries, and differences in the ease and difficulty of collecting data, may markedly influence estimates of national income, and therefore of *per capita* income differences, between these countries and the rest of the world. Some testimony to the role that the subsistence sector must play in the economies of most developing countries is illustrated by the inconceivability that 60 per cent of the world's population could remain alive on the equivalent of $1200 per annum. But this is not the whole story.

The other part of the story, and probably the major part, concerns the understatement of living standards in developing countries when their national incomes measured in local currencies are converted into US dollars (as the common unit of account) at the official rate of exchange. If the US dollar is used as the unit of account the national income per head of country X in US dollars is given by

$$\frac{\text{GNP}_X}{\text{Population}} \div \text{Exchange rate}$$

For example, if the GNP of country X is 100 million rupees, its population is 5 million, and there are 10 rupees to the dollar, then *per capita* income of country X in dollars is:

$$\frac{100}{5} \div 10 = \$2.$$

But if living standards between two countries are to be compared by this method, it must be assumed that 10 rupees in country X can buy the same living standard as $1 in the United States. It is well known, however, that official exchange rates between two countries' currencies are not very good measures of **purchasing-power parity** between countries, especially between countries at different levels of development. The reason is this: exchange rates are largely determined by the supply and demand for currencies based on goods which are traded, the prices of which tend to be

equalised internationally. Purchasing-power parity, however, depends not only on the price of traded goods, but also on the price of non-traded goods which is largely determined by unit labour costs, which tend to be lower the poorer the country. In general, therefore, the lower the level of development the lower the ratio of the price of non-traded goods to traded goods and the more the use of the official exchange rate will understate the living standards of the developing country measured in US dollars. The ratio of the price of non-traded goods to traded-goods tends to rise with development as wage levels in the non-traded goods sector rise while productivity growth is relatively slow, and slower than in the traded goods sector. **To make meaningful international comparisons of income and living standards, therefore, what is required is a measure of purchasing-power parity, or a *real* exchange rate, between countries.**

There are several methods of constructing purchasing-power parity ratios in order to make binary comparisons (one country with another) or 'multilateral' comparisons in which the currency of any one of a group of countries can act as the unit of account without altering the ratios of living standards between countries.

One approach to the construction of a purchasing-power parity ratio between two countries is to revalue the national incomes of the two countries by selecting a comparable basket of goods and services in each country and estimating the purchasing-power equivalent of each item in country *A* relative to country *B*. Thus if P_{ia} is the price of item *i* in country *A* and P_{ib} is the price of item *i* in country *B*, the purchasing-power equivalent of item *i* in country *A* relative to country *B* is P_{ia}/P_{ib}. By extending this calculation to all goods, and applying the price ratios to the average quantities consumed of each item in the two countries, we obtain a formula for the over-all purchasing-power equivalent in country *A* relative to country *B*:

$$\frac{\sum_i Q_i P_{ia}}{\sum_i Q_i P_{ib}}$$

where Q_i is the geometric mean of the quantities of each good consumed in the two countries.

The purchasing-power-equivalent ratio can then be used to convert one country's national income measured in local currency into another country's currency as the unit of account (e.g. the US dollar). For example, suppose that the official exchange rate between the Indian rupee and the US dollar is 10 : 1, while the purchasing-power-equivalent ratio is 5 : 1. This means that converting the Indian national income into US dollars at the purchasing-power parity rate will give double the income than the conversion at the official exchange rate.

The method described above is only one possible approach to the construction of a binary purchasing-power parity ratio. Instead of the relative prices being applied to the geometric average of the quantities of each good consumed in the two countries, the quantity weights could be the quantities consumed in either the one country or the other. If the quantity weights of the poor country are used, the dollar valuation of the poor country's income would probably be even higher because relatively large weights would be given to those items which are widely consumed in those countries with low relative prices, therefore improving the purchasing-power parity ratio.

Alternatively comparisons can be made from the output side by valuing output in both countries either at one country's prices or at the other's prices.

The results of constructing and using purchasing-power parity ratios for making binary comparisons have been quite dramatic. In an early study, Millikan suggested that the real incomes of many African and Asian countries in 1950 were of the order of 350 per cent larger than indicated by UN statistics in US dollars *per capita* (Kindleberger (1965), p. 9). Likewise, Usher (1966, pp. 10–17) estimated the ratio of British to Thai national income per head to be 13.06 : 1 converting Thai income in local currency into pounds at the foreign exchange rate. However, by-passing the exchange rate and valuing British and Thai income directly at Thai prices the ratio fell to 6.27 : 1, and valuing both incomes at British prices the ratio fell

Table 1.3 ***Per Capita GDP in 1970 in $US Using Official Exchange Rates and in International $s Using International Prices***

	Per capita GDP (1970) in $US at official exchange rates	*Per capita GDP (1970) in I$ at international prices*
Colombia	329	763
France	2902	3599
West Germany	3080	3585
Hungary	1037	1935
India	98	342
Italy	1699	2198
Japan	2003	2952
Kenya	144	275
United Kingdom	2143	2895
United States	4801	4801

to 2.76 : 1. In making binary international comparisons of *per capita* incomes, therefore, it makes a great deal of difference whether the official foreign-exchange rate is used as a measure of purchasing-power parity, or, if the use of exchange rates is discarded, which quantity weights are applied to relative price indices or which price weights are applied to relative quantities.

More recently, Irving Kravis and collaborators have developed a method of making **multilateral** comparisons of real *per capita* incomes across countries by constructing world price ratios based on price and quantity data for over 100 commodity categories in over 100 countries. The international prices are then used to value quantities in each of the countries. The international prices and product values are expressed in international dollars (I$). An international dollar has the same overall purchasing power as a US dollar for national income as a whole, but relative prices for each country are relative to average world prices rather than relative to US prices. This multilateral approach allows a direct comparison between any two countries using any country's currency as the unit of account. The results of this exercise for ten countries originally taken by Kravis *et al.* ((1975); see also Kravis *et al.* (1978)) are summarised in **Table 1.3**. It can be readily seen that converting some of the poor countries' incomes at international prices rather than at official exchange rates increases the estimate of *per capita* income more than two-fold (e.g. in the case of Colombia and India).

Purchasing power parities can be derived from the table in the following manner. The purchasing power parity rate (PPPR) is equal to the official exchange rate divided by the extent to which the official exchange rate conversion of *per capita* income understates the true level of *per capita* income when measured at international prices. Suppose, for example, there are 7 Kenyan shillings to one US dollar, and that the official exchange rate conversion understates Kenyan *per capita* income by 90 per cent (which it does according to **Table 1.3**). The PPPR of Kenyan shillings to $US is therefore PPPR = 7/1.9 = 3.7. That is, to compare living standards between Kenya and the US, the real exchange rate of 3.7 ought to be used, not the official rate of 7 shillings to the dollar.

The pioneer work of Kravis is now regularly extended and updated by his collaborators, Summers and Heston, who produce international comparisons of price levels and real *per capita* incomes at international prices for all major countries in the world since 1950, which can be compared with the World Bank estimates of *per capita* incomes based on official rates of exchange with the US dollar (see, for example, Summers and Heston (1988)).

Before ending this section it should be stressed

that purchasing-power parity ratios, however derived, should not be interpreted as equilibrium exchange rates to be used as a standard for measuring the extent to which the official exchange rate may be either under- or over-valued. As we have said before, exchange rates are determined by the supply of and demand for traded goods, while many goods not traded figure in the purchasing-power parity ratios.

Apart from the construction of purchasing-power parity ratios there have been several other attempts to overcome the problems of using suspect income statistics to compare living standards between countries and over time. One consists of the use of non-monetary indicators, such as levels of health and education, the number of cars per head, steel production, etc., and to rank countries according to an index of each indicator (United States = 100). The indices of all indicators are then averaged. However, this approach suffers from the drawback that there is no satisfactory weighting system that can be used for combining the different indices. An alternative approach has been suggested by Beckerman and Bacon (1966) which they claim to be 'theoretically valid, potentially very accurate, and at the same time, almost costless'. The approach is based on correlation and regression analysis. Their procedure is as follows. First, they take *reliable* estimates of relative (to the United States) real consumption per head for thirteen countries. Then they take several non-monetary indicators and pick out those that correlate best with the reliable observations of real consumption per head, experimenting with different functional forms. Finally, with the aid of a computer they find which combination of indicators, and which forms of the equations linking them to real consumption per head, give the best results in terms of the multiple correlation coefficients and the standard errors of the regression equations. From the best results, predictions can be made of relative consumption per head for countries, where data on income per head are thought to be unreliable, from the non-monetary independent variables. The variables used as predictors were as follows: annual crude steel consumption per head; annual cement production per head; annual number of domestic letters sent per head; stock of radio receivers per head; stock of telephones per head; stock of road vehicles per head; and annual meat consumption per head. Predictions are made by Beckerman and Bacon for eighty countries, and the countries ranked. Unfortunately there is no indication given of the extent to which the ranking of countries by this method differs from the ranking by published *per capita* income statistics. If the rankings differ substantially, it may be that the Beckerman–Bacon approach is the most appropriate to adopt for obtaining a measure of comparative levels of welfare between countries as measured by consumption per head. If the rankings do not differ markedly, income per head may still be regarded as a good proxy for the comparison of living standards. (This is the conclusion of Hagen and Hawrylyshyn (1969).)

Other Dimensions of the Development Gap

The human problems of developing countries are not confined to low levels of *per capita* income. Developing countries generally experience much higher levels of unemployment – open and disguised – than do developed countries; their income distributions tend to be much more inegalitarian, and the levels of health, nutrition and education are often abysmally low. Policy in developing countries is becoming increasingly concerned with these other dimensions of the development gap. The growth of *per capita* income has never been the sole objective of development policy but more attention is now being paid to other objectives which in some instances may conflict with growth of *per capita* income.

Unemployment

Open unemployment in the urban areas of developing countries is another dimension of the development problem, and an increasingly serious one. The reduction of unemployment has become a major policy priority of governments and inter-

Table 1.4 ***Unemployment Rates in Selected Developing Countries***

	Percentage of labour force					
	1965	*1970*	*1975*	*1980*	*1981*	*1982*
Africa:						
Egypt	1.9[a]	2.4	2.5	5.2	–	–
Middle East:						
Syria	7.4	6.4	4.8	3.8[b]	–	–
Asia:						
S. Korea	7.4	4.5	4.1	5.2	4.6	4.4
Philippines	8.2	6.0	4.4	4.8	5.1	5.3
Latin America and Caribbean:						
Argentina	5.3	4.8	2.3	2.3	4.5	5.7
Chile[c]	5.4	4.1	15.0	10.4	11.3	20.0
Colombia[d]	8.9	8.2	10.5	9.9	8.1	–
Panama	7.6	7.1	6.4	8.8[e]	–	–
Peru[f]	–	4.7	4.9	7.0	6.8	7.0
Trinidad and Tobago	14.0	12.5	15.0	10.0	12.2	–
Uruguay[g]	7.2[h]	7.5	8.1[i]	7.3	6.6	–
Venezuela[j]	7.7[k]	6.3	7.6[l]	6.0	6.2	7.1

[a] 1964, [b] 1979, [c] Gran Santiago, [d] Bogota, [e] 1979, [f] Lima Callao, [g] Montevideo, [h] 1967, [i] 1974, [j] urban, [k] 1967, [l] 1976.
Source: M. Godfrey, *Global Unemployment: The New Challenge to Economic Theory* (Brighton: Wheatsheaf Books, 1986).

national agencies concerned with developing countries. Poor countries for a long time, and particularly since the population explosion, have been characterised by underemployment, or disguised unemployment (see Chapter 3), on the land. What has happened in recent years is that disguised unemployment on the land has transferred itself into open unemployment in the towns. The reasons for this, and the rationale for migration, will be considered later, but first let us outline the facts. Some idea of the seriousness of unemployment is given by the figures in **Table 1.4** for a selection of developing countries. The figures are not so different from unemployment rates recorded in some developed countries in the 1980s, but the recorded figures measure only the tip of the iceberg.

There are a number of contributory factors to the emergence of unemployment in the towns on an increasing scale. The problem is not so much one of a deficiency of demand for labour in an aggregate demand sense. The causal factors relate to the incentives to labour migration from the rural to the urban areas, and the incapacity of the urban areas to provide employment owing to a lack of co-operating factors of production to work with labour: capital in particular. As far as migration is concerned, there are both push and pull factors at work. The **push factors** have to do with the limited job opportunities in rural areas, and the greater willingness and desire to move fostered by education and the improvements in communications. The pull factors relate to the development of industrial activities in the towns offering jobs at a higher real wage than can be earned in rural areas, so that even if a migrant is unemployed for part of the year, he may still be better off migrating to the town than working in the rural sector. If there is no work at all in the rural sector, the migrant loses nothing, except perhaps the security of the extended family system. The rate of growth of job opportunities in the rural sector depends on the rate of growth of demand for the output of the rural sector and the rate at which jobs are being 'destroyed' by productivity growth.[1] The growth of demand for the

[1] i.e. since $O = L(O/L)$, then $dL/L = dO/O - d(O/L)/(O/L)$, where L is employment, O is output and O/L is labour productivity.

output of the rural sector will be equal to the rate of growth of total population plus the rate of growth of *per capita* income multiplied by the income elasticity of demand for rural output. Suppose population is growing at 2 per cent, that *per capita* income is growing at 4 per cent and that the income elasticity of demand is 0.5, then the rate of growth of demand for the rural sector's output will be 2.0 + 0.5 (4.0) = 4.0 per cent. Now suppose that the rural sector's productivity is growing at 2 per cent. The rate of growth of demand for labour will then be the difference between 4 per cent and 2 per cent, i.e. 2 per cent. If the rural-sector labour force is growing at 3 per cent, then 1 per cent of the labour force will be becoming redundant annually. If the level of disguised unemployment in the rural sector were not to increase, this figure would constitute the potential volume of migrants. If the urban labour force is only one-fifth of the size of the rural labour force, a 1 per cent migration of rural labour would represent a 5 per cent increase in the urban labour force due to migration. On average, this is about the extent of the influx from the rural sector into the urban areas of developing countries. On top of this there is the natural increase in the work-force in the urban area to consider; this is of the order of between 2 and 3 per cent. If job opportunities in the urban areas are only increasing at 5 per cent, then 2 to 3 per cent of the urban labour force will become unemployed annually, thus raising the unemployment percentage year by year.

