Department of Economic and Social Affairs

SOME ISSUES OF DEVELOPMENT POLICY IN THE COMING DECADE

World Economic Survey 1968—Part One

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[redacted]

NOTE

Symbols of United Nations documents are composed of capital letters combined with figures. Mention of such a symbol indicates a reference to a United Nations document.

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FOREWORD

This report, *World Economic Survey, 1968,* is the twenty-first in a series of comprehensive reviews of world economic conditions published by the United Nations. It is issued in response to General Assembly resolution 118 (II), in which the Secretary-General was requested to prepare an annual review and analysis of world economic conditions and trends. The report is intended to meet the requirements of the Economic and Social Council and other organs of the United Nations for an appraisal of world economic conditions which may serve as a basis for recommendations on economic matters. It is also intended to stimulate interest in and discussion of international economic problems among a more general public audience.

Each year since 1955, the *World Economic Survey* has contained a study of a particular problem concerning economic development. Among the subjects examined have been economic growth in the first post-war decade, balance of payments problems in relation to economic growth, inflation, post-war commodity trade and policies, experience and policies relating to investment and saving, industrialization and economic development, foreign trade and economic development, the appraisal of development plans, the financing of economic development, and problems in the implementation of development plans.

As a contribution to the preparatory work for the Second United Nations Development Decade, Part One of the present *Survey* discusses some of the major issues of development policy likely to confront the world in the coming decade. This study thus forms the complement to Part One of the *World Economic Survey, 1967* which examined the principal features of the economic progress of developing countries during the period 1955 to 1965 and sought to draw some lessons from experience relevant for economic policies. It is hoped that these *Surveys* will provide a helpful background to discussions in United Nations forums on designing a concerted programme of action for the 1970s.

Part One of the *Survey* consists of an introduction and three chapters. The first chapter discusses problems and policies relating to the prospective growth of population, employment and educational requirements. The second chapter examines policies for the acceleration of agricultural and industrial growth in the coming decade. The third chapter analyses the increase in domestic and external resources which would be required for the acceleration of growth, and considers the implications for policies of both developing and developed countries.

Part Two of the *Survey* summarizes the main features of the world economic situation in 1968 and the outlook for 1969. The first chapter reviews achievements in production, the second discusses the course of international trade and the third reports on the state of economic balance of individual countries, both domestic and on external account. The final chapter assesses the prospects for 1969 as they appeared in the second quarter of that year.

The *World Economic Survey* is prepared in the Centre for Development Planning, Projections and Policies of the Department of Economic and Social Affairs of the United Nations Secretariat.

List of tables

Explanatory notes

The following symbols have been used in the tables throughout the report:

Three dots ( ) indicate that data are not available or are not separately reported.

A dash (—) indicates that the amount is nil or negligible.

A blank in a table indicates that the item is not applicable.

A minus sign (—) indicates a deficit or decrease, except as indicated.

A full stop ( ) is used to indicate decimals.

A comma (,) is used to distinguish thousands and millions.

A slash (/) indicates a crop year or financial year, e.g., 1960/61. If a two- or three-year period is shown in this way, e.g., 1952/55, an average has been taken over the period beginning with the crop year or financial year 1952/53 and ending with the crop year or financial year 1954/55.

Use of a hyphen (-) between dates representing years, e.g., 1961-1963, signifies the full period involved, including the beginning and end years.

Reference to "tons" indicates metric tons, and to "dollars" ($) United States dollars, unless otherwise stated.

The term "billion" signifies a thousand million.

Annual rates of growth or change, unless otherwise stated, refer to annual compound rates.

Details and percentages in tables do not necessarily add to totals, because of rounding.

The following abbreviations have been used:

AsDB	Asian Development Bank
FAO	Food and Agriculture Organization of the United Nations
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IMF	International Monetary Fund
OECD	Organisation for Economic Co-operation and Development
SITC	Standard International Trade Classification
UNCTAD	United Nations Conference on Trade and Development
UNESCO	United Nations Educational, Scientific and Cultural Organization

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country or territory or of its authorities, or concerning the delimitation of its frontiers.

INTRODUCTION

It is the common hope that the pace of development in the coming decade can be quickened. When the General Assembly set a target of 5 per cent as the rate of growth in income and output to be attained by developing countries as a whole by the end of the present Development Decade, it may have seemed optimistic in the light of historical experience. However, while the present decade has not yet come to a close, it seems likely that the actual performance of the developing regions may not fall much short of this initial objective. If effective policies for growth are pursued in both developing and developed countries, there is no objective reason why such performance cannot be improved in the years to come. In this report, some of the issues which confront both groups of countries in reviewing their policies are discussed.

The synthesis of social and economic policies

If there is any criticism of general validity which can be levelled against post-war discussions of development, it is the compartmentalization of political, social and economic policies. Social thinkers have long recognized the profound importance of political and social changes for economic growth; and they have been no less aware of the converse influence of economic trends on social and political relations within society. In most discussions of development policies, and in many development plans, however, measures to bring about social changes conducive to development have played only a peripheral role. Attention has focused on economic measures directly relating to the level and composition of output, investment and foreign trade, while social and political policies have remained matters for separate consideration. It is being increasingly understood that a strategy for economic development cannot be formulated within these limited confines. As a deliberate objective of national policy, economic development is not a limited aim to be accomplished within an unchanging political and social structure any more than it is a short-term aim to be reached within a few years.

A first condition of development is its acceptance as a political goal. This might seem unnecessary to state since economic growth is universally acclaimed as a proper objective of government. It is part of the present dissatisfaction with much post-war discussion of development, however, that it has not been distinguished from economic growth. Development, as now conceived, is an objective with broad social significance. It is surely true that the power which the concept of development exercises over the imagination of men and women draws much of its strength from the great egalitarian ideals with which most modern political and social philosophies are imbued. The vision of economic development would be far less imposing were it not for the conviction —born of the immense advances in science and technology—that the opportunity of a better material life can be placed within reach of the great masses of the people. Acceptance of development as a political aim thus puts a broader construction on the purpose of economic policy. Its aim is not only greater output, but changes in the level, composition and distribution of output which lead to improvements in the present and future welfare of the community at large. Thus, the many political problems which have economic origins, such as the social tensions generated by disparities in economic well-being or opportunity among regional or racial groups or classes, are not issues to be regarded as diverting development policy from its main purpose of economic growth; on the contrary, they are the very kinds of problems which must be tackled by development policy.

Only one or two decades ago, it might have been possible to accept this broad social purpose of development while concentrating attention on measures of a directly economic nature. It seemed valid to argue that, if an adequate rate of economic growth could be attained—even though its benefits might be immediately confined to narrow segments of the community—social aims could be met through taxation and redistribution of income in the form of social welfare programmes. As understanding of the nature and causes of development has broadened, however, this limited view of social aims and policies has appeared increasingly unsatisfactory. There is now widespread agreement that, if broad-based economic development is to take place, policies to alter and improve social conditions are of fundamental importance. It is the institutions and attitudes conditioning the economic behaviour of the population which, first and foremost, mark the difference between a stagnant and a dynamic economy. Measures to change the distribution of income and wealth, or social programmes for health and education, are not simply desirable in themselves on grounds of social equity or common humanity; they are neces-

sary means of strengthening the incentive, motivation and ability of the population to seek ways of raising output through work, investment and innovation. Thus, social measures can no longer be regarded as separate actions directed toward separate ends; they are also themselves instruments of a strategy for development. The fusion of social and economic measures into a common strategy for development is, however, far from being generally achieved; and a closer synthesis of the two kinds of policy is a major task of development strategy for the coming decade.

Some social policies

Probably the most important social change necessitated by development must take place in the forms of social organization which govern the nature and direction of economic activity. The traditional system of property relations in predominantly agrarian societies has long been recognized to be generally inimical to development. For the introduction of more efficient methods of production, new forms of organization have to be established. This process of institutional change is necessary not only in agriculture but throughout the various branches of economic activity. It is not solely the shortage of financial resources or of skilled manpower which impedes the application of modern science and technology to productive activity; it is also the lack of productive entities with the organizational span and incentives to exploit more modern methods. Thus, a fundamental task of development strategy is to replace the traditional forms of social organization resistant to change with new, and more dynamic, kinds of productive organization.

A principal means of accomplishing this is by reform of the system of rewards and penalties influencing productive activity. There is room for wide disagreement on what may constitute the appropriate relation between reward and effort, but there is little doubt that in many developing countries the institutional conditions determining the distribution of income and wealth cause major distortions in this relation. Income and effort are not closely related, and the incentive to intensify productive activity is accordingly impaired. This, moreover, is true not only of the incentive to work but also of the incentive to save and invest in productive activity. It has often been assumed that an inequitable distribution of income and wealth should facilitate a rising trend in the level of domestic saving and investment, since higher income groups tend to save a larger proportion of their incomes. But the distribution of income and wealth itself also constitutes the system of rewards for productive activity, and if—as discussed in chapter III—it offers insufficient incentives to work and innovation, the rising level of saving and investment characteristic of a dynamic economy cannot be expected to materialize. Thus, institutional and fiscal reforms to strengthen the incentives to work, save and invest should be at the forefront of a strategy for development.

This question assumes particular importance in the rural areas where farmers and peasants are deprived of the incentive to raise output through onerous tenurial systems, as in many Asian and Latin American countries, or through the social obligations imposed by the extended family system, as in many African countries. Reform of the systems of land ownership and tenure has long been recognized as a necessary step. The task, however, should also be conceived more broadly as the develment of new forms of organization for economic activity in the rural areas. The need is for the provision of adequate incentives for cultivators to work and invest, not only through such means as land redistribution or the provision of security of tenure, but also through the establishment of an infrastructure of services for marketing, credit, extension activities and distribution of input. In fact, there is no necessary presumption that the new systems of farming should take the form of peasant small holdings supported by an infrastructure of services. They can take many different forms, ranging from various types of collective or large-scale farming systems to individual small holdings. An imaginative and flexible approach to new forms of economic organization in the rural areas is clearly desirable if farming systems are to be suited to the technical requirements of the crops to be grown, as well as to provide adequate incentives to cultivators

Hardly less fundamental than changes in the forms of social organization and the strengthening of incentives is the development of new attitudes and skills among the population. In recent years, the pervasive role of education in the transformation of society has come to be a familiar theme in general discussions of development. The revision of attitudes towards education, and their translation into new educational programmes, however, have hardly begun. It is to be hoped that the reappraisal started in the 1960s presages more radical changes in educational policies during the coming decade

It has to be recognized that, at least at present, empirical knowledge concerning the relation of education to development is quite limited; and it offers only partial guidance to decisions on educational policy. No one doubts that the increasing supply of trained people, at various levels of skills, is necessary to support economic development. Research over the last few decades has yielded convincing evidence that labour productivity and the extension of education are interrelated developments. And it is certainly true that decisions on educational policy can be usefully aided by manpower planning; for-

ward estimates of future requirements of skilled manpower at least indicate the minimum expansion required in educational systems, particularly in training high-level and skilled manpower. Such planning is essential if appropriate action is to be taken to correct the undue orientation towards general education at the expense of technical education frequently observed in educational programmes at the secondary and tertiary levels.

Education, however, should not be considered solely as a means of providing skilled manpower. This does not adequately encompass the broader, if less easily measurable, influence which education may have on development by inducing changes in attitudes, increasing social flexibility, and enhancing the receptivity of the population to social and economic change. To evaluate the significance of education in this regard, reliance can only be placed on broad social judgements. In current thinking, however, the general view is that broad-based programmes of education merit very high priority in development strategy, since they can serve as the principal means of overcoming age-old customs resistant to change, instilling a new spirit of innovation, and encouraging the adoption of more modern techniques and new forms of organization of productive activity.

The expansion of educational programmes—as rapid as resources permit—appears an essential element of long-term development strategy. In most developing countries, expenditure on education is, in fact, one of the fastest growing components of the national budget. However, increased resources are not the sole, or even the main, requisite in most developing countries. As noted in chapter I, it is a widespread criticism of current educational programmes that they display much evidence of waste and that they are poorly adapted to the purposes of general social and economic development. In many countries, if education is to be an instrument of development strategy, the reform of educational programmes to heighten their quality and relevance is at least as important as their expansion.

A major criticism of established educational systems is their comparative neglect of adult education and training. The value of educating the young may be greatly diminished if the society in which they live is not itself undergoing social and economic change; the stream of new economic opportunities, and the receptivity of the community to new ways, must be progressively widening. This brings programmes for adult education and training, such as functional literacy programmes, to the forefront of educational policy. As has been recommended at a ministerial conference of the United Nations Educational, Scientific and Cultural Organization (UNESCO), these programmes merit higher priority than the further extension of primary education if current development appears to be impeded by illiteracy or lack of skills among adults.

Other social policies besides educational programmes or measures for introducing a more efficient distribution of income and wealth are necessary to create a social framework more conducive to development. Despite the progress made in recent decades, mortality rates are still high in many countries of the world and debilitating diseases are prevalent. Reduction of the mortality rates and improvement in general levels of health among the population are elementary objectives of social policy, and a condition of changing attitudes and strengthening motivations in regard to economic activity. The introduction or expansion of family planning programmes similarly offers a major means of improving the welfare of the family. There is evidence, as noted in chapter I, that attitudes favourable to the limitation of family size are present among parents in many developing countries. If, along with other social measures, family planning programmes could be successfully expanded over the coming decade to initiate a downward trend in birth-rates, this would decidedly enhance the long-term prospects for improvements in welfare.

Agricultural and industrial development

Policies for agricultural and industrial growth are principal economic issues in a strategy for development. Fortunately, at the inception of the decade of the 1970s, little remains to be said on the long controversy over the relative emphasis to be placed on agriculture and industry. The experience of the last two decades, in which agriculture frequently acted as a brake on general economic growth, has amply demonstrated the complementary nature of these two sectors. However, though this issue has been largely settled between the two activities, the same cannot be said of policies for development within agriculture or industry.

Over the first half of the present decade, food production in developing countries as a whole failed to keep pace with the growth of population. While a new optimism concerning agricultural development has emerged in more recent years, particularly in Asia, following successful innovation of the new high-yielding varieties of grains, aided by favourable monsoons, it would be dangerous to believe that the problem of agricultural development is anywhere near solution. It may be pointed out that, if developing countries were to attain a minimum rate of growth of 6 to 7 per cent by 1980, the annual rate of increase in demand for food might then be expected to be about 4 per cent; and this substantially exceeds any rate of growth in production so far generally achieved. Estimates suggest that even a

more modest growth in food output of about 3 per cent per annum would demand very considerable, and continuous, improvements in farming practices.

The development of agriculture has proved to be the most intractable problem confronting Governments of many developing countries. The forces making for a dynamic agriculture are numerous and complex; and the most effective measures are neither easy to identify nor to execute. Over much of the post-war period, discussions of agricultural policy have been characterized by a tendency to single out one or another measure as of strategic importance; land reform, price policy, credit supplies, extension work, and, more recently, technological improvements, have been among the main measures which have been separately stressed. There is an emerging consensus, however, that such partial approaches to the problem of agricultural development are not a sufficient basis for agricultural policy. The transformation of a traditional, and largely subsistence, agriculture into a dynamic, commercial farming system requires a complex of institutional, technical and economic changes; and these changes should be viewed as complementary, being mutually reinforcing in their effects on production.

This comprehensive approach confronts developping countries with a dilemma. The financial, technical and administrative resources are generally far too scarce to permit the adoption of such an approach on a country-wide scale. Comprehensive programmes to implement a full range of institutional, technical and economic measures could only be attempted for selected areas, and even this might require some curtailment of programmes elsewhere. There is no wholly satisfactory solution to this dilemma other than the provision of increased resources. It has been suggested, however, that while the various measures necessary for agricultural development are broadly complementary, they are also, to some extent, substitutable at the margin, at least in the short-run. Thus, by means of a comprehensive analysis, it is possible to identify the more immediate constraints on output and to construct a programme of action in which the whole range of necessary measures have their place in an orderly sequence. Throughout agricultural policies, the keynote clearly must be adaptation and experiment based on the informed analysis of local difficulties and opportunities.

As in agriculture, developing countries will have to accelerate their industrial development in the coming decade if the pace of general economic growth is to be quickened. The attainment of a minimum rate of economic growth of 6 to 7 per cent by 1980 might well necessitate a rate of increase in industrial output amounting to 8 to 9 per cent. Over the first seven years of the 1960s, industrial output in the developing countries as a whole rose by 6.5 per cent per annum.

Policies for industrialization have been undergoing re-evaluation in the recent past. More specifically, concern has been expressed about the efficiency of the emerging structure of industrial production in many countries. The establishment of new industries has often been determined more by the play of circumstances than by the deliberate exercise of policy measures; and there is frequent evidence of industries emerging behind highly protective barriers which have little prospect of operating at reasonable cost. While it was not an uncommon belief in the earlier post-war years that such industrialization could be justified on the grounds that increased domestic production of manufactures would lessen the foreign exchange constraint on over-all growth, events have not borne out this view. Industrialization has brought about changes in the composition of imports, but as total income and output have grown, the demand for total imports has risen commensurately, or often, more than commensurately. Thus, the more industrialized of the developing countries have increasingly emphasized the importance of enlarging their export trade in manufactures; and this has turned attention to domestic industrial costs.

If some of the past mistakes of industrialization are to be avoided in the years to come, many countries will need to formulate more deliberate policies for industrial development that take account of the relative efficiency of new industries. It must be stressed, however, that there is no standard pattern of industrialization on which individual countries can model their policies. Not general precepts, but analysis of the specific constraints and opportunities confronting general development in each country should be the foundation of a strategy for industrialization.

The promotion of a more efficient pattern of industrialization implies a measure of specialization within individual countries; and the corollary to such specialization is an expanding volume of imports of manufactures. The ability to implement policies for efficient industrial development thus depends, not only on the individual countries themselves, but also on the possibilities of expanding trade with other countries. The granting by developed countries of non-reciprocal tariff preferences to manufactures from developing countries as recommended by the United Nations Conference on Trade and Development (UNCTAD), would clearly be important in this context. This also emphasizes the significance of the endeavours on the part of groups of developing countries to promote regional economic co-operation among themselves

This problem of efficient industrial growth presents itself in a particularly acute form among the smaller developing countries. The number of such countries is large; there are, for instance, about sixty Member States of the United Nations with populations of less than 10 million each. Once beyond its earliest stages, efficient industrialization in these countries is restricted by the smallness of the domestic market unless specialization through foreign trade can be developed. It is true that the size of the domestic market is not static and could often be appreciably enlarged through a more equitable distribution of income and greater rural development; and it is also true that possibilities for exports of manufactures to world markets could sometimes be exploited through more vigorous export promotion policies. Generally, however, closer regional co-operation offers the most promising solution for most of these countries.

The use of resources for development

The policies for the various social and economic sectors which have been discussed above form the main substance of a strategy for development. It is within the framework set by these policies that decisions can be reached about the allocation of the financial resources available for development programmes. To make the most effective use of these scarce resources is, in the main, a task of strengthening these sectoral policies. Sectoral policies have, of course, to be assessed in combination as well as separately and this is a principal function of national development planning. But no amount of planning in broad aggregates at the national level can compensate for the absence of sound policies and programmes within sectors. In most developing countries, a principal weakness in planning is still the lack of sufficient social, economic and technical information and analysis relating to the specific difficulties and opportunities that confront development programmes within specific sectors. The continued broadening of social and economic research, of technical surveys and of pre-investment studies in general is thus essential for the construction of more effective policies.

The more effective use of productive resources for development is, however, not only a question of the allocation of the resources available for investment. There is the larger, and much more problematic, issue of how to absorb the growing labour force more fully into productive activity. This, of course, is not merely an economic problem; it is also a social issue of major dimensions.

Because of the acceleration of population growth over the last two decades, developing countries are going to be faced in the coming decade with a dramatic increase in the number of young people seeking some form of gainful employment. The population of working age in the developing regions has been increasing at about 2.3 per cent per annum in the present decade, and this rate is likely to accelerate to 2.7 per cent in the 1970s. To absorb such growing numbers of young people into employment would be exceedingly difficult in itself. The problem, however, is compounded by the widespread unemployment and underemployment that now prevails.

It cannot be said that any comprehensive solution to this crucial problem lies readily to hand. Indeed, the issue has not received the attention its social importance demands. It has been suggested in chapter I, however, that Governments could at least take the question of employment much more systematically into account in the formulation and execution of their policies affecting investment. It has long been maintained by many economists that, in view of the scarcity of capital and the plentiful supply of labour, developing countries should, wherever practicable, give preference to the use of labour-intensive techniques in their investment programmes. As explained in chapter I, this is not to be mistaken for a prescription in favour of exclusive or even primary reliance upon labour-intensive industries. The structure of industrial production should quite properly be based on other considerations besides the supply of labour and capital, and the use of capital-intensive technologies is inescapable in many branches of production. Nonetheless, opportunities to vary the choice of technique do exist in most countries, and the deliberate use of measures to exploit these opportunities has generally not been practised. It appears probable, however, that agriculture provides one of the main areas for a greater enlargement of employment opportunities in most developing countries; and in this sector, the promotion of labour-intensive methods to raise output is not simply a question of the use of alternative techniques, but the reform of institutional conditions to establish or expand labour-intensive systems of farming.

The volume of domestic and external resources

If developing countries are progressively to enlarge the various social and economic programmes necessary for the acceleration of development, they must be able to command an increasing volume of resources to finance current public expenditure, investment and imports. Estimates of the resources which would be needed for an appreciable acceleration of economic growth leave no doubt that their mobilization constitutes a major challenge to policy in the coming decade.

Preliminary estimates suggest that, if developing countries were to attain a minimum rate of growth in output of 6 to 7 per cent by 1980, the share of investment in gross domestic product might have to increase from about 15 per cent in 1965 to about 20 per cent in 1980. If domestic saving in the developing countries were to grow in accordance with historical trends, the share of saving in gross domestic product might increase from about 14 per cent in 1965 to about 18 per cent in 1980. There would thus be a shortfall in the resources required for investment which would have to be met by stronger action to raise the level of domestic saving, by a greater inflow of foreign capital, or by some combination of both.

Many developing countries could undoubtedly do more to raise levels of domestic saving; and in this context, as mentioned above, policies to change the distribution of income and wealth constitute a relevant, though often neglected, line of action. Besides the constraint imposed on economic growth by the supply of savings, however, most developing countries are confronted by the limitation arising from foreign exchange scarcity; and, on the evidence of historical trends, the shortfall in foreign exchange earnings below likely import requirements generally appears to represent the greater barrier to accelerated economic growth. Preliminary estimates suggest that, if developing countries were to attain a minimum rate of growth in output of 6 to 7 per cent by 1980, a small group of these countries might record a foreign exchange surplus. A much larger group, however, could be faced by 1980 with a foreign exchange gap of about $25 billion to $30 billion, which would amount to 6 to 7 per cent of their own gross domestic product.

These estimates indicate the high importance of the policies of developed countries for the acceleration of economic growth in the developing regions. An expanding volume of imports is crucial for their development; and the rate at which imports can be increased is a significant determinant of their pace of over-all growth.

The need for more liberal trade policies on the part of developed countries has been a familiar theme of discussions in UNCTAD and other international bodies over recent years; and some of the main issues are described in chapter III. There can be little doubt, however, that until such time as much greater changes in the structure of domestic production and exports have been effected, most developing countries will need an inflow of foreign capital to supplement their earnings from primary commodity exports.

At the outset of the present Development Decade, the economically advanced countries agreed that 1 per cent of their income and output should be devoted to international assistance. Progress towards the fulfilment of this aim on the part of most donor countries has been disappointing. After a sharp increase at the turn of the decade, as noted in chapter III, the flow of official and private capital from the developed market economies rose at an annual average rate of 4.5 per cent between 1961 and 1967; and present indications are that the volume of assistance is now tending to level off. This trend, moreover, has been accompanied by a rising level of debt service payments borne by the developing countries; and debt service payments on official and officially guaranteed funds in 1967 were equivalent to 42 per cent of the outflow of these funds in that year. At the same time, the terms on which new assistance is extended have not, in general, been relaxed but have tended to harden.

In some important respects, however, there has been significant progress in improving the effectiveness of international assistance. Consistent with the greater appreciation of the role of non-investment factors in development, is a better understanding of economic assistance as something more than a means of supplementing domestic resources for investment or of alleviating foreign exchange scarcity; and an increasing proportion of assistance has been taking the form of programme aid. Such assistance is better suited to the financing of the various types of development expenditure now recognized to be as important as fixed investment in promoting growth. Closer co-ordination of the aid programmes of donor countries through such means as consortia and consultative groups has also helped to improve the effectiveness of this assistance. On the other hand, aid-tying and the inability of most donor countries to make aid commitments extending beyond a fiscal year have continued to restrict the flexibility of aid programmes.

While further improvements in the quality of external assistance programmes are undoubtedly needed, it is the volume of assistance which nonetheless remains the central issue. Developing countries today are better placed to execute the policies and programmes necessary for development than they were at the commencement of the present decade. It would be singularly unfortunate if, at the onset of the Second Development Decade, developed countries failed to support their efforts with a growing volume of external assistance in line with agreed targets.

Chapter I

POPULATION, EMPLOYMENT AND EDUCATION

Population growth and development policy

The population of the developing countries in Africa, Asia and Latin America may well increase by some 500 million people over the coming decade.[1] This is to be compared with an expected increase of about 375 million people in the present decade. Expressed in terms of growth rates, the increase over the next decade would amount to about 2.6 per cent per annum as compared to 2.5 per cent at present (see table 1). Such high rates of population growth over such vast regions are unparalleled in the history of the world; and it is hardly surprising that this fact has come to the forefront of much recent discussion of development prospects.

It is well known that progress in the improvement of health standards and probably also better distribution of food supplies are mainly responsible for the present high population growth rate. Modern medical technology has made possible a much faster reduction in death-rates than would have been conceivable in the early stages of development in the now economically advanced countries. It must be emphasized, however, that despite the improvements, health and nutritional standards nonetheless continue to be pitifully low in many developing countries. It has been estimated, for example, that the average life expectancy in Africa is still only about forty to forty-five years, and in Asia about forty-five to fifty years.[2] In most developing countries, the realization of further substantial progress in reducing death-rates and in raising general standards of health remains an elementary requirement for improvement in the conditions of life.

The welcome appearance of a decided downward trend in mortality rates in developing countries has not been accompanied—any more than it was in the demographic history of the economically advanced countries—by a simultaneous decline in birth-rates; and as a consequence, the rate of population growth has accelerated. With the faster gains being made in lowering death-rates, however, the developing countries are experiencing a more rapid expansion of population than took place in the economically advanced countries during the comparable phase of their population change. It is this situation which has given rise to the so-called population explosion, the subject of so much concerned comment in recent years. In view of the continuation of high birth-rates in a situation of declining death-rates, numerous authorities have advocated the introduction of extensive family planning programmes as a matter of urgency. Several Governments have, in fact, brought large-scale programmes into operation, particularly in the last few years.

It must be recognized, however, that the lag in lowering birth-rates is a complex, social phenomenon, not readily influenced by any single policy measure. In societies where high death-rates have always been part of the human lot, high fertility rates have served to preserve both the family and the community as viable economic and social units. The experience of the developed countries indicates, however, that when general economic and social conditions have begun to improve and when it has become apparent that numerous children may impair, rather than protect, the welfare of the family, there has been a gradual change in attitudes about family size. Recent field studies offer specific evidence that the same change in attitudes is now to be widely found among people in developing countries where mortality rates have declined and some improvement, however modest, in economic prospects and social conditions has been taking place. There are, moreover, a sufficient number of these studies to indicate that such a change can be found in countries differing widely in cultural or religious traditions.[3]

It does not therefore seem to be a matter of serious argument that increasing numbers of people in developing countries will, in the future, wish to limit family size. A crucial condition, however, is a continuing and perceptible improvement in their general economic prospects and social welfare—not least, the further raising of health standards and lowering of death-rates. As attitudes respond to such improvement, family planning programmes can prob-

[1] This estimate excludes mainland China and other developing countries in Asia with centrally planned economies.

[2] J. Bourgeois-Pichat, *Population Growth and Development* (New York, Carnegie Endowment for International Peace, 1966), p. 66

[3] For a summary of evidence, see Goran Ohlin, *Population Control and Economic Development* (Paris, Development Centre of the Organisation for Economic Co-operation and Development (OECD), 1967), chapter V.

ably much accelerate the decline in birth-rates through the dissemination of information and materials. Though means of family limitation have probably been known and practised for centuries in most societies, ignorance is widespread and traditional methods less efficacious, or more injurious to health, than modern. Indeed, it is by no means inconceivable that, as attitudes become more favourable, the trend towards lower birth-rates—like the decline in death-rates—may occur much more rapidly in many developing countries than was the case in developed countries. In addition to the availability of better techniques, it is true, at least in several of the developing countries, that the official sponsorship of family planning programmes contrasts strikingly with the official attitude of hostility that prevailed in many developed countries when the popular demand for family planning first emerged.

To draw attention to the importance of general improvements in economic prospects and social conditions for the success of family planning programmes is simply to say that these programmes can only form one among a complex of measures to promote human welfare. While the causes of a change of attitude about family size are imperfectly understood, actual experience in the implementation of family planning programmes has sufficiently demonstrated the relevance of concomitant changes in education, health and other conditions of life. Family planning programmes should therefore not be considered as a potentially independent determinant of the rate of growth in *per capita* income, and certainly not as substitutes for other measures to enlarge economic prospects and improve social conditions.

While it is only realistic to recognize that the course of future population growth is not independent of the pace of general development, this in no way diminishes the magnitude of the problems created for developing countries by the present rapid expansion in population. The increase in the number of adults seeking some form of gainful employment, and the growing numbers of children to be educated, are among the major consequences of expanding population. These present difficult problems for policy in developing countries. Some discussion of these problems is contained in the following sections.

Table 1. Projected total population and annual rates of growth for the world and major areas during the First and Second Development Decades

Region	*Total population (millions)*			*Annual rate of growth (percentage)*	
	1960	*1970*	*1980*	*1960-1970*	*1970-1980*
World total	2,998	3,593	4,344	1.8	1.9
Developed market economies[a]	656	732	820	1.1	1.1
Centrally planned economies[b]	1,016	1,160	1,314	1.3	1.3
Developing regions[c]	1,326	1,701	2,210	2.5	2.6
Africa	257	325	423	2.4	2.7
Asia	863	1,105	1,425	2.5	2.6
Latin America	206	272	362	2.8	2.9

Source: *World Population Prospects as Assessed in 1963* (United Nations publication, Sales No : 66.XIII.2).

Note: These estimates, which are shortly to be revised, are the medium variant projected by the Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat. For further explanation, see the source.

[a] North America, continental Europe excluding the centrally planned economies but including Cyprus and Turkey, Australia, Japan, New Zealand, South Africa.

[b] Eastern Europe (Albania, Bulgaria, Czechoslovakia, Eastern Germany, Hungary, Poland, Romania, Yugoslavia), Union of Soviet Socialist Republics and the Asian centrally planned economies (China (mainland), Mongolia, North Korea, North Viet-Nam).

[c] *Africa*: continental Africa excluding South Africa; *Asia*: south and south-east Asia, the Middle East excluding Cyprus and Turkey, Oceania excluding Australia and New Zealand; excluding Japan and the Asian centrally planned economies; *Latin America*: central America, south America and the Caribbean excluding Cuba.

THE EMPLOYMENT PROBLEM

The magnitude of the problem

Over the course of the coming decade, no matter what future changes take place in birth-rates, developing countries are going to be faced with a dramatic increase in the numbers of young people seeking some form of gainful employment. The population of working age is at present growing at an annual rate of about 2.3 per cent; and in the 1970s,

this rate will accelerate to nearly 2.7 per cent (see table 2). This trend is irreversible, and the problems which it creates are inescapable.

Comparison with the developed countries may help to emphasize the rapidity of the expected increase. In the developed market economies, population of working age is projected to grow by about one per cent per annum in the 1970s; and in the developed centrally planned economies, this growth will be of the order of 1.2 per cent. Thus, the labour force in developing regions will grow at a very substantially faster pace than in developed regions, roughly twice to three times as fast

While the continued growth of total output will progressively enlarge the number of employment opportunities, economic growth is always associated with technological and structural changes that raise labour productivity; and employment consequently increases at a slower pace than output. While the over-all trend of labour productivity in developing countries is not known, experience elsewhere indicates that it could rise at a rate somewhere in the range of 2 to 4 per cent per annum. Thus, if the projected annual increase in the labour force in developing countries over the next decade were to be absorbed into employment, the annual rate of

Table 2. Actual and projected population of working age and annual rates of growth for the world and major areas during the First and Second Development Decades

Region	*Working age population (millions)*			*Annual growth rate (percentage)*	
	1960	*1970*	*1980*	*1960-1970*	*1970-1980*
World total	1,759	2,093	2,536	1.8	1.9
Developed market economies	408	457	503	1.1	1.0
Centrally planned economies	585	672	778	1.4	1.5
of which: USSR and eastern Europe	196	223	252	1.3	1.2
Developing regions	765	964	1,255	2.3	2.7
Africa	138	175	225	2.4	2.5
Asia	510	637	826	2.2	2.6
Latin America	117	153	204	2.7	2.9

Source: Centre for Development Planning, Projections and Policies of the United Nations Secretariat, based on *World Population Prospects as Assessed in 1963* (United Nations publication, Sales No.: 66.XIII.2).

Note: Population of working age refers to the age group 15-64. The regional coverages in this table are basically the same as those in table 1. Slight differences are due to lack of country data by age groups.

increase in gross domestic product would have to be in the range of 5 to 7 per cent.

If the problem of employment in developing countries were confined solely to the absorption of the growing number of young people, it would be difficult enough. It is, however, compounded by the widespread unemployment and underemployment that now prevails. The task is therefore to increase employment opportunities not only to absorb the additions to the labour force but also to reduce the present unemployment and underemployment.

It is well nigh impossible to make any statistical assessment of the extent of present unemployment and underemployment. Indeed, it is even conceptually difficult to define. In predominantly agrarian economies, the conventional standards utilized in developed countries to measure employment and unemployment are of very limited relevance, since these rely on the prevalence of wage employment and a standard work week. In developing countries, most of the working population finds some sort of livelihood in agriculture or services where, as is well known, many are idle or underemployed for much of the time. To complicate the matter, the idleness or underemployment may not always be involuntary. In many rural areas, the accepted, traditional pattern of social behaviour largely limits economic activity to short periods of intensive work during the planting and harvesting seasons; and the long non-productive stretches are not so much enforced idleness as a part of the traditional pattern of life. Still, this attitude to work is disappearing in most countries as education spreads and people become aware of the possibility of a better life; and it is fair speculation that underemployment, in the sense of numbers of people who are willing to work longer and harder to improve their lot, but are without the opportunity to do so, is spreading quite rapidly. Thus, while underemployment may be difficult to measure, it undoubtedly exists and is growing.

Despite the difficulties of quantification for developing countries as a whole, some estimates for individual countries and a region may be quoted to illustrate possible orders of magnitude. In the Third Five Year Plan of Pakistan, for instance, it was noted that

> "almost one-fifth of the available manpower . . . is wasted every year for lack of useful work. In actual numbers, about half the labour force is affected, as unemployment in Pakistan generally takes the form of an under-utilization of at least half of the available manpower."[4]

Referring to open unemployment alone, the Fourth Five Year Plan in India noted that "the backlog of unemployment at the beginning of the Fourth Plan is 9 to 10 million, of whom about three-fourths are in the rural areas". It further estimated that

> "against the 23 million of net addition to the labour force during the period of the Fourth Plan, the increase in employment opportunities outside agriculture may be about 14 million and in agriculture of the order of 4.5 to 5 million, making a total employment potential of 18.5 to 19 million."[5]

Thus, according to the projections and definitions of the Indian Planning Commission, unemployment would increase by about 4 to 4.5 million during the Fourth Plan, raising the total unemployed to 13 to 14.5 million by the end of the plan period. For the Latin American region as a whole, it has been estimated that in 1960 about 40 per cent of the economically active labour force was underemployed.[6] A calculation of over-all unemployment in which underemployment was reduced to its unemployment equivalent showed that about 18 million persons or some 27 per cent of the active population were unemployed in 1960. For the 1970-1980 decade, the estimates indicated that in order to absorb those now underemployed as well as the new additions to the active labour force resulting from population growth, total output would have to grow by not less than 8 per cent per annum. If output were to increase by about 6 per cent per annum, the level of unemployment prevailing in 1960 would persist into 1980.

The conclusion can hardly be avoided that the task of creating sufficient employment opportunities over the next decade both to absorb the growing labour force and to lessen underemployment is likely to be beyond the capacity of many developing countries. Though much of the underemployment will remain dispersed and concealed throughout the rural areas and in the service industries, the pool of open urban unemployment, with all its attendant social ills and tensions, will surely swell.

Numerous Governments in developing countries have been deeply concerned about this problem for some time. Many have for years carried out programmes of public works specifically intended to alleviate unemployment in urban and rural areas. Youth corps or youth training schemes have also been widely developed in an attempt to stem the rising tide of unemployment among school-leavers. However, though socially desirable, and often politically imperative, these various public works programmes have necessarily been limited in scope by financial and organizational constraints. Besides being only temporary palliatives, their contribution towards improving the employment situation has generally been modest; and it is only realistic to recognize that, by themselves, they cannot offer a general solution to the problem.

It is trite, though true, to say that the growth of employment depends on developments throughout the economy as a whole and that the principal measures to promote employment must be correspondingly broad-based. It is just for this reason that the main prescription for the employment problem offered in the earlier post-war years was capital accumulation. Industrial growth, in particular, was believed to be the primary means of creating higher levels of employment. Analysis emphasized the fact that, in developed countries where employment levels are high, a large proportion of the working population is in industry and a small proportion in agriculture, whereas in developing countries. the position is quite the reverse. It was concluded, therefore, that the solution for developing countries lay in a rapid transfer of their working populations from the traditional agricultural sector to the modern industrial sector. Actual experience over the post-war years, however, has brought home the fact that industry only emerges as a major source of employment after a long period of growth. Though numerous developing countries have made progress in industrialization, the proportion of the working population employed in industry has generally risen only moderately, and the absolute numbers engaged in agriculture have invariably continued to increase.[7]

While the underlying importance of capital accumulation for the creation of employment may not be denied, the forces determining the growth in employment cannot be simply explained in terms of the

[4] Government of Pakistan, *The Third Five Year Plan (1965-70)* (June 1965), p. 149.

[5] Government of India, Planning Commission, *Fourth Five Year Plan, A Draft Outline*, p. 106.

[6] "Second United Nations Development Decade, the trade and domestic savings gaps and structural unemployment in Latin America" (E/CN 12/831, April 1969).

[7] It is interesting to note as an example that in Japan the working population in agriculure ceased to increase only by the mid-1950s. At that time, the share of manufacturing industry in net domestic product was about 22 per cent.

aggregate level of new investment. With the emphasis in development theory and practice on capital accumulation, however, alternative strategies for raising the level of employment and output have not played any central part in policy discussions. Employment is still regarded mainly as a result of development policies and programmes designed to influence the level and pattern of investment. Alternatively, it is viewed as a social objective which, though it may require measures such as a public works programme to lessen suffering or unrest, stands in conflict with the aim of greater output. The possibilities of raising output by increasing the degree of labour utilization have thus been largely neglected.

In view of the gravity of the unemployment problem, there is at least a case for re-examination of the prevailing position; and two alternative methods of solution are accordingly discussed below. The first is the line of thought which has run through post-war literature on the possibilities of substitution of labour for capital. The second, which has emerged more recently from the shift in attention to agricultural development, is the realization that the nature and extent of institutional and economic changes in the rural areas may substantially affect the degree of labour utilization.

Labour-intensive methods

One means of tackling the employment problem which has provoked much discussion among economists is the use of labour-intensive methods of production. It is contended that, since developing countries have a greater supply of labour in relation to their capital than developed countries have, the former should use more labour-intensive techniques. Such substitution of labour for capital would make greater use of the available labour force and result in a higher total output than would otherwise be possible.

The theoretical grounds for this view have been thoroughly explored, and are well established. It cannot be said, however, that the view has had much success in practice. First, it has been widely misunderstood as implying that developing countries should eschew the technologically more advanced and larger-scale industries since these are usually more capital-intensive. Secondly, though many Governments and institutions have favoured the use of labour-intensive methods in their statements of development policy, the influence of these statements on actual decisions has been generally slight. For both reasons, it is worth re-examining this idea to assess its possible contribution to the solution of the employment problem.

Theoretical expositions have always recognized that the choice of techniques is subject to major restrictions. The composition of total output cannot be decided on the basis of the relative scarcity of capital and labour, but must conform to the pattern of demand in domestic or export markets; and within the branches of production required to meet demand, technical conditions may limit the possibilities of substitution. Moreover, the reduction of productive resources to two factors—capital and labour—each considered as homogeneous, is a broad simplification which may not hold good in reality; relative costs of other inputs may also influence the choice of technique. Thus, technological conditions may either remove the question of choice from practical consideration or make a capital-intensive method preferable on the grounds, say, of quality control or reduction in wastage of materials. For such reasons, the development of capital-intensive industries incorporating the most modern technology, or the use of capital-intensive methods in industries where a range of technical choices exists, is very often the necessary and rational choice for developing countries to make.

It is a misunderstanding, however, to suppose that the advocacy of labour-intensive methods is necessarily inconsistent with this conclusion. Within the recognized limitations, possibilities for substitution of labour for capital do exist.

Foreign trade offers a partial escape from the discipline imposed by the structure of domestic demand on the choice of industries. Production in labour-intensive industries can be expanded beyond domestic requirements if export markets can be found. It is this thought which, in fact, motivates many commentators to urge the developing countries to concentrate on labour-intensive industries. It is probably a reasonable presumption that for countries where wage costs are relatively low, the greater comparative advantages in international trade may lie in the labour-intensive industries. Possibilities for the development of such export-oriented industries may therefore exist. On a realistic view, however, their potential contribution to the alleviation of the employment problem must generally be very limited. For one thing, the size of the export sector producing manufactures is generally a very small, or even non-existent, segment of the national economy in developing countries. Secondly, relative capital and labour costs alone do not determine comparative advantage; the costs of the raw materials and semi-manufactures used in the production process are also significant, and vary with the natural resource endowment and the stage of development. Finally, the creation of export markets for manufactures presents considerable, well-known difficulties; developing countries often lack the supporting marketing and credit structure necessary to compete effectively in world markets and encounter

tariff and non-tariff obstacles in developed countries.

In production for the domestic market there may be greater possibilities for promoting the use of labour-intensive methods. Not all industries or branches of production are technologically inflexible. Appreciable flexibility in the choice of techniques may be found in such industries as weaving, clothing, wood-working, leather, construction materials and most of the simpler metal products. In addition, throughout manufacturing industries, opportunities for labour absorption and capital saving exist in the area of various ancillary operations, such as the handling and packaging of materials. Apart from manufacturing, the construction industry and agriculture also offer scope for the substitution of labour for capital. In both sectors, many necessary activities can be performed indifferently by manual labour or by labour-saving machinery. The use of tractors in agriculture to replace draft animals and manpower is perhaps the classic example of mechanization which displaces labour but does not necessarily raise output. Even in these sectors, however, caution has to be exercised in determining whether mechanization is advantageous or disadvantageous. For example, though the supply of labour in relation to land may be plentiful, technical conditions might make the use of tractors advantageous; the time saved by tractors could be important where weather conditions limit the period available for ploughing.

There is probably considerable scope in most developing countries for a greater use of labour-intensive methods in numerous branches of production. It is difficult to substantiate this judgement, but it seems quite evident that both the structure of prices and the adoption of technologies from developed countries tend to bias investment decisions unduly in favour of capital-intensive methods. However, it can hardly be said that any practical means of correcting this bias in the conditions of mixed or market economies have been worked out in any coherent way.

In many developing countries, the private sector is responsible for a large proportion of the investment decisions, which are necessarily influenced by market prices. In principle, taxes and subsidies could be manipulated to change prices and to bring about the substitution of labour for capital wherever this was deemed desirable. But, leaving aside the technical problem of determining the accounting prices of productive resources, any extensive and detailed system intended to influence each and every investment decision would undoubtedly be complicated, and would make heavy demands on the administrative capacity of Governments. However, though such detailed adjustment of market prices is probably impractical, there is nevertheless a case for scrutiny of the various government policies which indirectly influence the choice of techniques in the private sector or bear directly on the investment decisions of the Governments themselves.

Despite the impracticability of introducing any refined system of tax and subsidy adjustments, Governments might nonetheless review their present tax, tariff and credit policies in order to determine whether these tend to bias investment decisions against labour-intensive methods. Some across-the-board changes in policies directly influencing investment decisions might be both feasible and desirable. For instance, tax concessions widely offered to new investors, and comparable tariff concessions on imported capital equipment, are generally designed to lower capital costs in order to stimulate private investment. But the nature of the concessions either contains some bias against labour-intensive methods, as in the case of accelerated depreciation allowances, or is neutral between capital-saving and labour-saving methods, as in the case of most tariff concessions. The possibility therefore exists that changes in the nature and administration of the concessions could be introduced which would tilt investment decisions more favourably towards labour-intensive methods. Similarly, public agencies extending investment credits to the private sector could be prevented from offering loans for labour-saving equipment on the same terms as for other equipment.

In their own investment programmes, Governments are not bound to adhere rigidly to the dictates of market prices in their choice of techniques. Moreover, they usually play a commanding role in major fields of construction activity, such as roads and irrigation projects. While financial resources place restrictions on the extent to which labour-using methods can be preferred to capital-using methods, it is clearly more advantageous to seek to absorb labour through the approved investment programmes than to carry out these programmes through capital-intensive methods and to be later faced with the necessity of implementing additional public works programmes introduced specifically for the purpose of generating employment. On the whole, however, Governments do not appear to have attempted to follow this prescription in their investment programmes in any systematic way. The technical departments of government usually have a strong bias in favour of using capital-intensive methods for several reasons. Besides saving on departmental budgetary costs, these methods minimize problems of labour organization. High technical standards for the quality of the project attainable only through the use of machinery are sometimes also set, often only because they are in line with the latest practices in developed countries; this tendency may be particularly strong when

overseas consultant firms or contractors are employed on the project. Foreign lending agencies also reinforce the tendency, since they usually insist on minimizing the financial cost. It need hardly be added that donor Governments and agencies could make some contribution towards the greater utilization of labour if they broadened their loan conditions to include this consideration.

Finally, attention should be drawn to the importance of training, both in skills and in labour management and organization, for the promotion of labour-intensive methods. The preference for capital-intensive methods in both the public and the private sectors quite often arises from the shortage of skilled labour and, perhaps more important, from the reluctance of employers to recruit a labour force which would not only need on-the-job training but might also be without much previous experience in regular wage employment. Through the use of machinery, the difficulties encountered in the organization of training and in the development of disciplined work habits are avoided. Governments can counter this tendency by encouraging on-the-job training and enlisting the support of management and unions in improving the organization of work forces. In their own investment programmes, they have clearly a particular responsibility to face and overcome these difficulties.

Employment in agriculture

The other method of dealing with the problem of employment is to make use of scope for increasing the degree of labour utilization through broad changes, mainly of an institutional and organizational character, in agriculture.

It has been a recurrent idea in discussions of development that the large labour supply in many developing countries provides a surplus of productive resources which could potentially be used to raise output. In the past, however, the idea has been conceived mainly in terms of a transfer of labour out of agriculture to industry or to investment projects in the rural areas. The assumption was that withdrawal of labour from agriculture would not reduce total agricultural output, since there was widespread underemployment in agriculture and the productivity of labour at the margin was negligible, or even zero. Thus, if a means could be found—through taxation or price policy—simultaneously to transfer part of the food production along with the labour, non-agricultural employment could be raised without inflationary consequences, the increase demand for wage-goods being mainly composed of demand for food. Total output and investment could accordingly be raised through increased utilization of the labour force.

This theory, however, does not seem to square with the evidence. Despite the mass underemployment and low productivity, it is questionable whether the free transfer of a large pool of surplus labour to other sectors without loss of agricultural output is a reasonable, working hypothesis. It presupposes a form of social and economic organization in which the actions of individuals are guided mainly by the operation of normal economic forces. But in the traditional and largely subsistence economy which prevails in the rural areas, output is related mainly to subsistence requirements and is shared by those who, in one way or another, take part in the process of production. The family is not only the social unit, but also the fundamental economic entity for the organization of work and the distribution of output; and economic agents do not necessarily base their decisions on productivity or efficiency criteria. First, the motivation to raise output above the accepted subsistence level may be weak because the traditional pattern of life is still the norm of conduct; a high value is placed on leisure or non-economic activities. Secondly, the incentive to raise output may be largely stifled by an institutional structure which attenuates the relation between productive effort and reward. Thirdly, though the incentives and motivation are present, the knowledge and the means for raising output through the use of improved inputs, different cropping patterns or better husbandry methods may be lacking. Thus, production is decided mainly on the basis of subsistence requirements, the amount of productive effort varying more with the number of persons in the family available for work than with other criteria. Certainly, there is widespread underemployment, but much of the underemployment is of a seasonal nature; it is inherent in the traditional farming practices and part of the customary way of life.

These same reasons which cast doubt on the existence of a freely transferable labour surplus, however, also point to the possibilities for a more intensive utilization of labour within agriculture through institutional, economic and technical changes. The design and implementation of policies for agricultural development are discussed in another chapter, and need not be elaborated upon here. But in the context of employment, it must be stressed that the nature and extent of the measures taken to transform agriculture are of great importance. The degree to which an expanding agricultural output is achieved through the more intensive utilization of labour depends very much on the character of these measures.

The size of holdings, the kinds of crops and the methods of cultivation are perhaps the main features that characterize the system of farming; and these often interrelated features combine to determine the degree of labour utilization. It has been found, for

instance, from a study of nineteen countries, that output per acre tends to be higher on small holdings than on large farms or estates, mainly because there are relatively more adult workers depending for their livelihood on the small holding and the labour input per acre is therefore greater.[8] The difference between small and large holdings, however, is not only in the labour input per acre. More labour-intensive methods are likely to be used on small holdings with the consequence that, although output per man is lower, output per acre may be higher. Further, cropping patterns are also likely to vary appreciably with the amount of land and labour available to each farm unit. A study carried out in Chile, for instance, concluded that the labour force on medium-size farms could be increased by 80 per cent, and on large farms by 130 per cent, if these holdings followed a cropping pattern similar to that found on sub-family holdings.[9] This, of course, does not imply that it would necessarily be rational to adopt the cropping patterns found on subsistence holdings, but it does suggest that alternative patterns could be more labour-intensive.

These observations appear to advocate the development of a peasant-type rural economy as the most likely means of raising output per unit of land through the more intensive use of labour. For numerous developing countries, this may well be a valid conclusion. However, no dogmatic assertion can be made that development of a peasant-type economy everywhere offers the solution for a more intensive utilization of labour and growing agricultural output. There are several alternative kinds of farming system which may be compatible with these aims. In choosing the particular system of farming to be promoted in any area other considerations besides the supply of labour must be taken into account. Depending on the kinds of crops to be grown and the local ecological conditions, there are bound to be variations on the system of farming best suited to technical requirements. On the other hand, local traditions and attitudes condition the readiness of the rural population to work within different farming systems. Much agricultural planning should, in fact, be concerned with the search for a suitable framework within which these two sets of conditions—the technical and the institutional—are reconciled. The range of possible variation is wide, running from a system of independent peasant holdings to forms of collective farming under close central direction; and in each country, different systems may be appropriate for different areas and crops. What matters throughout, however, is that each particular system promotes the growth of output by means of a more intensive use of labour.

It should be said that the development of new forms of social and economic organization in agriculture to raise both output and employment is still largely a novel endeavour. In many countries, of course, political resistance to institutional reforms blocks the way towards the introduction of new forms. There are, however, a number of countries which have been engaged in extremely interesting experiments over recent years; and studies of the relation between farming systems on the one hand, and output and employment on the other, are being more extensively undertaken. In view of the great importance of finding ways of lessening the employment problem, such experiments and studies are surely of immense value. If action to reform the traditional institutional structure in rural areas is persistently avoided, however, the opportunity which agriculture offers to raise employment cannot be seized.

Educational policy

Over the last two decades, most developing countries have made great progress in the expansion of their educational services. Between 1950 and 1965, for example, enrolments in primary school increased at an average annual rate of 7.7 per cent in Africa, 6.3 per cent in Asia and 5.6 per cent in Latin America. Enrolments at the secondary and tertiary levels of education in the three regions rose at rates which were from one and a half times to twice as high (see table 3). In addition, many countries have supplemented their formal educational systems with programmes for adult literacy and other types of adult training.

The emphasis placed by nearly all developing countries on the expansion of their educational programmes has necessitated a high rate of increase in public expenditure. For developing countries as a whole, public expenditure on education is estimated to have increased since the early 1950s at an average annual rate of about 12.5 per cent, whereas for the developed countries, the rate has been about 6.5 per cent.[10] The proportion of total public expenditure channelled into education in developing countries is currently about the same as in developed countries, and in some regions somewhat higher (see table 4). As a share of national income, public expenditure on education currently ranges from 1.5 to nearly 6 per cent among individual developing countries (see table 5).[11]

[8] United Nations Research Institute for Social Development, *Land Tenure, Land Concentration and Agricultural Output* (Geneva 1966).

[9] M. J. Steinberg, "Agrarian reform and employment, with special reference to Latin America", *International Labour Review*, Vol. 95, Nos. 1-2 (January-February 1967), p. 13.

[10] OECD, *The OECD Observer*, October 1968, p. 33.

[11] For the developing countries, the task of expanding educational facilities is made more difficult by the fact that the provision of a given educational service tends to absorb a higher proportion of national income than in developed countries. Thus, it has been estimated that:

Table 3. Annual average rate of growth in student enrolment, by level of education and by major areas[a]

(Percentage)

Region and period	*Total enrolment*[b]	*First level*[c]	*Second level*[d]	*Third level*[e]
World				
1950-1965	4.2	3.7	6.0	7.2
1960-1965	4.9	4.1	6.9	10.0
Africa				
1950-1965	8.1	7.7	10.7	10.6
1960-1965	7.1	6.5	11.3	10.9
Asia				
1950-1965	6.7	6.3	9.1	9.9
1960-1965	7.5	7.0	10.0	12.9
Latin America				
1950-1965	6.1	5.6	9.5	8.2
1960-1965	6.1	5.2	11.5	9.9

Source: Based on data from United Nations Educational, Scientific and Cultural Organization (UNESCO), *Statistical Yearbook, 1967*.

[a] *World*: excluding China (mainland), North Korea and North Viet-Nam; *Africa*: continental Africa including South Africa; *Asia*: excluding Asian centrally planned economies and Japan but including Cyprus and Turkey; *Latin America*: central America, south America and Caribbean.

[b] Not including pre-school, special and adult education.

[c] Not including pre-school.

[d] General, vocational and teacher-training.

[e] Universities and other institutions of higher education.

Despite the progress made, educational systems in most developing countries have still far to go before they reach the levels attained in developed countries. At the present time, for instance, the number of children in the developing countries as a whole who are not enrolled in schools may be around 40 per cent. Over the coming decade, a steady increase in the number of primary school places will be needed simply in order to maintain this ratio, since the child population may well increase at an annual rate varying between 2.5 and 3.0 per cent in the developing regions (see table 6). At the

"to give eight years of primary education to every child would cost at current prices about 0.8 per cent of national income in the United States of America, 1.7 per cent in Jamaica, 2.8 per cent in Ghana and 4.0 per cent in Nigeria. The main reason for this wide difference is that, while the average salary of a primary school teacher is less than one and a half times *per capita* national income in the United States, a primary school teacher gets three times the *per capita* national income in Jamaica, five times in Ghana and seven times in Nigeria."
See William Arthur Lewis, "Priorities for educational expansion" in *Policy Conference on Economic Growth and Investment in Education, Washington 16-20 October 1961*, part III (Paris, OECD, 1962), chap. II, p. 38. In absolute figures, of course, the costs are much higher in developed countries. For example, the 1961 unit cost per primary school pupil ranged from $10.80 (India) to $359 (Sweden). In Africa, annual total public educational expenditure per head for pupils enrolled for first and second level education ranged from less than $10 in some countries to over $100 in others. See UNESCO, "Educational planning, a survey of problems and prospects" (ED/ICEP/3, 1968), p. 153.

Table 4. Public expenditure on education as a percentage of total public expenditure, by regions

Region	*Annual average 1962-1966*
Africa	14.7
Arab States	18.1
Asia	13.8
Europe and North America	14.5
Latin America	17.9
World, total	15.3

Source: UNESCO "Educational planning, a survey of problems and prospects" (ED/ICEP/3) 1968, p. 50, based on the replies of sixty-three countries to a questionnaire sent out by the International Conference on Educational Planning held in Paris, 6-14 August 1968.