Historically, the process of development has always been associated with, and characterised by, an exodus from the land, continuing over centuries. The uniqueness of the present situation is not the migration itself but its magnitude and speed. And the problem is that the urban sector cannot absorb the numbers involved. For any given technology the rate at which the urban (industrial) sector can absorb migrants largely depends on the rate of capital formation. If labour and capital must be combined in fixed proportions, and the rate of capital accumulation is only 5 per cent, then the rate of increase in job opportunities can be only 5 per cent also. Unfortunately, however, as we shall show in Chapter 3, the problem is not necessarily solved by a faster rate of capital accumulation in the urban sector, because migration is not simply a function of the actual difference in real remuneration between the two sectors, but also of the level of job opportunities in the urban sector. If the rate of job creation increases, this may merely increase the flow of migrants with no reduction in unemployment. The solution would seem to be to create more job opportunities in the rural sector. This will require, however, not only the redirection of investment but also the extension of education and transport facilities, which in the past few years have themselves become powerful push factors in the migration process. Whereas formerly redundant labour might have remained underemployed on the family farm, nowadays education and easy transportation provide the incentive and the means to seek alternative employment opportunities. While education and improved communications are desirable in themselves, and facilitate development, their provision has augmented the flow of migrants from rural to urban areas.

The **pull factors** behind migration are not hard to identify. The opportunities for work and leisure provided by the industrial, urban environment contrast sharply with the conservatism and stultifying atmosphere of rural village life and act naturally as a magnet for those on low incomes or without work, especially the young. Given the much higher wage in the urban sector, even the prospect of long spells of unemployment in the urban area does not detract from the incentive to migrate. Moreover, the choice is not necessarily between remaining in the rural sector and migrating to the urban sector with the prospect of long periods of unemployment. The unemployed in the urban sector can often find work, or create work for themselves, on the fringes of the industrial sector – in particular in the informal service sector of the industrial economy. The wages may be low, but some income is better than no income. In other words, unemployment in urban areas may take the form of underemployment, or become disguised, just as in the case of the rural sector – its manifestation being low income. This has led to the notion of an **income measure of unemployment**

which needs to be added to registered unemployment to obtain a true measure of unemployment and the availability of labour supply.

One way of measuring the extent of unemployment disguised in the form of low-productivity/low-income jobs is to take the difference between the actual labour employed at the sub-standard income and the labour that would be required to produce a given level of output or service at an acceptable level of income per head. Before measurement took place, of course, the acceptable (standard) level of income would have to be defined. It could be that level set as the 'poverty line', below which health and welfare become seriously impaired. The income measure of unemployment would thus be:

$$U = L - L^* = \frac{O}{O/L} - \frac{O}{O/L^*}$$

where L is the actual labour employed, L^* is the labour consistent with an acceptable level of income per person employed, O/L is the actual level of productivity, O/L^* is the acceptable level of income per employed person, and O is output.

Let us work an example. Suppose that the annual flow of output of an activity or service is £1 million and that the existing number employed is 10 000, giving a level of productivity of £100. Now suppose that the acceptable level of productivity to produce an acceptable level of income per person employed is £200. The income measure of unemployment is then:

$$U = \frac{1\,000\,000}{100} - \frac{1\,000\,000}{200} = 5000$$

that is, one-half of the existing labour force is disguisedly unemployed in the sense that the level of output is not sufficient to maintain all those who currently work at an adequate standard of living.

Such has been the concern in recent years with employment and unemployment in developing countries that the International Labour Office launched in 1969 a World Employment Programme sponsoring missions to several countries to undertake detailed diagnosis of the employment problem. Some of the major findings and conclusions have been surveyed by Thorbecke (1973). The report on Colombia estimated that an employment growth rate of 7 per cent per annum would be required to absorb all increases in the labour force. Since the projected rate of growth of labour productivity would make this impossible, the report recommended a move to more labour-intensive techniques, at least in the industrial sector. The report on Kenya emphasised the income measure of unemployment discussed above. It drew attention to the large number of people forced to work in the informal sector of the industrial sector with extremely low productivity, such that income falls below an acceptable minimum. Visible (open) unemployment was estimated at between 8 and 14 per cent. Adding low-income workers in the manner described above, the percentage rises to 20 per cent for males and 50 per cent for females. The report on Iran gave priority to population control (which we discuss in Chapter 6) but, as it reputably said in the draft of the report, the population problem cannot be solved overnight! The report on Sri Lanka is distinctive for its thorough analysis of structural unemployment. There are three main types of structural imbalance in most developing countries which affect employment. One is between skills, attitudes and expectations on the one hand and opportunities on the other. This affects mainly educated people. Second, there is imbalance between regions. Third, there is the sheer lack of co-operating factors for labour to work with, particularly capital and skilled managerial enterprise. We take up some of these difficulties in later chapters.

■ The Distribution of Income

The average level of *per capita* income in the developing countries has increased fairly substantially over the last two decades, as **Table 1.2** shows, yet the evidence suggests that growth and development in many countries has left the vast mass of people untouched. The growth that has

taken place has served largely to benefit the few – the richest 20 per cent of the population. Rural and urban poverty are still widespread, and if anything the degree of income inequality within the developing countries has increased. It should not come as a surprise, however, that the transformation of economies from a primitive subsistence state into industrial societies, within a basically capitalist framework, should be accompanied in the early stages by widening disparities in the personal distribution of income. Some people are more industrious than others, and more adept at accumulating wealth than others. Opportunities cannot, in the very nature of things, be equal for all. In the absence of strong redistributive taxation, income inequality will inevitably accompany industrialisation because of the inequality of skills and wealth that differences in individual ability and initiative, and industrialisation, produce.

The evidence for individual countries suggests, however, that income inequality ceases to increase at quite low levels of *per capita* income – at about $300 per annum at 1965 prices, or at about $1500 at 1992 prices. Beyond this level, income inequality tends to decrease as industrialisation proceeds. Kuznets's work (1955, 1963) shows that in many of the present developed countries, the extent of inequality decreased in the later stages of industrialisation, and certainly the degree of inequality in the developing countries is greater than in the present developed countries, largely as a result of the heavy concentration of income among the top 5 to 10 per cent of income recipients. The work of Kravis (1960) also shows that the degree of inequality first increases within countries and then declines.

The most comprehensive data assembled to date are those by Adelman and Morris (1971), and extended by Paukert (1973), which show the size distribution for fifty-six countries, developed and developing (see **Table 1.5**). The table also shows two measures of income concentration calculated from these figures – the Gini coefficient and the maximum equalisation percentage, which indicates what percentage of total income would have to be shifted between the quintiles of income recipients in order to achieve an equal distribution of income. The data show fairly conclusively that inequality increases up to a certain stage of development and then declines, tracing out an inverted U-shape similar to the pioneer work of Kuznets for the now developed countries. The average Gini coefficient for forty-three developing countries is 0.467 compared with 0.392 for thirteen developed countries. The maximum equalisation percentage is 35.8 for the developing countries compared with 28.4 for the developed countries. The greater degree of income inequality in the developing countries appears largely due to the higher share of income received by the richest 5 per cent of income recipients. In developing countries this share is 28.7 per cent, compared with 19.9 per cent in developed countries. The share going to the poorest 20 per cent in developing countries is slightly higher than in the developed countries, but there can be no comfort in this fact. The focus must be on absolute, as well as relative, poverty; and the poorest in countries with average *per capita* incomes less than $1000 per annum must be very poor indeed. On average, the *per capita* income of the poorest 20 per cent of the population in the typical developing country is about 30 per cent of the national average. As we said earlier in the chapter, there are about 600 million people living on *per capita* incomes of less than $275 per annum at 1985 prices: 50 million in Latin America; 450 million in Asia, and 100 million in Africa.

Several formidable barriers exist to raising the living standards of the poorest, and to narrowing the income distribution overall. There is the dualistic nature of many economies (see Chapter 5), perpetuated by feudal land-tenure systems and urban bias in the allocation of investment resources. There is inequality in the distribution of education facilities to contend with, particularly the lack of facilities in rural areas where the poorest are concentrated. Third, there is disguised unemployment on the land and underemployment and open unemployment in urban areas created by rural-urban migration, a shortage of investment resources, and inappropriate technological choices. Until development policy comes to grips with these problems, there will continue to be large pockets of

Table 1.5 ***Size Distribution of Personal Income Before Tax in Fifty-Six Countries: Income Shares Received by Quintiles of Recipients in the Neighbourhood of 1965***

Country and level of GDP per head	*Percentiles of recipients*						*Gini coefficient*	*Maximum equalisation percentage*	*GDP per head in 1965 ($US)*
	Below 20	*21–40*	*41–60*	*61–80*	*81–95*	*95–100*			
Under $100									
Chad (1958)	8.0	11.6	15.4	22.0	20.0	23.0	0.35	25.0	68
Dahomey (1959)	8.0	10.0	12.0	20.0	18.0	32.0	0.42	30.0	73
Niger (1960)	7.8	11.6	15.6	23.0	19.0	23.0	0.34	25.0	81
Nigeria (1969)	7.0	7.0	9.0	16.1	22.5	38.4	0.51	40.9	74
Sudan (1969)	5.6	9.4	14.3	22.6	31.0	17.1	0.40	30.7	97
Tanzania (1964)	4.8	7.8	11.0	15.4	18.1	42.9	0.54	41.0	61
Burma (1958)	10.0	13.0	13.0	15.5	20.3	28.2	0.35	28.5	64
India (1956–7)	8.0	12.0	16.0	22.0	22.0	20.0	0.33	24.0	95
Madagascar (1960)	3.9	7.8	11.3	18.0	22.0	37.0	0.53	39.0	92
Group average	*7.0*	*10.0*	*13.1*	*19.4*	*21.4*	*29.1*	*0.419*	*31.6*	*78.3*
$101–200									
Morocco (1965)	7.1	7.4	7.7	12.4	44.5	20.6	0.50	45.4	180
Senegal (1960)	3.0	7.0	10.0	16.0	28.0	36.0	0.56	44.0	192
Sierra Leone (1968)	3.8	6.3	9.1	16.7	30.3	33.8	0.56	44.1	142
Tunisia (1971)	5.0	5.7	10.0	14.4	42.6	22.4	0.53	44.9	187
Bolivia (1968)	3.5	8.0	12.0	15.5	25.3	35.7	0.53	41.0	132
Ceylon (Sri Lanka) (1963)	4.5	9.2	13.8	20.2	33.9	18.4	0.44	32.5	140
Pakistan (1963–4)	6.5	11.0	15.5	22.0	25.0	20.0	0.37	27.0	101
South Korea (1966)	9.0	14.0	18.0	23.0	23.5	12.5	0.26	19.0	107
Group average	*5.3*	*8.6*	*12.0*	*17.5*	*31.6*	*24.9*	*0.468*	*37.2*	*147.6*
$201–300									
Malaya (1957–8)	6.5	11.2	15.7	22.6	26.2	17.8	0.36	26.6	278
Fiji (1968)	4.0	8.0	13.3	22.4	30.9	21.4	0.46	34.7	295
Ivory Coast (1959)	8.0	10.0	12.0	15.0	26.0	29.0	0.43	35.0	213
Zambia (1959)	6.3	9.6	11.1	15.9	19.6	37.5	0.48	37.1	207
Brazil (1960)	3.5	9.0	10.2	15.8	23.1	38.4	0.54	41.5	207
Ecuador (1968)	6.3	10.1	16.1	23.2	19.6	24.6	0.38	27.5	202
El Salvador (1965)	5.5	6.5	8.8	17.8	28.4	33.0	0.53	41.4	249
Peru (1961)	4.0	4.3	8.3	15.2	19.3	48.3	0.61	48.2	237
Iraq (1956)	2.0	6.0	8.0	16.0	34.0	34.0	0.60	48.0	285
Philippines (1961)	4.3	8.4	12.0	19.5	28.3	27.5	0.48	35.8	240
Colombia (1964)	2.2	4.7	9.0	16.1	27.7	40.4	0.62	48.0	275
Group average	*4.8*	*8.0*	*11.3*	*18.1*	*25.7*	*32.0*	*0.499*	*38.5*	*244.4*
$301–500									
Gabon (1960)	2.0	6.0	7.0	14.0	24.0	47.0	0.64	51.0	368
Costa Rica (1969)	5.5	8.1	11.2	15.2	25.0	35.0	0.50	40.0	360
Jamaica (1958)	2.2	6.0	10.8	19.5	31.3	30.2	0.56	41.5	465
Surinam (1962)	10.7	11.6	14.7	20.6	27.0	15.4	0.30	23.0	424
Lebanon (1955–60)	3.0	4.2	15.8	16.0	27.0	34.0	0.55	41.0	440
Barbados (1951–2)	3.6	9.3	14.2	21.3	29.3	22.3	0.45	32.9	368
Chile (1968)	5.4	9.6	12.0	20.7	29.7	22.6	0.44	33.0	486
Mexico (1963)	3.5	6.6	11.1	19.3	30.7	28.8	0.53	39.5	441
Panama (1969)	4.9	9.4	13.8	15.2	22.2	34.5	0.48	36.7	490
Group average	*4.5*	*7.9*	*12.3*	*18.0*	*27.4*	*30.0*	*0.494*	*37.6*	*426.9*

Table 1.5 ***Size Distribution of Personal Income Before Tax in Fifty-Six Countries: Income Shares Received by Quintiles of Recipients in the Neighbourhood of 1965 (continued)***

Country and level of GDP per head	*Percentiles of recipients*						*Gini coefficient*	*Maximum equalisation percentage*	*GDP per head in 1965 ($US)*
	Below 20	*21–40*	*41–60*	*61–80*	*81–95*	*95–100*			
$501–1000									
Republic of South Africa (1965)	1.9	4.2	10.2	26.4	18.0	39.4	0.58	43.7	521
Argentina	7.0	10.4	13.2	17.9	22.2	29.3	0.42	31.5	782
Trinidad and Tobago (1957–8)	3.4	9.1	14.6	24.3	26.1	22.5	0.44	32.9	704
Venezuela (1962)	4.4	9.0	16.0	22.9	23.9	23.2	0.42	30.6	904
Greece (1957)	9.0	10.3	13.3	17.9	26.5	23.0	0.38	29.5	591
Japan (1962)	4.7	10.6	15.8	22.9	31.2	14.8	0.39	28.9	838
Group average	*5.1*	*8.9*	*13.9*	*22.1*	*24.7*	*25.4*	*0.438*	*32.9*	*723.3*
$1001–2000									
Israel (1957)	6.8	13.4	18.6	21.8	28.2	11.2	0.30	21.2	1243
United Kingdom (1964)	5.1	10.2	16.6	23.9	25.0	19.0	0.38	28.1	1590
Netherlands (1962)	4.0	10.0	16.0	21.6	24.8	23.6	0.42	30.0	1400
Federal Republic of Germany (1964)	5.3	10.1	13.7	18.0	19.2	33.7	0.45	32.9	1667
France (1962)	1.9	7.6	14.0	22.8	28.7	25.0	0.50	36.5	1732
Finland (1962)	2.4	8.7	15.4	24.2	28.3	21.0	0.46	33.5	1568
Italy (1948)	6.1	10.5	14.6	20.4	24.3	24.1	0.40	28.8	1011
Puerto Rico (1963)	4.5	9.2	14.2	21.5	28.6	22.0	0.44	32.1	1101
Norway (1963)	4.5	12.1	18.5	24.4	25.1	15.4	0.35	24.9	1717
Australia (1966–7)	6.6	13.4	17.8	23.4	24.4	14.4	2.30	22.2	1823
Group average	*4.7*	*10.5*	*15.9*	*22.2*	*25.7*	*20.9*	*0.401*	*29.0*	*1485.2*
$2001 and above									
Denmark (1963)	5.0	10.8	18.8	24.2	26.3	16.9	0.37	25.4	2078
Sweden (1963)	4.4	9.6	17.4	24.6	26.4	17.6	0.39	28.6	2406
United States (1969)	5.6	12.3	17.6	23.4	26.3	14.8	0.34	24.5	3233
Group average	*5.0*	*10.9*	*17.9*	*24.1*	*26.3*	*16.4*	*0.365*	*26.5*	*2572.3*

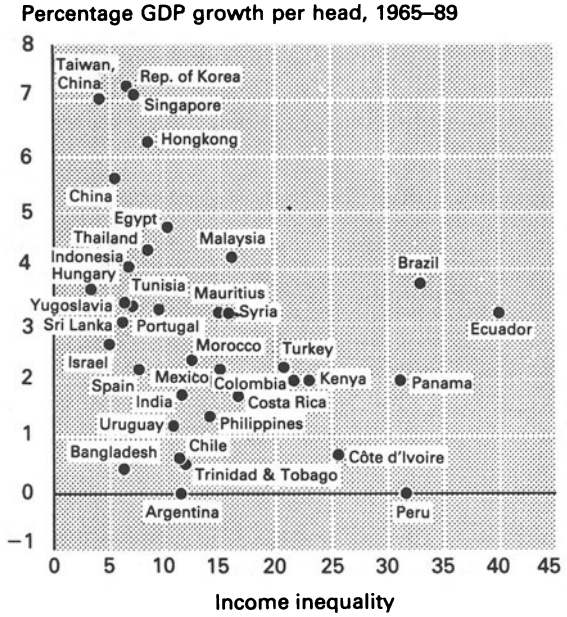
Source: F. Paukert, *International Labour Review* (August 1973), based on data compiled by I. Adelman and C. Morris, 'An Anatomy of Income Distribution Patterns in Developing Countries', *AID Development Digest* (October 1971).

absolute poverty and a marked degree of inequality in income distribution. In deciding on the allocation of investment resources and the choice of projects, a high weight needs to be given to projects which raise the income of the poorest in the income distribution (see Chapter 8). Fortunately, evidence from the World Bank does not suggest that growth and equity necessarily conflict. If anything, countries with a greater degree of equality have grown fastest. This is shown in **Figure 1.2** opposite where the growth of income per head is measured on the vertical axis, and income inequality is measured on the horizontal axis, and it can be seen that many of the fastest growing countries have a comparatively equal income distribution while many of the slowest growing countries have a high degree of income inequality. It appears that income inequality is not necessary for high levels of saving and investment or other factors that contribute to fast growth.

■ Growth and Distribution

Progress towards achieving the twin objectives of faster growth and a more equal distribution of income can be examined simultaneously by constructing **poverty-weighted indices of growth.**

Figure 1.2 ***Income Inequality and Economic Growth***



Source: *World Development Report* 1991.

GNP growth as conventionally measured is a weighted average of the growth of income of different groups of people, where the relevant weights are each group's share of total income. The measured growth rate pays no regard to the distribution of income. A high growth rate may be recorded, which has benefited only the rich. For example, suppose the bottom one-third of the population receive 10 per cent of income; the middle one-third receive 30 per cent of income, and the top one-third receive 60 per cent of income. GNP growth would be measured as:

$$\% \text{ growth of GNP} = r_1(0.1) + r_2(0.3) + r_3(0.6)$$

where r_1, r_2 and r_3 are the respective rates of growth of income of the three groups. Suppose $r_1 = 1$ per cent; $r_2 = 1$ per cent and $r_3 = 10$ per cent. A growth rate of GNP of 6.4 per cent would then be recorded which looks very respectable but the position of the poorest would hardly have changed.

The idea of constructing poverty weighted indices of growth is to give at least equal weight to all income groups in society, if not a greater weight to the poor, in order to obtain a better measure of the growth of overall welfare combining the growth of income with its distribution.

In the above example, for instance, if each group is given an equal weight of one-third, the measured growth of welfare becomes:

$$\% \text{ growth of 'welfare'} = 1(0.33) + 1(0.33) + 10(0.33) = 4\%$$

which is much less than the rate of growth shown by the conventional measure of GNP growth when distributional considerations are taken into account.

A society could go further and say it places no value or weight on income growth for the richest third of the population, and places all the weight on the lower income groups with, say, a 60 per cent weight to the bottom third and a 40 per cent weight to the middle third. The growth of 'welfare' would then look derisory:

$$\% \text{ growth of 'welfare'} = 1(0.6) + 1(0.4) + 10(0) = 1\%$$

This approach has been experimented with by economists from the World Bank (see Ahluwalia, Carter and Chenery (1979)) to compare countries, giving a 60 per cent weight to the lowest 40 per cent of the population; a 40 per cent weight to the middle 40 per cent and no weight to the top 20 per cent. In countries where the distribution of income deteriorated, the poverty-weighted measure of the growth of welfare shows less improvement than GNP growth, and where the distribution of income improved, the poverty-weighted growth rate shows more improvement than GNP growth.

■ Nutrition and Health

Low absolute levels of income can have serious consequences for the nutrition and health of individuals. It has been estimated by the UN Food and

Agriculture Organisation that there are at least one billion people in the world suffering from various degrees of malnutrition, including two-thirds of the world's one billion children. Malnutrition among children is particularly serious because it stunts growth and mental development, and adds another element to the vicious circle of poverty. Malnutrition is also a major cause of infant mortality, the rates of which are more than twice as high in developing countries as in developed countries. The costs of treating various forms of malnutrition are trivial relative to the tangible benefits, and to the costs of treating the consequences. To prevent malnutrition in children from the age of six months to three years, which is a child's most vulnerable period, can cost as little as $50 at current prices. The annual cost of preventing malnutrition is about the same as the daily cost of treating its effects. Vitamin A deficiency is a cause of blindness. The annual cost of supporting a blind person is at least 1000 times the annual ingredient cost of the vitamin A needed for prevention. Iodate deficiency is a cause of goitre, which leads to cretinism and deaf-mutism. The cost of iodate to prevent goitre is one-sixth of a cent per person per year. And so one could go on. Prevention is better than cure not only for the individual but also in a very real economic sense for the welfare of society as a whole.

The relation between low-income and food intake is two-way. Low income is a cause of malnutrition. Malnutrition in turn is a cause of low income by impairing working efficiency and productivity. All too little is known about the second relationship. But we do know that the food requirements considered by nutritionists to be necessary for efficient working and healthy living are far greater than the levels achieved by a large minority of the population in developing countries. Calorie deficiency causes loss of body weight, tiredness, listlessness, and a deterioration of mental faculties. Calories are also required for the absorption of protein which is otherwise used up for energy. Protein deficiency causes such conditions as kwashiorkor (the bloated stomachs and staring eyes we see on our television screens), which may cause death in children. Protein is particularly important for brain development in the first three years of life, during which the brain grows to 90 per cent of its full size. Brain damage due to protein deficiency is irreversible.

Poverty, Famine and Entitlements

Malnutrition is caused by a lack of access to food, but this does not only depend on the availability of food; it also depends on people's entitlement to food. Vast sections of the population may go short of food, and experience famine conditions, not primarily because food has become scarce, but because their entitlement to food has been impaired. This is the powerful thesis put forward by Professor Sen (1984), who argues that to understand poverty and starvation, or malnutrition associated with it, it is necessary to understand both ownership patterns and exchange entitlements, which requires in turn an understanding of modes of production and the class structure. He attempts to document the theory drawing on the experience of major famines such as the Great Bengal famine of 1943; the Ethiopian famine of 1973–5; the famine in the Sahel region of Africa in the early 1970s, and the Bangladesh famine of 1974. It seems that some of the worst famines occurred with no significant fall in food availability per head.

What does the entitlement to food depend on? Above all, it depends on the ability of individuals to exchange productive resources and goods for food. This depends in turn on such factors as the ownership and employment status of individuals (for example, whether they are owners of land, labourers, peasant farmers, sharecroppers, etc.); productivity; non-working income in the form of subsidies and transfer payments; and on the terms of trade between food and other goods. Exchange entitlements may deteriorate independently of a general decline in the supply of food which raises its price and worsens the terms of trade for other goods. Job opportunities may diminish; real wages or productivity may fall, and other people may become better off and demand more food. During

the Great Bengal famine of 1943, 3 million people died, yet in terms of the total availability of food grains, 1943 was not a subnormal year. Starvation occurred because food entitlements shrunk as a result of first, a rise in the price of food due to military procurement, secondly, because the price of other commodities fell as more monetary demand was switched to food, and thirdly, because of a fall in the output of other goods. Because of their ownership position, however, those in rural areas suffered less than the urban poor. The absence of famine in China and other socialist countries is not so much the result of increases in food production per head, but the result of a shift in the entitlement system through guaranteed employment and social security provisions.

The policy message is that the alleviation of famine requires the establishment and preservation of adequate entitlements to food, not simply the provision of more food – important as that may be. Public action requires programmes of **food security** which guarantee that people have access to enough food at all times, and **nutrition programmes** working through clinics targeted particularly at children and pregnant women.[1]

■ Food Production

At the global level the problem of nutrition, and of food supply to those who need it, is also essentially a distribution problem. It is not a capacity problem in the sense that the world is physically incapable of producing enough food to feed its inhabitants adequately. Since the Second World War global food production has generally kept pace with population growth, and the world is probably capable of feeding itself ten times over if need be. The worrying factor that needs to be stressed, however, is that most of the increase in world food production that has taken place in recent years has been in the granary of North America. Food production in the developing countries has barely kept pace with population growth and there has been no margin of safety or very little provision for improving the distribution of food supplies. A dangerous dependence has grown up on North America and the EEC. In 1972, for the first time since the war, world food production actually fell. In 1973 the world was threatened with a food crisis. Stocks of wheat amounted to only four weeks of world consumption. A crop failure in just one major producing area would have spelt disaster. Disaster was averted by reasonably good weather and harvests. But the situation is still precarious and malnutrition persists. It is an intolerable situation that year in and year out, at the end of the twentieth century, millions of people should have their very lives threatened by the vagaries of the weather, or by sudden political upheavals which impair their ability to import food. How has this precarious situation arisen? The answer is simple enough: through the neglect of agriculture. If blame is to be apportioned it must lie jointly with the international development agencies and the developing countries themselves. In the early 1950s the developing countries saw industrialisation as the road to development and starved agriculture of resources. International development agencies supported industrialisation plans and rarely lent money for agricultural projects. Technically, it is well within the world's grasp to increase agricultural production on an immense scale. What is required is the initiative and political will, both within the international community and the developing countries, to make the radical changes necessary. As far as the international community is concerned, it could increase its foreign aid for agricultural projects, especially where this could lead to a significant breakthrough in agricultural production. For example, the investment of $3 billion to eliminate the tsetse fly in infested areas of tropical Africa could open up seven million square kilometres to livestock and crop production. There must also be genuine international co-operation and agreement to guarantee world food supplies. One possibility would be to have a system of granaries strategically placed across the world under international supervision, which could store the food surpluses of the 'north' and

[1] See the work of Dreze and Sen (1989) for the hunger and poverty project of the World Institute for Development Economics Research (WIDER).

release them at time of need. This in no way need preclude or hinder the fundamental agricultural reforms that everyone recognises are necessary in many of the poorer countries in Africa and elsewhere if there is to be self-sustaining growth. The desirability of a development policy based on a healthy agricultural sector is emphasised in Chapter 3.

Lack of adequate food supply and nutrition, combined with rudimentary health facilities, leads to low life expectancy and a high incidence of infant and child mortality. **Tables 1.6** and **1.7** present some selected statistics showing changes in the level of food production per head; daily *per capita* calorie intake as a percentage of requirements, and various health-related indicators including the number of people that share a doctor, the percentage of the population with access to safe water, life expectancy at birth and rates of infant and child mortality.