Table 5. Developing countries: public expenditure on education as percentage of national income, around 1965

Country	*Expenditure*
Africa	
Ethiopia	1.5[a]
Ghana	4.6[b]
Kenya	5.6[a]
Morocco[c]	4.2
Nigeria	2.6[a]
Sudan	2.8[a]
Uganda[d]	2.7[a]
United Arab Republic	4.8
Asia	
Burma	2.7
Ceylon[d e]	4.7
India[f]	2.8
Iran	3.5
Pakistan	1.7
Philippines[g]	4.1
Thailand[d]	3.1
Latin America	
Argentina	3.3[a]
Bolivia	4.3
Brazil	3.0
Chile	3.6
Colombia	3.1
Ecuador	3.5
Guatemala[d]	2.1
Mexico[c]	2.1
Peru	4.9
Venezuela	4.3

Source: See table 3.

[a] As percentage of gross domestic product.

[b] As percentage of gross national product.

[c] Ministry of Education only.

[d] Central (or federal) Government only.

[e] Not including expenditure on the third level of education.

[f] Including private expenditure relating to private education.

[g] Not including expenditure of the Bureau of Vocational Education.

Table 6. Projected annual average rate of growth of school-age population in major areas during the First and Second Development Decades

Region	1960-1970	1970-1980
	(Percentage)	
World	2.1	1.7
Africa	2.4	2.7
Asia	3.1	2.5
Latin America	3.2	3.0

Source: Centre for Development Planning, Projections and Policies of the United Nations Secretariat, based on *World Population Prospects as Assessed in 1963* (United Nations publication, Sales No.: 66.XIII.2).

Note: Data refer to population in the age group 5-14. The regional coverages in this table are basically the same as those in table 1. Slight differences are due to lack of country data by age groups.

secondary and tertiary levels, where the enrolment ratios are generally much lower, the duel problems of keeping pace with the expanding population and of opening up opportunities for education to a larger proportion of the young people, are perhaps even more acutely present. It is yet another indication of the magnitude of the task confronting developing countries that, despite the progress in education, the absolute number of illiterate persons is still growing and is expected to surpass 800 million in 1970 compared with 700 million in 1950.[12]

There is no question that continuing expansion of educational programmes is essential. It would be a mistake, however, if this were regarded as the sole, or even the main, issue confronting educational policy-makers in most developing countries during the coming decade. Precisely for the same reason that widespread emphasis is now placed on the expansion of education, it is no less important that vigorous efforts be made to reform, and improve, established educational systems. The significance now attached to education derives, in no small part, from the recognition of its potential contribution to social and economic development; it is seen to be a powerful means of inducing the changes in attitudes and of imparting the new skills necessary for individual and social betterment. Viewed in this light, however, many long-standing educational programmes appear to be defective and wasteful; their adaptation to the new aims of social and economic development has been a slow process. The continued expansion of education, which is costly in terms of both trained manpower and actual capital, may often be wasteful of scarce resources if not accompanied by the progressive transformation of educational programmes.

[12] For further discussion of this subject see UNESCO, "Literacy as a factor in development", *UNESCO Chronicle*, Vol. XI, No. 9 (September 1965), pp. 321-326.

The criticisms often levelled at present educational policies concern both the relative emphasis given to different educational programmes and the contents of specific programmes. In the following paragraphs, some of the main tasks of adaptation which demand attention are discussed, first, as regards programmes for literacy and training in elementary skills and secondly, as regards education and training at the secondary and tertiary levels.

Elementary education and training

A major issue of educational policy for most developing countries is the relative emphasis to be placed on primary school education, on adult literacy programmes or on other programmes for training in elementary skills. While very high priority has usually been given to achieving the aim of universal primary education, experience suggests that the exclusive pursuit of this aim, without regard to local circumstances, may not be the most effective policy. A broader programme for elementary education and training, embracing adults as well as children, may often be more appropriate.

The wastage in primary school systems offers some evidence in support of this contention. In most developing countries, high "drop-out" rates, frequent repetition of the same class, and high rates of failure in school-leaving examinations are prevalent. In a group of Asian countries, for example, "drop-out" rates in the first four years of primary school were found to exceed 80 per cent in some countries, while rates of around 50 per cent were quite common.[13] In the African region as a whole, the "drop-out" rate over the six years of primary school amounted to 68 per cent.[14] Thus, to quote a recent report,

> "During the past ten years or so it has become more and more clear that problems of wastage and retardation reach in many developing countries such high proportions as to threaten to cancel out, or at least to retard very considerably, the increase in enrolment won at the cost of heavy financial effort."[13]

The general cause of these high rates of wastage lies in the poverty of the families from which most children come. When children go to school, clothes have to be found, books may have to be bought, and the family has to forgo the children's contribution towards its daily work. At the same time, the benefits of education may seem vague and uncertain, particularly if no clear opportunities for economic advancement lie ahead. Moreover, the motivation and learning ability of the children may be dimin-

[13] UNESCO, "Educational planning, a survey of problems and prospects" (ED/ICEP/3, 1968), p. 41.

[14] UNESCO, *UNESCO Chronicle*, Vol. XIV, No. 10 (October 1968), p. 373.

ished by poor nutrition, primitive housing conditions, and low teaching standards. Some direct measures, such as the provision of free school meals or books, may help to lessen the wastage; and though these raise the financial outlay on primary education, they may, where feasible, be quite justifiable if they enlarge the benefits derived from the present educational programme.

Whatever the value of specific measures, however, no quick and easy solution to the high rates of wastage can be expected, since their root cause lies in underdevelopment. Recognition of this fact raises the question of whether concentration on primary education constitutes the best use of educational resources in all circumstances. If the value of existing programmes for primary education is impaired by lack of development, it is reasonable to ask whether educational policy would not be more effective if it sought to enhance its own contribution to current development.

For this reason, many observers have called for a shift in emphasis from primary school education to programmes for functional literacy and other forms of adult education and training. Whereas the benefits of primary education lie in the future, programmes to broaden the outlook and enhance the skills of the present adult generation can contribute to current development. Indeed, it has been argued that the future benefits of primary school education may be largely lost if the economic opportunities for the greater use of education and skills are not now being progressively enlarged.[15] It is particularly true in the rural areas that, if the traditional social and economic pattern of life is undergoing little change, young people may experience small benefit from education in their lives. While the more enterprising and restless of the youth may migrate to the towns, the majority, who remain confined in the traditional pattern of rural life, find little room for the expression of such new attitudes or skills as they may have acquired. In such circumstances, measures to induce development in the rural areas and to enlarge economic opportunities may be the precondition for successful programmes of primary education. Schemes for adult education and training, particularly in the rural areas, may thus deserve high priority. Such schemes, it should be noted, are not synonymous with agricultural extension services but are concerned more with the spread of literacy and with general attitudes, factors which condition the receptivity of the rural population to development programmes in general, as well as to agricultural extension in particular.

The case for greater attention to adult education and training is not, however, confined to the rural areas. As a general prescription on the subject of literacy, the World Congress of Ministers of Education convened by UNESCO recommended that the division of effort between adult and child education should be based upon the future employment prospects for the various categories of workers. Where there was an immediate need for more workers able to read and write, the accent should be placed on teaching adults. If, however, the adult manpower now available was adequate in quality for the implementation of the development plans during the next decade, the major effort should be devoted to primary and secondary school education.[12]

Besides adult literacy, programmes for training in elementary skills could also be advantageously enlarged. In developing countries, while the need to train the limited numbers of highly skilled workers required in modern industries and services is widely understood, the less specific but no less important need to raise efficiency through training other workers in more elementary skills is often overlooked. The promotion of on-the-job training, or the organization of short training courses at technical institutes, to improve labour efficiency—and, incidentally, to discourage resort to capital-intensive methods—are also relatively inexpensive forms of training. These forms of education and training, however, have sometimes been neglected because they are outside the formal educational system, and have not been customarily a function of governmental education departments.

A separate source of dissatisfaction with prevailing practices in primary education concerns the curricula and teaching methods employed in the programmes themselves. In the established educational systems of many developing countries, the curricula and teaching methods have been largely modelled on educational practices in more developed countries with little attempt to adapt these to local conditions and needs. The textbooks and methods used to educate children in a predominantly urban society are not likely to be as relevant for the education of children who not only live in other countries but also reside in largely rural communities. Further, the lack of relevance in curricula is heightened by the academic bias in many educational programmes. Customarily, primary school education has been dominated by the aim of preparing pupils for entry into secondary school. While this meets the needs of the academically gifted children who may have the opportunity to pass on to secondary school, these children are comparatively few in number. The majority are compelled by economic

[15] "The main strategic target of the education system should be the creation of economic opportunity in rural areas through the education of the adult producer backed by the physical inputs he will need", Guy Hunter, *The Best of Both Worlds? A Challenge on Development Policies in Africa* (Oxford University Press, 1967), p. 114.

circumstances to remain in rural life; and for them, completion of a primary school education structured to serve as the first stage in a scholastic career leading to university entrance may be poor preparation for adult life.

Several countries have been progressively revising their primary school curricula in order to render them more relevant to national conditions and rural life. This task of adaptation is, however, an area of quite recent endeavour and one that calls for much more research and experiment. It is unfortunately a fact that many educational authorities have been more preoccupied with the quantitative problem of increasing the number of children going through the educational system than with the task of improving curricula and teaching methods. In view of the heavy expenditure which Governments are obliged to incur on primary education, research and experiment to raise the quality of primary education and to reduce waste can be sound measures of economy.

Education and training at secondary and tertiary levels

At the secondary and higher levels of education, the same theme of imbalance in present educational policies runs through most critical appraisals. In part, dissatisfaction again centres on the very high priority frequently given by educational policies to the aim of achieving universal primary education. Though a sharply increasing supply of high-level and middle-level manpower is of key importance for development, the emphasis on primary education has sometimes restricted the amount of finance available for expanding secondary and tertiary education. As can be seen from table 7, in some countries, particularly in Africa, enrolments at secondary school embrace a dramatically smaller proportion of the child population than do enrolments at primary school. This lack of any reasonable alignment, it may be noted, also compounds the future problem of extending primary education since qualified teaching staff must themselves be the products of secondary schools.

A more general criticism of the secondary and tertiary educational systems is their orientation. There is hardly any important document on education in developing countries which does not bring out the lack of balance between general and technical education at these levels. Secondary school education is dominated by academic studies intended to prepare pupils for university entrance examinations. The majority do not pass on to university or to other higher level institutions, but are ill-equipped for technical careers at the sub-professional level and tend to seek jobs in commerce, general administration or teaching.[10] At the tertiary level, institutions are heavily oriented towards the arts, law or medicine, and only a minority of students study scientific or technical subjects (see table 8). Such an educational pattern among developing countries stands in contradiction to the evident need for technological innovation and to the shortage of people qualified to carry out such innovation. In some countries, the paradox appears to be heightened by presence of substantial unemployment among the educated youth. In India, for example, a recent survey showed that about 500,000 persons with diplomas in secondary or higher education, which represented about 10 per cent of all diploma holders, were out of work.

Care must be taken, however, in interpreting the sense in which there is a shortage of scientific and technical personnel. In most African countries, the situation is clear-cut; there are shortages of trained local staff in most occupations, and dependence on expatriate staff is still considerable. In many Asian and Latin American countries, however, the bias in educational systems which limits the output of scientific and technical personnel, reflects a situation in which the social valuation placed on scientific and technical posts is low. In the hierarchy of social preferences, scientific and technical work frequently ranks lower than such professions as law or medicine.

Social attitudes, however, derive in large part from economic valuations; and Governments themselves can do much to alter the economic scale. They themselves are usually large employers of high-level manpower, but frequently, their own salary and career structure places an appreciable higher value on the general administrator; his salary level is higher and his promotion prospects are better than those of the scientific or technical worker with similar educational attainments. Secondly, the demand of Governments for scientific or technical staff is often modest because they themselves understate the need for such staff within their administrations to carry out scientific research and technical operations.

Along with changes in economic valuation, there has to be a steady shift in the orientation of insti-

[10] The bias towards general education at the secondary level can be well illustrated by figures from Africa. The UNESCO Conference on African Education held in Addis Ababa in 1961 called for emphasis, at secondary level, on vocational and technical education, and teacher-training enrolments. The aim was to reduce the proportion of secondary level pupils enrolled in general education from 79 per 100 students in 1960-1961 to 76 by 1965-1966, to increase those enrolled in vocational and technical training from 9 to 12 per cent and to maintain the 12 per cent proportion in teacher training. In point of fact, the reverse has happened. General enrolment increased at almost double that of teacher-training enrolment, and was also somewhat higher than vocational and technical enrolment. See UNESCO. *UNESCO Chronicle*, Vol. XIX, No 6 (June 1968), p 228

Table 7. Developing countries: school enrolment ratios at the first and second levels of education, around 1965

Country	Unadjusted school enrolment ratios			Adjusted school enrolment ratio (first and second levels)
	First level	Second level	First and second levels	
Africa				
Algeria	43	11	34	39
Congo (Democratic Republic of)	53	9	42	52
Ethiopia	7	2	6	8
Ghana	70	27	57	72
Kenya	52	7	39	45
Morocco	32	15	27	38
Nigeria	30	6	23	25
Sudan	13	7	11	14
United Arab Republic	46	34	43	53
United Republic of Tanzania	27	2	20	23
Asia				
Afghanistan	11	4	9	11
Burma	34	22	30	50
Ceylon	60	78	65	81
India	40	34	38	44
Indonesia	45	17	38	47
Iran	33	28	32	40
Nepal	15	6	13	19
Pakistan	21	24	22	27
Philippines	65	31	55	83
Thailand	48	12	38	44
Latin America				
Argentina	71	40	61	64
Bolivia	46	23	39	49
Brazil	46	26	41	47
Chile	69	41	61	77
Colombia	43	23	38	52
Ecuador	65	24	53	67
Guatemala	34	8	25	35
Mexico	59	21	49	66
Peru	62	28	52	71
Venezuela	61	34	54	74

Source: See table 3.

Note: The unadjusted school enrolment ratio for the first level of education is a percentage ratio based on the enrolment at this level related to the estimated population of age group 5-14; the corresponding ratio for the second level of education is based on the enrolment in all types of schools (general, vocational and teacher-training) at this level related to estimated population of age group 15-19. The adjusted school enrolment ratios have been computed according to the same principles, but on the basis of a population figure adjusted to correspond to the actual duration of schooling, which varies from one country to another.

tutes of higher learning towards scientific and technical subjects. Though present demand for scientific and technical workers may not far outrun supply, such demand should grow considerably in years to come as economic development continues. The significant expansion of science or technical facilities, or the creation of new technical institutes, takes years to accomplish. To ensure, therefore, that future development is not impeded by shortages of scientific and technical personnel, plans for the reorientation of education at the tertiary level have to be implemented some years in advance of requirements. Manpower planning is a helpful tool in this context since it makes possible some assessment of the future requirements of educated people, particularly of middle-level and high-level manpower. These plans, however, have to be translated into programmes for change in educational institutions, and it is at this level of action that many countries need to make greater progress in the coming decade.

Summary

Improvements in health standards, as well as in the distribution of food supplies, have given rise to an unprecedented rate of population growth in the developing world as a whole, although in many countries, further progress in raising health and nutri-

Table 8. Distribution of third level students, by field of study, around 1965

(*Percentage*)

Country	Engineering and agriculture			Natural sciences	Arts, law and medicine	Not specified
	Total	Engineering	Agriculture			
United Arab Republic	29	16	13	5	65	—
Colombia	28	21	7	8	64	—
Kenya	25	10	15	4	68	3
Mexico	22	19	3	12	66	—
China (Taiwan)	22	15	6	6	72	—
Ethiopia[a]	21	10	11	6	73	—
Venezuela	20	14	6	4	74	1
Brazil	18	14	4	4	77	—
Indonesia	17	14	2	6	77	—
Peru[a]	16	9	7	6	76	3
Sudan	15	12	4	8	77	1
Argentina	15	12	2	7	78	—
Chile[b]	15	12	3	1	76	9
Iran	14	11	3	7	79	—
Philippines	14	12	2	1	70	14
Nigeria	14	6	7	15	71	—
Iraq	12	9	3	14	67	7
Malaysia	12	9	3	7	79	2
Burma	11	9	2	22	67	—
Ghana[a]	10	8	2	17	72	1
Thailand[a]	10	5	5	4	86	—
Congo (Democratic Republic of)	9	6	3	14	55	22
India[c]	8	5	3[d]	29	62[d]	1
Pakistan[e]	7	4	3	20	73	—
Uganda[f]	7	—	7	14	79	—
Algeria	6	4	1	19	75	—
Ceylon	5	4	1	9	76	10
Morocco	5	4	1	8	87	—
Senegal[g]	2	2	—	27	71[g h]	—
Tanzania[h]	—	—	—	8	77	15
Tunisia[i]	—	—	[j]	19	81[j]	—

Source: See table 3.

[a] Universities and degree-granting institutions only.

[b] University of Chile only.

[c] Including intermediate colleges.

[d] Veterinary science is excluded from agriculture and included in medicine.

[e] Not including intermediate colleges.

[f] Makerere College only.

[g] Not including students preparing for the *capacité en droit* examination.

[h] University of Dar es Salaam only.

[i] University of Tunis only.

[j] Agriculture and fine arts, for which data are not available, are not included in total.

tional standards is still an elemental need for the betterment of human welfare. It is through such changes in social and economic conditions that attitudes towards family size may be altered. There is evidence that attitudes favouring family limitation are common in many developing countries; and in these circumstances, family planning programmes can appreciably accelerate the decline in birth-rates. Indeed, it is possible that, with the assistance of such programmes, the future decline in birth-rates could be as dramatic as the current reduction in death-rates. They should, however, be viewed as part of a complex of measures to promote human welfare, not as substitutes for other actions.

Whatever the future trends in birth-rates, developing countries are going to be faced in the coming decade with an accelerating rate of increase in the numbers of young people seeking some form of gainful employment. When this is superimposed upon the present employment situation, it seems inescapable that the underemployment and unemployment now prevalent in developing countries will worsen in the years to come.

Most countries have relied on capital accumulation and particularly the growth of industry to provide fresh avenues for employment and many have carried out programmes of public works to alleviate unemployment. These in themselves, however, have

not been sufficient to meet the problem. Other lines of action therefore deserve close examination.

Though the use of capital-intensive technology is necessary in many industries, there are possibilities for the greater use of labour-intensive methods in certain activities. These include some manufacturing industries as well as certain ancillary operations to manufacturing such as handling and packaging of materials. Perhaps on a broader scale, there is also scope for increased utilization of labour in construction and agriculture.

Labour-intensive methods may be encouraged in the private sector through appropriate tax, tariff and credit policies, many of which at present may tend to bias decisions in favour of capital-intensive investments. Decisions within Governments on their own investment programmes can also have an important influence on employment absorption. The provision of training both for labour and management may also encourage increased employment where the lack of an experienced work force is a significant incentive to the use of machinery.

In agriculture, the more intensive utilization of labour could be achieved through broad institutional, economic and technical changes. There is a presumption that peasant-type agriculture is most likely to raise output through the more intensive use of labour. However, no dogmatic position can be taken about the form of farming system to be promoted. There is a wide range of possible systems, and the task is always to select the system best suited both to the crops and technical farming requirements, and to local motivations. The important point to recognize is that the development of new forms of social and economic organization in traditional and largely subsistence agriculture offers wide scope for raising both employment and output.

During the last two decades, most developing countries have greatly expanded their educational services, though they still have far to go before they reach the educational levels attained in developed countries. The expansion of education is now receiving widespread emphasis. Equally important, however, is the need for reform and improvement of existing educational systems. At the primary level high rates of wastage have revealed the need for other welfare measures to deal with poor nutrition, inadequate housing and low teaching standards, and for greater emphasis on programmes for adults in functional literacy and other forms of adult education and training. These programmes can contribute more directly to current development and may thus, in time, enhance the value of primary education. There is also increasing recognition of the urgent need for the adaptation of curricula and teaching methods to local conditions in developing countries. More research and experimentation is required in this field.

In a number of countries, secondary and tertiary levels of education have low priority compared with primary schooling and have therefore been hampered by lack of funds. Systems of higher education have also been generally criticized for their orientation towards a general and liberal education rather than towards technical studies to meet the shortage of skilled scientific and technical personnel in developing countries. In many cases, however, this bias in education systems also reflects the social valuation of types of employment. Governments can influence and change these attitudes through the economic valuation they themselves place on scientific and technical employees.

The expansion and reorientation of educational systems takes years to accomplish and programmes for change need to be initiated without delay if developing countries are to be able to meet their demands for scientific and technical personnel in the coming decades.

Chapter II

AGRICULTURAL AND INDUSTRIAL DEVELOPMENT

Agricultural development[1]

While a new optimism currently pervades many commentaries on agricultural development, the prevailing attitude over much of the present decade has been one of mounting concern. In the ten years ending in 1963/65, both total agricultural output and food production in the developing countries[2] increased by about 3.2 per cent per annum, a rate which was above the estimated population growth. In the period from 1960/1962 to 1965/67, however, the rate of expansion of total agricultural output and food production declined to 2.2 and 2.3 per cent respectively, while population grew at some 2.5 per cent per annum. This lag in production was most evident among countries in the African and Asian regions. The failure of domestic food production to keep up with the growth in population in several developing countries over much of the 1960s was accompanied by rising food prices and increasing dependence on imported food, including food-aid shipments. Recent discussions on agricultural development have therefore revolved to a great extent around the food shortage; and self-sufficiency in food production has become a common national objective in food deficit countries.

Concern over the food shortage has been reinforced by the accelerating rate of increase of population as well as by the desire to raise current levels of nutrition. In the coming decade a minimum annual increase in food production of some 2.5 to 3 per cent will be required solely in order to maintain current nutritional levels; and the efforts required to raise production assume greater proportions when the need to improve nutritional levels is included in the equation.

The minimum calorie and protein intake which human beings require for good health is still highly uncertain; and comparatively little is known about the adaptability of the human body to different low levels of consumption. But no one doubts that present calorie and protein consumption falls well below acceptable minimum standards in many developing countries (see table 9). An estimate by the Food and Agriculture Organization of the United Nations (FAO) placed daily *per capita* consumption in low calorie countries at 2,150 calories in 1960 compared with 3,050 calories in high calorie countries.[3] The same agency also estimated that, to meet minimum requirement of *per capita* food availability suggested by current medical knowledge about physiological needs, *per capita* food supply in the low calorie countries would have to be increased by 26 per cent over the 1962/1964 level. Assuming that the trend in food production recorded between 1953 and 1963 will continue, this desirable minimum target would not be attained until 1996.[4]

Another more troublesome aspect of current levels of nutrition is the inadequacy in protein supply: this is not only greater and more widespread than calorie deficiency but also more costly to make good. The most promising developments in this field are the extension and improvement of commercial fisheries, the breeding of high lysine wheats and the conversion of the protein in such crops as the

[1] Agriculture has been defined as including crop and livestock husbandry, forestry, fishing and hunting.

[2] Unless otherwise stated, the term "developing countries" signifies all countries and territories other than member countries of OECD, Australia, Finland, New Zealand, South Africa and the Asian and European centrally planned economies.

[3] The classification differs from that of "developed" and "developing" but the term "low calorie countries" includes all those here defined as developing with the exception of Argentina, Uruguay and Paraguay.

[4] FAO, *Third World Food Survey*, Freedom from Hunger Campaign Basic Study No. II (Rome), 1963.

Table 9. Selected developing countries: *per capita* calorific and protein intake per day in recent years

Country	*Year*	*Calories*	*Protein*	
			Total	*Animal*
Afghanistan	1961/62	2,050		
Ceylon	1965	2,080	44.5	7.9
China (Taiwan)	1965	2,380	61.0	17.5
India	1964/65	2,110	53.9	5.7
Indonesia	1961/63	1,980	38.2	4.5
Pakistan	1964/65	2,260	50.7	9.5
Philippines	1965	2,070	49.7	15.9

Source: Asian Development Bank (AsDB), *Asian Agricultural Survey, Volume Two, Sectional Reports* (Manila, Philippines, March 1968), p. 99.

soya bean to more acceptable edible forms. If the protein deficiency is to be made good by increasing the output of various animal sources, the need to improve grain supplies for feed purposes becomes far greater and more urgent.[5]

In narrower economic terms, the requisite growth in food supplies over the coming decade depends on the likely increase in demand. Given the low levels of *per capita* income and the expanding populations in developing countries, a substantial proportion of any increase in national income can be expected to be expended on food. Projections which have been made of the demand for food in the developing countries as a whole over the period from 1965 to 1980, indicate a possible rate of increase of 3.25 to 3.40 per cent per annum (see table 10). Such a range of increase is probably not significantly different from the past rates of growth in demand. It should be noted, however, that these projections assume rates of growth in total income and output which imply no acceleration over past trends. If total income and output of developing countries were to accelerate to a minimum annual rate of growth of 6 to 7 per cent by 1980, the implied increase in demand for food might then amount to almost 4 per cent per annum.

In the projections shown in table 10, the more optimistic estimate for trends in production over the years to 1980 was an annual rate of growth of 3.1 per cent.[6] This would not be much higher than the rate achieved over the last ten years, but its attainment nonetheless presupposes significant changes in current agricultural practices. Much of the past growth in output has been realized through enlargement of the acreage under cultivation, but in the years to come, particularly in the Asian region, greater reliance will probably have to be placed on the progressive improvement of methods of cultivation on land at present being farmed (see table 11).

If a higher rate of growth of income and output were assumed, then performance in agriculture, and particularly food production, would have to be better than this projected annual growth rate of 3.1 per cent. To attain, for example, a minimum annual rate of growth in income and output of 6 to 7 per cent by 1980 among developing countries, the associated rate of increase in the agricultural output might be about 4 per cent.

These projected rates of growth would have different implications for the imbalance between demand and production in developing countries. For example, the attainment of the projected rate of growth of food production of 3.1 per cent per annum would nonetheless lead to a worsening of the imbalance and by 1980, the shortfall in output might amount to about $4 billion. If the substantial improvements in agricultural technology assumed in this projection were not to materialize, it is postulated that food production would increase at 2.6 per cent per annum; in this even, the shortfall would rise

[5] While the conversion ratio improves with technological change, in recent years it has taken 140 calories of feed-grain to produce 1 gram or 20 calories of animal food.

[6] The assumptions regarding production and demand are, of course, interrelated since much of the food produced is consumed by the farmers and peasants themselves.

Table 10. Developing countries: projections of annual rates of increase in demand for food and other variables, 1965-1980

Item	*Projections of annual rates 1965-1980*		*Actual annual rates 1955-1965*
	Variant[a] A	*Variant[a] B*	
Demand for food[b]	3.25	3.40	3.3[c]
Food production	2.60	3.10	2.85[d]
Rate of population growth	2.58	2.58	2.4
Per capita gross domestic product	1.75	2.00	2.0
Total gross domestic product	4.40	4.70	4.5
Per capita income available for consumption	1.60	1.80	
Agricultural value added	2.40	2.80	2.8
Income elasticity of demand for food	0.40	0.45	

Source: OECD, *The Food Problem of Developing Countries* (Paris, 1968).

[a] The variants have different assumptions about technological changes attainable in agriculture. Even the low variant yielding food production increase of 2.6 per cent per annum, a rate less than the 1955-1965 decade figure requires a sizable increase in use of fertilizer since it is assumed that opportunities for extension of cultivated areas will be more limited in the 1965-1980 period.

[b] Derived as $D = n + pg$ where D is the rate of increase of demand for food, n = rate of growth of population; p is income elasticity of demand for food and g is the rate of growth of *per capita* disposable income.

[c] Estimate using demand elasticity employed in projections

[d] 1953-1965.

Table 11. Developing regions:[a] the contribution of increases in acreage and yield to annual growth in cereal production, 1952/56 to 1963/65

(Percentage)

Region	*Total output*	*Yield*	*Area*
Latin America	4.06	1.46	2.56
Near East	2.45	0.62	1.81
Far East	2.96	1.83	1.12
Africa[b]	2.66	1.03	1.62
Total	3.05	1.53	1.49

Source: OECD, *The Food Problem of Developing Countries* (Paris, 1968), p. 20.

[a] See p. 22, foot-note 2.

[b] Africa excludes Libya, the Sudan and the United Arab Republic, which are included in the Near East.

to $8 billion. By 1980, the shortfall in food supplies might thus range from about 5 to 10 per cent of total food production. An acceleration to close to 4 per cent of the annual rate of expansion of food output—implied in the target rate of increase of 6 to 7 per cent in total output by 1980—would result in a substantial diminution, or even a complete elimination of the food deficit by 1980.

The growing food requirements of the developing countries have drawn attention to the urgency of promoting agricultural development in the next decade. This has also coincided with an increasing appreciation of the role of agriculture in the overall economic development strategy. There has been a general recognition of the fact that the relative neglect of agriculture in favour of industry has neither produced the hoped for expansion of non-agricultural employment opportunities nor engendered accelerated economic growth. A growing consensus indicates that effective development strategy should view agricultural and industrial development as complementary; recent experience has demonstrated that rapid development cannot take place in either sector without adequate growth in the other.

Approaches to agricultural development

To design and execute more coherent policies for the transformation of the institutional, economic and technological network of traditional agricultural society is the present challenge. If national and international policies in the coming decade were to lay the foundations for a more modern agriculture, few greater contributions could be made to sustained, long-term development. However, while past experience offers some broad guidelines with regard to pitfalls to be avoided, the best course to follow for agricultural development is still open to much uncertainty and doubt.

Recently, there has been increasing agreement that past analyses and methods have greatly understated the complexity of the problem. Agricultural development is being increasingly recognized as a multifaceted problem that does not generally yield to partial solutions. This outlook contrasts significantly with attitudes prevalent during the post-war years when most prescriptions for agricultural development were relatively simple. Diagnoses of the problem of agricultural stagnation have singled out particular factors as the principal obstacles to development; and policy recommendations have accordingly emphasized one or other specific measure. Institutional constraints, for example, have been consistently stressed by some observers as the primary limitation on agricultural development. Agrarian reform in Asia and Latin America, or the organization of co-operatives and land consolidation in Africa, have thus been envisaged as the principal steps towards agricultural development. Taking another view, based on experience gained over a long period during which numerous Governments sought to hold down urban prices of food-stuffs or to tax agricultural exports, many commentators have emphasized the role of price incentives in stimulating output. Others have long stressed the role of extension services in disseminating new ideas among farmers and in teaching them new skills More recently, particularly as the result of the development of the new high-yielding varieties of grains, technological progress through the use of improved seed and fertilizers has been seen to offer a possible solution.

While these partial measures are still influential in shaping policies in many countries, the direction of current thinking is towards the search for a more general solution that takes into consideration all the major factors that affect production In very broad terms, these factors fall into three groups: institutional, technological and economic. The creation of institutional conditions within which producers will be responsive to market demand is a *sine qua non* of agricultural development. Along with institutional changes, however, must go continuing technological improvement supported by research and extension facilities if a dynamic and flexible agricultural sector adaptable to market needs is to develop. And for both institutional reforms and technological improvements to result in growing output, economic policy has to create a system of incentives—as well as the transportation and marketing systems—which ensure that the expanding urban demand for agricultural products reaches and influences the decisions of producers.

It is easy to state that an effective agricultural development strategy should seek to create the institutions, the mechanisms for continuous technical change, and the system of incentives needed to promote growing output. The real task comes in the translation of these broad conditions into operational programmes. Despite the recognized advantage of the comprehensive over the partial approach, a country-wide programme embracing institutional, technological and economic measures would generally seem to be both financially and administratively impractical. Since most developing countries are short of resources, such a programme would lead to dispersal of effort and loss of the benefit arising from concurrent implementation of complementary measures. The difficulty is further heightened by the diversity of conditions in the rural areas. Since the human, ecological, institutional and other factors influencing production vary from one area to another, no uniform combination of measures can be applied except, perhaps, in small countries. Thus, the comprehensive method sen-

sibly designed to suit local conditions, confronts a major and recurrent dilemma of agricultural policy: the concentration of resources versus their dispersion.

A selective approach drawing on comprehensive analysis perhaps offers a middle course between the comprehensive and partial solutions. Such an approach seeks to take as much advantage as possible of the benefits of the comprehensive view while not ignoring the scarcity of resources. It has been argued that while the policy ingredients of an agricultural development strategy are broadly complementary in their effect, some of these measures can, to some extent, be substituted for others at the margin.[7] The timing of specific measures as well as the policy mix adopted at a given stage of development allows for some substitution among measures. By seeking to provide or strengthen a missing link, such a tactic need not violate the dictates of the comprehensive course. In concentrating on measures to strengthen weak links rather than on the provision of a comprehensive set of actions, the method would make the most economic use of available resources.

Identification and correct diagnosis of the constraints on development in a given area at a given stage of development are the preconditions for designing an agricultural programme along these lines. The programmes must be guided by informed and imaginative understanding of the forces influencing economic activity in the rural areas; institutional and social as well as economic and technical forces. Well prepared studies that encompass social, technical and economic aspects are essential if expensive failures are to be minimized and problems in implementation are to be anticipated. While there is general sympathy for the urgency given to raising production, slow but steady progress is obviously preferable to the many faulty starts that have so often resulted in disappointment and waste of resources.

The following passage clearly states the case:

> The fundamental problem confronting agriculture is not so much the adoption and spread of any particular set of physical inputs or of economic arrangements or of organizational patterns or of research institutions; rather it is to build into the whole agricultural process—from the farmer to the university research institute . . .—an attitude of experiment, trial and error, continued innovation, and adaptation of new ideas.[8]

In the following paragraphs, the main components of an agricultural policy are separately reviewed, and the section concludes with some further discussion of the problem of combining these elements into a single programme.[9]

The institutional conditions

Perhaps no question is more fundamental for the development of agriculture than the form of social structure within which economic activity takes place in the rural areas. The property relations and the social attitudes that result from the institutional environment are of immense importance for the efficient utilization of resources and the promotion of greater effort. The transformation of the institutional structure is therefore an inescapable condition of the modernization of agriculture; and the pace at which the transformation takes place is a critical determinant of the rate of growth in agricultural output.

In many parts of Asia and Latin America, the socio-political structure in the rural areas has been and is still largely semi-feudalistic in nature. In Africa, the traditional form of social organization has also conflicted with the needs of development These forms of social organization impede the efficient utilization of manpower and land in most developing countries. Existing institutions often fail to provide a direct relationship between effort and returns. Landlords, money-lenders and other intermediaries absorb significant portions of the gains arising from greater efforts by cultivators. And rural areas lack an efficient and adequate commercial infrastructure in the form of marketing outlets, credit facilities, transportation and distribution networks. Transformation of current institutions is needed to remove these constraints on better resource utilization and to provide the incentives conducive to productive activity.

Land reform

A principal instrument of institutional change is reform of the system of land ownership and tenure This, however, has naturally met with powerful political opposition from the traditional landed interests, and in only a few countries have circumstances permitted appreciable progress. Numerous countries have enacted land reform legislation, but commonly the legislation has been weak, poorly enforced or easily evaded.

It is true that, though political conditions may rule out programmes of extensive land reform, this rarely puts a halt to agricultural development. Commercial agriculture undertaken by landowners or by tenant farmers and peasants has some foothold everywhere and, as the demand for agricultural produce grows over the years, the incentive to enlarge com-

[7] See Annual Meeting of the American Farm Economics Association, University of Maryland, 21-24 August 1966, in *Journal of Farm Economics*, Vol. 48, No. 5 (December 1966).

[8] Max F. Millikan and David Hapgood, *No Easy Harvest*, The Dilemma of Agriculture in Underdeveloped Countries (Boston, Mass., Little Brown and Co., 1967), p. 27.

[9] For a fuller discussion, see FAO, *The State of Food and Agriculture, 1967* (Rome, 1967), chap. III.

mercial farming operations spreads among these more fortunate groups. It has indeed been frequently observed that it is these groups who, by virtue of their education, financial resources and scale of operation, have been able to benefit most from official agricultural development programmes. Recent experience among many developing countries and the historical experience of some developed countries, leave no doubt that, whatever the consequences in aggravating the inequitable distribution of income and wealth, this pattern of development does give rise to some growth in output. The slow erosion of the traditional rural structure through the operation of market forces alone, however, is a work of many generations; if the experience of the last twenty years is any guide, this is not likely to generate a pace of agricultural development sufficient to support the rate of over-all economic growth which developing countries now seek. It remains true that, over the greater part of the rural areas, the structures of property relations, production techniques and social attitudes are interwoven in a system which is strongly resistant to change; and without deliberate measures for institutional change to loosen the hold of tradition on rural life the process of technological innovation cannot easily be accelerated. Agrarian reform, through raising the economic and social status of the peasants, paves the way for the more widespread acceptance of technological change. The peasant becomes interested in improving his land and in raising his yields; extension advice is more eagerly listened to; the demand for improved seeds and fertilizers grows; and such new endeavours as co-operatives or rural self-help programmes acquire greater meaning. This, in an important sense, is what popular participation in development means.

For countries able to carry out extensive land reform, it is most important that the broad objective of both economic and social change should guide their programmes. One significant lesson of post-war experience is that the redistribution of land or changes in tenancy laws are not sufficient in themselves to promote the spread of more productive activity. These actions need to be supported by the creation of an infrastructure of supporting services in the rural areas if the small peasants are to be able to work as successful commercial farmers. In many Asian and Latin American countries, the local landlord or money-lender has often been the sole purchaser of crops or supplier of credit and materials. In land reform programmes, new organizations have to be established not only to carry out these functions but also to create a new network of marketing and technical services which will actively assist the peasant in modernization.

The keynote in programmes to transform the institutional structure should again be experiment. Programmes based on general political, economic or technical considerations alone run the risk of failure. The new institutional structure, embracing not only the system of land ownership and tenure but also the organizational arrangements for supporting services, can take many different forms; they include, for example, collectives, co-operatives, plantations using wage labour, peasant farms in schemes with a high degree of central control, land settlement schemes in which some activities are undertaken communally, and independent small holdings supported by externally provided services. In each country or district, the selected farming system has both to be suited to the technical requirements for production and to provide adequate incentives for those who will work the land; and this will vary with such factors as the kinds of crops to be grown, the local traditions and attitudes towards land ownership and the supply of labour.

This again argues for the value of local studies or pilot projects in the preparation of land reform programmes. The pressure of population on the land, for example, might dictate the redistribution of land into holdings which, with existing cropping practices, would not be viable farm units; and advance study would point to the need for research into alternative cropping patterns or farming methods before the programme was launched. Indeed, though the preference has usually been to initiate land reform programmes on a national scale, the limitations imposed by the administrative resources required for cadastral surveys and the financial resources required for land acquisition and loans to farmers suggest the need for programmes phased by areas.

Agricultural credit

It has been pointed out that

> "where effective and profitable production supplies and equipment are available nearby, and where farmers have facilities for learning how to use them, production credit can accelerate the adoption of improved practices."[10]

Recently, credit has been increasingly used as a major incentive for the adoption and implementation of agricultural programmes. Repayment problems, the difficulty of administering small sums loaned to farmers scattered all over the countryside, and poor output performance have, however, characterized post-war experience with rural lending for general development. Efforts to lessen the problems of debt recovery through the use of producer and marketing co-operatives have been circumscribed by administrative weaknesses in the co-operative system.

[10] Arthur T. Mosher, *Getting Agriculture Moving, Essentials for Development and Modernization* (New York, Frederick A. Praeger for the Agricultural Development Council, 1966), p. 152.

Increasing emphasis is now being put on what has been termed "supervised credit". Credit is given for specific projects under technical advice and supervision. An attempt is therefore being made to tie credit operationally to complementary input promotion services. In the Philippines, for example, the Farm Home Development Programme of the College of Agriculture collaborates with a bank which finances programmes identified as profitable by the college. At the same time, the college provides the cultivator with extension services to ensure success.

The advantage of such a "package" lies in the possibility of extending credit in kind, a practice being more and more frequently employed. Such an approach minimizes the diversion of credit for non-innovative outlays. Further, in order that new holders of land should not have to risk their title to land in order to adopt an improved method or crop, the lien is placed on the harvest. The credit agency then shares the risk with the cultivator. This has the added advantage of minimizing the danger of extension officers using credit to tempt farmers into the adoption of untried, or uncertain, methods.

However, it should not be forgotten that the significance of credit as a constraint on increased agricultural production is closely related to the stage of development. In the early phases, the need for production credit is generally not large. It is only as the habit of using purchased inputs and implements takes hold that credit becomes important and its non-availability on easy terms may constitute a serious obstacle.

Technological conditions

Research and extension

The recent development of the new high-yielding varieties of grain is a dramatic demonstration of the value of fundamental biological research. Over the post-war years, research work has also led to improvements in numerous other branches of tropical and semitropical agriculture—improvements which, while more continuous and therefore less striking, have nonetheless been appreciable. The newer cross-breeds of dairy and beef cattle suited to tropical conditions, the higher yielding rubber trees and the improved strains of sugar cane are but a few examples.

Very few developing countries, however, at present possess the resources to undertake fundamental research on an extensive scale. Large foreign companies have been responsible for much of the research into tropical and semitropical export crops; and on food crops for home consumption certain private institutions have played a leading role. The scope for further research on the crops, livestock, fisheries and forestry of the tropical and semi-tropical world is undoubtedly large, and this would seem to be a task particularly suited to international assistance. The institutions established by national Governments or private foundations in recent years could be the nucleus of a network of internationally supported research centres, each specializing in different products or located in different ecological zones.

Advantage cannot be taken of scientific advances, however, without extensive applied research within each developing country itself. There is generally both a dearth of knowledge about local soil and climatic conditions and a shortage of experimental work to test the adaptability of new crops or methods of cultivation to local circumstances. Lack of trained staff and finance are the familiar reasons. In India, for example, the number of agricultural research workers for each 100,000 persons in the active farm population in 1960 was about 1.2 compared with 60 in Japan and 120 in the Netherlands.

Shortages of staff also plague the extension services needed to disseminate the results of research to farmers. A recent evaluation of the agricultural situation in Asia, for example, singled out the extension services along with the distribution of inputs as the weakest links in programmes for agricultural development.[11] The "ideal" ratio of extension workers to farm families has been put at 1:300,[12] but as can be seen from table 12, the actual ratio in developing countries is generally far from this level.

The weaknesses of the research and extension programmes in many countries, however, cannot simply be reduced to the shortage of trained staff and finance. It is a common complaint that the results achieved by these programmes do not appear to have been commensurate with the expenditure.

The main, avowed purpose of agricultural research stations is to collect and analyse information about agronomic conditions in their areas, and to undertake experimental work on ways of improving local farming practices. This should provide the extension workers with the local knowledge and tested methods necessary for sound advice to the farmers. In prac-

[11] See AsDB, *Asian Agricultural Survey, Volume Two, Sectional Reports* (Manila, Philippines, March 1968), p. 906.

[12] See OECD, *Supply and Demand Prospects for Fertilisers in Developing Countries* (Paris, 1968). The same ratio was proposed at the Conference of Agricultural Specialists convened by the Massachusetts Institute of Technology. Estimates of extension staff requirements made in particular countries are similar. For example in Peru, the estimated extension need has been put at 1:265 while in Venezuela the objective based on the estimated capacity of an extension worker yielded a ratio of 1:100. Some actual working ratios have been: 1:250-300 for Japan (both official and co-operative extension), 1:240 for the accelerated ground-nut scheme in Senegal, 1:100 on the Tanzania settlement scheme, and 1:250 for the successful Gezira scheme in Sudan. But it should be noted that intercountry comparisons of these ratios are of very limited significance; among other things, they do not allow for differences in the qualifications and training of the extension workers.

tice, however, agricultural research stations often nominally serve areas which are far larger than the research staff can possibly handle. In addition, the research stations quite frequently are organizationally divorced from the extension service. Thus, the stations tend to turn their attention inward to research programmes that are only loosely related to farming conditions and practices in the area. They become small oases of advanced farming methods which may

Table 12. Selected developing countries: number of farm families per extension worker and number of extension workers

Country	*Estimated number of farmers per extension worker*	*Estimated number of extension workers*
Africa		
Nigeria	2,000	2,850
Sierra Leone	2,500	99
United Republic of Tanzania	1,500	1,000
Asia		
Ceylon	930	1,258
China (Taiwan)	620	1,366
India	700	92,857
Republic of Korea	730	3,219
Pakistan	1,500	8,600
Thailand	7,000	505
Latin America		
Argentina	1,200	393
Bolivia	9,000	50
Brazil	4,700	1,915
Chile	1,200	126
Colombia	1,700	732
Ecuador	2,500	138
Mexico	5,900	231
Paraguay	3,000	50
Peru	2,800	305
Venezuela	500	640

Source: OECD, *Supply and Demand Prospects for Fertilisers in Developing Countries* (Paris, 1968), p. 72

Note: Since the basic data for individual countries refer to different years, they should be treated as indicators of orders of magnitude only.

have limited applicability to actual conditions in the area. This vitiates the value of extension work, since the advice tendered to farmers is not grounded in knowledge of local agronomic conditions nor tested by local experimental work.

Both research and extension work also suffer widely from a preoccupation with technical improvements in farming without regard to their economic viability for the farmer. New crops or methods that, for example, require larger labour inputs than does current production are not likely to be adopted unless the additional reward to the farmer is more than commensurate with the additional work required. But often little or no research is undertaken into the viability of the technical improvements that are advocated by extension services from the point of view of farm economics; and extension advice makes little impression if, for the farmer, it is economically unsound.

The methods and approaches used in extension work have also been criticized on the broader grounds that they are often not based on a sufficient appreciation of local motivations and circumstances. A persistent dilemma in extension work, for example, is how to reach as many farmers as possible without, at the same time, so diffusing efforts as to yield little or no benefit. One common solution has been to concentrate these efforts on the better farmers. The better farmers, however, are not necessarily those whose lead is most likely to be followed. In considering the adoption of new practices and ideas, farmers, like others, tend to depend more on the opinion of respected neighbours than on the advice of experts. The identification of the opinion leaders,[13] and the concentration of extension work on these people, can therefore enhance the effectiveness of the extension service.[14] Action or advice which responds to needs perceived by the farmers themselves is likely to have the best prospects of acceptance. Part of the success of the famous Gezira scheme, for example, was that it tackled a problem—the lack of water—which had long been recognized in the local community.

These various criticisms of research and extension programmes might appear to be "a counsel of perfection". But this is not so. Even within the limits of existing resources, more effective programmes could probably be designed by drawing research and extension work more closely together, by injecting more social and economic research into the programme and by concentrating greater efforts on particular areas and farmers. A possible course might be the establishment of small pilot projects in different areas to collect agronomic and economic information about present farming practices and to test the technical and economic feasibility of new crops and methods.

Supply of inputs

In recent discussions of agricultural development, particularly with regard to food production in Asian

[13] Opinion leaders should be distinguished from innovators. Innovators tend to be outsiders or nonconformists whose lead is often not accepted by a group. Opinion leaders or key communicators, however, are the informal or formal leaders whose general mode of behaviour is acceptable to the group and therefore followed. See Herbert F. Lionberger, *Adoption of New Ideas and Practices;* a Summary of the Research dealing with the Acceptance of Technological Change in Agriculture, with Implications for Action in facilitating such Change (Ames, Iowa, Iowa State University Press, 1960).

[14] An interesting example of the time taken to disseminate a new method is the introduction of hybrid corn in the State of Iowa. Only 5 per cent of the farmers adopted the new variety in the first five years while 100 per cent acceptance took twelve years.

countries, the technological possibilities of raising output through the use of improved inputs have risen to prominence. The scope for expanding output through application of improved seeds, irrigation, fertilizers and insecticides has, of course, long been recognized; and most Governments have had extensive programmes for enlarging the area under irrigation and for promoting the use of improved inputs. In the last few years, however, the successful development and application of the new high-yielding varieties of grains in some Asian countries have caused a number of observers to single out technological change as strategic in promoting agricultural development. In some quarters, the pessimism about finding a solution to the food problem has given way to high optimism.

The research sponsored by certain private institutions in developing high-yielding varieties of rice, wheat and maize has produced distinctly superior varieties whose cultivation has recently spread rapidly in Asia, especially in China (Taiwan), Japan and the Republic of Korea, but also in India, Pakistan and the Philippines and, to a lesser extent, in Ceylon and Iran. The acreage planted with the new varieties in Asia rose from 23,000 acres in 1965/66 to 20 million acres in 1967/68, and the 1968/69 acreage has been forecast to reach 40 million. The yields from these new varieties are high. Under experimental conditions, for example, the International Rice Research Institute in the Philippines produced annual yields of more than 20,000 kilogrammes of rice per hectare. This may be compared with current yields under actual conditions of about 4,000 kilogrammes per hectare in China (Taiwan) and the United Arab Republic and some 5,000 kilogrammes in Japan. Again, the use of improved maize in West Java led to yields of 5,000 kilogrammes per hectare, an improvement of some sixfold on local yields.

There is no doubt that the new varieties represent a striking scientific advance which permits the realization of sharply increased yields. The technical conditions which have to be met for effective use of the new varieties are, however, quite stringent. They require not only the heavy use of fertilizers and pesticides but also irrigation and careful water control; and along with new farming practices, a more intensive use of labour is needed. Thus, the exploitation of the new varieties calls for a complementary set of changes in inputs, incentives and farming practices.[15] The problem of taking advantage of the recent technological advances, in fact, encounters all the familiar difficulties of agricultural development—the need for an adequate system of incentives, for more extension work, for investment in irrigation, and for a sound organizational structure to market produce, distribute inputs and supply credit.

It is not accidental that the countries which have taken greatest advantage of the new high-yielding varieties are China (Taiwan), Japan and the Republic of Korea. In these countries, many years of change and development in institutional, technological and economic conditions preceded the present phase of exploitation of improved inputs. Extensive irrigation networks had been developed, research and extension services of good calibre were available, and past land reform programmes ensured that peasant cultivators had sufficient incentive to provide the additional labour input required by the newer methods of farming.[16] The data shown in table 13 indicates clearly enough that agriculture in many of the other developing countries in Asia is at a much earlier stage of development and is therefore less well prepared to benefit from the new emphasis on improved inputs. The arable land under irrigation is, for instance, generally less than 20 per cent; and even in the irrigated areas, the prevailing irrigation systems often do not permit the degree of water control required for the new high-yielding varieties. In both India and Pakistan, for example, the untimely delivery of water has been a major problem. Organizational and supply difficulties in getting the improved seeds, the fertilizers and pesticides to the farmers have also been encountered. Further, it has been mainly the peasants and farmers with larger holdings who, with their greater education and access to technical advice and credit, have been able to take advantage of the improved seeds. Their adoption by peasants and farmers with less land has also been impeded both by the lack of incentives arising from institutional conditions and by the grave risks which those at the margin of subsistence encounter if the new seeds should prove a failure in their locality.

These considerations only emphasize the fact that, while the new high-yielding varieties, like other technological developments, should contribute to the solution of the problem of raising output, they are no more likely by themselves to offer a complete solution than have other partial measures to encourage agricultural development which have been advocated in post-war years.

Economic conditions

While the institutional and technological conditions provide the environment and means for raising output, the decision to innovate and to improve

[15] For a discussion of some of the technical difficulties encountered in the use of the new high-yielding varieties, see *World Economic Survey, 1967—Part One* (United Nations publication, Sales No.: 68.II.C.2) pp. 49-53.

[16] For further comparison of the agricultural systems in these countries with those of other Asian countries, see "Planning and implementation in the ECAFE region, 1950/51 to 1967/68" (E/AC.54/L.34), chap. 2.

Table 13. Selected developing countries: cereal yield, share of arable land under irrigation and chemical fertilizer consumption, 1966[a]

Country	Cereal yield (100 kg/ha)	Irrigated area as percentage of arable land	Chemical fertilizer consumption[b] (kg/ha)
China (Taiwan)	37	58	289
Korea, Republic of	31	32	183
Malaysia (West)	26	9	190
Nepal	19	47	1
Ceylon	18	21	154
Thailand	18	18	8
Indonesia	16	21	11
Burma	14	5	1
Brazil	13	1	18
Mexico	13	15	48
Pakistan	12	39	12
Colombia	11	4	101
Philippines	11	12	31
Iran	9	40	8
India	9	16	13
Morocco	4	3	16

Source: FAO, *Production Yearbook 1967*, Vol. 21 and *Monthly Bulletin of Agricultural Economics and Statistics*, Vol. 17, No. 2, February 1968.

[a] The date for cereal yield is 1966, for chemical fertilizer consumption, 1966/1967, and for share of irrigated area to arable land, the years vary from country to country. They generally refer to the early 1960s.

[b] Chemical fertilizers referred to are nitrogen, phosphate and potash fertilizers.

farming techniques is often based on the profit to be derived from the greater effort involved. This depends not only on the prices obtained by producers but also on such broader economic conditions as the level of effective demand and the accessibility of markets. For instance, where general development in the non-agricultural sector is lagging, lack of effective demand blunts the incentive to produce more than is needed for the family's own consumption. The same may be true when markets are inaccessible owing to poor transportation links.

In most developing countries, price policies in the past have, by and large, been oriented towards the protection of consumers and may therefore have adversely affected output. Since farmers have usually been faced with limited alternative opportunities, increases in prices have invariably elicited favourable output responses; and this has led to the notion of the primacy of price policy. It has therefore been envisaged as a spearhead for promoting the adoption of better farming practices. It has been pointed out, for instance, that the relaxation in price controls in Indonesia during 1964 resulted in price increases that were accompanied by increased interest on the part of farmers in modern inputs such as chemical fertilizers and improved seeds. In recent years, similar price improvements in Afghanistan, India, Pakistan and the United Arab Republic have stimulated not only increased output but also greater demand for new improved inputs. The accumulation of surpluses of hybrid maize in Kenya has similarly been traced to government price support above world prices.

The pursuit of a favourable price-support policy over a sustained period no doubt facilitates the adoption and integration of modern technology into farm practices. Thus, a major aim of price-support policies has been to provide the minimum incentive which would push the farmer over the threshold of resistance to innovation. It has been argued that, for this purpose, input subsidies would be preferable to price supports. Whereas price-support policies benefit both innovators and non-innovators, the gain from input subsidies is reaped only by the innovators through reductions in costs. In the initial decision-making process, however, the cost of inputs is rather secondary, and the availability of profitable and stable prices may initially be more attractive to the farmer. A policy of price supports and one of input subsidies might initially be complementary, being later substituted at the margin as the new practices are adopted and the farmer becomes integrated into the market economy.

There is obviously an apparent conflict between the use of price supports to stimulate agricultural output and the taxation of agriculture to finance general development. Policy measures must be so designed that tax measures do not adversely affect the economic atmosphere essential for innovation and effort. The arguments for taxing agriculture should therefore be understood as the taxation of a dynamic sector. The tax burden on rising incomes is more bearable than on stagnant incomes. For agriculture as a whole to make a net contribution to industrialization the prior condition is that average productivity should be rising. In the initial stages when traditional agriculture is being stimulated, price support and the transfer of organizational resources to the sector should not be viewed as in conflict with a growing agricultural sector contributing to non-agricultural development.

Selective approach[17]

It has already been noted that current opinion stresses the complementarity of the factors needed to transform rural society and to provide the organizational support and means needed to assist farmers to adopt better farming methods. Since the various measures needed to improve the quality of rural life are likely to reinforce one another, the

[17] For views on such an approach see contribution to discussions of Annual Meeting of the American Farm Economics Association, University of Maryland, 21-24 August 1966, in *Journal of Farm Economics*, Vol. 48, No 5 (December 1966)

impact of a programme of land reform will be greatest if they are carried out simultaneously. Few developing countries, however, have the resources necessary to mount such a comprehensive attack.

As suggested earlier, an alternative course is to seek to identify the critical obstacles and to provide the minimum essential inputs. This method has relevance both for the timing of new measures and for the combination of different policies at a given stage of development. It is based on the belief that, while the measures are broadly complementary in their effect, in the short run, they can be substitutable at the margin. For example, the existence of an effective pricing or subsidy policy may compensate at the margin for the lack of an adequate extension service. An instance is the expansion of the system of private tube wells in Pakistan which has been called the "largest contributor to agricultural growth and the most significant technical change"[18] over the last decade; this was adopted rapidly with the minimum of assistance from the extension staff. Or again, research and extension work may also be substitutable at the margin. Losses in the application of research findings to actual farm conditions due to insufficient extension work could be offset, if research were concentrated on the production of improved seeds for wide distribution, as has been the case with the new high-yielding varieties. Of course, a motivated and innovative rural society minimizes the need for public extension. Therefore by changing attitudes and raising levels of literacy, the educational system and cultural environment may in the long run prove substitutable for public extension effort.

The sequence of new measures is also important. Thus, the approach would seek to evolve a method for identifying critical impediments and concentrating effort on reducing constraints in sequence. For example, in food production adaptive research geared to utilizing existing results of research may have high priority in Asia and Latin America at the present time, while in Africa applied research on the soil nutrients and suitable cultural practices may be of greater immediate importance. Again, the use of the new high-yielding varieties as a leading input presupposes the existence of adequate supplies of other inputs and, more important, an institutional environment that is conducive to the intensive labour input required.