Table 1.6 ***Health Related Indicators: Food Production, Calorie Intake and Doctors***

	Average index of food production per capita (1979–81 = 100) 1988–90	*Daily calorie supply (per capita)*		*Population per doctor*
		1965	*1989*	*1984*
Low-income economies	**119 *w***	**1 975 *w***	**2 406 *w***	**5 800 *w***
China and India	**127 *w***	**1 966 *w***	**2 464 *w***	**1 650 *w***
Other low-income	**105 *w***	**1 994 *w***	**2 298 *w***	**14 160 *w***
Mozambique	81	1 712	1 680	..
Tanzania	88	1 831	2 206	*24 970*
Ethiopia	84	1 853	1 667	*78 780*
Somalia	94	1 718	1 906	*19 950*
Nepal	115	1 889	2 077	*30 220*
Chad	85	2 395	1 743	*38 390*
Bhutan	93	..	..	*9 730*
Lao PDR	114	2 135	2 630	1 360
Malawi	83	2 259	2 139	*11 340*
Bangladesh	96	1 970	2 021	6 390
Burundi	92	2 131	1 932	*21 020*
Zaire	97	2 187	1 991	*13 540*
Uganda	95	2 361	2 153	..
Madagascar	88	2 447	2 158	9 780
Sierra Leone	89	2 014	1 799	*13 620*
Mali	97	1 938	2 314	25 390
Nigeria	106	2 185	2 312	*6 410*
Niger	71	1 996	2 308	*39 670*
Rwanda	77	1 856	1 971	*35 090*
Burkina Faso	114	1 882	2 288	*57 183*
India	119	2 021	2 229	*2 520*
Benin	112	2 019	2 305	*15 940*
China	133	1 929	2 639	1 010

Table 1.6 ***Health Related Indicators: Food Production, Calorie Intake and Doctors (continued)***

	Average index of food production per capita (1979–81 = 100) 1988–90	*Daily calorie supply (per capita)*		*Population per doctor*
		1965	*1989*	*1984*
Haiti	94	2 045	2 013	*7 140*
Kenya	106	2 208	2 163	10 050
Pakistan	101	1 773	2 219	*2 900*
Ghana	97	1 937	2 248	*20 390*
Central African Rep.	91	2 055	2 036	..
Togo	88	2 454	2 214	*8 700*
Zambia	103	2 072	2 077	7 150
Guinea	87	2 187	2 132	..
Sri Lanka	87	2 171	2 277	5 520
Mauritania	85	1 903	2 685	*11 900*
Lesotho	86	2 049	2 299	18 610
Indonesia	123	1 791	2 750	*9 410*
Honduras	83	1 967	2 247	*1 510*
Egypt, Arab Rep.	118	2 399	3 336	*770*
Afghanistan	85	2 304	..	..
Cambodia	165	2 292	2 166	..
Liberia	84	2 158	2 382	*9 340*
Myanmar	93	1 897	2 440	3 740
Sudan	71	1 938	1 974	*10 190*
Vietnam	127	2 041	2 233	*950*
Middle-income economies	**102 *w***	**2 489 *w***	**2 860 *w***	**2 250 *w***
Lower-middle-income	**98 *w***	**2 415 *w***	**2 768 *w***	**3 000 *w***
Bolivia	109	1 868	1 916	*1 530*
Zimbabwe	94	2 075	2 299	6 700
Senegal	102	2 372	2 369	..
Philippines	84	1 875	2 375	6 570
Côte d'Ivoire	101	2 352	2 577	..
Dominican Rep.	90	1 834	2 359	*1 770*
Papua New Guinea	103	1 996	2 403	6 070
Guatemala	91	2 026	2 235	*2 180*
Morocco	128	2 112	3 020	*4 730*
Cameroon	89	2 011	2 217	..
Ecuador	100	2 191	2 531	*810*
Syrian Arab Rep.	80	2 177	3 003	*1 250*
Congo	94	2 260	2 590	..
El Salvador	97	1 853	2 317	*2 830*
Paraguay	116	2 586	2 757	*1 460*

Table 1.6 ***Health Related Indicators: Food Production, Calorie Intake and Doctors (continued)***

	Average index of food production per capita (1979–81 = 100) 1988–90	*Daily calorie supply (per capita)*		*Population per doctor*
		1965	*1989*	*1984*
Peru	100	2 323	2 186	*1 040*
Jordan	100	2 277	2 634	*860*
Colombia	104	2 179	2 598	*1 230*
Thailand	106	2 138	2 316	*6 290*
Tunisia	87	2 217	3 121	*2 150*
Jamaica	95	2 232	2 609	2 040
Turkey	97	2 698	3 236	1 390
Romania	92	2 988	3 155	570
Poland	109	3 292	3 505	490
Panama	90	2 241	2 539	1 000
Costa Rica	91	2 367	2 808	*960*
Chile	113	2 581	2 581	*1 230*
Botswana	75	2 045	2 375	*6 900*
Algeria	96	1 701	2 866	*2 340*
Bulgaria	96	3 443	3 707	*280*
Mauritius	100	2 269	2 887	1 900
Malaysia	147	2 353	2 774	*1 930*
Argentina	93	3 163	3 113	*370*
Iran, Islamic Rep.	104	2 060	3 181	*2 840*
Albania	92	2 374	2 761	..
Angola	81	1 907	1 807	*17 750*
Lebanon	135	2 485	..	..
Mongolia	86	2 364	2 479	..
Namibia	93	1 900	1 946	..
Nicaragua	58	2 305	2 265	*1 500*
Upper-middle-income	**109 *w***	**2 584 *w***	**2 987 *w***	**940 *w***
Mexico	102	2 570	3 052	..
South Africa	87	2 759	3 122	..
Venezuela	96	2 266	2 582	*700*
Uruguay	109	2 812	2 653	510
Brazil	115	2 417	2 751	*1 080*
Hungary	113	3 134	3 644	310
Yugoslavia	95	3 243	3 634	*550*
Czechoslovakia	119	3 397	3 632	280
Gabon	84	1 950	2 383	*2 790*
Trinidad and Tobago	87	2 496	2 853	*940*

Table 1.6 ***Health Related Indicators: Food Production, Calorie Intake and Doctors (continued)***

	Average index of food production per capita (1979–81 = 100) 1988–90	*Daily calorie supply (per capita)*		*Population per doctor*
		1965	*1989*	*1984*
Portugal	106	2 647	3 495	140
Korea, Rep.	106	2 178	2 852	*1 160*
Greece	103	3 019	3 825	*350*
Saudi Arabia	189	1 850	2 874	*730*
Iraq	92	2 150	2 887	*1 740*
Libya	78	1 875	3 324	*690*
Oman	..	..	..	1 700
High-income economies	**100 *w***	**3 091 *w***	**3 409 *w***	**470 *w***
OECD members	**101 *w***	**3 099 *w***	**3 417 *w***	**460 *w***
Other	**80 *w***	**2 546 *w***	**3 072 *w***	**880 *w***
Ireland	109	3 605	3 778	*680*
Israel	95	2 799	3 174	*350*
Spain	112	2 770	3 572	*320*
Singapore	69	2 285	3 198	*1 410*
Hong Kong	80	2 486	2 853	*1 070*
New Zealand	102	3 238	3 362	580
Belgium	108	..	..	330
United Kingdom	105	3 304	3 149	..
Italy	94	3 097	3 504	*230*
Australia	95	3 053	3 216	*440*
Netherlands	111	3 024	3 151	450
Austria	106	3 244	3 495	390
France	103	3 355	3 465	*320*
United Arab Emirates	..	2 639	3 309	*1 020*
Canada	108	3 127	3 482	*510*
United States	92	3 234	3 671	*470*
Denmark	126	3 420	3 628	*400*
Germany	112	3 088	3 443	*380*
Norway	100	3 036	3 326	*450*
Sweden	99	2 930	2 960	390
Japan	101	2 668	2 956	*660*
Finland	105	3 126	3 253	*440*
Switzerland	101	3 471	3 562	*700*
Kuwait	..	2 766	3 195	*640*
World	**112 *w***	**2 383 *w***	**2 711 *w***	**4 200 *w***
	104 *w*	**2 093 *w***	**2 642 *w***	**4 480 *w***

w means weighted average.
Source: *World Development Report 1992.*

Table 1.7 ***Life Expectancy***

	Under-5 mortality rate (per 1000 live births)		*Life expectancy at birth (years)*			
			Female		*Male*	
	Female 1990	*Male 1990*	*1965*	*1990*	*1965*	*1990*
Low-income economies	**91 *w***	**98 *w***	**50 *w***	**62 *w***	**48 *w***	**61 *w***
China and India	**69 *w***	**72 *w***	**52 *w***	**66 *w***	**50 *w***	**65 *w***
Other low-income	**131 *w***	**145 *w***	**45 *w***	**56 *w***	**44 *w***	**54 *w***
Mozambique	194	215	39	48	36	45
Tanzania	182	203	45	49	41	46
Ethiopia	185	205	43	50	42	46
Somalia	200	223	40	50	37	47
Nepal	183	175	40	51	41	53
Chad	198	221	38	49	35	45
Bhutan	183	179	40	47	41	50
Lao PDR	159	179	42	51	39	48
Malawi	242	255	40	47	38	46
Bangladesh	160	142	44	51	45	52
Burundi	167	187	44	48	41	45
Zaire	143	162	45	54	42	50
Uganda	185	206	48	47	46	46
Madagascar	160	178	45	52	42	50
Sierra Leone	236	261	34	44	31	40
Mali	209	238	39	50	37	46
Nigeria	152	171	43	54	40	49
Niger	204	227	38	47	35	44
Rwanda	192	213	45	50	42	47
Burkina Faso	190	210	40	49	37	46
India	121	116	44	58	46	60
Benin	155	173	43	52	41	49
China	29	40	57	71	53	69
Haiti	126	144	47	56	44	53
Kenya	97	112	50	61	46	57
Pakistan	151	145	45	55	47	56
Ghana	127	144	49	57	46	53
Central African Rep.	156	176	41	51	40	48
Togo	133	151	44	55	40	52
Zambia	123	140	46	52	43	48
Guinea	221	245	36	43	34	43
Sri Lanka	21	26	64	73	63	69
Mauritania	193	215	39	48	36	45

Table 1.7 ***Life Expectancy (continued)***

	Under-5 mortality rate (per 1000 live births)		*Life expectancy at birth (years)*			
			Female		*Male*	
	Female 1990	*Male 1990*	*1965*	*1990*	*1965*	*1990*
Lesotho	125	142	50	57	47	55
Indonesia	75	90	45	64	43	60
Honduras	70	85	51	67	48	63
Egypt, Arab Rep.	95	110	50	62	48	59
Afghanistan	241	..	..	..	..	..
Cambodia	161	180	46	52	43	49
Liberia	168	193	46	56	43	53
Myanmar	78	94	49	64	46	59
Sudan	159	178	41	52	39	49
Viet Nam	46	59	51	69	48	64
Middle-income economies	**57** *w*	**68** *w*	**60** *w*	**69** *w*	**56** *w*	**64** *w*
Lower-middle-income	**62** *w*	**73** *w*	**58** *w*	**67** *w*	**55** *w*	**63** *w*
Bolivia	109	127	47	62	42	58
Zimbabwe	66	78	50	63	46	59
Senegal	120	137	42	49	40	46
Philippines	45	57	57	66	54	62
Côte d'Ivoire	126	144	44	57	40	54
Dominican Rep.	68	75	57	69	54	65
Papua New Guinea	70	84	44	56	44	54
Guatemala	76	91	50	66	48	61
Morocco	84	99	51	64	48	60
Cameroon	117	134	47	59	44	55
Ecuador	58	72	57	68	55	64
Syrian Arab Rep.	55	67	54	68	51	64
Congo	172	185	47	56	41	50
El Salvador	63	76	56	68	53	60
Paraguay	33	44	67	69	63	65
Peru	78	93	52	65	49	61
Jordan	62	68	52	69	49	66
Colombia	40	49	61	72	57	66
Thailand	28	38	58	68	54	63
Tunisia	50	63	52	68	51	66
Jamaica	16	22	67	75	64	71
Turkey	73	80	55	69	52	64
Romania	23	32	70	73	66	67

Table 1.7 ***Life Expectancy (continued)***

	Under-5 mortality rate (per 1000 live births)		*Life expectancy at birth (years)*			
			Female		*Male*	
	Female 1990	*Male 1990*	*1965*	*1990*	*1965*	*1990*
Poland	18	23	72	75	66	67
Panama	21	29	65	75	62	71
Costa Rica	18	22	66	78	63	73
Chile	18	23	63	76	57	69
Botswana	41	53	49	69	46	65
Algeria	83	91	51	66	49	65
Bulgaria	14	19	73	76	68	70
Mauritius	21	28	63	73	59	67
Malaysia	17	22	60	72	56	68
Argentina	30	40	69	75	63	68
Iran, Islamic Rep.	103	122	52	63	52	63
Albania	28	33	67	75	65	70
Angola	207	230	37	48	34	44
Lebanon	..	..	64	..	60	..
Mongolia	76	91	51	64	49	61
Namibia	119	140	47	59	44	56
Nicaragua	66	80	52	66	49	63
Yemen, Rep.	172	191	41	49	39	48
Upper-middle-income	**49 *w***	**60 *w***	**62 *w***	**71 *w***	**58 *w***	**65 *w***
Mexico	41	51	61	73	58	66
South Africa	81	98	54	65	49	59
Venezuela	36	45	65	73	61	67
Uruguay	22	28	72	77	65	70
Brazil	62	75	59	69	55	63
Hungary	16	22	72	75	67	67
Yugoslavia	25	30	68	76	64	69
Czechoslovakia	13	17	73	75	67	68
Gabon	148	167	44	55	41	52
Trinidad and Tobago	25	34	67	74	63	69
Portugal	14	17	68	78	62	72
Korea, Rep.	17	24	58	73	55	67
Greece	13	15	72	80	69	74
Saudi Arabia	72	87	50	66	47	63
Iraq	81	89	53	66	51	61
Libya	84	100	51	64	48	60
Oman	36	46	45	68	43	64

Table 1.7 ***Life Expectancy* (*continued*)**

	Under-5 mortality rate (per 1000 live births)		*Life expectancy at birth (years)*			
			Female		*Male*	
	Female 1990	*Male 1990*	*1965*	*1990*	*1965*	*1990*
High-income economies	**9 *w***	**12 *w***	**74 *w***	**80 *w***	**68 *w***	**74 *w***
OECD members	**9 *w***	**11 *w***	**74 *w***	**80 *w***	**68 *w***	**74 *w***
Other	**14 *w***	**18 *w***	**70*w***	**77 *w***	**65 *w***	**73 *w***
Ireland	8	10	73	77	69	72
Israel	11	15	74	78	71	74
Spain	9	12	74	79	69	73
Singapore	7	10	68	77	64	71
Hong Kong	7	10	71	80	64	75
New Zealand	10	15	74	79	68	72
Belgium	10	12	74	80	68	73
United Kingdom	9	12	74	78	68	73
Italy	10	12	73	80	68	75
Australia	8	11	74	80	68	74
Netherlands	8	10	76	80	71	74
Austria	9	13	73	80	66	73
France	8	10	75	81	68	73
United Arab Emirates	23	32	59	74	56	69
Canada	7	9	75	81	69	74
United States	10	13	74	80	67	73
Denmark	9	11	75	78	70	73
Germany	8	11	73	80	67	73
Norway	9	11	76	81	71	74
Sweden	6	8	76	81	72	75
Japan	5	7	73	82	68	76
Finland	7	9	73	79	66	73
Switzerland	7	9	75	82	69	75
Kuwait	14	20	65	76	61	72
World	**64 *w***	**70 *w***	**58 *w***	**67 *w***	**55 *w***	**64 *w***

w stands for weighted average.