An implication of this method is the concentration of effort in selected areas; and this raises a problem of social equity. However, since the areas with better land are usually the more densely populated, the approach does not necessarily violate considerations of social equity. Extension work should properly be concentrated on those members of a community whose success would be emulated by others.

While not necessarily a model, the Indian Intensive Agricultural Area Programme[19] initially suggested in 1959 and supported by the Ford Foundation, embodies this kind of approach. The programme began in the early 1960s in 7 districts; and by 1964 it covered 646 blocks in 75 districts for paddy, 356 blocks in 54 districts for millet and 200 blocks in 30 districts for wheat. The rationale of the selective approach has been to minimize dispersal of public effort, to benefit from the complementarity of policy instruments by the provision of an optimum combination of such instruments in the best physical environment, and to create dynamic centres from which it might be hoped that improvements would radiate to adjacent areas. The fact that some 80 to 85 per cent of farmers have remained outside of the programme is an indication of the limitations of the comprehensive method as a practical means of transforming agriculture.

Thus, agricultural development in the coming decade should not take the form of short-term responses to food crises. Rather the aim should be to strengthen the framework for the transformation of traditional agriculture into a dynamic sector. This calls for the establishment of institutions, technological means and an incentive system conducive to the development, dissemination and adoption of scientifically developed animal and crop husbandry practices.

Industrial development

Views on industrialization have changed considerably during the post-war years. First, there is no longer the same exclusive emphasis on industrialization as the prime force generating development. Secondly, there is more concern about the relative efficiency of the emerging industrial structure. Thirdly, while discussions of industrial development in the earlier post-war years were mainly restricted to the larger developing countries, such as Brazil, India, Mexico, Pakistan and the United Arab Republic, in the more recent past, greater attention has been directed to the problems of smaller countries. In the following paragraphs, some comments are made on these changes.

Comparative studies of developed and developing countries in early post-war years had usually singled out the level of industrialization as their most striking structural difference; and since output per man was much higher in industry than in agriculture, it seemed that the transfer of the working population

[18] *Ibid.*

[19] For further detail, see Gilbert Etienne, *Studies in Indian Agriculture: The Art of the Possible* (Berkeley, University of California Press, 1968).

from the latter to the former was the way to raise levels of *per capita* income. Further, it was evident that, in view of the sluggish growth in world import demand for most primary commodities, continued dependence on traditional exports would not be sufficient to generate an adequate pace of growth in income. For such reasons, most development plans and policies of the last two decades have assigned high priority to the promotion of domestic industrial growth.

While this analysis was valid, it is now amply recognized that the approach tended, in practice, to lead to the neglect of agricultural development as a complement to industrialization. Despite the numerous statements and analyses pointing out this error, however, it is probably true that policies in many countries are still more actively concerned with the promotion of industry than of agriculture; and in this sense, the pendulum has not swung far enough. Some of the inertia in the realignment of policies may arise from the fact that, for policy-makers, developments in the industrial sector appear more easily amenable to governmental action. In agriculture, not only are the appropriate actions less certain and more diffuse, but they may also entail institutional changes which are likely to encounter political resistance.

Still, it would be unfortunate if the necessary insistence on agricultural development were to lead to the opposite error of neglect of industrialization policies. This may well be only a remote contingency in the countries which are now semi-industrialized, but elsewhere, the heavy emphasis now being given to rural development could possibly result in some disregard of measures to promote industrial growth. It is therefore worth repeating that industrialization is essential for the economic development of most countries. Even if attention is restricted to agricultural development, it is evident that this cannot take place unless there is a growing urban market for food and agricultural raw materials; and, generally, overseas urban markets alone cannot be expected to generate a demand sufficient to promote widespread rural development. For most countries, much of the growth of market demand therefore depends on the pace of domestic industrialization.

The importance of industrialization for development is clearly illustrated by recent projections. These indicate that, if the developing countries were to achieve a minimum annual rate of growth in total output of 6.5 per cent by the end of the 1970s, the associated increase in manufacturing production would be expected to be about 7.5 per cent per annum in the first half of the decade, accelerating to about 8.5 per cent in the second half.[20] The actual rate of growth in manufacturing output of these countries over the first seven years of the present decade has been about 6.5 per cent (see table 14).

Table 14. Developing countries: annual rate of growth in industrial production, 1955-1967

(Percentage)

Period	*Annual rate of growth*
1955-1960	8.2
1960-1965	6.8
1960-1967	6.5
1955-1967	7.1

Source: Based on international tables in *The Growth of World Industry, 1967* (United Nations publication, Sales No.: 69.XVII.13), p. 264.

The reassessment of the early post-war emphasis on industrialization, and the recognition that it is not synonymous with development, has also given rise to more critical attitudes towards policies affecting the pattern of industrial development. It is true that, in many countries, the emerging industrial structure has been, in large part, determined by the play of circumstances rather than by the deliberate exercise of policy measures; industrial growth guided by a long-term strategy has been more the exception than the rule. And where specific action has been taken to influence the pattern of industrial development, it has quite often been unduly influenced by general precepts drawn from the historical experience or doctrines of developed countries. Comparatively few countries have sought to elaborate their own industrialization policies founded on the analysis of the specific conditions and constraints which are likely to shape their national development.

On the whole, it may be said that policies for industrialization have been concerned more with increasing the volume of new industrial investment than with the efficiency of the emerging industrial structure. The underlying hope—which is a legacy of earlier post-war views on the role of industrialization in economic development—has been that the progressive enlargement and diversification of industrial capacity would provide the foundation for self-sustained growth. At least until recently, it was also a common view that the expansion of industrial capacity to meet domestic requirements was essential in order to circumvent the constraint imposed on economic growth by the slow pace of growth in export earnings. Through its expansion and diversification, domestic industry was to supply a rising proportion of the domestic need for manufactures. The aim, therefore, of measures to protect or support new industries was to generate new output that would replace imports. In the event, industrial de-

[20] See "Developing countries in the 1970s: preliminary estimates for some key elements of a framework for international development strategy" (E/AC.54/L.29/Rev.1).

velopment has not lessened dependence on imported supplies, though the composition of imports has undergone substantial change, total import requirements have continued to rise steeply as economic activity has expanded. This, of course, could not have been otherwise unless countries had been willing to pursue autarkic policies. But the encouragement of new industrial investment on grounds of foreign exchange scarcity has led to some disregard of other standards of efficiency.

As a consequence of these attitudes, actual industrial growth has been accompanied by frequent inefficiencies and distortions. Perhaps this has been most evident in Latin America where very high and indiscriminate tariffs have been imposed on industrial imports. In other regions, more effort has been made to control investment allocation through import and industrial licensing, but the unplanned growth of inefficient industries behind barriers created by import restrictions has nevertheless occurred.

The high and indiscriminate protection accorded to new industries has encouraged the misallocation of investment into lines of production which cannot be operated efficiently at the existing stage of development of the country; it has been profitable to establish plants of uneconomic size or to operate plants at well below capacity. Barriers to foreign competition have also reduced incentives to increase efficiency in existing industries. The efficient operation of industrial establishments is difficult in any case, especially in small developing countries, because of the scarcity of trained labour and experienced management, the lack of research facilities for the testing or development of new technology and the information barrier to the acquisition of the most up-to-date methods or technology. But without import competition many established manufactures enjoy a monopoly, or near monopoly, of the market and have little incentive to raise efficiency. In some industries, the size of the market or the shortage of capital may be effective barriers to entry and the development of competition. In other cases, incentives are lacking since each manufacturer is assured a given share of the market because of the dependence of the industry on import or industrial licences for inputs.

It has to be recognized that, in the conditions prevailing in most developing countries, avoidance of these difficulties or distortions in industrial development is by no means easy. In view of the small size of the domestic industrial sector, the need to protect new industries from foreign competition, and the frequently necessary use of import restrictions or the licensing of scarce domestic materials, few developing countries can rely on spontaneous market forces to promote efficient industrial development. Thus, the emergence of an efficient pattern of industrial investment and the successful operation of existing industry depend heavily on the design and administration of governmental measures. Through such measures as the granting of tariff protection, import or other licences, tax concessions, credit policy, and foreign investment guarantees, as well as through direct participation in industry. Governments can considerably influence the pattern of new industrial investment; and it is important that, in using these measures, Governments should not simply consider the effects of new industries on the balance of payments but should also take into account the likely efficiency of these industries.

It should also be recognized that the most efficient pattern of industrial development has to be decided by each country in the light of its own conditions and opportunities; there is no standard pattern of industrialization. At the level of the broad branches of industrial production, there is bound to be some similarity among countries in the emerging pattern of industrial development. As industrial output increases, the industrial structure becomes more diversified so that, in time, most of the major branches of industry are likely to be established within all but the smallest countries. However, within each of the major branches, some degree of specialization will generally be essential for efficient industrial growth; and the direction of specialization can only be determined in the light of conditions within each country.

The corollary to industrial growth with specialization is an expanding volume of imports of manufactures; and it is precisely for this reason that so much importance is now assigned to the development of exports of manufactures, either to world markets or within regional economic groupings. Most especially for countries heavily dependent on foreign trade, an efficient pattern of industrial growth cannot be achieved without an expanding trade in manufactures. The ability to implement policies for efficient industrial development thus depends, not only on the individual countries themselves, but also on the trade policies of developed countries and on the success of endeavours to promote regional economic co-operation.

The special problem of small countries

Most developing countries which have gained their political independence in the last fifteen years are very small in terms both of population and of the size of their domestic markets. The number of developing countries with populations of less than 10 million that have become members of the United Nations rose between 1950 and 1965 from 23 to 60.[21] In terms of domestic market potential the majority of the developing countries produced less than $1.25

[21] This refers to countries in Africa, Asia and Latin America only. United Nations Industrial Development Organization, "The need for an export-oriented pattern of industrialization" (ID/CONF.1/56, 1967), p. 5.

billion worth of goods and services in 1965,[22] which represents less than one tenth of the total output of the Netherlands.

This reduction in size of the typical developing country has focused increasing attention on the effect of size on the pace and pattern of industrial development. It has generally been agreed that smallness is an impediment to industrial development and that particular problems are faced by small countries in their efforts to accelerate economic growth. Some larger developing countries that find it difficult to export manufactures because of the high cost structure of their industry are now also attributing their difficulties in promoting further industrial expansion to the limited size of their domestic markets.[23] These problems have led to the advocacy of more export-oriented policies to promote industrialization, and particularly of regional economic co-operation and integration. The economies of scale which would become available to members of an integrated market would allow for decreased industrial costs and promote increased specialization and the diversification of industry within the regional group.

The size of a country's market will not only affect the technical scale of output of individual industrial plants but also its industrial structure and, in particular, the extent of specialization and the competitiveness within an industry.

The importance of technical economies of scale remain controversial; and it is easy to exaggerate their weight among the many factors that affect costs. Some evidence is available of the relation between output and cost for several industries in developing countries. A hypothetical example of the production of rolled plates in an integrated mill in Latin America shows that total costs per unit are reduced by 28 per cent when annual output rises from 100,000 to 400,000 tons, and at an annual output of 1.5 million tons, capital charges are reduced by 60 per cent, salaries and wages by 79 per cent, the cost of ferrous materials by 38 per cent and total cost per unit by 46 per cent.[24] In the manufacture of fertilizers a doubling of ammonia output will increase capital costs by 81 per cent and labour costs by 40 per cent. The increase in capital and labour costs to double the output of ammonium nitrate and ammonium sulphate, the two most important types of fertilizers, are 68 and 27 per cent and 65 and 20 per cent respectively.[25] Potential economies of scale were also found in a study of the hypothetical cost of cement production in Asia. So long as large plants can be located in close proximity to raw materials, both operating cost per ton and capital charges per ton decrease by 39 per cent when capacity output is raised from 50,000 to 900,000 tons.[26] Any decisions regarding the scales of operation of cement plants must of course take into account the especially high transport costs involved. Similar calculations have been made for other industries, especially in relation to Latin American conditions.[27] The savings indicated in these examples are largely attributable to technological economies of scale and it may be assumed that they are broadly applicable to other developing regions.

Significant technical economies are most evident in the heavy industries. Many of these, such as the automobile, locomotive and heavy machinery industries, are in fact rarely found in smaller countries. In a study of the economic consequences of the size of nations, it was estimated that such industries are not found in countries with a population of less than 10 to 15 million, though there are exceptions where *per capita* income is high. Outside a few of these exceptional industries, most technical economies are exhausted by firms of quite moderate size and countries with a small market can support a number of industries with firms of a minimum size to give full or nearly full technical efficiency.[28] It has been found that in most industries in industrial countries plants of varying size coexist, and that in Canada, France, India, Italy, Japan and Sweden, for example, the larger plants in most industries are significantly smaller than those in the counterpart industries in the United States.[29] On the other hand, for very small countries with populations of 5 million or less and a *per capita* income of less than $150 it may not be possible for the domestic market to sustain a plant of minimum efficient size in many modern industries.

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[22] Measured in 1960 dollars. See *World Economic Survey, 1967—Part One* (United Nations publication, Sales No: 68.II.C.2), table 31, p. 60.

[23] "A contribution to economic integration policy in Latin America" (E/CN 12/728, 1965), p. 27; "The United Nations Second Development Decade, industrial development in Latin America" (E/CN 12/830, 1969); "Industrial integration among developing countries", *Asian Industrial Development News*, No. 2, 1967 (United Nations publication, Sales No.: 67.II F 5) and *Problems of Plan Implementation, Economic Co-operation and Integration in Africa* (United Nations publication, Sales No.: 69 II.K 7).

[24] "The iron and steel industry in Latin America, plans and perspectives", *United Nations Interregional Symposium on the Application of Modern Technical Practices in the Iron and Steel Industry to Developing Countries* (United Nations publication, Sales No.: 64 II B 7), p. 107.

[25] Bela A. Balassa, *Economic Development and Integration* (Mexico. Centro de Estudios Monetarios Latinamericanos, 1965), p. 91.

[26] *Formulating Industrial Development Programmes with Special Reference to Asia and the Far East* (United Nations publication, Sales No.: 61.II F 7), p. 46.

[27] See 'A contribution to economic integration policy in Latin America" (E/CN 12/728, 1965).

[28] E. A. G. Robinson (ed.), *Economic Consequences of the Size of Nations; Proceedings of a Conference held by the International Economic Association* (London, Macmillan, 1960), p. xvii.

[29] Joe S. Bain, *International Differences in Industrial Structure; Eight Nations in the 1950s* (New Haven, Conn., Yale University Press, 1966), pp. 38, 55-56.

Probably more important than economies of scale within plants are those connected with external economies. Industry restricted by a small market is less able to take advantage of the reduction in costs resulting from both horizontal and vertical specialization. The specialization of multi-product plants in the production of a narrower range of products permits the appropriation of economies in the specialized undertakings. These arise mainly from the efficiency of longer runs and the use of specialized machinery. Frequent examples are found in textile manufacturing. Vertical specialization occurs when the different activities leading to the production of a final product are carried out in separate and specialized plants. This type of specialization is important in the engineering industry and particularly in automobile production. The multiplicity of specialized firms which form an industry is just as much a characteristic of larger industrial countries as is the size of plants. In fact, the promotion of specialization is perhaps the main reason for the importance of market size to industrial development. A large market permits the establishment of a larger number of industries all of larger size, but what is much more important, it permits the establishment of suppliers to these industries. These suppliers may operate with plants of much smaller size, but their existence is dependent on the larger market which permitted the establishment of the final goods industry.

Two other disadvantages of smallness should be mentioned. First, because of the high costs involved, small countries are often less able to maintain efficient promotion and distribution networks. These may in fact be more important to a country with a small domestic market, which is seeking to expand production by exporting to a regional group or to the world market, than they are to a large country where the size of the domestic market allows the exploitation of economies of scale. Secondly, it is likely that small countries are less able to attract private foreign investment. Direct private foreign investment in industry usually seeks a guaranteed market large enough to support an industry of at least minimum efficient size in order to compete successfully with investment opportunities in developed countries.

A review of the disadvantages to industrial development of a small market indicates what the direct effect is likely to be on the pattern of industrialization in the country concerned. Where economies of scale and external economies are not significant, and where efficient production allowing competition with imports in terms of price and quality can be achieved within a reasonable period, a small country can substitute domestic production for imports of industries. According to this criterion, however, a small country dependent only on its domestic market will find it difficult to provide sufficient demand to permit the continued growth and diversification of industry into most branches of production.

Elements of an industrial development strategy for small countries

The special problems that exist for small countries in their efforts to industrialize may be moderated or removed by enlarging the market for the country's industries through the expansion of the domestic market, the promotion of exports to the world market or the creation of a system of regional co-operation or integration.

The size of the domestic market can be measured by domestic purchasing power—the product of population and average income. Many factors will affect this concept, including the size of population and the richness of the country's natural resources. But, these factors apart, the size of the domestic market is not static and can be increased through broadly based economic development. In many developing countries, the limitations of the domestic market for industrial goods are exacerbated by the skewed distribution of income and the existence of relatively backward areas. Where the majority of the population constitutes a relatively backward and stagnant agricultural sector, demand for manufactures emanates almost exclusively from a small urban enclave. The manufactured goods demanded by the urban group are diverse and the volume of demand for many products may be too small to support the development of efficient, indigenous industries. On the other hand, the market for manufactured wage goods is restricted. The redistribution of income and the development of the agricultural sector would enlarge the domestic market for industry in several ways. First, it would change the pattern of demand and widen the market for wage goods. These last are likely to be those products which are less complex technically and appropriate for efficient production in small countries. Secondly, a dynamic agricultural sector may provide possibilities for the manufacture of agricultural inputs such as fertilizers, tools and simple machinery. And thirdly, this would also promote the establishment or expansion of industries processing agricultural commodities.

The market may also be expanded by the promotion of industrial exports. This strategy has the advantage not only of permitting larger scale production but also of encouraging increased quality and decreased costs through competition with other world suppliers. The promotion of industrial exports by developing countries is, however, extremely difficult. New industries are usually costly, standards of quality and service acceptable to users in developed countries are difficult to meet, and the barriers to entry of manufactures into industrial countries are often formidable.

Despite the apparent difficulties, there are, however, a number of countries, which have been successful in promoting exports of manufactures to the world market. Historically, it may be noted, smallness has not been a decisive factor in restricting industrial development. Belgium and Switzerland are examples of countries where smallness is associated with industrialization and the achievement of a high *per capita* income. Analysis of the development of these countries indicates that their industrial growth has in large measure been due to the development of export markets for their manufactures to permit specialization and secure economies of scale in industry.

In spite of being poor in industrial raw materials, Switzerland, for example, has had a long and stable process of industrial development. A striking feature of the Swiss economy has been the export orientation of its industry. In the mid-1950s major branches of industry, watches, dyes, pharmaceutical preparations and perfumes, exported 95 per cent of their output; and over 75 per cent of the output of textile machines, machine tools and electrical equipment was exported. Swiss industry is characterized by small-sized firms, but the continual pressure of international competition has resulted in efficient production and a marked degree of adaptability to changing economic conditions. An analysis of labour productivity indicates that it is highest in the export industries and lowest in those industries producing for the domestic market, especially if they are protected by tariffs or quantitative restrictions.

Belgium is a small country with an excellent port, few raw materials resources except coal and few firms of any considerable size. Under these conditions, Belgium has encouraged its export industries by means of a policy of low or zero tariffs on imported raw materials and semi-manufactures. An interesting feature of its industrialization has been the relatively rapid growth since before the First World War of its traditional export industries: textiles, chemicals and basic metals. These have grown faster than its food and engineering industries which have been less export-oriented. The growth of the last-named, moreover, has fallen behind the average rate of the same industries in western Europe as a whole. Thus, the pattern of industrial growth in Belgium has not reflected the general trend in the rest of Europe where the rate of expansion was greatest in engineering and weakest in textiles.[30]

Among developing countries, certain countries such as China (Taiwan) and the Republic of Korea have been able to establish significant export markets for their manufactures in recent years. They have been assisted by domestic policies designed to enhance the profitability of new export industries. China (Taiwan), for instance, is now a relatively industrialized developing country, whose rapid development in recent years has been stimulated by expanding exports of highly processed goods. From 1952 to 1960, when manufacturing production grew by an annual average rate of 13 per cent, import-substitution provided the major stimulus. Between 1960 and 1966, however, the annual growth rate of manufactures rose to 15.3 per cent and was supported by an abrupt rise in exports. The industries which developed first in the highly protected market included agricultural processing and light manufactures such as textiles, plywood, glass and simple machinery. In the 1960s, it became obvious that continued expansion of these industries depended on the development of overseas markets. As a result the Government initiated a number of measures including the refunding of customs duties and surtaxes on the import content of exports, the remission of commodity taxes on exports, exemption from income tax and business tax on exports, cash bonuses for exports, and the establishment of joint export organizations in each industrial field. Foreign exchange was automatically made available for the importation of raw materials for exports. Between 1953 and 1964 the value of total exports rose by about 180 per cent. During this period their composition changed; manufactures rose from 5 per cent of total exports in 1955-1956 to 48 per cent in 1964-1965 (see table 15). It is true, however, that a number of special factors have contributed to the rapid development of Taiwan, including the heavy inflow of United States aid, which helped to overcome severe post-war inflation, and the availability of highly skilled labour and management.

In the Republic of Korea, where exports of manufactures grew at an annual rate of 71 per cent between 1955 and 1965, important incentives have included the provision of credit on favourable terms, the reduction of income and corporation taxes for specified businesses that earn foreign exchange, and preferential treatment for exporters in the issuance of foreign exchange permits. The greatest increases of exports have been in textiles, clothing, plywood and miscellaneous manufactured articles.

These examples indicate that it is quite possible, under appropriate conditions, for smaller developing countries to expand their markets for manufactures through exports. However, it must be recognized that neither the historical experience of the small industrialized countries of Europe nor the more recent experience of such countries as China (Taiwan) and the Republic of Korea, is particularly relevant for most developing countries. As late-

[30] For a discussion of industrial development in Switzerland and Belgium see W. A. Jöhr and F. Kneschaurek, "Study of the efficiency of a small nation: Switzerland" and L. Duquesne de la Vinelle, "Study of the efficiency of a small nation: Belgium" E. A. G. Robinson (editor), *Economic Consequences of the Size of Nations* (London, Macmillan, 1960).

Table 15. Selected developing countries: growth in export of manufactures,[a] 1955-1965[b]

(*Percentage*)

Country	Annual growth of exports		Share of manufactures in total exports	
	Total	Manufactures	1955-1956	1964-1965
Republic of Korea[c]	24	71	13	54
Israel	17	21	53	72
China (Taiwan)	16	60	5	48
Hong Kong	9	11	76	87
Philippines	7	29	2	11

Source: *World Economic Survey, 1967—Part One*, (United Nations publication, Sales No.: 68.II.C.2), table 51, p. 91.

[a] Manufactures consist of the following Standard International Trade Classification (SITC) categories: 012, 013, 032 (meat and fish, dried, tinned and prepared); 046, 047, 048 (flour, milled cereals and preparations); 052, 053, 055 (dried, preserved or prepared fruits and vegetables); 062, 073 (preparations of sugar and chocolate); 091, 099 (margarine, shortening and food preparations, NES); 11 (beverages); 122 (tobacco manufactures); 431 (processed oils and fats); 243, 251 (shaped wood and pulp); 266, 267 (synthetic fibres and textile wastes); 332 (petroleum products); 5 (chemicals); 6 excluding 67 and 68 but including 681 (manufactures classified by material); 7 (machinery and transport equipment) and 8 (miscellaneous manufactured articles).

[b] Rates are calculated as compound rates between first two years and last two years of period: based on data in dollars.

[c] 1958-1965.

comers to industrialization, developing countries are faced with an established international division of labour which places their manufactures in a competitively weak position; and few of these countries enjoy the special advantages that have accrued to such countries as China (Taiwan) and the Republic of Korea in the form of extensive aid from the United States and large offshore purchases. For sustained, and efficient, industrial growth, regional co-operation or integration thus appears essential for most small developing countries.

For those countries too, such co-operation or integration also offers the most promising means of widening the market for industry at the present stage of their development. It can make possible the establishment of plants of optimum size, increase specialization in existing industries, and make feasible the establishment of new industries which are now impossible because of the limitations of domestic markets. Co-operation may also facilitate the optimum location of new investment within the area in terms of the cheapest supply of raw materials, energy, fuels and other available external economies. The removal of regional trade barriers can also promote quality and efficiency through competition between existing industries.

It is not intended here to discuss the different forms of the economic, political and institutional requirements for successful co-operation and integration schemes. It may simply be said that the widening of the market through the establishment of a customs union may not be sufficient inducement for industrial efficiency, particularly in those industries where economies of scale are not important. The need for joint industrial planning is underlined by the tendency to polarization in industrial development, and the consequent appropriation of the immediate benefits of co-operation by the larger and more developed countries of the group. Various special measures have been suggested to bring about a relatively equitable distribution of industrial investment, less favourable to the smaller less developed countries.[31]

It is true, of course, that some of the schemes for regional co-operation are composed of countries with small markets; and even the regional market may not be large enough to support continued industrial growth. In these cases regional industries should be established with an export orientation to extra-regional markets in order that vigorous growth may continue after the limits of the regional market have been reached. In any case, regional co-operation will not only permit development that would otherwise have been difficult or impossible, but will also buy time for new industries to expand and to reduce costs. If export promotion is undertaken on a broader basis than that of the small national markets of many developing countries, it may encounter fewer risks and difficulties.

Summary

In the 1955-1965 decade both agricultural output and food production in developing countries increased at a faster rate than population. In the first seven years of the 1960s, however, the rate of expansion of production has been slightly below that of population. Concern over the food shortage problem has been reinforced by the growing food requirements implied in the accelerating rate of increase in population, the need to improve current nutritional levels and the planned increases in total income.

To meet a projected annual increase in the demand for food of slightly over 3 per cent—a rate which is probably not too different from the past rate of growth—would require significant changes in current agricultural practices. Much of the past growth in output has been realized through the extension of acreage under cultivation; and in the years to come, especially in the Asian region, greater reliance will have to be placed on progressive improvements in methods of cultivation on land at present being farmed.

[31] See, for example, "The economically relatively less developed countries and Latin American integration" (E/CN.12/774, April, 1967).

While the sense of urgency about agricultural development arose from increasing concern over the growing food requirements of developing countries, it has coincided with a greater appreciation of the role of agriculture in over-all development strategy. There is growing agreement that effective development strategy should view agricultural and industrial development as complementary, with growth in each of the two sectors supporting and stimulating progress in the other.

There is still much uncertainty and doubt as to the best agricultural development strategy. The direction of current thinking, however, is towards a comprehensive method. This is in contrast to earlier attitudes which singled out particular aspects of the problem and prescribed partial solutions. The general or comprehensive solution recognizes the multifaceted nature of the problem and seeks to create conditions conducive to the promotion of sustainable agricultural development. Three such broad conditions have been identified as essential requirements for an effective agricultural development strategy: the creation, primarily through changes in property relations, of institutional conditions which will change social attitudes and strengthen the motivations of farmers and peasants; the development of means, mainly in the form of research and extension facilities, to ensure continuing technological improvement; and the adoption of economic policies which provide a framework of incentives, as well as the transportation and marketing infrastructure, to ensure that expanding urban demand for agricultural output reaches and influences the decisions of producers.

The comprehensive course stresses the complementary nature of these measures. Resource limitations, however, constitute a restraint on the ability of most developing countries to implement comprehensive programmes. But it is believed that while the component measures of such a strategy are broadly complementary in their effect, they can be substituted, in the short run, at the margin. For example, the existence of an effective pricing or subsidy policy may compensate at the margin for the lack of an adequate extension service. Thus a selective policy which aims at identifying critical obstacles so as to provide the minimum of essential inputs has been advocated. In this way comprehensive analysis is combined with an appropriate sequence of measures, a changing policy mix, and a concentration of effort in selected areas so as to make maximum use of scarce resources.

In recent years, there have been significant changes in views on industrialization. The earlier preoccupation with industrialization as the prime force generating over-all development has yielded to recognition of the complementary nature of agricultural and industrial development. Emphasis on increasing the volume of new industrial investment has also been supplemented by concern that the emerging industrial structure be efficient and relevant to the stage of development. Further, with the emergence of so many small nations, discussions on industrialization have tended to shift in emphasis from the problems of relatively large countries to those of smaller countries.

While greater attention to agriculture has been necessary, the importance of achieving an adequate rate of industrialization should not be forgotten. Development of the rural economy cannot take place unless there is growing demand for agricultural produce, and overseas urban markets cannot generally be expected to generate an adequate demand for widespread development of rural society. If developing countries are to attain a minimum rate of growth of total output and income of between 6 and 7 per cent by 1980, this will imply a significant acceleration of the rate of expansion in manufacturing production.