Source: *World Development Report* 1992.

As far as food production *per capita* is concerned, it has risen on average by just over 1 per cent per annum in the last ten years in the low-income countries, but hardly at all if China and India are excluded from the sample. In the middle-income countries progress has also been very slow and in some low and middle-income countries *per capita* food production actually fell.

Daily *per capita* calorie intake shows most of the poorest countries below the required level of 2500, while the 'obese' industrial countries have an average intake of 40 per cent above requirements.

The average people to doctor ratio in developed countries is 500 : 1, while in low-income and middle-income countries over 5000 people share one doctor.

In the light of the above facts, it is no surprise that life expectancy is low in developing countries compared to the rich industrialised countries. In low- and middle-income countries we find that life expectancy at birth averages 63 years compared to 77 years in developed countries. In many of the poorest countries life expectancy is little more than 40 years. The infant and child mortality rates in poor countries are particularly high relative to the rich countries. Infant mortality is higher than 100 per 1000 in some poor countries compared with 8 per 1000 in rich countries. And while child mortality averages ten per 1000 in the rich countries, it averages 70 per 1000 in the low-income countries (excluding China and India).

■ Education

There has been an enormous growth in public expenditure on education in developing countries in recent years – some would say too much – but expenditure *per capita* is still only one-twelfth of that in developed countries. The statistics in **Table 1.8** indicate the relative underprovision of facilities and opportunities in poor countries, and the still low rate of literacy in the poorest countries. The adult literacy rate in the low-income countries

Table 1.8 ***Education Statistics***

	Percentage of age group enrolled in education					
	Primary		*Secondary*			
	Total		*Total*		*Tertiary (total)*	
	1965	*1989*	*1965*	*1989*	*1965*	*1989*
Low-income economies	**73 *w***	**105 *w***	**20 *w***	**38 *w***	**2 *w***	**..**
China and India	**83 *w***	**119 *w***	**25 *w***	**44 *w***	**2 *w***	**..**
Other low-income	**50 *w***	**77 *w***	**10 *w***	**28 *w***	**1 *w***	**4 *w***
Mozambique	37	*68*	3	*5*	0	*0*
Tanzania	32	63	2	4	0	0
Ethiopia	11	*38*	2	*15*	0	1
Somalia	10	..	2	..	0	..
Nepal	20	*86*	5	*30*	1	*6*
Chad	34	*57*	1	7	..	*1*
Bhutan	7	*26*	0	*5*	..	..
Lao PDR	40	*111*	2	*27*	0	*2*
Malawi	44	*67*	2	*4*	0	*1*
Bangladesh	49	70	13	17	1	4

Table 1.8 ***Education Statistics (continued)***

	Percentage of age group enrolled in education					
	Primary		*Secondary*			
	Total		*Total*		*Tertiary (total)*	
	1965	*1989*	*1965*	*1989*	*1965*	*1989*
Burundi	26	*71*	1	*4*	0	*1*
Zaire	70	*78*	*5*	*24*	0	*2*
Uganda	67	*77*	4	*13*	0	*1*
Madagascar	65	92	8	*19*	1	4
Sierra Leone	29	*53*	*5*	*18*	0	*1*
Mali	24	23	4	6	0	..
Nigeria	32	70	*5*	19	0	*3*
Niger	11	28	1	*6*	..	1
Rwanda	53	69	2	7	0	1
Burkina Faso	12	35	1	7	0	1
India	74	98	27	43	*5*	..
Benin	34	*65*	3	..	0	*2*
China	89	135	*24*	44	0	*2*
Haiti	*50*	*84*	*5*	*19*	0	..
Kenya	54	*94*	4	*23*	0	*2*
Pakistan	40	38	12	20	*2*	*5*
Ghana	69	*75*	13	*39*	1	*2*
Central African Rep.	56	*64*	2	*11*	..	*1*
Togo	55	*103*	*5*	*22*	0	*3*
Zambia	*53*	*95*	7	*20*	..	*2*
Guinea	31	34	*5*	9	0	*1*
Sri Lanka	93	107	35	74	2	4
Mauritania	13	*51*	1	16	..	*3*
Lesotho	94	110	4	26	0	*4*
Indonesia	72	*118*	12	*47*	1	..
Honduras	80	*108*	10	..	1	10
Egypt, Arab Rep.	75	*97*	26	81	7	*20*
Afghanistan	16	24	2	8	0	*1*
Cambodia	77	..	9	..	1	..
Liberia	41	..	*5*	..	1	*3*
Myanmar	71	*103*	15	*24*	1	*5*
Sudan	29	..	4	..	1	3

Table 1.8 ***Education Statistics (continued)***

	Percentage of age group enrolled in education					
	Primary		*Secondary*			
	Total		*Total*		*Tertiary (total)*	
	1965	*1989*	*1965*	*1989*	*1965*	*1989*
Middle-income economies	**93 *w***	**102 *w***	**26 *w***	**55 *w***	**7 *w***	**17 *w***
Lower-middle-income	**88 *w***	**101 *w***	**26 *w***	**54 *w***	**7 *w***	**17 *w***
Bolivia	73	81	18	34	5	23
Zimbabwe	110	125	6	52	0	6
Senegal	40	58	7	16	1	3
Philippines	113	111	41	73	19	*28*
Côte d'Ivoire	60	..	6	*20*	0	..
Dominican Rep.	87	*95*	12	..	2	..
Papua New Guinea	44	*73*	4	13	..	..
Guatemala	50	*79*	8	*21*	2	..
Morocco	*57*	68	11	36	1	11
Cameroon	94	101	*5*	26	0	3
Ecuador	91	118	17	*56*	3	*25*
Syrian Arab Rep.	78	108	28	54	8	20
Congo	114	..	10	..	1	*6*
El Salvador	82	78	17	26	2	17
Paraguay	102	106	13	29	4	8
Peru	99	123	25	67	8	32
Jordan	95	..	38	..	2	..
Colombia	84	107	17	52	3	14
Thailand	78	86	14	*28*	2	16
Tunisia	91	115	16	44	2	8
Jamaica	109	105	51	*61*	3	*5*
Turkey	101	112	16	51	4	13
Romania	101	95	39	88	10	9
Poland	104	99	69	81	18	20
Panama	102	107	34	*59*	7	*22*
Costa Rica	106	100	24	41	6	27
Chile	124	100	34	75	6	*19*
Botswana	65	111	3	37	..	3
Algeria	68	94	7	61	1	*11*
Bulgaria	103	97	54	75	17	26
Mauritius	101	103	26	53	3	2
Malaysia	90	96	28	59	2	*7*
Argentina	101	*111*	28	*74*	14	*41*

Table 1.8 *Education Statistics (continued)*

	Percentage of age group enrolled in education					
	Primary		*Secondary*			
	Total		*Total*		*Tertiary (total)*	
	1965	*1989*	*1965*	*1989*	*1965*	*1989*
Iran, Islamic Rep.	63	109	18	53	2	7
Albania	92	99	33	80	8	9
Angola	39	94	5	11	0	..
Lebanon	106	..	26	..	14	..
Mongolia	98	98	66	..	8	..
Namibia	..	..	..	..	..	..
Nicaragua	69	99	14	*43*	2	*8*
Yemen, Rep.	13	..	3	..	..	..
Upper-middle-income	**99 *w***	**104 *w***	**26 *w***	**56 *w***	**5 *w***	**17 *w***
Mexico	92	114	17	53	4	15
South Africa	90	..	15	..	4	..
Venezuela	94	*105*	27	*56*	7	*28*
Uruguay	106	*106*	44	*77*	8	*50*
Brazil	108	105	16	39	2	11
Hungary	101	94	..	76	13	15
Yugoslavia	106	95	65	80	13	19
Czechoslovakia	99	92	29	87	14	18
Gabon	134	..	11	..	..	*4*
Trinidad and Tobago	93	*97*	36	83	2	6
Portugal	84	111	42	53	5	18
Korea, Rep.	101	108	35	86	6	38
Greece	110	*102*	49	*97*	10	*28*
Saudi Arabia	24	*76*	4	*46*	1	*12*
Iraq	74	*96*	28	*47*	4	*14*
Libya	78	..	14	..	1	..
Oman	..	102	..	48	..	*4*
High-income economies	**104 *w***	**105 *w***	**61 *w***	**95 *w***	**21 *w***	**42 *w***
OECD members	**104 *w***	**105 *w***	**63 *w***	**95 *w***	**21 *w***	**43 *w***
Other	**99 *w***	**103 *w***	**39 *w***	**77 *w***	**11 *w***	**24 *w***
Ireland	108	*101*	51	*97*	12	*26*
Israel	*95*	93	48	83	20	*33*

Table 1.8 ***Education Statistics (continued)***

	Percentage of age group enrolled in education					
	Primary		*Secondary*			
	Total		*Total*		*Tertiary (total)*	
	1965	*1989*	*1965*	*1989*	*1965*	*1989*
Spain	115	*111*	38	*105*	6	32
Singapore	105	110	45	69	10	..
Hong Kong	103	*105*	29	*73*	5	..
New Zealand	106	106	75	88	15	41
Belgium	109	*101*	75	*99*	15	*34*
United Kingdom	92	*107*	66	*82*	12	*24*
Italy	112	*96*	47	78	11	29
Australia	99	106	62	82	16	32
Netherlands	104	*116*	61	*103*	17	*32*
Austria	106	104	52	82	9	31
France	134	113	56	97	18	37
United Arab Emirates	..	111	..	64	0	9
Canada	105	105	56	105	26	66
United States	100	..	..	..	40	*63*
Denmark	98	98	83	*109*	14	*32*
Germany	..	*103*	..	*97*	..	*32*
Norway	97	98	64	98	11	36
Sweden	95	104	62	91	13	31
Japan	100	102	82	96	13	31
Finland	92	99	76	112	11	43
Switzerland	87	..	37	..	8	*26*
Kuwait	116	*100*	52	*90*	..	*18*
World	**85 *w***	**105 *w***	**31 *w***	**52 *w***	**9 *w***	**16 *w***

w: means weighted average.
Source: *World Development Report*, 1992.

averages just 60 per cent compared to 78 per cent in the middle-income countries and 99 per cent in rich countries. While there has been a major improvement in the literacy *rate* in most countries over the last two decades, the absolute number of those illiterate has actually increased. Except in the poorest countries, most children now have access to some form of rudimentary primary education, but the drop-out rate even from primary schools is often high. Secondary education is still a luxury in most developing countries, as is higher education. This is not to say the more educational provision, the better. Education confers undoubted benefits on individuals and societies, but it can also confer costs by exacerbating certain development difficulties. Education inculcates

knowledge and skills which raise productivity, but it can also perpetuate inequalities in societies and impart values, attitudes and aspirations which are inimical to development; for example, the adoption of practices and institutional structures inappropriate to the environment of the country. Societies need to look carefully at the nature and allocation of educational provision in relation to the needs and aspirations of the society. It would be hard to argue, however, that a higher rate of literacy and numeracy and more training in vocational skills would not be in the private and social interest. The problem again is one of competing claims on limited resources.

■ Basic Needs

The provision of health services, education, housing, sanitation, water supply and adequate nutrition, came to be known in development circles in the 1970s (and supported by the World Bank) as the **basic needs approach** to economic development. The rationale of the approach was that the direct provision of such goods and services is likely to relieve absolute poverty more immediately than alternative strategies which simply attempt to accelerate growth or which rely on raising the incomes and productivity of the poor. Arguments used in support of this change in strategy were as follows: growth strategies usually fail to benefit those intended; the productivity and incomes of the poor depend in the first place on the direct provision of health and education facilities; it may take a long time to increase the incomes of the poor so that they can afford basic needs; in any case, the poor tend not to spend their income wisely and certain facilities such as water supply and sanitation can only be provided publicly; lastly, it is difficult to help all the poor in a uniform way in the absence of the provision of basic needs.

While these arguments undoubtedly contained an element of truth, there was some suspicion within the developing countries themselves that the international propagation of this new doctrine was an attack on their sovereignty and would alter the nature of international assistance in such a way as to make the structural transformation of their economies in the direction of industrial development more difficult. There may be a genuine dilemma here, and a trade-off between growth and basic needs. It depends on whether the scale of resource transfer increases as the allocation is changed and on the degree of complementarity between the two strategies. On the one hand it can be argued that the provision of basic needs is a form of consumption transfer – away from investment – so that growth will be retarded and the basic needs strategy will then not be sustainable in the long run. On the other hand it can be argued that the provision of basic needs is a form of investment in human capital, which may be as productive as investment in industry.

Whatever the conflict here, it can also be argued, as Singh (1979) does convincingly, that there must be an important complementarity and interrelationship between meeting basic needs, industrialisation and accelerated structural change, and both strategies need to be, and can be, pursued side by side. Specifically, that to meet basic needs on a sustainable basis it is necessary for productive structures to be transformed in favour of industry, and that a properly conceived basic needs strategy which achieves a more equitable distribution of income should help industrialisation.