In the coming decade, a deliberate exercise of policy measures will be needed if an effective industrial development strategy is to be devised. Since there is no standard pattern of industrialization, each country should decide on the most efficient industrial structure in the light of its own circumstances and opportunities.

In many countries over the post-war years, the use of strong and indiscriminate protective measures has resulted in the misapplication of resources to inefficient lines of production and has acted as a curb rather than as an incentive to increasing efficiency in existing industries. In order to promote an efficient pattern of industrialization, specialization suited to the conditions of each country should be an essential ingredient of any strategy. A corollary of growth through specialization, however, is an expanding exchange of goods and services through trade. The pursuit of an efficient industrial development policy, therefore, depends not only on individual countries themselves but on the trade policies of developed countries and on the extent to which endeavours to promote regional economic co-operation succeed.

Among small countries, an industrial development strategy can seek to overcome the disadvantage of size in three ways—policies aimed at expanding the domestic market, for instance, by means of broad-based economic development and income redistribution; policies to promote exports of manufactures on world markets; and the creation of systems of regional co-operation and integration. Given the difficulties of export promotion to world markets, perhaps the most promising means lie in regional co-operation. Regional co-operation can make pos-

sible development that would otherwise have been difficult or impossible. Also, in so far as it buys time for new industries to expand and reduce cost, it thereby reduces difficulties in export promotion. If regional co-operation is to succeed, however, it has to include some means for joint industrial planning so as to offset the tendency to industrial polarization.

Chapter III

INVESTMENT AND SAVING, AID AND TRADE

Investment and saving

Among the factors determining the rate of economic growth, the capacity to save and to invest has long been considered one of the most important. The surplus of production over consumption creates the basis for the augmentation of future output. The lack of resources for investment has thus been identified as a principal constraint to economic and social growth, and policy prescriptions have accordingly been concerned with means of raising the rate of saving.

Over the years, however, the accumulation of research findings and practical experience have caused many writers to question the central role assigned to capital accumulation. Referring to the historical experience of developed countries of widely varying institutional conditions and political systems in the nineteenth and twentieth centuries, they have observed that development has been the result of a combination of political, social and economic changes which have interacted to produce further changes. Such factors as institutional changes, technological progress, population growth and migration, a heightened spirit of enterprise, improvements in the quantity and quality of the labour force, and the widening of markets, have all played a part, along with capital formation, in promoting development. Some writers have even seen capital accumulation as more a consequence than a cause of development.

The controversy about the significance of capital accumulation has undoubtedly been of value. It has drawn attention to the role of both supplies of complementary factors and changes in attitudes and institutions in affecting the process of economic and social development. However, analysis of the broad changes which have accounted for development in the past do not necessarily provide guidelines for policy prescriptions. In formulating development strategy, the important task is to identify the means through which the broad changes associated with development can be best brought about. And without denying the need for numerous other measures, it surely remains true that new investment is one such means of prime importance. Through its effects in widening the domestic market, in creating external economies, in generating the demand for complementary factors of production, in embodying new technology, in shaping a new organizational system for production and in other ways, capital formation itself brings about many of the broad changes associated with development.

It seems clear that, if economic development is to be accelerated in the coming decade, attention needs to be concentrated as much on the mobilization of resources for investment as on the concomitant and supporting non-investment factors. Recent projections provide an indication of the magnitude of the task that confronts developing countries. Preliminary estimates based on certain assumptions about the capital-output ratio suggest that if developing countries were to attain a minimum rate of growth in output of 6 to 7 per cent per annum by 1980, the share of investment in gross domestic product would have to increase from about 15 per cent in 1965 to about 20 per cent by the terminal year. These figures measure the increase in domestic saving and foreign capital inflow which together would be necessary to realize the postulated acceleration in the rate of growth in output. If domestic saving in the developing countries as a whole were to grow in accordance with estimated historical trends, the share of saving in gross domestic product could be expected to increase from about 14 per cent in 1965 to between 17 and 18 per cent in 1980. Thus, in the absence of any change in its pattern, domestic saving would continue to fall short of investment requirements in the majority of developing countries.

> "The calculations show that in 1980 . . . countries accounting for between three-fourths and four-fifths of the postulated gross domestic product in 1980 would have a deficit of domestic saving over investment of between $17 and $34 billion or about 4 to 8 per cent of their own total gross domestic product."[1]

These provisional projections underline the importance of policies to raise levels of domestic saving and investment, particularly if developing coun-

[1] "Developing countries in the 1970s preliminary estimates for some key elements of a framework for international development strategy" (E/AC.54/L.29/Rev.1).

tries are to become more self-reliant. In view of the scarcity of resources for investment, they also stress the need for making the best use of the available resources. Some of the considerations relevant to both these issues are discussed in the following paragraphs.

The problem of raising levels of saving and investment

Governments in developing countries have generally employed an array of different measures intended directly to raise levels of domestic saving and investment. These have invariably included fiscal incentives to stimulate private investment, the establishment of new institutions and instrumentalities to encourage private saving, and the use of general taxation to increase or maintain public saving.[2] While these direct measures are necessary, and could often be strengthened, it should, however, be recognized that they cannot be relied upon alone to raise levels of saving and investment. A rising trend in the proportion of income that is saved and invested is a complex phenomenon which is closely related to the performance of the economy as a whole. If general conditions are favourable to economic growth, these are likely to strengthen the inducement to save and invest in the private sector and to facilitate the channelling of a greater proportion of private income into public saving. But if general conditions are unfavourable, the effectiveness of these direct measures is diminished. Thus, policies to raise levels of saving and investment should not be conceived in terms of these direct measures alone but should be viewed more broadly against the whole complex of institutional and economic factors which affect development.

Seen in a long-term context, a rising trend in the proportion of income saved and invested is not simply the consequence of the growth in total income but is closely associated with changes both in the system of incentives and in the distribution of income. In the past experience of developed countries, the rising level of saving and investment has been linked with a progressive redistribution of national income in favour of entities and individuals predisposed to reinvest a high proportion of their earnings. In the main, these entities or individuals have been the State itself, public enterprises, private corporate or unincorporated enterprises and individual farmers and peasants. The relative importance of these different groups has varied from country to country in accordance with its economic and social system, but in all cases, as incomes in the form of tax revenue, profits or earnings have risen in relation to national income, a common feature has been the increase in the level of saving and investment.

General economic policies pursued by developing countries can thus be assessed in relation to the aim of raising levels of saving and investment from two viewpoints: one is their effectiveness in strengthening incentives to engage in productive activity and to invest; and the other is the means whereby the proportion of income channelled into saving and investment is progressively increased. An adequate system of incentives, broadly based to encourage greater productive effort throughout the economy, is necessary for sustained economic growth; and a rising proportion of income has to be shifted from consumption to saving if there is to be a steady increase in the resources available for investment. A framework of policies and institutions which adequately meets only one or other of these conditions is not likely to be markedly successful in promoting a sustained rise in the level of saving and investment. Indeed, since the two conditions are influenced in different ways by the distribution of income, exclusive emphasis on one condition may be to the detriment of the other. The need is therefore for a balanced set of policies and institutions which reasonably satisfy both conditions at the same time.

This is easy enough to illustrate from post-war experience. The use of inflationary financing to raise levels of saving and investment, for example, is a policy which was sometimes advocated in the earlier post-war years. It is true that the inflationary financing of additional investment can raise the level of domestic saving through price increases which shift the distribution of income in favour of profits. However, while a moderate upward trend in price levels is acceptable in most countries, unrestrained use of the inflationary financing of investment is likely to give rise to sharp price increases which set in motion a chain of competitive upward adjustments in prices and costs. The social conflicts over the distribution of income and the uncertainty about economic prospects which such a situation may engender, are likely to have adverse effects on the longer term trend in saving and investment. Thus, by bringing about a more inequitable distribution in the burden of saving, the policy impairs the system of incentives and, in discouraging economic growth, may be self-defeating.

Another instance may be cited of a policy intended to raise levels of saving and investment which may react adversely on economic growth. This is the view which has enjoyed some support throughout the post-war years that, through taxation, price or

[2] For further discussion of these measures, see *World Economic Survey 1965—Part I* (United Nations publication, Sales No.: 66.II.C.1), chap. I and *World Economic Survey 1967—Part One* (United Nations publication, Sales No: 68.II.C.2), chap. III.

exchange-rate policy, real resources can be transferred from agriculture to increase investment in the modern, industrial sector. This method has, in fact, been applied with some success by several countries to their agricultural export sectors; mainly through the operation of marketing boards or exchange-rate measures, some part of export incomes has been made available for domestic investment. The procedure, however, has also been more broadly conceived to apply to domestic agriculture generally. In part, it has been inspired by the belief that labour could be transferred out of agriculture without any loss in agricultural output; if the labour were put to work on new investment projects, the demand for food which it generated could be met without any reduction in *per capita* consumption in agriculture. In part, it has also been based on the general presumption that, since agriculture is usually the largest sector in a developing economy, it should contribute substantially to total saving. This view has also drawn support from the historical experience of some countries where taxation of the agricultural sector appears to have added appreciably in the early stages of development to the surplus of production over consumption. Both these lines of argument are, however, at least subject to heavy qualification. As discussed in chapter II, the validity of the assumptions underlying the first argument are open to considerable doubt. And, in view of the difficulties experienced by most developing countries in securing an adequate rate of growth in agricultural output, the stress of current opinion is on the importance of eschewing price or taxation policies which might dampen incentives to increase production. This is not to deny the potential role of the agricultural sector as a source of increased saving. But the prior condition is the emergence of a dynamic agriculture in which production is increasing sufficiently to provide the incentive of improving consumption standards as well as to leave a surplus for saving.

The direction of these comments is to suggest a more general issue which has not received sufficient attention in discussions of measures to promote rising levels of saving and investment. This is the distribution of income and wealth. The more conscious formulation of policies to bring about changes in the distribution of income and wealth is perhaps the most significant improvement which Governments could make in their measures to bring about a long-term rising trend in levels of saving and investment.

It must be admitted that statements about the relation between economic growth and the distribution of income and wealth are of a largely speculative character; there is little empirical knowledge against which statements could be tested; and much more research on this subject could usefully be undertaken. Still, there is sufficient information to permit a question as to whether the maldistribution of income and wealth in many developing countries is favourable to economic growth.[3]

On the evidence that higher income groups tend to save a higher proportion of their personal income, it has been quite a commonly held view that a more unequal distribution of income and wealth should make possible a higher level of saving and investment. This line of reasoning, however, neglects the fact that the distribution of income and wealth not only affects the behaviour of the community as regards saving but also constitutes the whole system of rewards for productive activity. And if the system of rewards is grossly defective, it hampers economic growth and weakens the inducement to save and invest in productive activity. In these circumstances, the institutional conditions governing the distribution of income and wealth may act as a brake on the upward trend in the level of saving and investment. In this connexion, the following passage is of interest:

> "All we can say is that the unequal distribution of income in the earlier decades in the presently developed countries did not prevent rapid economic growth. But our data do not reveal the specific social and economic circumstances, and we cannot say that a somewhat less (or more) unequal size distribution might not have contributed to even faster growth. We know far too little of the interplay between relative income position, the average income and its rate of growth, and the responses of man as producer, consumer, saver, and investor to answer such questions seriously. It would seem that, beyond a point where average income is at some rock-bottom minimum, the particular social and political structure and the prevailing social philosophy within which a specific size distribution of income pattern is generated, have much to do with the responses it produces in stimulating or impeding economic growth. An unequal size distribution of income may be favourable to economic growth if the larger incomes are compensation for activities deemed useful by society in terms of the economic growth that is desired; if the upper income brackets save and invest in accordance with criteria of social return; if concomitantly provisions for equality of economic opportunity are made; and if there is a social consensus regarding the future economy to be attained by the use of present income. A similarly unequal income distribution would be a serious obstacle to economic growth if higher incomes are secured by what the society generally considers to be illegitimate and unwarranted means; if these incomes are used to strengthen monopolistic posi-

[3] For a recent study of the distribution of income and wealth in several countries, see *Economic Bulletin for Latin America*, Vol. XII, No. 2 (United Nations publication, Sales No.: E.68.II.G.5).

tions or wasted on frivolous consumer luxuries; if rigid barriers are set up to the advancement of the abler people among the lower brackets; and if there is no real consensus concerning the better economic society to be attained by the use of present income."[4]

It is in the rural areas that the evidence of the adverse effects of maldistribution of income and wealth is most obvious. There is widespread agreement that institutional conditions in many developing countries, particularly in the rural areas of Asian and Latin American countries, substantially impair the relation between reward and effort. Reform of these conditions would encourage greater productive activity among the peasantry and improve the prospects for raising levels of saving and investment.

The importance in the rural area of saving and investment in kind through increased labour inputs is often overlooked in general analyses of the saving and investment problem. For one thing, it is usually extremely difficult to make accurate estimates of investment in land improvement for the purposes of national accounting. Such investment is nonetheless a necessary complement to the more easily identifiable forms of investment in the rural areas, such as in roads or large irrigation works, if a sustained growth in agricultural output is to be achieved. Indeed, in numerous countries, areas can be found where past neglect of the land has given rise to serious problems of land and soil conservation. Because of insecurity of tenure and other discouragements, peasants have failed to use proper farming methods; land, for example, has been cultivated to exhaustion, erosion has set in because of deforestation, and even irrigation works have fallen into disuse.

Reform of the system of land ownership and tenure to promote the spread of owner-operated farms or to provide security of tenure at reasonable rents is a means of strengthening the inducement to work and invest among peasants or small holders. As noted in a recent report

"the most important disincentive in many developing countries stems from forms of land tenure which leave to the cultivator only a fraction of the rewards stemming from increased investment or labour . . . Even when prices are guaranteed by the State, a farmer will not easily devote his capital and labour to increasing production if past experience has convinced him that he will share only partially, if at all, in the increased returns . . . Nothing is more calculated to increase production for the market than giving the cultivator the status and security of an owner-farmer and the assurance that he himself will reap the fruits of his labour."[5]

Institutional reforms in the rural areas, however, may also promote saving and investment by redirecting the energies and resources of landowners, intermediaries and money-lenders into more productive activities. It has been observed in several countries which have carried out extensive programmes of land reform that, once deprived of their former sources of income in rent and other receipts, these groups have sought to restore their incomes by investing or engaging directly in productive activities. Further, if sufficient institutional and organizational changes in the rural areas have been effected to realize a steady growth in agricultural output, it becomes more feasible for the Government to channel a proportion of the rising incomes into public saving through taxation. This, however, would be likely to meet with political resistance from the farmers if the condition of more equitable income distribution had not been met first.

Because the agricultural sector bulks large in the economies of most developing countries, institutional reforms in the rural areas are of particular importance for strengthening the incentives to work, to save and to invest in productive activities. However, measures to strengthen these incentives should not be conceived exclusively in terms of land reform and related organizational changes in the rural areas. The aim of ensuring that the distribution of income constitutes an adequate system of rewards for productive effort applies generally throughout the economy.

Fiscal measures, like institutional changes, can contribute substantially towards the creation of a more efficient distribution of income and wealth. A progressive improvement can be realized if non-functional incomes, or the wealth from which they derive, attract relatively high rates of taxation. No comprehensive review of fiscal policies can be attempted here, but two possible fiscal measures may be cited by way of illustration; they concern taxes on wealth. Besides higher death duties, taxes on capital gains and on land merit consideration. Whereas capital gains in developed market economies arise chiefly from trading in securities, in developing countries they accrue mainly from transactions in land. Since investments in land are not socially productive and are often speculative, a capital gains tax would help to discourage such investment and to redirect attention towards more productive activities. It is, moreover, an important supplement to a system of progressive income taxes

[4] Simon Kuznets, "Quantitative aspects of the economic growth of nations: VIII. Distribution of income by size", *Economic Development and Cultural Change*, Vol. XI, No 2, part II (January 1963), p. 69.

[5] FAO, *The State of Food and Agriculture 1967* (Rome, 1967), pp. 100-102.

in promoting tax equity.[6] Again, a system of land taxes graduated by size of holdings, with the assessment of land values preferably based on the value of potential output, may be a means of inducing the subdivision and sale of large, under-utilized estates and of facilitating the establishment of viable owner-operated farms.[7] It should be noted, however, that such taxes will be effective only if the tax burden cannot be shifted to farm tenants or workers or, through higher food prices, to city dwellers.

Fiscal and institutional reforms to alter the distribution of income and wealth and thereby strengthen incentives, are certainly not sufficient, in themselves, as a policy to induce a rising trend in the level of saving and investment. The strengthening and extension of the various organizational arrangements designed to facilitate private saving and investment are also important; and a progressive increase in the general level of taxation likewise appears essential. There is a strong case, however, for supposing that such reforms as those outlined above would create conditions more favourable to the growth of output, saving and investment. A more equitable distribution of income and wealth might not only strengthen the inducements to work, save and invest in the private sector but also make increases in the general level of taxation more socially acceptable.

The problem of investment allocation

In view of the scarcity of resources for investment, it is clearly most important that developing countries endeavour to make the best use of these resources. Waste of capital through the misallocation of resources or the poor management of projects is something which countries can ill afford. The present pattern of investment, moreover, goes far towards determining the level of future income, employment and investment.

Once this has been said, however, it must immediately be added that there is no generally applicable and well established set of principles for guiding the efficient allocation of resources for investment. The most appropriate allocation of resources is something which can only be decided within the conditions of each country; and this, moreover, will change for each country over time. The absence of any general set of principles, however, does not remove the fact that decisions must somehow be made on the basis of informed judgements. If any general criticism can be levelled against the present process of investment allocation in developing countries, it is that the relevant decisions are often reached without sufficient knowledge or perception of their consequences for social and economic development. Inefficiency in the allocation of resources for investment may arise because, for political reasons, these consequences are deliberately ignored. But another widespread cause is the lack of a well-articulated strategy for investment derived from thorough analysis of current social and economic conditions and future requirements for development.

One of the most difficult decisions that faces Governments in evolving a strategy for investment is the priority they should accord to the social as against the economic sectors. Previously, the choice used to seem relatively clear-cut. It was a decision between enhancing present welfare through investment, say, in health services, housing or other social amenities, and raising future output through investment in the productive sectors. However, as appreciation of the importance of non-investment factors has grown, this choice has become more complex and uncertain. Improvements in health standards, for instance, may be an elementary condition for raising levels of economic productivity in many countries. An added complication is introduced by the fact that the economic benefits of some so-called social programmes are of a long-term nature; and the programmes should therefore be decided within a long-term perspective, and by no means simply in terms of their contribution to present welfare. Education, for instance, is recognized to be of fundamental importance for long-term social and economic development. No country can reasonably decide its educational policy within a perspective of a few years, or even a simple decade. But the relative emphasis a country should give to education as against other social and economic investments is clearly a matter which can be based only on the broadest judgement about the requirements for social and economic progress. The analysis in manpower plans of present shortages and future requirements of skilled manpower helps in forming this judgement; but this alone does not offer an answer to the larger question of the role of general education in development.

It should be repeated, however, that though decisions about the broad allocation of resources between social and economic sectors have to be based on broad judgements, these judgements need not be arbitrary. They should be reached after as thorough study as information allows of the present constraints on, and future requirements for, development. Though the interrelation between social and economic factors in development is still a comparatively new field of research, some insights have been gained which should be brought to bear on investment decisions.

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[6] For a fuller discussion, see C. D. Amatong "Taxation of capital gains in developing countries", International Monetary Fund (IMF) *Staff Papers*, Vol. XV, No. 2 (July 1968).

[7] For further discussion, see FAO, *The State of Food and Agriculture 1967* (Rome, 1967), p. 106.

On the face of it, it would appear that a strategy for the allocation of investment within the productive sectors can be more firmly rooted in analysis. The pattern of future demand for industrial and agricultural products can be gauged and, on the basis of an evaluation of dynamic comparative advantage and existing constraints, the optimum structure of future production, exports and imports can be outlined. This method offers a foundation for investment allocation, particularly if provisions are made for adjustments necessitated by unforeseen development. Guidance for infrastructure investment can also, in principle, be derived from production plans.

The apparently systematic character of such investment planning is, however, to some extent spurious. Many developing countries are faced with a great lack of the kind of technical and economic information necessary to make investment choices. They have very few of the resource and geological surveys, the pilot agricultural projects, the industrial feasibility studies and similar pre-investment analyses which would inform them about the opportunities and requirements for investment. The information, analysis and research basis generally needs to be strengthened if resources for investment are to be allocated more efficiently.

In agriculture, for instance, many other measures besides investment are clearly essential for raising output but, as has been discussed in chapter II, there is still considerable uncertainty about the combination of measures best calculated to promote agricultural development. In these circumstances, the relative weight which should be given to agricultural investment in national development programmes is not easy to decide. However, it seems true that in many developing countries over the post-war years national development programmes have tended to give agricultural investment unduly low priority. In agriculture, unlike the other productive sectors, it has been possible to assume that measures other than public investment might often be sufficient to raise output. Another weakness has been a tendency to channel much of the public investment in agriculture into large-scale and therefore, easily identifiable, projects, such as large irrigation dams or land settlement schemes. Much of the required investment in agriculture, however, takes the form of large numbers of very small investment projects, such as local feeder roads, small irrigation works, or small processing plants and storage facilities. Weaknesses in the allocation of resources for investment to agriculture can only be eliminated if agricultural development programmes as a whole are strengthened. As has been discussed in chapter II, recent thinking and experience suggest that this can best be achieved through the construction of coherent programmes for individual districts or localities, the programmes being devised as a set of complementary, or sequential, measures which take account of all the relevant constraints on production. Within such a framework, investment requirements could be better assessed and investment resources more effectively utilized.

The need for careful appraisal of investment requirements before decisions on investment allocation are made applies with particular force to investment in infrastructure. Investment in infrastructure is usually among the largest of the undertakings confronting Governments at the earlier stages of their countries' development. Quite often, the existing production centres are separated from each other by inaccessible areas, a fact which poses a major obstacle to their incorporation into a single economic system. Unfavourable topographical and climatic conditions also add to the difficulty of establishing an adequate transportation and communications network in many tropical countries. What is true within countries is even more true with regard to links between countries within the subregions, a factor which stands in the way of greater intraregional trade.

The distinctive feature of investments in transport and communications, as well as in other sections of the infrastructure such as power and water, is their "lumpiness" or technological indivisibility. The high cost of such investments thus calls for particular caution in the allocation of resources to infrastucture. One relevant consideration which should be borne in mind is that many infrastructure investments may only partially contribute to productive activity, since they may rather serve to raise consumption standards. It is also important, particularly with regard to investment in transportation, to recognize that other measures often have to be taken simultaneously with the new infrastructure investment if the latter is, in fact, to raise productive activity. An obvious example is the construction of a road to open up a new area; if the inhabitants of the area are to be able to take advantage of the new opportunities thus created, the investment in the road may have to be part of a broader development programme. More generally, it may be said that, in view of the scarcity of resources for investment and the large outlays required by infrastructure projects, the creation of excess capacity in infrastructure facilities should not be countenanced, except in so far as it is made unavoidable by the indivisibility of the investment outlays. Probably no more resources should be allocated to investment in infrastructure facilities than is necessary to remove obstacles that have already emerged or can be very clearly foreseen as likely to limit the growth of productive activity within the immediate future.

No comments on investment strategy would be complete without reference to its interrelation with trends and prospects in foreign trade. As is well known, the long-term possibilities for raising levels of saving and investment depend not only on the willingness to save and invest but also on the capacity of the economy to supply the capital goods needed to realize investment. For most developing countries at the early stages of industrialization, this depends upon their ability to import. Being dependent mainly on primary commodity exports, however, countries are generally faced with slow growth in their foreign exchange earnings. Thus, to assure themselves of a sufficient and progressive expansion in supplies of capital goods, countries must either seek to increase their capacity to import through export promotion and import substitution of other goods, or endeavour to lay the foundations of a future, domestic capital goods industry. Most countries are likely to find it efficient to combine these alternatives to some degree. But the relative emphasis placed on export promotion, import substitution or a domestic capital goods industry must vary from country to country, depending on such factors as its size, stage of industrial development and foreign trade prospects. What is important, however, is that each country should form a strategy for structural changes in the economy which will help to ensure that future levels of investments are not depressed by the inability to procure sufficient capital goods. If the current pattern of investment is not guided by an analysis of future requirements, the ability to sustain economic growth is likely to be impaired. It is well known that such analysis is likely to reveal the need for the creation of arrangements for regional co-operation or integration in order to permit the development of domestic capital goods industries. This is particularly true among many of the smaller developing countries with limited foreign trade prospects.[8]

International economic assistance and capital flows

The concept of economic assistance to the developing countries as a joint responsibility of the economically advanced countries was formally recognized by the United Nations General Assembly in its resolution 1522 (XV) adopted in 1960. In this resolution the hope was expressed that "the flow of international assistance and capital should be increased substantially so as to reach as soon as possible approximately 1 per cent of the combined national incomes of the economically advanced countries". This was followed in 1961 by the launching of the First United Nations Development Decade in which economic assistance was expected to play a major role. In fact, the achievement of the 1 per cent target for resource transfers has come to be regarded as a measure of the concern of the developed countries for development and a condition for the success of the Development Decade.

The inception of the First Development Decade occurred at a time when the flow of official and private resources from the developed market economies had attained a new peak of approximately $9 billion after two years of exceptionally rapid expansion. In the years after 1961, the rate of expansion slowed down; and from 1961 to 1967, the average annual increase was only of the order of 4.5 per cent, or some 3 per cent in terms of constant prices (see table 16). During that period the combined gross domestic product in constant prices of the developed market economies increased at an average annual rate of 4.9 per cent so that the ratio of resource transfers to gross domestic product was lower in 1967 than at the beginning of the decade. As of 1967 the 1 per cent target had not been fulfilled.

Though the transfer of resources has not measured up to initial hopes, much has nontheless been learned in recent years about the development process and the effective planning and utilization of economic assistance. Moreover, the financial and technical assistance which the developing countries have received in the past decade has certainly made them better able to employ increasing amounts of new capital productively. It is therefore all the more regrettable that public and political support for economic aid programmes in the developed countries has weakened considerably. This can be partly explained by factors such as preoccupation with balance-of-payments problems, the pressure of domestic demands on resources and, in some cases, mounting defence expenditure. But there has also developed a sense of frustration about the failure of economic assistance to produce quick results. There is no denying the fact that aid has sometimes been wastefully used, but disappointment with results has been more often due to unrealistic expectations. The causes of economic underdevelopment are complex and deep-rooted and the transformation and modernization of stagnant economies is a lengthy process requiring co-ordinated and sustained efforts at the national and international level. Limited amounts of financial aid and technical assistance cannot reasonably be expected to produce dramatic improvements in a few years. It would deal a hard blow to relations between developed and developing countries if, at the commencement of the Second Development Decade, when the developing countries are better placed to execute the

[8] Efficiency in the use of resources for investment raises many other issues which it has not been possible to discuss here. One such, however—the question of the choice of techniques—has been examined in chapter II.

Table 16. Developing countries:[a] net receipts of external resources from all sources, 1960-1967

Source or item	1960	1961	1967	Average annual rate of increase	
		(Millions of dollars)		1960-1967	1961-1967
				(Percentage)	
Developed market economies:					
Total	7,307	8,398	10,236	5.0	3.3
Public	4,329	5,277	6,213	5.3	2.4
Private	2,978	3,121	4,023	4.5	4.3
Centrally planned economies	200[b]	300[b]	(350)[b]	7.2	1.9
Multilateral agencies	284	252	1,060	17.9	27.5
Total[c]	7,797	8,955	11,646	5.9	4.5
World export prices for manufactures (1960 = 100)	100	101	109	1.3	1.3
Net receipts in 1960 prices	7,797	8,866	10,665	4.6	3.2

Source: Centre for Development Planning, Projections and Policies of the United Nations Secretariat, based on data from OECD, *1968 Review, Development Assistance, Efforts and Policies of the Members of the Development Assistance Committee* (Paris, 1968) and from the Statistical Office of the United Nations.

[a] In this table, the term "developing countries" includes, in addition to those in Africa, Asia and Latin America, the following European countries: Cyprus, Greece, Malta, Spain, Turkey and Yugoslavia. In the United Nations, these six are not considered as falling within the category of developing countries.

[b] Development Assistance Committee estimate.

[c] Includes small unallocated receipts.

policies and programmes necessary for development, international financial assistance were to cease to grow.

Assistance requirements and the prospective availability of resources

The question of the quantity of external resources that will be needed by developing countries in the 1970s in order to achieve a given rate of economic progress is, of course, of particular relevance in the context of the formulation of an international development strategy for the Second Development Decade. There is, unfortunately, no simple way of estimating requirements for external capital. Development planners and aid agencies have attempted to make projections on the basis of various growth models, but it has to be recognized that the estimates are subject to major qualifications. One of the difficulties about such estimates is that the available statistical data relating to the economic trends and structure in the developing countries are limited both in time and coverage, as well as often being of questionable reliability. But more important than the accuracy and range of empirical data is the fact that some of the strategic factors in the development process are not yet fully understood or are not quantifiable. There are consequently important differences in the views held by planners and students of economic development on the role of various factors in the development process; and this is not least the case with respect to views about the role of saving, investment and external resources.

Most of the attempts to estimate global requirements of external resources are based on the concept of resource gaps; these are measures of the shortfall in resources between the amounts likely to become available from domestic sources to finance investment or imports and the amounts required to support a postulated rate of economic growth. It is assumed that unless these resource gaps are filled by means of an inflow of foreign capital the target growth rates cannot be achieved. In the preceding section preliminary estimates have been given of the saving gap that might emerge if investment in developing countries were to rise to levels consistent with the attainment by 1980 of minimum rates of growth in total output of 6 to 7 per cent per annum. Comparable provisional estimates have been made of the possible foreign exchange gap. These suggest that, on the basis of certain specified assumptions,

> "a group of countries accounting for between about five-sixths and just over three-fourths of the total postulated gross domestic product of developing countries in 1980 would have a foreign exchange gap of between $27 and $32 billion or about 6 to 7 per cent of their own total gross domestic product."[9]

[9] "Developing countries in the 1970s: preliminary estimates for some key elements of a framework for international development strategy" (E/AC.54/L.29/Rev.1).

It will be noted that the "foreign exchange gap" estimates generally show greater shortfalls than the "saving gap" estimates, which suggests that foreign exchange scarcity is likely to be a more severe limitation on economic growth in the 1970s than is a scarcity of domestic saving.

As indicated earlier, present prospects for a rapid expansion of the total net flow of external resources to developing countries are not favourable. The increase in resource transfers since 1960-1961 has not kept pace with the growth of the gross national product of developed countries; and with few exceptions, the donor countries still fall appreciably short of the attainment of the 1 per cent United Nations target (see table 17). If the net flow were to continue to increase in the coming years at the same rate as in the period 1961-1967, the total net transfer of resources to developing countries in 1980 would only amount to some $17.5 billion (in 1960 prices). This would be roughly equivalent to the estimated saving gap of the developing countries with shortfalls in domestic saving assuming that their minimum rate of economic growth were increased gradually so as to reach 6 per cent by 1980. It would fall short of the hypothetical saving gaps of deficit countries at terminal growth rates higher than 6 per cent and it would be nowhere near the magnitude of the projected foreign exchange gaps.

Table 17. Net flow of official and private financial resources from developed[a] to developing[b] countries as a percentage of gross national product, 1960 and 1967

Country	*1960*		*1967*	
	Total	*Public*	*Total*	*Public*
Australia	0.38	0.38	0.70	0.64
Austria	0.09	—	0.45	0.36
Belgium	1.59	0.88	0.80[c]	0.51
Canada	0.39	0.20	0.44	0.37
Denmark	0.64	0.09	0.21	0.23
France	2.19	1.40	1.24	0.76
Germany, Federal Republic of	0.88	0.49	0.95	0.46
Italy	0.88	0.31	0.43	0.30
Japan	0.58	0.26	0.74	0.34
Netherlands	2.11	0.31	1.01	0.51
Norway	0.23	0.22	0.37	0.19
Portugal	1.46[d]	1.46	1.78	1.06
Sweden	0.37	0.05	0.55	0.27
Switzerland	1.83	0.04	0.78	0.02
United Kingdom	1.22	0.56	0.79	0.45
United States	0.75	0.54	0.70	0.47
Total DAC countries[a]	0.89	0.54	0.75	0.46

Source: OECD, *1968 Review, Development Assistance; Efforts and Policies of the Members of the Development Assistance Committee* (Paris, 1968).

[a] Member countries of Development Assistance Committee.

[b] In this table, the term "developing countries" includes, in addition to those in Africa, Asia and Latin America, the following European countries: Cyprus, Greece, Malta, Spain, Turkey and Yugoslavia. In the United Nations, these six are not considered as falling within the category of developing countries.

[c] Excluding reinvested earnings.

[d] Development Assistance Committee estimate.

It should be further noted that the figures of net flow cover transactions with all developing countries including investments in countries expected to have saving and foreign exchange surpluses. Since the countries with surpluses include most of the major petroleum exporters which are large recipients of foreign private direct investment capital, the shortfall of external resources available to the countries with deficits in relation to their resource gaps would be substantially larger than the above estimate suggests.

It is clearly a matter of the greatest urgency that the United Nations target for resource transfers be attained with a minimum of delay in accordance with the recommendations of several international bodies.

Qualitative aspects of the flow of external resources

While it is to be hoped that developed countries will make every effort to increase the volume of aid as rapidly as possible, it is also important that

the quality of aid programmes should be progressively improved. There are many aspects of existing economic assistance programmes which are known to limit the efficiency of the resources supplied to developing countries. In the paragraphs which follow, some comments regarding possible improvements are made with respect to the programming of assistance, the terms of assistance, and the institutional framework for assistance.

Programming of assistance

The programming of assistance involves decisions on the distribution of aid among developing countries, its allocation to projects, sectors or purposes within a country, and the time-path for distribution of a given amount of aid.

There is very little co-ordination among aid-giving countries with respect to criteria for the selection of aid recipients. Furthermore, the selection by most of the individual donors is usually influenced more by established political or commercial relations or by strategic consideration than by economic criteria. For instance, in the years from 1960 to 1965 some 90 per cent of French official assistance went to French dependencies and associated States; virtually all the United Kingdom assistance was allocated to countries in the sterling area; some three-fifths of United States assistance was directed to countries in Asia and Latin America with which the United States has special links; Japanese assistance was almost exclusively given to countries in the Asian region; and Italian assistance went predominantly to former dependencies and to countries in the Mediterranean region with which Italy has close commercial links. Among the major aid-giving countries, the Federal Republic of Germany was the only one to distribute assistance widely throughout the developing regions.

Several criteria for a more rational allocation of assistance have been suggested It has been variously argued that assistance should be tied to the recipient's performance as measured by a set of standardized indicators; that it should be concentrated on countries which are far advanced on the way to self-sustaining growth, or that it should be given to countries with low *per capita* income which are presumed to be most in need of supplementary resources. Again, there are those who favour a combination of equity and performance criteria as the basis for allocation: a minimum of assistance to be given to all developing countries with additional aid allocated on the basis of some kind of indicator of effort or performance.

Since political factors are inevitably present in the choice of the countries which are to receive bilateral assistance, it would probably be fruitless to attempt to establish hard and fast rules to guide national Governments in the allocation of assistance. The most promising approach to the achievement of a more rational distribution of assistance is probably the channelling of an increasing proportion of those resources, which are to be devoted specifically to development financing, through multilateral agencies. The smaller donor countries whose contribution to international economic assistance has increased significantly in recent years, have already adopted this course of action and there is a possibility that some of the larger countries may similarly direct more of their aid through these agencies in the future.

Another trend in aid policies, which could usefully be developed more extensively, has been the increase in the proportion of assistance provided as programme loans within the framework of development plans. It was the encouragement given to developing countries in the early 1960s to prepare comprehensive development plans which first initiated this trend. But it has been reinforced in more recent years by the general change in attitudes towards development problems and policies. Much more emphasis has come to be placed on the role in development of such non-investment factors as institutional reforms, improvements in health standards, the extension of general educational and vocational training, and the development of technological research. At the same time, the concentration on industrialization has given way to a more balanced outlook in which agricultural development has been accorded higher priority. These changes have progressively altered attitudes towards economic assistance programmes, and these have ceased to be regarded simply as means of supplementing domestic resources for investment or of alleviating foreign exchange scarcity. The practice of financing investment projects, or the import content of projects, which was consistent with the "resource gap" approach to external development financing, has been increasingly replaced by programme assistance. Such assistance is better suited to the financing of the various types of development expenditure now recognized to be as important as fixed investment in promoting growth. The increasing volume of assistance concurrently being provided in the form of technical aid forms part of this change in outlook. It should be noted that the shift from project to programme financing heightens the need for the co-ordinated programming of assistance from all sources to each country.

A further area in which the programming of assistance could be improved relates to its phasing. There is clearly an inconsistency between the emphasis on the preparation of medium-plans as a framework for the allocation of assistance and the inability of donor countries to make financial com-

mitments for more than a year at a time. Development is a continuous process and it requires advance planning of a steady stream of investments and inputs for the various sectors of the economy. The ability of Governments to plan these investments is seriously hampered by the uncertainty concerning the future availability of external financial assistance. The reason for these difficulties is that assistance programmes are financed by national budgets which normally do not permit long-term commitments. The solution to this problem lies in an extension by the legislature of the authority of aid administrations to make possible provisional commitments over a number of years. Such a system is now in operation in the Netherlands and similar arrangements were in effect in the Federal Republic of Germany in the early 1960s. It is to be hoped that, as part of their countries' contribution to the Development Decade, legislatures in other donor countries might be persuaded to relax the provisions limiting aid commitments to one year periods.

The terms and conditions of assistance

The widespread practice of trying financial assistance to purchases in the country supplying the funds is a major source of inefficiency in international development financing since it deprives recipients of the possibility of buying from the most economical source of supply. The real value of a given financial contribution may thus be diminished, and if the contribution takes the form of a loan, the recipient may be obliged to service an inflated debt. Furthermore, the restriction of procurement to supplies from one country may mean that the recipient country has to accept equipment and a technology which may be inappropriate for its purpose.

The losses attributable to aid-tying are known to be quite substantial. A study of the problem in Pakistan, for example, estimated that in the years 1961-1963 when the country had received approximately $500 million annually in external assistance, some $60 million, or 12 per cent, could have been saved each year had the Government been free to use aid receipts for procurement from the cheapest source.

The extent to which procurement restrictions reduce the real content of a given amount of financial assistance depends on a number of factors, including the international competitiveness of the donor country's industry. However, no country has a cost and price disadvantage in all its export products and, so long as the recipient of assistance is free to choose the products to be purchased with a given amount of tied assistance, it can reduce its "loss" by a judicious selection of items. If, on the other hand, assistance is tied not only to procurement in the donor country but also to the purchase of specific items, the recipient must bear any possible "loss" resulting from the fact that the prices of those items in the donor country are higher than in other countries.

The tying of assistance to purchases in the donor countries has been motivated by a variety of considerations, political as well as commercial and economic. Among these the desire to limit the adverse effect of assistance on the balance of payments of the donor country has been widely accepted as an adequate justification for resorting to this practice. It is certainly true that in a situation of persistent balance-of-payments disequilibrium, the granting of untied aid can aggravate the imbalance; and in these circumstances the tying of assistance reduces the strain. By no means all donor countries, however, are faced with a situation of persistent disequilibrium in their balance of payments; and the granting of untied assistance by a country whose external transactions are normally in balance should not by itself cause a serious and persistent deterioration of its balance of payments. Moreover, even where a persistent disequilibrium exists, the effect of aid-tying in lessening the imbalance is circumscribed by several factors; the tying of assistance to purchases in the donor country does not reduce the donor's external imbalance by an amount equivalent to the assistance given. First, it is generally true that part of the aid would, in any case, have been spent by the recipient in the donor country. Secondly, another part would, in any case, have eventually returned to the donor country through multilateral transactions. Thirdly, when aid is tied, the recipient may be able to use some part of the tied credits for the purchase of goods which it would normally have imported from the donor country with its own foreign exchange earnings, thus freeing the latter for the financing of imports from other sources. To the extent that such substitution has been possible the tying of assistance does not lessen its adverse effect on the balance of payments of the donor country. Measures to reduce possibilities for substitution which have been applied do not appear to have produced significant results.[10]

While it is impossible to measure exactly the net effect of aid-tying on the donor country's balance of payments, there is evidence to suggest that the impact has in practice been considerably less than advocates of such restrictions suggest.

[10] For a description of new provisions introduced in the United States in 1968, see *The External Financing of Economic Development: International Flow of Long-term Capital and Official Donations, 1963-1967* (United Nations publication. Sales No: E.69.II.D.10). Those provisions regarding "additionality" have more recently been modified

Considering the limited value of aid-tying as an instrument for dealing with persistent balance-of-payments disequilibrium and its disadvantages for the recipient countries, donor countries might consider joint action on the matter with a view to its eventual elimination.

Until such time as this may become possible, techniques might be developed for combining tied financing with the practice of international competitive bidding. These and other means for mitigating the unfavourable consequences for developing countries of aid-tying are being actively explored by the International Bank for Reconstruction and Development (IBRD) as well as the Development Assistance Committee of OECD.

Another important aspect of external assistance lies in the financial terms on which assistance is given. Since the servicing of external debt reduces the amount of resources available to the borrowing country for its own development, other things being equal, the real contribution of a given loan to the recipient's economic growth is determined by the interest rate and the terms of repayment.

In recent years the financial terms of official assistance have become harder. Furthermore, as the supply of official funds has tended to rise more slowly, developing countries have increasingly resorted to relatively short-term private export credit facilities involving much higher interest rates than those attached to public loans. The deterioration in the terms of assistance together with the fact that the sharp increase in external borrowing in the late 1950s and early 1960s began to give rise to a growing volume of amortization payments as grace periods came to an end, has caused debt-service payments to rise very rapidly in the 1960s. Thus, since 1963, debt service on the public debt and publicly guaranteed private export credit has increased at an annual rate of over 12 per cent (table 18), nearly three times as fast as the gross domestic product and about twice as fast as the exports of developing countries. Whether the burden of debt servicing is measured in relation to the total economic resources or to foreign exchange receipts, it has clearly become heavier. Furthermore, by 1967, debt service was equivalent to 42 per cent of gross disbursements of official and government-guaranteed funds, an increase by 9 percentage points since 1963.

The World Bank Group has estimated that even if there were no expansion in the net annual flow of official funds from North America, Western Europe and Japan beyond the 1967 level of $6 billion and if the terms and composition remained unchanged by 1980, the service on the public debt would nonetheless be 1.7 times its level in 1968. In this respect the implications of the early attainment of the 1 per cent United Nations target would be very serious indeed unless existing debt-service terms were made substantially easier. If, to take a hypothetical case, the United Nations 1 per cent target were to be attained in 1969, if official flows were to account for the same proportion of net flows as at present, if the gross national product of developed countries were to grow at a constant annual rate of 5 per cent in the subsequent years, and if the terms and composition of the debt were to remain unchanged, the service on official debt in 1980 would be 2.5 times the 1969 level, and the gross official flow required in 1980 to attain the 1 per cent target for the net flow would have to be 2.5 times its 1969 volume. Since the bulk of resources for bilateral development assistance programmes is provided within the framework of national budgets and budgetary appropriations are normally made on a gross basis, the legislatures in donor countries would have to agree to a more rapid expansion in aid budgets than is implicit in the 1 per cent target for net resource transfers. This would certainly add substantially to the difficulty of implementing the United Nations target.

In an effort to ease the debt-servicing burden and to achieve a certain degree of homogeneity in the terms on which aid is supplied by the developed countries in Western Europe, North America and Japan, the member countries of the Development Assistance Committee of OECD adopted a recom-

Table 18. Debt-service payments on external public debt[a] of developing countries, 1963-1967

(Millions of dollars)

Region	*1963*	*1967[b]*	*Average annual rate of increase 1963-1967*
Africa	192	413	21.0
Asia (including Middle East)	542	900	13.5
Latin America	1,333	2,007	10.8
Total above	2,067	3,320	12.6
Grand total[c]	2,317	3,643	12.0

Source: IBRD/International Development Association *Annual Report 1968* (Washington, D.C.).

[a] External public debt consists of obligations of the central Governments and their political subdivisions and agencies as well as private debt guaranteed by the said Governments and/or agencies, excluding IMF drawings.

[b] Projected.

[c] Including estimates for twenty-one countries not comprised in previous total.

mendation in 1965[11] which was designed to improve and unify the financial terms of assistance over a period of three years. As of the end of 1967, unfortunately, the provisions of the recommendations had not been put into effect by several of the member countries and in that year the average terms for the group as a whole were harder than they had been in 1964 before the Development Assistance Committee recommendation was adopted (table 19).

Institutional arrangements

The fragmentation of assistance, involving some thirty separate sources and about three times as many recipients of assistance, is a major obstacle to greater efficiency; for this reason the strengthening of co-ordinating machinery is of great importance. Better co-ordination is needed at the aid-giving level where divergences persist in spite of some substantial achievements within the framework of the Development Assistance Committee. In this connexion the consortium approach appears to have been by far the most successful because it has involved an implicit commitment to co-ordinate the allocation of assistance by all participating countries and agencies. The consultative groups and other aid-co-ordinating machinery have also proved useful in improving communications between those providing assistance and the developing countries. This in turn has resulted in a better understanding of plan priorities and has made for improved aid-programming even in the absence of any firm commitment to joint action on the part of the participating developed countries and multilateral agencies. Better co-ordination is also needed at the recipient level both among local representatives of donor countries and agencies and among the various agencies of the local government which are involved as recipients of assistance. A well-staffed and efficient service within the Government of the recipient country is required to co-ordinate projects put forward by individual government departments, to establish priorities, and to negotiate with agencies supplying assistance. If an effective local service is not available, the role of any co-ordinating machinery set up by donors becomes correspondingly more important. But the idea that such a body should take over part of the local government's responsibility for certain aspects of national planning and plan implementation should be discouraged. The aim of any co-ordinating body of aid agencies should be to assist, if necessary, in setting up local machinery and to confine its own activities to the day-to-day problems relating to the execution of the various projects or programmes.

[11] In February 1969, members of the Development Assistance Committee recommended further action for the improvement of assistance terms

The role of private foreign investment and lending in development financing

Private direct investment, traditionally the main source of external capital for the development of the export sector of developing countries, now also accounts for a substantial proportion of investment in manufacturing industries catering to the domestic market. Since such industries do not earn foreign exchange and since their over-all impact in reducing import outlays is often quite small, the transfer abroad of the profits they earn may become a significant burden on the balance of payments. It is therefore particularly important to ensure that new foreign investment is consistent with the host country's developmental priorities and that the terms on which it is undertaken are such as to achieve the greatest possible impact on the development of the local economy.

Developing countries, in their eagerness to promote industrialization, may approve foreign investments which, for one reason or another, are not in the best interest of their economic development. The proposed enterprises may be unable to operate profitably without excessive protection: they may produce luxuries whose consumption absorbs resources needed for productive investment; or, as often happens with subsidiaries of foreign companies, plants may be established exclusively to supply the domestic market in the host country even though it may be in the interest of the country to establish industries with future export possibilities. Primary responsibility for the approval of proposals for the establishment of foreign-controlled enterprises rests, of course, with the host country. But the Government of the capital exporting country could also help, especially if it operates an investment guarantee or similar scheme to encourage investment in developing countries. Applications for guarantees might be screened by the aid agency from the standpoint of the consistency of the proposed investment with the recipient's developmental priorities and its balance-of-payments position. The criteria employed in screening applications for investment guarantees usually differ from those applied in connexion with the allocation of official funds under assistance programmes, as indeed do those used in the case of applications for export credit guarantees. This is to some extent inevitable since the guarantee schemes are designed primarily to protect the interests of nationals of the capital exporting country. An effort might nonetheless be made to achieve a measure of co-ordination between the allocation of assistance and the promotion of private investment.

The value of private direct investment in the financing of economic development is increasingly recognized. Because it usually introduces new tech-

Table 19. Aid-terms:[a] degree of compliance with development assistance recommendations of 1965

Country	Donations as percentage of total			Donations and loans at 3 per cent interest as a percentage of total			Donations and loans with 25 year maturities as percentage of total			Weighted average grace period (in years)		
	1964	1965	1967	1964	1965	1967	1964	1965	1967	1964	1965	1967
United States	57.9	61.7	56.1	89.8	82.3	83.3	89.0	83.0	80.6	7.7	5.9	6.7
France	80.4	79.8	72.6	88.7	83.3	76.0	82.7	81.9	74.5	3.1	2.8	1.3
Germany (Federal Republic of)	49.5	42.6	35.3	78.3	70.5	68.0	62.4	47.5	66.9	4.4	3.6	4.9
United Kingdom	54.4	55.2	57.2	60.8	70.2	89.8	91.8	84.4	95.6	5.1	4.8	5.5
Japan	50.8	37.2	37.6	50.8	51.6	37.6	50.8	37.2	37.6	4.5	2.4	4.7
Total, member countries of Development Assistance Committee	60.0	60.3	54.9	84.2	78.6	78.5	84.1	75.4	75.0	6.4	4.5	5.3

Source: See table 17.

[a] The Development Assistance Committee recommendation of 1965 provides that member countries should either provide at last 70 per cent of assistance as donations or:

(i) Provide at least 81 per cent of assistance as donations and loans at interest rates not exceeding 3 per cent;

(ii) Provide at least 82 per cent of assistance as donations and loans with maturities of 25 years or more;

(iii) Provide a grace period of at least 7 years (later revised to 6.4 years) for all loans.

nology and skills, the contribution of direct investment to economic development often far exceeds the quantitative addition it makes to fixed capital formation. There are, nonetheless, many more possibilities for increasing its over-all impact on the host country's economy which could be further developed. One is the establishment of joint ventures between foreign and domestic investors; these have proved highly successful in integrating the foreign enterprise more fully into the host country's economy. Foreign private enterprises might also be encouraged to transfer some of their industrial research activities to developing countries and to take a more active part in the training of local technical and managerial talent.

Besides direct investment, foreign private capital might also contribute more to development through portfolio investment. In view of the growing reluctance of legislatures in several donor countries to approve the allocation of public funds for development assistance, it may become necessary for developing countries in the coming years to resort increasingly to borrowing in the private capital markets of the developed countries. Some countries already raise such loans on their own credit, but the majority have thus far been unable to do so on reasonable terms.

All capital exporting countries restrict access to their market by foreign borrowers, usually for reasons not specifically related to capital transfers to developing countries. The terms on which access is granted vary widely and there would clearly be an advantage in unifying the prevailing practices. Since the international credit standing of many developing countries is low, the terms on which they might be able to borrow in the private market are likely to be too onerous to make financing from this source practicable. It has therefore been suggested that developed countries might set up machinery to guarantee loans from private sources and establish a fund from which commercial interest rates might be subsidized.[12] This possibility merits further consideration

Private foreign capital is also channelled to developing countries through export credits. Export credits with or without government guarantees have come to account for an increasing share of the flow of funds to developing countries. Most developed countries operate export credit guarantee schemes which are primarily designed as a means of promoting national exports. These credits have been used to an increasing extent by developing countries to finance investment through purchases of imported capital goods. Although the maturity periods for such credits have been lengthened with their increased use in the financing of trade in capital goods, they are not of sufficient duration to warrant their use for the financing of investment projects with a long gestation period. In a number of developing countries, extensive resort to export credit financing has created an external debt with a highly unfavourable maturity structure which has given rise to repeated debt-servicing difficulties.

Since export credit guarantees are issued primarily to assist domestic exporters, Governments in developed countries do not usually scrutinize these credits from the standpoint of their impact on the borrowers' economy and balance of payments. The borrowers for their part have often resorted to this mode of financing in cases where funds from other sources were not available. Both sides to these transactions have then, for different reasons, tended to use export credits in a manner which was not in the best interest of the developing countries. It is incumbent upon developing countries to exercise stricter control over the financing of imports with export credits. At the same time the introduction of more stringent regulations concerning the granting of government guarantees in the exporting country may be necessary if the problem of excessive and inappropriate use of export credits is to be solved.

Continuity of economic development: the role of compensatory and supplementary financing

Instability of commodity prices and the resulting fluctuations of export receipts constitute a major threat to economic development in developing countries. International commodity arrangements can help to iron out price fluctuations, but such agreements have been in operation only for a small number of major export commodities and in some cases their results have been disappointing. In recent years new means of dealing with the problem of export instability have therefore been explored and developed. A number of proposals for compensatory financing schemes have been put forward and studied in the past decade. Some of these were based on the idea that developed countries, being "responsible" for fluctuating commodity prices and the deteriorating terms of trade of primary commodity exporters, have an obligation to provide compensation. This idea has been categorically rejected by the developed countries but they have recognized the disruptive effect of export fluctuations on economic development and the need for international financial facilities to deal with this problem. Since these fluctuations are unpredictable

[12] This proposal was put forward by Governor Horowitz of the Bank of Israel at the first session of UNCTAD which recommended that a study be made of the proposal by IBRD. This study was subsequently published by IBRD under the title *The Horowitz Proposal, A Staff Report* (Washington, D.C., February 1965).

and the movements are usually of relatively short duration and reversible, it was considered that the provision of compensatory finance under existing facilities for long-term development assistance would interfere with the smooth operation of assistance programmes. On the other hand, it was recognized that the conditions of access to IMF credit facilities, designed to deal with problems of short-term imbalance, were too restrictive to meet the particular needs of developing countries. In 1963, IMF therefore established a new compensatory arrangement which was further expanded in 1966. The conditions for exercising the new rights are more liberal than those applying to the use of basic IMF facilities. Such credits are normally repayable in five years.

Following a recommendation of the first Session of UNCTAD in 1964, IBRD prepared a study[13] which concluded that special financial facilities to deal with the impact on development of unexpected reductions in export receipts were both desirable and feasible. The proposed scheme would provide financing in the event of export shortfalls within the context of a country's development programme. Access to the scheme would not be automatic but contingent upon "the implementation of development programmes and related policies previously agreed with the agency". A developing country wishing to avail itself of the proposed facility would also have to enter into an agreement with the agency concerning the expected growth of its exports and the adjustments to export shortfalls which could be made without disrupting the agreed development programme. The IBRD proposal called for the financing to be provided on terms consistent with the borrowing country's debt-servicing capacity. It was assumed that most of the assistance would take the form of loans on particularly easy terms. A series of intergovernmental meetings were subsequently convened by UNCTAD to discuss the IBRD scheme and alternative more limited proposals for the establishment of supplementary financing facilities, but no scheme has thus far been adopted.

Whatever the merits and deficiencies of IBRD and other schemes may be, they seek to fill a serious gap in the existing international machinery for development assistance. While it is hoped that trade measures and steady economic growth in the developed countries will achieve a high degree of stability in world commodity markets in the 1970s so that the need for compensatory or supplementary financing will be minimized, it is nonetheless important to have appropriate facilities available when the need for them arises.

[13] IBRD, *Supplementary Financial Measures* (December 1965)

External trade

The relationship between external trade and economic development has been the subject of so many studies that it is unnecessary to re-examine the question in the present context. It is sufficient to say that a steady expansion of exports is a necessary condition for sustained economic progress; an adequate supply of foreign exchange is essential to finance the imports of capital equipment and other goods needed for investment and economic growth, and a prosperous export sector is important as a major source of monetary income and saving in developing economies. However, a favourable export performance does not by itself automatically ensure economic progress: there are many developing countries today where economic development has not taken hold in past decades despite growing exports. If expanding exports are to have a lasting effect, the saving generated in the export sector and the foreign exchange earned need to be effectively utilized in the interest of the growth of the economy as a whole.

Export trends

In the first half of the 1960s, the volume of merchandise exports from developing countries increased at an average annual rate of over 6 per cent compared with about 5 per cent in the preceding decade. The improvement in the export performance gave rise to a more optimistic mood regarding export prospects than had prevailed for some time in the past. Looking back on the period 1960-1965 from the vantage point of 1969 it is clear, however, that the better export performance of the developing countries was primarily attributable to the substantial acceleration in economic growth of the developed market economies. The annual average rate of growth in the combined gross domestic product of these economies increased from 3.6 per cent in the decade of the 1950s to 4.9 per cent in the period 1960-1965. It seems unlikely, however, that this rate can be sustained indefinitely; in fact, the average rate for the three years from 1966 to 1968 was appreciably lower.

The effect of economic growth in developed countries on demand for the exports of developing countries varies substantially among commodities. Thus, on the basis of post-war experience, it has been provisionally estimated that an increase of one per cent in the gross domestic product of the developed market economies normally raises their imports of food-stuffs from developing countries by 0.6 per cent, imports of agricultural raw materials by 0.5 per cent, and imports of fuels by 2.4 per cent (see table 20). In other words, for most primary commodities other than fuels, import demand generally lags behind the growth of income in the importing countries.