The International Labour Organisation (ILO) has emphasised in its various publications (see, for example, *Meeting Basic Needs*) that the satisfaction of basic needs depends crucially on the establishment of a New International Economic Order, which according to the **Lima Declaration** of 1975 has as its aim to increase the developing countries' share of world manufacturing output to 25 per cent by the year 2000 (compared to 15 per cent today). Singh shows that the provision of basic needs on a sustainable basis requires accelerated growth of 7–8 per cent per annum, which in turn implies a growth of manufacturing output of 10 to 11 per cent. This is the rate of growth of manufacturing needed to reach the Lima target of a 25 per cent share of world manufacturing output by the year 2000. Thus the basic needs strategy and structural transformation in the direction of indus-

try lead to the same conclusion as far as industrial growth is concerned. Whether both *objectives* are achieved largely depends on the overall economic *strategy* pursued. The experience of several countries shows that the rapid development of industry and the provision of basic needs are quite compatible. China has achieved remarkable progress in both directions by recognising the importance of gearing industrial development to the needs of agriculture and the rural sector, by encouraging the use of modern inputs into agriculture and by encouraging the development of small scale rural industries. Other, non-socialist, countries have a good record in the provision of basic needs judged by the level of life-expectancy in relation to *per capita* income. These tend to be societies where income is more equitably distributed or which make special provision, such as Sri Lanka. Countries with a poor performance in the provision of basic needs illustrate that a basic needs strategy needs to be comprehensive, otherwise failure in one respect will nullify progress in others.[1]

World Bank lending for poverty alleviation programmes rose quite dramatically during the 1970s and 1980s. The amount spent on poverty alleviation programmes rose from US $500 million in 1970 to $3300 million in 1989, or from 8 to 20 per cent of the total lending programme. Of the total in 1989, $1800 million was spent on basic needs including education, health and water supply compared to $340 million in 1970. The rest was spent on rural development and small-scale industrial projects. Industry's share of total lending remained at just over 30 per cent; while the share of total lending going to infrastructure fell from 58 per cent to 37 per cent between 1970 and 1989.

■ Human Development Index

In 1990, the United Nations Development Programme (UNDP) produced its first annual Human Development Report which gives alternative measures of the economic well-being or progress of nations which do not necessarily accord with the usual measure of the level or growth of income per head. As the UNDP Report says 'although GNP growth is absolutely necessary to meet all essential human objectives, countries differ in the way that they translate growth into human development'. The UNDP defines human development as a process of 'enlarging people's choices'. This depends not only on income but also on social indicators such as health provision, education, leisure time and so on. The UNDP thus constructs a **Human Development Index** which combines a measure of income per head with measures of life expectancy and adult literacy. Countries are then ranked by the index and compared with their income per head ranking. The results are shown in **Table 1.9**, ranking from lowest to highest. It can be seen that some countries that rank low by *per capita* income rank high by the human development index, and vice versa. In the former category of countries are: Costa Rica, Cuba, Mexico, Venezuela, Jamaica, China, Chile, Uruguay and Sri-Lanka. In the latter category of countries, note that the United States ranks only 19th on the human development index, but second according to the level of *per capita* income. Other rich countries which score low on human development are Kuwait, United Arab Emirates, Libya and Saudi Arabia.

The Human Development Index (HDI) is constructed as follows. First a deprivation index is constructed for each of the three variables – *per capita* income, life expectancy and adult literacy. The deprivation index is measured as the difference between the desirable (maximum) value of the index minus the actual value of the index divided by the difference between the desirable (maximum) and minimum values of the index (those actually observed across countries). The bigger the difference between desirable and actual, the higher the degree of deprivation. The deprivation indices are then averaged, and the human development index is taken as 1 – average deprivation index. To give an example: if the maximum (desirable) adult literacy index is 100 per cent, the

[1] For an evaluation of country experience, and of the complementarities and trade-offs in the provision of basic needs, see Streeten *et al.* (1981), and Stewart (1985).

Table 1.9 ***Human Development Index***

	Life expectancy at birth (years)'87	*Adult literacy rate (%)'85*	*Real GDP per head (PPP-adj'd)'87, $*	*HDI*	*Rank by GNP per head*	**Rank by HDI**		*Life expectancy at birth (years)'87*	*Adult literacy rate (%)'85*	*Real GDP per head (PPP-adj'd)'87, $*	*HDI*	*Rank by GNP per head*	**Rank by HDI**
Niger	45	14	452	0.116	20	**1**	China	70	69	2 124	0.716	22	**66**
Mali	45	17	543	0.143	15	**2**	Libya	62	66	7 250	0.719	103	**67**
Burkina Faso	48	14	500	0.150	13	**3**	South Africa	61	70	4 981	0.731	82	**68**
Sierra Leone	42	30	480	0.150	27	**4**	Lebanon	68	78	2 250	0.735	78	**69**
Chad	46	26	400	0.157	4	**5**	Mongolia	64	90	2 000	0.737	57	**70**
Guinea	43	29	500	0.162	31	**6**	Nicaragua	64	88	2 209	0.743	54	**71**
Somalia	46	12	1 000	0.200	23	**7**	Turkey	65	74	3 781	0.751	71	**72**
Mauritania	47	17	840	0.208	40	**8**	Jordan	67	75	3 161	0.752	76	**73**
Afghanistan	42	24	1 000	0.212	17	**9**	Peru	63	85	3 129	0.753	74	**74**
Benin	47	27	665	0.224	28	**10**	Ecuador	66	83	2 687	0.758	68	**75**
Burundi	50	35	450	0.235	18	**11**	Iraq	65	89	2 400	0.759	96	**76**
Bhutan	49	25	700	0.236	3	**12**	United Arab Emirates	71	60	12 191	0.782	127	**77**
Mozambique	47	39	500	0.239	10	**13**	Thailand	66	91	2 576	0.783	55	**78**
Malawi	48	42	476	0.250	7	**14**	Paraguay	67	88	2 603	0.784	65	**79**
Sudan	51	23	750	0.255	32	**15**	Brazil	65	78	4 307	0.784	85	**80**
Central African Republic	46	41	591	0.258	29	**16**	Mauritius	69	83	2 617	0.788	75	**81**
Nepal	52	26	722	0.273	8	**17**	North Korea	70	90	2 000	0.789	67	**82**
Senegal	47	28	1 068	0.274	43	**18**	Sri Lanka	71	87	2 053	0.789	38	**83**
Ethiopia	42	66	454	0.282	1	**19**	Albania	72	85	2 000	0.790	61	**84**
Zaire	53	62	220	0.294	5	**20**	Malaysia	70	74	3 849	0.800	80	**85**
Rwanda	49	47	571	0.304	26	**21**	Colombia	65	88	3 524	0.801	72	**86**
Angola	45	41	1 000	0.304	58	**22**	Jamaica	74	82	2 506	0.824	62	**87**
Bangladesh	52	33	883	0.318	6	**23**	Kuwait	73	70	13 843	0.839	122	**88**
Nigeria	51	43	668	0.322	36	**24**	Venezuela	70	87	4 306	0.861	95	**89**
Yemen Arab Rep.	52	25	1 250	0.328	47	**25**	Romania	71	96	3 000	0.863	84	**90**
Liberia	55	35	696	0.333	42	**26**	Mexico	69	90	4 624	0.876	81	**91**
Togo	54	41	670	0.337	24	**27**	Cuba	74	96	2 500	0.877	66	**92**
Uganda	52	58	511	0.354	21	**28**	Panama	72	89	4 009	0.883	88	**93**
Haiti	55	38	775	0.356	34	**29**	Trinidad and Tobago	71	96	3 664	0.885	100	**94**
Ghana	55	54	481	0.360	37	**30**	Portugal	74	85	5 597	0.899	94	**95**
Yemen, PDR	52	42	1 000	0.369	39	**31**	Singapore	73	86	12 790	0.899	110	**96**
Côte d'Ivoire	53	42	1 123	0.393	52	**32**	South Korea	70	95	4 832	0.903	92	**97**
Congo	49	63	756	0.395	59	**33**	Poland	72	98	4 000	0.910	83	**98**
Namibia	56	30	1 500	0.404	60	**34**	Argentina	71	96	4 647	0.910	89	**99**
Tanzania	54	75	405	0.413	12	**35**	Yugoslavia	72	92	5 000	0.913	90	**100**
Pakistan	58	30	1 585	0.423	33	**36**	Hungary	71	98	4 500	0.915	87	**101**
India	59	43	1 053	0.439	25	**37**	Uruguay	71	95	5 063	0.916	86	**102**
Madagascar	54	68	634	0.440	14	**38**	Costa Rica	75	93	3 760	0.916	77	**103**
Papua New Guinea	55	45	1 843	0.471	50	**39**	Bulgaria	72	93	4 750	0.918	99	**104**
Kampuchea, Dem.	49	75	1 000	0.471	2	**40**	USSR	70	99	6 000	0.920	101	**105**
Cameroon	52	61	1 381	0.474	64	**41**	Czechoslovakia	72	98	7 750	0.931	102	**106**
Kenya	59	60	794	0.481	30	**42**	Chile	72	98	4 862	0.931	73	**107**
Zambia	54	76	717	0.481	19	**43**	Hongkong	76	88	13 906	0.936	111	**108**
Morocco	62	34	1 761	0.489	48	**44**	Greece	76	93	5 500	0.949	98	**109**
Egypt	62	45	1 357	0.501	49	**45**	East Germany	74	99	8 000	0.953	115	**110**
Laos	49	84	1 000	0.506	9	**46**	Israel	76	95	9 182	0.957	108	**111**
Gabon	52	62	2 068	0.525	93	**47**	USA	76	96	17 615	0.961	129	**112**
Oman	57	30	7 750	0.535	104	**48**	Austria	74	99	12 386	0.961	118	**113**
Bolivia	54	75	1 380	0.548	44	**49**	Ireland	74	99	8 566	0.961	106	**114**

Table 1.9 ***Human Development Index (continued)***

	Life expectancy at birth (years)'87	*Adult literacy rate (%)'85*	*Real GDP per head (PPP-adj'd)'87, $*	*HDI*	*Rank by GNP per head*	**Rank by HDI**		*Life expectancy at birth (years)'87*	*Adult literacy rate (%)'85*	*Real GDP per head (PPP-adj'd)'87, $*	*HDI*	*Rank by GNP per head*	**Rank by HDI**
Burma	61	79	752	0.561	11	**50**	Spain	77	95	8 989	0.965	105	**115**
Honduras	65	59	1 119	0.563	53	**51**	Belgium	75	99	13 140	0.966	116	**116**
Zimbabwe	59	74	1 184	0.576	45	**52**	Italy	76	97	10 682	0.966	112	**117**
Lesotho	57	73	1 585	0.580	35	**53**	New Zealand	75	99	10 541	0.966	109	**118**
Indonesia	57	74	1 660	0.591	41	**54**	West Germany	75	99	14 730	0.967	120	**119**
Guatemala	63	55	1 957	0.592	63	**55**	Finland	75	99	12 795	0.967	121	**120**
Vietnam	62	80	1 000	0.608	16	**56**	Britain	76	99	12 270	0.970	113	**121**
Algeria	63	50	2 633	0.609	91	**57**	Denmark	76	99	15 119	0.971	123	**122**
Botswana	59	71	2 496	0.646	69	**58**	France	76	99	13 961	0.974	119	**123**
El Salvador	64	72	1 733	0.651	56	**59**	Australia	76	99	11 782	0.978	114	**124**
Tunisia	66	55	2 741	0.657	70	**60**	Norway	77	99	15 940	0.983	128	**125**
Iran	66	51	3 300	0.660	97	**61**	Canada	77	99	16 375	0.983	124	**126**
Syria	66	60	3 250	0.691	79	**62**	Holland	77	99	12 661	0.984	117	**127**
Dominican Rep.	67	78	1 750	0.699	51	**63**	Switzerland	77	99	15 403	0.986	130	**128**
Saudi Arabia	64	55	8 320	0.702	107	**64**	Sweden	77	99	13 780	0.987	125	**129**
Philippines	64	86	1 878	0.714	46	**65**	Japan	78	99	13 135	0.996	126	**130**

minimum is 50 per cent, and the actual is 70 per cent, then literacy deprivation is measured as $(100 - 70) / (100 - 50) = 30/50 = 0.6$. If this was the only index, the HDI would be $1 - 0.6 = 0.4$.

■ The Stages of Development

It is often argued that countries pass through phases during the course of development and that by identifying these stages, according to certain characteristics, a country can be deemed to have reached a certain stage of development. The simplest stage theory is the sector thesis of Fisher ((1933) and (1939)) and Clark (1940), who employ the distinction between primary, secondary and tertiary production as a basis of a theory of development. Countries are assumed to start as primary producers and then, as the basic necessities of life are met, resources shift into manufacturing or secondary activities. Finally, with rising income, more leisure and an increasingly saturated market for manufactured goods, resources move into service or tertiary activities producing 'commodities' with a high income elasticity of demand.

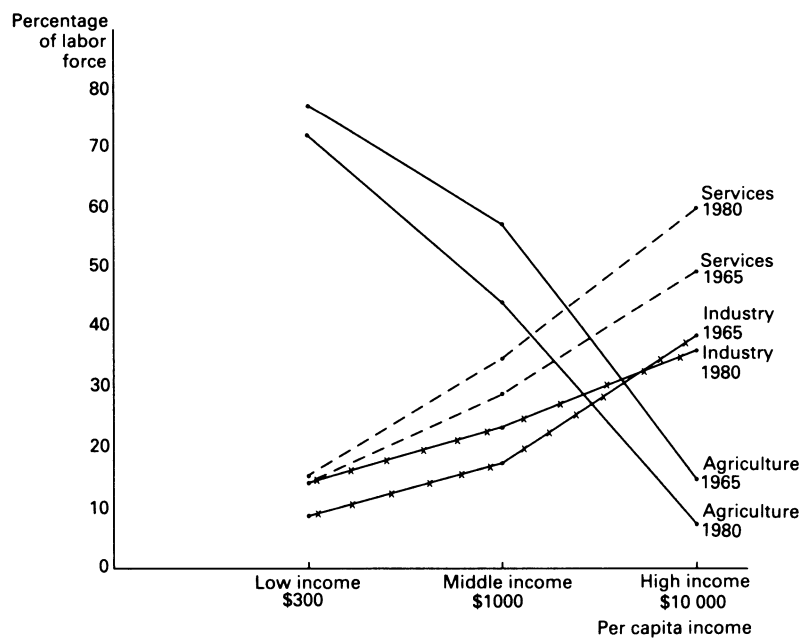
Naturally enough in this schema, the developing countries get identified with primary production, the more developed countries with the production of manufactured goods, and the mature developed economies with a high percentage of their resources in the service sector. There can be no dispute that resource shifts are an integral part of the development process, and that one of the main determinants of these shifts is a difference in the income elasticity of demand for commodities and changes in elasticity as development proceeds. But just as care must be taken to equate (without qualification) development and welfare with the level of *per capita* income, so, too, caution must be exercised in identifying different degrees of underdevelopment, industrialisation and maturity with some fairly rigid proportion of resources engaged in different types of activity. Such an association would ignore the doctrine of comparative advantage which holds that countries will specialise in the production of those commodities in which they have a relative advantage as determined by natural or acquired resource endow-

ments. The fact that one country produces predominantly agricultural products while another produces mainly manufactured goods need not imply that they are at different stages of development on any of the conventional definitions of development we gave earlier. Such an association would also ignore the different types of service activities which may exist at different stages of a country's history. There are three broad categories of service activities, and the determinants of resource allocation to service activities accompanying development may operate differently on each in an offsetting manner. Newer service activities linked with the growth of leisure and high mass consumption tend to have a very high income elasticity of demand; services linked to the growth of manufacturing also grow but at a declining rate, and traditional services of pre-industrial times decline (Katouzian (1970)). In short, tertiary production is an aggregation of many dissimilar service activities some of which are related to low *per capita* incomes and some to high *per capita* incomes. Thus the same proportion of total resources devoted to services may be associated with very different levels of development.