In contrast to the demand for most primary commodities, the demand for manufactures in the developed countries grows strongly and the recent export performance of developing countries in this field has been very favourable. In fact, since 1960, exports of manufactures from developing countries have increased faster than world trade in manufactures (see table 21). The expansion of these exports accounted for almost one-third of the total increase in the value of exports from developing countries, although the share of manufactures in their total exports was only about 14 per cent in 1960.

Many of the manufactured products exported by the developing countries are processed or semi-finished products such as metals, chemical materials, or wood-products, used by industry in the developed countries. Demand for these products is to a large extent subject to the same influences as the demand for the raw materials which they incorporate, being notably subject to considerable short-term fluctuations. It has nonetheless been an important step forward for developing countries that they have been able to export a growing share of the materials they produce in a processed or semi-manufactured form. It is to be hoped that the gains made in the recent period of rapid economic expansion in the developed countries may not be lost through the adoption of measures to protect domestic producers in the event of a slackening in the pace of economic activity.

Table 20. Developed market economies: coefficients of import elasticity

Commodity class	*Elasticity*
Food, beverages, tobacco (SITC 0 + 1)	0.6
Crude materials, oils and fats (SITC 2 + 4)	0.5
Fuels (SITC 3)	2.4
Manufactures (SITC 5-8)	1.9
Total, excluding fuels	0.8

Source: Centre for Development Planning, Projections and Policies of the United Nations Secretariat, based on data from Statistical Office of the United Nations and national sources for the years 1953-1965

The expansion of exports of manufactured goods has not been confined to these industrial products. A number of the industrially more advanced developing countries have also been able to increase exports of a variety of finished manufactures, even including such items as electrical apparatus, machinery, passenger cars, and bicycles. Exports of these goods have generally increased much faster than the more established and much larger textile exports, which have been affected not only by lagging demand in the export markets but also by import restrictions.

The shift in the composition of exports towards processed and manufactured goods, which has become quite marked in recent years, appears to reflect a longer term trend. Since the second half of the 1950s the share of manufactures, including base metals, in the exports of developing countries has steadily increased from an average of 13 per cent for the years 1955-1959 to 15.5 per cent for 1960-1964, and to 19.7 per cent for 1965-1967 (see table 22). Part of the increase in the 1960s has been due to changes in price relationships between primary products and manufactures; in particular, the rapid rise in prices of non-ferrous metals in recent years has enlarged the share of manufactured products in the value of exports of developing countries. But even when allowance is made for this factor, there has been a significant shift in the composition of exports towards more fabricated and manufactured goods. This seems to suggest that developing economies may have made a modest beginning in adapting their production and trade to the changing pattern of world demand. Though for most individual develop-

Table 21. Developing countries: share in world exports by commodity classes, 1960 and 1966

(Percentage)

Commodity class	*1960*	*1966*
Food, beverages and tobacco	36.2	31.9
Raw materials	35.8	32.6
Fuels	60.5	63.7
Manufactures	5.5	6.2
Base metals	12.4	14.7
Textile manufactures	14.7	15.5
Metal products	2.2	3.2
Chemicals	3.9	4.5
Machinery	0.7	1.0
Other manufactures	6.7	8.9
Total exports	21.5	19.0

Source: See table 20

Table 22. Developing countries: commodity composition of exports, 1955-1967

(Percentage)

Commodity class	*1955-1959*	*1960-1964*	*1965-1967*
Food	32.1	29.6	27.3
Raw materials	27.5	25.2	21.3
Fuels	27.4	29.7	31.7
Manufactures:	13.0	15.5	19.7
Chemicals	0.9	1.2	1.6
Machinery and transport equipment	0.6	0.8	1.3
Textile manufactures	11.5	3.4	3.6
Base metals		5.0	6.5
Other manufactures		5.1	6.7
Total	100.0	100.0	100.0

Source: See table 20

ing countries the share of manufactures in total exports remains small, it has been rising in recent years (see table 23). And the number of countries exporting manufactures on a significant scale has been rising. The seven countries,[14] which have been

Table 23. Selected developing countries:[a] share of manufactures[b] in total exports, 1960 and 1966

(Percentage)

Country	*1960*	*1966*
Hong Kong	80	87
Israel	60	67
Korea, Republic of	14	57
China (Taiwan)	42	47
Pakistan	27	45
India	44	45
Singapore	21	27
El Salvador	6	23
United Arab Republic	12	21
Costa Rica	1	16
Mexico	11	15
Guatemala	3	14
Tunisia	10	13
Malaysia	3	11
Kenya	12	10
Philippines	3	9
Colombia	1	8
Brazil	2	6
Argentina	4	6
Honduras	2	6

Source: See table 20

[a] The countries listed account for 80 per cent of exports of manufactures excluding base metals; they are ranked in descending order of magnitude of the share in 1966.

[b] Excluding base metals.

dominant in exports of manufactures in the past have retained their primacy of place, but their share in the export of manufactures (other than base metals) from all developing countries declined from almost three-quarters in 1960 to a little over 60 per cent in 1966.

Import requirements

Post-war experience has amply demonstrated that there is a close relationship between the pace of economic growth and the capacity to finance import requirements. A rising volume of imports of capital goods, intermediate goods and other manufactures is essential to sustain economic growth. In fact, imports into developing countries over the post-war years have generally tended to increase at a faster rate than domestic output. This has been accompanied by a continuing shift in the composition of imports towards capital goods (see table 24).

[14] China (Taiwan), Hong Kong, India, Israel, Mexico, Pakistan and Singapore.

Table 24. Developing countries: commodity composition of imports[a] of developing countries, 1953-1965

(Percentage)

Imports	*1953-1955*	*1956-1960*	*1961-1965*
Total imports	100.0	100.0	100.0
Consumer goods	42.7	39.1	38.2
Food-stuffs	17.8	16.6	16.9
Other consumer goods	24.9	22.5	21.3
Intermediate goods	31.5	31.7	30.3
Capital goods	25.8	29.2	31.5

Source: *Trade Prospects and Capital Needs of Developing Countries* (United Nations publication, Sales No.: E.68.II.D.13).

[a] Based on data for merchandise exports from all sources to developing countries.

There is no doubt that, if the rate of economic growth in the developing countries is to be accelerated over the coming decade, the volume of imports will also have to increase more rapidly than it has in the recent past. Thus, it has been estimated on the basis of historical trends that, if the developing countries as a whole were to achieve an annual rate of growth in total output of 6 to 7 per cent by 1980, the corresponding annual rate of increase in imports might have to be in the range of about 7 to 8 per cent.[15] The actual rate of growth in imports over the period 1960 to 1965 was slightly more than 4 per cent, rising to about 5 per cent between 1965 and 1967.

Possibilities of improving the trade performance

By far the most important factor determining the exports of developing countries in the 1970s will be the rate of economic expansion in the developed countries. It has been provisionally estimated that a difference of .5 per cent in the annual rate of growth of the developed countries in the 1970s would be equivalent to over $10 billion in the annual export receipts of developing countries in 1980.[16] This is almost as much as the total net annual flow of capital and aid from the developed to developing countries in recent years.

However, even if the developed countries were to maintain the high rate of economic expansion which they recorded in the years 1960-1965—and this is generally considered to be unlikely—past performance does not suggest that the majority of developing countries would be able to expand their exports at a rate consistent with the increase in import require-

[15] "Developing countries in the 1970s: preliminary estimates for some key elements of a framework for international development strategy" (E/AC.54/L.29/Rev.1).

[16] In constant prices of 1960.

ments which would occur if their annual rate of economic growth were to be accelerated to between 6 and 7 per cent by 1980. In the long run the structural transformation which is an aim of development policy should solve the problem of lagging export receipts. As the economies of developing countries become more diversified and efficient, their dependence on exports of a few primary commodities will diminish and their ability to adjust the commodity composition of exports to changing world demand will increase. But the process of transforming a country's productive structure takes a long time and, while it is going forward, developing countries will need assistance from the international community in their efforts to accelerate the expansion of their exports.

International action for the promotion of exports from developing countries should have two main objectives: to help developing countries earn more foreign exchange from their traditional exports while they undertake structural changes in their economies; and to facilitate these structural changes by opening up the markets of developed countries to the new lines of production which the developing countries are establishing. International measures should also seek to ensure that in the long run world demand for primary commodities will be met from production in developing countries whenever these countries enjoy a comparative advantage. This, however, is subject to the proviso that it would clearly be undesirable to give developing countries priority as suppliers of primary commodities if this involved fostering uneconomic production or the expansion of productive capacity for commodities with poor long-term demand prospects. To do so would temporarily increase the exports of developing countries at the cost of perpetuating activities which are uneconomic or lacking in dynamism; it might also weaken efforts to bring about the necessary structural changes in the developing economies.

The manner in which developed countries can enlarge imports from developing countries depends on the extent of governmental control over imports and the ability of the Government to influence the decisions of consumers. In the developed market economies Governments can do relatively little to influence the pattern of domestic consumption or the choice of technology so as to increase domestic demand for certain primary commodities. But they can remove obstacles to the importation of primary products. The gradual reduction of protection for domestic producers of primary products or synthetic substitutes and the elimination of consumption taxes on imported products such as coffee or tea are among the measures recommended by UNCTAD and other international agencies for prompt implementation in this connexion. The early adoption of measures to give exports from developing countries a larger share of the market in the importing countries would facilitate such exportation at a critical phase in the development of the countries. In addition to measures designed to increase imports of primary products the developed countries could also use the elimination of tariff discrimination against imports of processed or semi-manufactured materials to promote exports from developing countries. Further, and perhaps most important of all, arrangements to secure for developing countries an increasing share of the market for manufactures could provide a powerful stimulus to their exports and to their industrial development. As a minimum, developed countries might agree to remove existing import restrictions on manufactures, such as those in force for textiles. A more far-reaching effort would include the granting of non-reciprocal tariff preferences to manufactures from developing countries along the lines recommended by UNCTAD. Ultimately, it may be possible to envisage a world-wide reallocation of productive capacity which would give manufacturing industries in developing countries an increasing share of the world market for selected manufactures in the production of which they have an advantage. Such a reallocation would in fact involve the planning of economic changes which in the absence of trade barriers would have been brought about by the operation of market forces.

The introduction of a system of non-reciprocal preferences for manufactures from developing countries would enable the latter to plan new industries on a scale which would allow for export possibilities and which would in many cases be more efficient than that of industries confined to the domestic market. The object of such a system would be similar to that of the protection of new industries at the national level. In both cases the purpose is to give support to weaker industries until they become sufficiently well established to operate without special protection. A preferential system for imports of manufactures from developing countries should not be regarded as a permanent feature of trade relations between developed and developing countries but one eventually to be discontinued. It may be necessary to set a time limit to the granting of preferences so as to ensure that the exporters benefiting from the preferences take the necessary action to increase productive efficiency.

In the centrally planned economies, there is also scope for direct governmental action to increase imports from developing countries. These countries have in fact undertaken to adopt appropriate measures at the second session of UNCTAD. They have notably agreed to take into account the production and export potential of developing countries in drawing up their plans; not to encourage the import of primary commodities from other sources whenever they are available on competitive terms in developing

countries; to undertake measures so that imports of manufactures and semi-manufactures from developing countries may constitute a growing element in their total imports of manufactures and semi-manufactures; and to refrain from re-exporting the goods purchased from developing countries, unless it is with the consent of the developing countries concerned.

While progressive structural change is needed to overcome the problem of stagnant or lagging exports, it would be a mistake to assume that nothing short of extensive industrialization will solve the trade problem of developing countries. In fact, for the majority of developing countries, there is little likelihood that exports of manufactures will become the major source of foreign exchange receipts in the foreseeable future. For some countries, depending on their resource endowment, diversification of the productive structure might focus on the development of new and efficient lines of primary production and related export-oriented processing industries in addition to the establishment of manufacturing industries. With increased productive efficiency and vigorous export promotion, even a traditional export product long thought to have unfavourable prospects can become a relatively good foreign exchange earner. In Pakistan, for instance, though the performance of cotton exports had been poor for many years, the combination of an expansion in output, improvements in quality and a dynamic export promotion drive resulted in a substantial increase in exports during the Second Five-Year Plan. If the major consumers of primary commodities have turned to synthetic substitutes or to materials produced in other developed countries to replace imports from developing countries, there is at least a possibility that increased productive efficiency, reductions in costs and improvements in quality may make it possible for producers in developing countries to retain their markets.

To compete successfully in world markets, developing countries need to undertake more research into various aspects of the production, processing, marketing and utilization of actual or potential export products. In this, as in the field of investment, they are frequently handicapped by their poverty and by the shortage of qualified personnel. Increased technical assistance in export-related activities, such as that undertaken by the International Trade Centre jointly set up by UNCTAD and the General Agreement on Tariffs and Trade, can, by increasing supplies of foreign exchange, yield particularly large benefits in terms of the economic growth of developing countries.

Expansion of trade among developing countries

The possibilities and problems of increasing trade among developing countries merit close attention. Increased trade among developing countries is, of course, not a direct substitute for an expansion of exports to developed countries, since developing countries are unable to supply each other with many of the capital goods and other complex manufactures needed to build up their productive capacity. But there are some commodities imported from developed countries which they could obtain from each other. By making increased use of these opportunities for reciprocal trade, developing countries could make a larger proportion of their foreign exchange earnings available for those imports which they can only obtain from the developed countries. In addition, an intensification of trade would also provide a stimulus—albeit a limited one to begin with—to production and employment and to the development of some specialization in industry among developing countries.

In the present section, the possibilities of general trade expansion among developing countries and the creation of more specific arrangements for trade co-operation among groups of countries are examined separately. In the former, the principal objective is to exploit existing specialization more fully, while in the latter, the main aim is to create new lines of specialization within the framework of a unified multinational market in order to promote both trade and development.

At the present time, trade among developing countries accounts for only about one-fifth of their total exports. More than one-third of such trade consists of petroleum exports from the main producing countries, chiefly in the Middle East and Latin America, to the rest of the developing countries (see table 25). This segment of trade is determined by the location of petroleum resources and its future growth depends partly on the development of petroleum resources in the importing countries. It appears, in fact, that the discovery of petroleum in the countries of Africa and south-east Asia in the present decade has substantially slowed down the earlier high rate of expansion of trade in fuels among developing countries.

Next in importance to fuels are food-stuffs and manufactured goods, each category accounting for somewhat less than one-quarter of the mutual trade of developing countries. In recent years trade in food-stuffs within the developing country group has expanded much more slowly than imports from developed countries, notably from the United States. The availability of food-stuffs under the United States aid programme has evidently influenced the pattern of trade in this commodity; but as food aid from the United States is being reduced, there may be new opportunities for the expansion of trade among developing countries.

Table 25. Trade among developing countries (exports) by commodity classes, 1966

(Millions of dollars)

Commodity class	Total	Latin America		Africa		South-east Asia and Far East		Asian Middle East	
		Total	Intra-regional	Total	Intra-regional	Total	Intra-regional	Total	Intra-regional
Food, beverages, tobacco[a]	1,880	490	370	355	205	880	660	135	105
Cereals	520	115	100	32	13	350	285	—	—
Crude materials[b] and metals	1,470	368	295	225	77	759	588	55	37
Textile fibres	310	91	60	105	6	105	90	11	7
Fuels[c]	2,770	1,000	250	110	—	360	340	1,100	300
Manufactures, total[d]	1,850	302	255	268	260	1,221	822	140	78
Textiles[e]	460	19	18	39	22	380	190	25	15
Chemicals[f]	280	82	76	42	2	120	115	13	5
Machinery and[g] transport equipment	315	68	65	23	21	205	175	14	10
All commodities, total	7,970	2,160	1,170	950	550	3,140	2,410	1,430	520

Source: Centre for Development Planning, Projections and Policies, based on United Nations *Monthly Bulletin of Statistics*. Data refer to exports.

[a] SITC sections 0 and 1.

[b] SITC sections 2 and 4, divisions 67 and 68.

[c] SITC section 3.

[d] SITC sections 5, 6, 7 and 8 minus divisions 67 and 68.

[e] SITC division 65.

[f] SITC section 5.

[g] SITC section 7.

The prominence gained by manufactures in trade between developing countries is a recent phenomenon. From 1960 to 1967, when the total trade between developing countries increased at an annual rate of 4 5 per cent, developing country trade in manufactures increased at a rate of nearly 10 per cent (see table 26). This was much more rapid than imports of manufactures from developed countries and although the amounts involved remain very small, the developing countries appear to have reduced slightly the degree of their dependence on imports of manufactures from the developed countries (see table 27).

Table 26. Trade among developing countries by commodity classes:[a] value in 1960 and average annual rate of increase, 1960-1967

Commodity class	Value of exports in 1960 (millions of dollars)	Annual rate of increase 1960-1967 (percentage)
Food, beverages, tobacco	1,460	3 6
Crude materials	1,100	—0 6
Fuels	2,260	3 8
Manufactured goods	1,140	9 9
Chemicals	105	16 4
Metals and manufactures	142	13 0
Machinery and transport equipment	135	13 1
Textile yarns and fabrics	400	4 7
All other manufactures	358	11 3
Total	6,010	4 4

Source: See table 20.

[a] Coverage as indicated in footnotes *a* to *g* in table 25 except as follows: SITC divisions 67 and 68 are included in present table in "manufactured goods" instead of "crude materials".

Table 27. Developing countries: imports of manufactures by source, 1960 and 1967

Source	Value in 1960 (millions of dollars)	Percentage distribution	
		1960	1967
Total imports of manufactures	18,100	100 0	100 0
Imports from:			
Developed market economies	16,360	90 4	85 8
Centrally planned economies	600	3 3	6 1
Developing countries	1,140	6 3	8 1

Source: See table 20

Trade in manufactures among developing countries includes only a limited range of products, among which semi-manufactures are prominent. For instance, chemicals, base metals and metal products account for some 30 per cent of the manufactures entering trade between developing countries in 1967 and textile yarns and fabrics account for 20 per cent of the total. It is noteworthy, however, that trade in manufactures is becoming somewhat more diversified. Since 1960, exports of textiles have increased very little—their share in the total has been almost halved—while exports of some items of machinery

and transport equipment and of a variety of other manufactures have expanded quite rapidly.

Possibilities of expanding trade among developing countries may be less limited than is commonly assumed. While it is true that the complementary nature of structures of production is most evident between developing and developed countries, it also exists among developing economies and is likely to grow as development proceeds. There are, for instance, opportunities for trade in food-stuffs, especially in grains, meat and dairy products, which are likely to increase as incomes rise and the rapid urbanization continues. Import demand for some industrial materials and semi-manufactures can also be expected to rise quite sharply as industrialization progresses beyond manufacturing industries based on a few domestic raw materials. Further, developing countries in which a fairly diversified industrial sector is emerging may be more able to supply manufactures to their less industrialized trading partners than they have in the past.

There is obviously a need for more information on present and future trading opportunities among developing countries. As proposed by UNCTAD, a first step in the promotion of such trade might therefore be the preparation of a detailed study of existing trade flows and consumption patterns with a view to identifying products which developing countries could economically supply to each other; this might best be done for pairs or groups of contiguous countries.[17] Such a study would, of course, have to examine costs, including transportation costs, in order to permit the formulation of realistic proposals for the promotion of trade. In this connexion, countries might consider whether, in view of the scarcity of foreign exchange and its importance for the financing of imports of capital goods from developed countries, it might not be to their advantage to substitute products from other developing countries for imports from developed countries even if this involved paying somewhat higher prices or transportation costs.

Once trading opportunities have been determined, developing countries might initiate bilateral trade negotiations. The bilateral approach has often proved effective as an initial step in fostering trade. Of course, bilateral agreements are feasible only if there is some governmental control over trade, either through import licensing arrangements or state trading.

In order to minimize the use of foreign exchange in settling bilateral balances, the possibility of establishing a multilateral clearing or payments scheme might be considered. A payments scheme would presumably require a capital fund which might be supplied by aid-giving nations in much the same way as the resources for the European Payments Union were supplied in the early post-war years by the United States Government.

Multinational economic co-operation and integration schemes

Since the late 1950s, developing countries have given increasing attention to possibilities of expanding trade and promoting development through the establishment of integrated multinational markets at the regional or subregional level. In contrast to the situation in developed countries which look to the creation of economic groupings as a means of expanding trade and enhancing productive efficiency through increased competition, the developing countries view integration primarily as a means of accelerating the process of industrialization. The wider market is expected to permit the establishment of the relatively large-scale industries which would be economically viable. The creation of larger economic units also offers opportunities for the specialization of industrial and agricultural production in accordance with locational or natural advantages. In developing countries where a large part of agricultural production takes place in the subsistence sector, the present scope for specialization in agriculture may be limited, but it should increase with the progress of urbanization and the commercialization of agriculture.

In view of the fact that the economic structures of developing countries are generally not complementary, the short-term effects of the formation of regional co-operation arrangements on trade and the pattern of production is usually small. Moreover, while trade liberalization is likely to stimulate industrial development over a longer period of time, new enterprises are likely to gravitate towards the more developed regions within a common market, which places the less developed member countries at a disadvantage. The traditional method of forming common markets or free trade areas by eliminating trade barriers is therefore generally not in itself sufficient for the creation of viable and stable economic units. Dissatisfaction with the distribution of integration benefits is the most common cause of failure of common markets or free trade area schemes among developing countries. Various arrangements to reduce, or to compensate for, inequalities, notably the payment of financial compensation by the more advanced to the less developed members of a trading group, have generally not been adequate in the eyes of the beneficiaries; and the countries required to sacrifice some advantage have tended to be unwilling to make more substantial sacrifices in the interest of the trading group as a whole.

The efforts of developing countries to find practical solutions to the problem of more effective co-opera-

[17] See, *Trade Expansion and Economic Integration among Developing Countries* (United Nations publication, Sales No: 67.II.D.20).

tion could be greatly facilitated by more vigorous support from the developed countries and international agencies. Some assistance has been forthcoming in specific cases, for instance, the Central American Common Market under the Alliance for Progress, but general programmes of action in support of economic co-operation among developing countries have thus far not been formulated. In the first instance developed countries might examine how support could be most effectively given, taking into account that any direct intervention in negotiations for the establishment of economic groupings among developing countries would be inappropriate. There are ways in which the process of economic co-operation among developing countries could be facilitated without trespassing upon the rights of sovereign States to shape their own economic policies. Among these would be a reorientation of economic assistance programmes so as to make more financial and technical resources available for projects or activities undertaken within the framework of programmes of co-operation. The developed countries could also agree to a common position on questions of economic co-operation in international organizations, which would carry some weight in the formulation of international programmes of action. These organizations for their part could make their research and technical assistance facilities more readily available to developing countries seeking to formulate programmes of economic co-operation.

Summary

While development is the result of a combination of political, social and economic changes, capital accumulation is generally recognized to be one of the most important vehicles of growth. Preliminary estimates suggest that if developing countries were to attain a minimum rate of growth in output of 6 to 7 per cent by 1980, the share of investment in gross domestic product might have to increase from about 15 per cent in 1965 to about 20 per cent in 1980. If economic development is to be accelerated in the coming decade, attention needs to be concentrated as much on the mobilization of resources for investment as on the concomitant and supporting non-investment factors.

Governments in developing countries have employed a variety of measures directly intended to raise levels of domestic saving and investment. But these measures cannot be relied upon alone to achieve these objectives. When viewed over a long period of time, a rising trend in the proportion of income saved and invested is seen to be closely associated with changes both in the system of incentives and in the distribution of income. Institutional and fiscal reforms to bring about changes in the distribution of income and wealth that will strengthen the incentives to work, to save and to invest should be seen as part of a policy to raise levels of saving and investment.

In view of the scarcity of resources for investment in developing countries, it is clear that every effort must be made to utilize the available resources to the best effect. There is no generally applicable set of principles for guiding the efficient allocation of resources for investment; the most appropriate allocation can only be decided within the conditions of each country. One of the most difficult decisions that faces Governments in evolving a strategy for investment is the priority which they should accord to the social as against the economic sectors. As appreciation of the importance of non-investment factors has grown, the choice has become more complex and uncertain. While decisions regarding the sectoral allocation of resources have to be based on broad judgements, these judgements need not be arbitrary. They should be reached after as thorough a study as information allows of the present constraints on, and future requirements for, development.

The scarcity in developing countries of domestic resources and skills has made external capital and assistance virtually indispensable for the achievement of higher levels of development. Preliminary estimates suggest that, if developing countries were to achieve a minimum rate of growth on total output of 6 to 7 per cent by 1980, the majority would need substantially greater external assistance than they now receive. While some countries might have a foreign exchange surplus, a much larger group—accounting for over three quarters of the total output—might have a deficit which under certain specified assumptions might amount to between $25 and $30 billion in 1980. Since the beginning of the 1960s, the developed countries have recognized a joint responsibility for providing resources to developing countries and they have agreed to aim at making 1 per cent of their combined gross national product available for this purpose. Thus far that target, a main element of international endeavour on behalf of developing countries in the First United Nations Development Decade, has not been achieved. If recent trends in the flow of resources were to continue in the 1970s the volume of external capital available to developing countries in the coming decade would fall far short even of likely requirements for accelerated growth.

In addition to the need for a larger volume of external resources for development, certain qualitative aspects of the assistance given to developing countries also stand in need of improvement. With the increased emphasis on non-investment factors in the formulation of development plans more programme assistance is needed to finance essential developmental expenditure other than that connected

with specific investment projects. A related issue is that of the phasing of assistance. The limitation of aid commitments to single years introduces difficulties into the implementation of plans which are detrimental to efficient resource utilization.

The use of external resources for the financing of development is, of course, not without cost. While the proportion of outright donations to developing countries in the total flow of external resources has been declining fairly steadily, interest rates on official loans have tended to rise in some countries and as the expansion of official transfers has slowed down developing countries have been obliged to make increasing use of private export credits at commercial rates. Transfers from developing countries in connexion with the servicing of their external debts have become an increasing burden on their balance of payments. Unless measures designed to reduce the cost to developing countries of external borrowing are put into effect, the growth of debt-service obligations might become a serious obstacle to economic growth in the 1970s. Not only are financial terms becoming harder; prices are also rising in the aid-giving countries, most of which restrict the use of their loans to purchases of their own products.

In the majority of developing countries the need for external capital and assistance arises not only from a scarcity of domestic resources for investment but also from an inability to expand export earnings sufficiently to finance the import requirements of development programmes. The growth of their exports is closely bound up with the expansion of income and output in the developed countries. In the first half of the 1960s, economic growth in these countries was unusually rapid and sustained, and exports of developing countries increased at rates well above their longer term trend. It is considered unlikely that the developed countries will be able to sustain such rapid economic expansion indefinitely, and in these circumstances, the early adoption by the international community of measures to foster exports from developing countries becomes all the more important.

International action for the promotion of exports from developing countries should have two main objectives: to help developing countries to earn more foreign exchange from their traditional exports while they undertake structural changes in their economies; and to facilitate these structural changes by opening up the markets of developed countries to the new lines of production which the developing countries are establishing. International measures should also seek to ensure that in the long run world demand for primary commodities will be met from production in developing countries whenever these countries enjoy a comparative advantage.

To compete successfully in world markets, developing countries need to undertake more research into various aspects of the production, processing, marketing and utilization of actual or potential export products. To this end they need increasing technical assistance in export-oriented activities.

The possibilities and problems of increasing trade among developing countries also merit attention. Even in the absence of specific economic co-operation schemes, possibilities for reciprocal trade between these countries may be less limited than is commonly assumed. While it is true that the complementary nature of structures of production is most evident between developing and developed countries, it also exists among developing economies and is likely to grow as development proceeds. There are, for instance, opportunities for trade in food-stuffs, especially grains, meat and dairy products, which may be expected to increase as incomes rise and the rapid urbanization continues. Import demand for some industrial materials and semi-manufactures will probably also rise quite sharply as industrialization progresses beyond manufacturing industries based on a few domestic raw materials. Further, developing countries, in which a fairly diversified industrial sector is emerging, may be able to supply manufactures to their less industrialized trading partners to a greater extent than they have in the past.

Since the late 1950s, developing countries have given increasing attention to possibilities of expanding trade and promoting development through the establishment of integrated multinational markets at the regional or subregional level. The wider market is expected to permit the establishment of the relatively large-scale industries which are economically viable. The creation of larger economic units also offers opportunities for specialization of industrial and agricultural production in accordance with locational or natural advantages.

The traditional approach to the formation of common markets or free trade areas through the elimination of trade barriers tends to give rise to serious problems of imbalance between members of such groups and to dissatisfaction with the way benefits derived from the market integration are distributed among them. Efforts to find effective solutions to these problems could be facilitated by more vigorous support of such measures by the developed countries and multilateral agencies.