Ideally a criterion of development stages is required which leaves the proportion of resources employed in different activities out of account. One possibility is to argue that a country has reached a developed state when productivity in the agricultural sector matches productivity in the industrial sector, and that it has reached a state of maturity when productivity in all sectors, including services, is approximately equal provided the level is reasonably high. The alternative is simply to classify countries as industrial, semi-industrial and non-industrial, using as a criterion for division some level of the net value of manufacturing production per head of the total population combined perhaps with an indicator of the degree of industrialisation of exports (see Maizels, 1963).

Having said all this, however, the fact remains that there is a good deal of empirical support for the Fisher–Clark view that the pattern of development across countries evidences many common characteristics, especially the shift of resources from agriculture to industry. **Figure 1.3** shows the proportions of the labour force engaged in agricul-

Figure 1.3 *Labor Force Distribution*



ture, industry and services between low-income, middle-income and industrialised countries, and over time. One sees the broad thesis of Fisher and Clark confirmed. In the low-income countries over 70 per cent of the labour force on average is employed in agriculture, while only 10 per cent is employed in industry. By contrast in the industrial market economies only 7 per cent on average is employed in agriculture and 35 per cent in industry. The proportion of the labour force in services is also relatively low in low-income countries compared to more mature industrial countries, although there is quite a wide variation between low-income countries. Over time, there is a noticeable reduction in the proportion of the labour force in agriculture in most countries, but particularly in the industrial market economies. There is a slight increase in the importance of industry in the low- and middle-income countries, but not in the industrial market economies where on average the shift of resources has been away from both agriculture *and* industry towards services, which employ on average over one half of the labour force. Generally speaking the lower the *per capita* income, the higher the proportion of the labour force in agriculture, and the higher the level of *per capita* income, the higher the proportion in services.

What is true of the sectoral distribution of the labour force is also true of the sectoral distribution of output, although the magnitude of the proportions differ because productivity differs markedly between sectors (see **Table 1.10**). Because productivity tends to be lower in agriculture than in industry, except in some special cases such as Australia and Canada, the proportion of total output generated by agriculture tends to be lower than its share of the labour force, and the proportion generated by industry tends to be higher than its share of the labour force. (See also Cody, Hughes and Wall (1980).)

Chenery and others (Chenery (1960) and (1979), Chenery and Syrquin (1975)) have documented the changing sectoral share of output using regression analysis. Using an estimating equation of the form $\log V = \log a + b \log Y$, where V is value-added *per capita* and Y is *per capita* income, it is possible to make estimates of the income elasticity of demand for different commodities (given by b). An income elasticity of demand for a good less than unity would imply that its proportional importance in total output would decline as income grows. Conversely, an income elasticity greater than unity means that its relative importance in total output will increase. Taking this basic equation (with some modifications), and applying it to a cross section of 51 countries, Chenery found that the growth elasticity of the agricultural sector is less than 0.5, while for industry it is over 1.3 and for services it is approximately unity. Within the industrial sector, there will also be differences in the income elasticity of demand for products which will cause the pattern of industry to change as development proceeds. The most notable demand shift is the relative switch from basic necessities like food, beverages and clothes to capital and consumer durable goods.

■ Industrialisation and Growth

The importance attached to industrialisation by developing countries lies in the close association that appears to exist between industrialisation and real income per head, and between the growth of industry and the growth of output as a whole. This latter observed relationship is summed up in the maxim 'manufacturing as the engine of growth'. If we relate the average growth of gross domestic product (g_{GDP}) to the average growth of manufacturing industry (g_I) over the period 1970–77 for 81 countries, the following regression equation is obtained:

$$g_{GDP} = 1.414 + \underset{(0.051)}{0.569}\ g_I \qquad r^2 = 0.610$$

This is a highly significant relationship and is confirmed by many other studies.[1] Since the regression coefficient is significantly less than unity,

[1] See the Symposium on Kaldor's growth laws edited by the present author in *Journal of Post-Keynesian Economics*, Spring 1983.

Table 1.10 ***Structure of Production***

	Distribution of gross domestic product (per cent)							
	Agriculture		*Industry*		*Manufacturing*		*Services, etc.*	
	1965	*1990*	*1965*	*1990*	*1965*	*1990*	*1965*	*1990*
Low-income economies	**41 *w***	**31 *w***	**26 *w***	**36 *w***	**19 *w***	**27 *w***	**32 *w***	**35 *w***
China and India	**41 *w***	**29 *w***	**29 *w***	**36 *w***	**22 *w***	**30 *w***	**30 *w***	**35 *w***
Other low-income	**42 *w***	**30 *w***	**20 *w***	**34 *w***	**8 *w***	..	**38 *w***	**38 *w***
Mozambique	..	65	..	15	..	..	..	21
Tanzania	46	*59*	14	*12*	8	*10*	40	**29**
Ethiopia	58	41	14	17	7	11	28	42
Somalia	71	65	6	9	3	*5*	24	26
Nepal	65	60	11	14	3	*5*	23	26
Chad	42	38	15	17	12	14	43	45
Bhutan	..	43	..	27	..	10	..	29
Malawi	50	33	13	20	..	14	37	46
Bangladesh	53	38	11	15	*5*	9	36	46
Burundi	..	*56*	..	15	..	10	..	29
Zaire	20	*30*	32	*33*	..	*13*	48	*36*
Uganda	52	67	13	7	8	4	35	26
Madagascar	*25*	33	*14*	13	..	*12*	*61*	54
Sierra Leone	34	32	28	13	6	6	38	55
Mali	*65*	46	9	13	*5*	8	*25*	41
Nigeria	55	36	12	38	5	7	33	25
Niger	68	*36*	3	*13*	2	*5*	29	*51*
Rwanda	75	38	7	22	2	15	18	40
Burkina Faso	37	32	24	24	11	14	39	44
India	44	31	22	29	16	19	34	40
Benin	59	37	8	15	..	7	33	48
China	38	27	35	42	28	38	27	31
Kenya	35	28	18	21	11	11	47	51
Pakistan	40	26	20	25	14	17	40	49
Ghana	44	48	19	16	10	9	38	37
Central African Rep.	46	42	16	17	4	..	38	41
Togo	45	33	21	22	10	9	34	46
Zambia	14	17	*54*	*55*	6	43	32	29
Guinea	..	28	..	33	..	4	..	39
Sri Lanka	28	26	21	26	17	15	51	48
Mauritania	32	26	36	29	4	..	32	44
Lesotho	*65*	*24*	*5*	*30*	1	*14*	30	*46*
Indonesia	*51*	22	*13*	40	*8*	20	*36*	38

Table 1.10 ***Structure of Production (continued)***

	Distribution of gross domestic product (per cent)							
	Agriculture		*Industry*		*Manufacturing*		*Services, etc.*	
	1965	*1990*	*1965*	*1990*	*1965*	*1990*	*1965*	*1990*
Honduras	40	23	19	24	12	16	41	53
Egypt, Arab Rep.	29	17	27	29	..	16	45	53
Middle-income economies	**19 *w***	**12 *w***	**34 *w***	**37 *w***	**20 *w***	..	**46 *w***	**50 *w***
Lower-middle-income	**22 *w***	**17 *w***	**32 *w***	**31 *w***	**20 *w***	..	**44 *w***	**50 *w***
Bolivia	23	24	31	32	15	13	46	44
Zimbabwe	18	13	35	40	20	26	47	47
Senegal	25	21	18	18	14	13	56	61
Philippines	26	22	27	35	20	25	47	43
Côte d'Ivoire	47	47	19	27	11	..	33	26
Dominican Rep.	23	17	22	27	16	13	*55*	*56*
Papua New Guinea	42	29	18	31	..	12	41	40
Guatemala	..	26	..	19	..	..	..	55
Morocco	23	16	28	33	16	18	49	51
Cameroon	33	27	20	28	10	*13*	47	46
Ecuador	27	13	22	42	18	23	50	45
Syrian Arab. Rep.	29	28	22	22	..	..	49	50
Congo	19	13	19	39	..	7	62	48
El Salvador	29	11	22	21	18	19	49	67
Paraguay	37	28	19	23	16	23	45	49
Peru	18	7	30	37	17	27	53	57
Jordan	..	8	..	26	..	12	..	66
Colombia	27	17	27	32	19	21	47	51
Thailand	32	12	23	39	14	26	45	48
Tunisia	22	16	24	32	9	17	54	52
Jamaica	10	5	37	46	17	20	53	49
Turkey	34	18	25	33	16	24	41	49
Romania	..	18	..	48	..	..	..	34
Poland	..	14	..	36	..	..	..	50
Panama	18	10	19	9	12	7	63	80
Costa Rica	24	16	23	26	..	19	53	58
Chile	9	..	40	..	24	..	52	..
Botswana	34	3	19	57	12	6	47	40
Algeria	..	13	..	47	..	12	..	41
Bulgaria	..	18	..	52	..	..	..	31
Mauritius	16	12	23	33	14	24	61	55
Malaysia	28	..	25	..	9	..	47	..
Argentina	17	13	42	41	33	..	42	45

Table 1.10 ***Structure of Production (continued)***

	Distribution of gross domestic product (per cent)							
	Agriculture		*Industry*		*Manufacturing*		*Services, etc.*	
	1965	*1990*	*1965*	*1990*	*1965*	*1990*	*1965*	*1990*
Iran, Islamic Rep.	26	21	36	21	12	8	38	58
Angola	..	*13*	..	*44*	..	*4*	..	*43*
Lebanon	12	..	21	..	..	..	67	..
Mongolia	..	17	..	34	..	..	..	49
Namibia	..	*11*	..	*38*	..	*5*	..	*50*
Nicaragua	25	..	24	..	18	..	51	..
Yemen, Rep.	..	20	..	28	..	8	..	47
Upper-middle-income	**16 *w***	**9 *w***	**36 *w***	**40 *w***	**19 *w***	**25 *w***	**47 *w***	**51 *w***
Mexico	14	9	27	30	20	23	59	61
South Africa	10	5	41	44	24	26	48	51
Venezuela	6	6	40	50	..	20	55	45
Uruguay	18	11	35	34	..	28	47	55
Brazil	19	10	33	39	26	26	48	51
Hungary	..	12	..	32	..	27	..	56
Yugoslavia	23	12	42	48	..	..	35	40
Czechoslovakia	..	*8*	..	*56*	..	..	..	*36*
Gabon	26	9	34	49	7	7	40	42
Trinidad and Tobago	8	3	48	48	..	13	44	49
Portugal	..	..	..	..	..	..	..	..
Korea, Rep.	38	9	25	45	18	31	37	46
Greece	24	*17*	26	*27*	16	*14*	49	*56*
Saudi Arabia	8	*8*	60	*45*	9	*9*	31	*48*
Iraq	18	..	46	..	8	..	36	..
Libya	*5*	..	63	..	3	..	33	..
Oman	61	*3*	23	*80*	0	*4*	16	*18*
High-income economies	**5 *w***	..	**43 *w***	..	**32 *w***	..	**54 *w***	..
OECD members	**5 *w***	..	**43 *w***	..	**32 *w***	..	**54 *w***	..
Other	..	..	..	..	..	..	..	..
Ireland	..	..	..	..	..	..	..	..
Israel	..	..	..	..	..	..	..	..
Spain	..	..	..	..	..	..	..	..
Singapore	3	0	24	37	15	29	74	63
Hong Kong	2	*0*	40	*26*	24	*18*	58	*73*

Table 1.10 ***Structure of Production (continued)***

	Distribution of gross domestic product (per cent)							
	Agriculture		*Industry*		*Manufacturing*		*Services, etc.*	
	1965	*1990*	*1965*	*1990*	*1965*	*1990*	*1965*	*1990*
New Zealand	..	*9*	..	*27*	..	*19*	..	*65*
Belgium	..	*2*	..	*31*	..	*23*	..	*67*
United Kingdom	3	..	46	..	34	..	51	..
Italy	..	*4*	..	*33*	..	*23*	..	*63*
Australia	*9*	*4*	39	*31*	26	*15*	51	*64*
Netherlands	..	*4*	..	*31*	..	*20*	..	*65*
Austria	*9*	*3*	46	*37*	33	*27*	45	*60*
France	..	*4*	..	*29*	..	*21*	..	*67*
United Arab Emirates	..	*2*	..	*55*	..	*9*	..	*43*
Canada	6	..	40	..	26	..	54	..
United States	3	..	38	..	28	..	59	..
Denmark	*9*	*5*	*36*	*28*	*23*	*19*	*55*	*67*
Germany	4	*2*	53	*39*	40	*31*	43	*59*
Norway	..	..	..	..	..	..	..	..
Sweden	..	*3*	..	*35*	..	*24*	..	*62*
Japan	10	*3*	44	*42*	34	*29*	46	*56*
Finland	16	*6*	37	*36*	23	*23*	47	*58*
Switzerland	..	..	..	..	..	..	..	..
Kuwait	0	*1*	70	*56*	3	*9*	29	*43*
World	**10** ***w***	..	**41** ***w***	..	**30** ***w***	..	**51** ***w***	..

w means weighted averages.
Source: *World Development Report 1992.*

the equation also implies that the greater the *excess* of manufacturing output growth over the rate of growth of the economy as a whole, the faster the overall growth rate will be. Setting $g_{GDP} = g_I$ gives the growth rate which divides those countries where industry is growing faster than overall output and those countries where industry is growing slower. In the above sample, that growth rate is 3.3 per cent (i.e. 1.414/(1 − 0.569)).

There are two good reasons for expecting a strong relation between the growth of manufacturing industry and the growth of the overall economy. The first is that productivity growth in industry is closely related to the growth of manufacturing output itself owing to the existence of increasing returns, both static and dynamic. Static returns relate to the size and scale of production units and are a characteristic largely of manufacturing where in the process of doubling the linear dimensions of equipment, the surface increases by the square and the volume by the cube. Dynamic economies refer to increasing returns brought about by 'induced' technical progress, learning by doing, external economies in production and so on. Manufacturing seems to be the sector where major cost saving, technical advances take place. The relationship between the growth of productivity and the growth of industry is sometimes

referred to in the literature as **Verdoorn's Law**. This relationship can provide the basis of models of geographic dualism (see Chapter 5). The second induced effect that manufacturing growth has on overall growth is that the faster manufacturing grows, the faster the rate of transference of labour from other sectors of the economy where there is either diminishing returns or where no relationship exists between employment growth and output growth because there is already surplus labour. In both cases, a reduction in the amount of labour in these sectors will raise productivity growth outside manufacturing.

The question then is: what determines the rate of growth of manufacturing? In the early stages of development the impetus to industrialisation must come from the agricultural sector which provides the main source of autonomous demand for industrial goods. In the later stages of development, the demand for industrial goods from outside the country becomes of prime importance for maintaining the momentum of industrial growth. We will develop and elaborate these points later when we consider the role of agriculture in development in Chapter 3 and the idea of export-led growth in Chapters 5 and 15.

Will Developing Countries Ever Catch Up?

If living standards are largely determined by the level and growth of productivity in industry, the interesting question is whether the developing countries will ever catch up with the performance of the advanced industrialised countries. It is sometimes argued that the larger the gap between a country's technology, productivity and *per capita* income on the one hand and the level of productivity in the advanced countries on the other, the greater the scope for a poor country to absorb existing technology and to 'catch up' with richer countries. In other words, a process of convergence is predicted. One test is to do a simple correlation between the level of productivity or *per capita* income and the growth rate of countries. A strong negative correlation would be evidence of convergence.

The results of testing the catch-up hypothesis are mixed. A study by Baumol (1986) shows a strong inverse correlation between a country's productivity level and its average growth of productivity among industrialised countries and those at an intermediate stage of development, but there is no evidence of convergence as far as the poorer countries are concerned. Another study of 113 countries by Dowrick (1992) shows that while there is some evidence of catch-up in the sense that growth rates are negatively related to initial levels of productivity, other differences have caused *per capita* income growth to be faster the higher the level of *per capita* income, producing a divergence in living standards across the world (as we saw earlier in the chapter). Countries with higher levels of income have had higher investment ratios and a faster growth of the workforce which has contributed to a faster growth of output.

Clearly a productivity gap itself is not a sufficient condition for catch up. There have to be the cooperating factors to enable poor countries to take advantage of the more advanced technology available, and they have to innovate as well.

Rostow's Stages of Growth

Interest in stage theories of development was given new impetus with the publication of Rostow's book *The Stages of Economic Growth* (1960), which represents an ambitious attempt to provide an alternative to the Marxist interpretation of history – hence its subtitle 'A Non-Communist Manifesto'. Rostow presents a political theory as well as a descriptive economic study of the pattern of the growth and development of nations. A brief summary of his main points will provide a useful introduction to the next few chapters on the sources of growth and development.

The essence of the Rostow thesis is that it is logically and practically possible to identify stages of development and to classify societies according to those stages. He distinguishes five such stages:

traditional, transitional, take-off, maturity and high mass consumption.

All we need say about traditional societies is that for Rostow the whole of the pre-Newtonian world consisted of such societies; for example, the dynasties of China, the civilisations of the Middle East, the Mediterranean and medieval Europe, etc. Traditional societies are characterised by a ceiling on productivity imposed by the limitations of science. Traditional societies are thus recognisable by a very high proportion of the work-force in agriculture (greater than 75 per cent), coupled with very little mobility or social change, great divisions of wealth and decentralised political power. Today there are very few, if any, societies that one would class as traditional. Most societies emerged from the traditional stage, as described by Rostow, some time ago, mainly under the impact of external challenge and aggression or nationalism. The exceptions to the pattern of emergence from the traditional state are those countries which Rostow describes as having been 'born free', such as the United States and certain British dominions. Here the preconditions of 'take-off' were laid in more simple fashion by the construction of social overhead capital and the introduction of industry from abroad. But for the rest of the world, change was much more basic and fundamental, consisting not only of economic transformation but also a political and social transition from feudalism.

The stage between feudalism and take-off Rostow calls the transitional stage. The main economic requirement in the transition phase is that the level of investment should be raised to at least 10 per cent of national income to ensure self-sustaining growth. (On this particular point, as we shall see, there seems to be very little difference between the transition stage and the later stage of take-off.) The main direction of investment must be in transport and other social overhead capital to build up society's infrastructure. The preconditions of a rise in the investment ratio consist of a willingness of people to lend risk capital, the availability of men willing and able to be entrepreneurs and to innovate, and the willingness of society at large to operate an economic system geared to the factory and the principle of the division of labour.

On the social front a new elite must emerge to fabricate the industrial society and it must supersede in authority the land-based elite of the traditional society. Surplus product must be channelled by the new elite from agriculture to industry, and there must be a willingness to take risks and to respond to material incentives. And because of the enormity of the task of transition, the establishment of an effective modern government is vital. The length of the transition phase depends on the speed with which local talent, energy and resources are devoted to modernisation and the overthrow of the old order, and in this respect political leadership will have an important part to play.

Then there is the stage of take-off. The characteristics of take-off are sometimes difficult to distinguish from the characteristics of the transition stage, and this has been one bone of contention between Rostow and critics. None the less, let us describe the take-off stage as Rostow sees it – a 'stage' to which reference is constantly made in the development literature. Since the pre-conditions of take-off have been met in the transitional stage, the take-off stage is a short stage of development during which growth becomes self-sustaining. Investment must rise to a level in excess of 10 per cent of national income in order for *per capita* income to rise sufficiently to guarantee adequate future levels of saving and investment. Also important is the establishment of what Rostow calls 'leading growth sectors'. Historically, domestic finance for take-off seems to have come from two main sources. The first has been from a diversion of part of the product of agriculture by land reform and other means. The examples of Tsarist Russia and Meiji Japan are quoted, where government bonds were substituted for the landowner's claim to the flow of rent payments. A second source has been from enterprising landlords voluntarily ploughing back rents into commerce and industry.

In practice the development of major export industries has sometimes led to take-off permitting substantial capital imports. Grain in the United

States, Russia and Canada; timber in Sweden, and, to a lesser extent textiles in Great Britain are cited as examples. Countries such as the United States, Russia, Sweden and Canada also benefited during take-off from substantial inflows of foreign capital. The sector or sectors which led to the take-off seem to have varied from country to country, but in many countries railway building seems to have been prominent. Certainly improvement of the internal means of communication is crucial for an expansion of markets and to facilitate exports, apart from any direct impact on such industries as coal, iron and engineering. But Rostow argues that any industry can play the role of leading sector in the take-off stage provided four conditions are met: first, that the market for the product should be expanding fast to provide a firm basis for the growth of output; second, that the leading sector generates secondary expansion; third, that the sector has an adequate and continual supply of capital from ploughed-back profits; and last, that new production functions can be continually introduced into the sector, meaning scope for increased productivity.

Rostow contends that the beginnings of take-off in most countries can be traced to a particular sharp stimulus which has taken many different forms, such as a technological innovation or more obviously a political revolution, e.g. Germany in 1848, the Meiji restoration in Japan in 1868, China in 1949 and Indian independence in 1947. Rostow is at pains to emphasise, however, that there is no one single pattern or sequence for take-off. Thus there is no need for the developing countries today to recapitulate the course of events in, say, Great Britain, Russia or America. The crucial requirement is that the preconditions of take-off are met, otherwise take-off, whatever form it takes, will be abortive. Investment must rise to over 10 per cent of national income; one or more leading sectors must emerge; and there must exist or emerge a political, social and institutional framework which exploits the impulse to expansion. The examples are given of extensive railway building in Argentina before 1914, and in India, China and Canada before 1895, failing to initiate take-off because the full transition from a traditional society had not been made. The dates of take-off for some of the present developed countries are given as follows: Great Britain, 1783–1802; France, 1840–60; the United States, 1843–60; Germany, 1850–73; Sweden, 1868–90; Japan, 1878–1900; Russia, 1890–1914.

Then there is the stage of maturity which Rostow defines as the period when society has effectively applied the range of modern technology to the bulk of its resources. During the period of maturity new leading sectors replace the old, and Rostow sees the development of the steel industry as one of the symbols of maturity. In this respect America, Germany, France and Great Britain entered the stage of maturity roughly together.

Accompanying changes in the industrial structure will be structural changes in society such as changes in the distribution of the work-force; the growth of an urban population; an increase in the proportion of white-collar workers; and a switch in industrial leadership from the entrepreneur to the manager.

Maturity also has important political features. This is the period when nations grow confident and exert themselves – witness Germany under Bismarck and Russia under Stalin. This is also the period when fundamental political choices have to be made by society on the use to which greater wealth should be put. Should it be devoted to high mass consumption, the building of a welfare state, or to imperialist ends? The balance between these possibilities has varied over time within countries, as well as varying between countries. Ultimately, however, every nation will presumably reach the stage of high mass consumption whatever the balance of choices at the stage of maturity. Since the developing countries have no likelihood of reaching this stage in the foreseeable future, however, and only a handful of countries have reached it already, we shall not consider this fifth stage here.

Instead, let us evaluate Rostow's thesis, and consider the usefulness of this type of stage theory apart from it providing a valuable description of the development process and pinpointing some of the key growth variables. Most criticisms have hinged on whether a valid and operationally mean-

ingful distinction can be made between stages of development, especially between the so-called transitional phase and take-off, and between take-off and maturity. Critics have attempted to argue that the characteristics that Rostow distinguishes for his different stages are not unique to those stages. Thus the demarcation between take-off and transition is blurred because the changes that take place in the transition phase also seem to take place in the take-off phase, and similarly with the demarcation between take-off and maturity.

One of the most outspoken of Rostow's critics is Kuznets, and some of his criticisms may be quoted as representative of the criticisms that Rostow has received in general. First, there is the difficulty of empirically testing the theory, which Rostow himself makes no attempt to do. For one thing there is a general lack of quantitative evidence for assertions made, and for another Rostow's description of the characteristics of some of the stages are not sufficiently specific to define the relevant empirical evidence even if data were available. With respect to the take-off stage, for example, what is a 'political, social and institutional framework which exploits the impulses to expansion in the modern sector'? Kuznets argues: 'it seems to me that Rostow . . . defines these social phenomena as a complex that produces the effect he wishes to explain and then treats this identification as if it were a meaningful identification' (Kuznets (1963), reprinted in Kuznets (1965), p. 219). Kuznets seems to be calling into question the whole of Rostow's scientific method and is claiming as unscientific the practice of observing phenomena, developing hypotheses on the basis of the phenomena, and then using the phenomena to support the hypotheses!

As regards quantitative evidence that is available for testing hypotheses, Kuznets questions Rostow's figures of investment and the incremental capital–output ratio during the take-off period in the countries studied. He says: 'Unless I have completely misunderstood Professor Rostow's definition of take-off, and its statistical characteristics, I can only conclude that the available evidence lends no support to his suggestions' (Kuznets (1965), p. 227). And on the concept of the take-off stage in general Kuznets concludes that lack of common experience typifying countries in the take-off stage, in relation to investment, etc., 'casts serious doubt on the validity of the definition of the take-off as a general stage of modern economic growth, distinct from what Professor Rostow calls the precondition, or transition, stage preceding it and the self-sustaining growth stage following it' (Kuznets (1965)). Cairncross (1961) echoes these remarks of Kuznets and appears to deliver a decisive blow when he asks what, if the various stages overlap, is the meaning of a 'stage'?

Are we to conclude from all this that Rostow's contribution is of little value? The answer to this must be in the negative; at least, much can be salvaged. While growth stage theories may be lacking in analytical power, the purpose of stage theory is not that the stages distinguished should necessarily have parallels in history, or be rigidly distinct, but to distinguish the situations in which an economy may find itself – situations which may merge into one another. While the concept of a 'stage' may be quibbled with, and stage theory dismissed as a blue-print for development, Rostow offers many extremely valuable insights into the development process. As we have seen from the work of Chenery and Maizels, development is not entirely haphazard, and there are certain features of the development process which do follow a well-ordered sequence. Moreover, there are certain development priorities which countries planning development may neglect at their peril. The importance of agriculture and the role of investment in raising the rate of growth are particularly stressed, as are certain political and sociological preconditions for development which economists are prone to forget, and which are ignored here. While emphasis on investment appears to be an unfashionable doctrine in the developed countries at present, there exists no satisfactory counter-argument to the doctrine in developing countries if capital is properly defined. If Rostow fails to provide an analytical breakthrough, he has aroused once again theoretical interest in the history and causes of the growth of the wealth of nations.

Questions for Discussion and Review

1. What are the major reasons why some countries are rich and others poor?
2. How would you measure the 'development gap'?
3. Why is the distribution of income within developing countries more unequal than in developed countries?
4. What have been the causes of growing urban unemployment in developing countries?
5. What is meant by 'income measure' of unemployment?
6. What do you understand by the 'basic needs approach' to development?
7. What are the developing countries asking for by way of a New International Economic Order?
8. Outline and discuss the feasibility of the main recommendations of the Brandt Commission Report?
9. What major structural changes take place in the course of development?
10. Is any useful purpose served by defining stages of economic growth?
11. What lessons, if any, can poor countries learn from the development experience of today's industrialised countries?
12. Is there any evidence that the developing countries are 'catching up' with the developed countries?