LATIN AMERICAN SYMPOSIUM ON
INDUSTRIAL DEVELOPMENT

Organized jointly by the Economic
Commission for Latin America and
the United Nations Centre for
Industrial Development

Santiago, Chile, 14 to 25 March 1966

INDUSTRIAL DEVELOPMENT: PROBLEMS AND ISSUES

Submitted by the Centre for Industrial
Development, United Nations
I. RECENT TRENDS

1. There is no longer any substantial controversy about the importance of industrialization as the main long-run path of economic growth for the developing countries. The difficulties of industrialization, however, are commensurate with its importance. The growth of the industrial sector in most developing countries since the end of World War II has, it is true, been substantial in relative terms; thus of a wide group of developing countries for which reasonably reliable information is available, nearly four-fifths enjoyed a cumulative annual rate of growth of manufacturing output of 5 per cent or more during the period 1953-63; and in one-sixth of this sample, the rate was in the neighbourhood of 10 per cent. Moreover, in all these countries the rate of increase in manufacturing output either matched or exceeded that of total output as given by gross domestic product.

2. It must be acknowledged, however, that these high relative growth rates mainly reflect small absolute increments on an initial low level. This point is dramatized by the experience of the country with the highest rate of growth of manufacturing output - namely the Republic of Korea. Here a phenomenal rate of

1/ Twenty-seven countries representative mainly of Latin America and East and South-East Asia: see Table I.
<table>
<thead>
<tr>
<th>Country</th>
<th>Annual rate of growth (percentage)</th>
<th>Share of Manufacturing in Gross Domestic Product (percentage)</th>
<th>Average</th>
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 Rates of growth of manufacturing output have been calculated from data for value added in manufacturing in constant prices. For China (Taiwan), Algeria, the former Federation of Rhodesia and Nyasaland and Kenya, they have been computed from indices of manufacturing production.

Manufacturing industry includes forestry in Argentina; mining, construction, electricity, gas and water in Brazil and India; construction in the Federation of Malaya; electricity and gas in Nicaragua; mining and construction in Paraguay; oil products distribution in Iraq; and mining, electricity, gas and sanitary services in Syria.

For Brazil, Chile, India, Pakistan and Syria, the data refer to net domestic product; for the Philippines, they refer to net national product.

For the following countries, the period differs from that stated: Colombia, Honduras, Nicaragua, Paraguay, Venezuela, India and Morocco, 1953-62; Peru, 1954-62; Federation of Malaya, 1956-61; Pakistan and Algeria, 1953-61; Ceylon, 1956-65; Federation of Rhodesia, 1955-61; Kenya and Uganda, 1954-65.

The shares of manufacturing in Gross Domestic Product have been calculated from data for value added in current prices. For the following countries they have been calculated from data in constant prices: Venezuela, Mexico, the Federation of Malaya, and Guatemala.

1960.
expansion of manufacturing activity averaging nearly 19 per cent per annum was responsible for an annual increase of only 1.5 per cent in total output. This experience, characteristic of most developing countries, only emphasizes the relative scale of the industrialization effort required of them to achieve anything like a significant impact on total output. The developed countries in contrast have a far easier task; in recent years it required in many cases only a 3 per cent increase in manufacturing output to achieve a 1 per cent increase in total output. The reason for this is, of course, that the size of the industrial sector in developed countries is already large in relation to the output of the economy as a whole, so that any increase in industrial production has a substantial impact on total output.

3. One important implication of the contrast just noted is that if industry were to expand at the same pace in the developing and developed countries, and if their rates of population growth were identical, the gap in per capita levels of income between them would widen. Moreover, if, as expected, population were to grow faster in the developing countries, this gap in income levels would widen even more rapidly. The trend of recent years has been disturbing in this respect. While per capita income in the developed market economies valued in 1960 prices increased from $1,080 to $1,410, or at an annual rate of 2.7 per cent, between 1950 and 1960, it grew at only 2.2 per cent per annum in the developing countries or from $105 to $130. That the per capita income gap has not become wider is due to an essentially fortuitous circumstance, namely that the rate of growth of income in the developed market economies has lagged slightly behind that of the developing countries. This is the result of a variety of checks to growth encountered by the developed market economies of a more or less short-term and remediable nature, rather than of any massive effort of the developing countries. The developed countries have in many cases come up against obstacles to expansion either of a physical nature or connected with the functioning of the international monetary system. As solutions to these problems are worked out and a more dynamic pace of industrial advance is resumed in the developed countries, international action will need to be addressed even more urgently to the task of closing the gap.

2/ In three quarters of the countries analysed the percentage increase in output attributable to manufacturing was less than 1 per cent. See Table 2.
<table>
<thead>
<tr>
<th>Country</th>
<th>Growth of manufacturing output (per cent annual rate of increase)</th>
<th>Per cent increase in gross domestic product attributable to manufacturing b/ (per cent of gross domestic product)</th>
<th>Relative share of manufacturing in increment of gross domestic product c/ (per cent of increase in gross domestic product)</th>
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<td>Korea, Republic of</td>
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a/ For differences in definitions and coverage of items and periods among the countries, see Table 1.

b/ Annual rate of growth of manufacturing output x per cent share of manufacturing in gross domestic product.

c/ Annual rate of growth of manufacturing output x per cent share of manufacturing in gross domestic product

Annual rate of growth of gross domestic product
4. There is another important disparity between the experience of the developing and developed countries. According to evidence available for certain areas, the rate of increase in employment in manufacturing in developing countries - some 3 per cent per annum in recent years - is only sufficient to absorb less than 20 per cent of the increase in their economically active population. By contrast, the same rate of expansion in manufacturing employment would absorb nearly the whole of the increase in the economically active population of most developed countries. This contrast, of course, again reflects the relatively greater importance of the industrial sector in the economies of the developed countries. But it also underlines the magnitude of the industrialization effort demanded of the developing countries. Most of them have insufficient arable land at their disposal to permit the productive absorption of all available labour in the agricultural sector. This task of absorption must therefore be undertaken by industry which cannot be said to be performing its task satisfactorily when it provides employment to only a fifth or less of the addition to the economically active population. The remaining four fifths when not visibly unemployed, must tend to swell the ranks of the underemployed both in the agricultural and services sectors.

National and International Action

5. The obstacles to industrial development in the developing countries are of two kinds. They may be divided into those that must be overcome mainly by the efforts, at the national level, of the developing countries themselves, and those which can be removed only by the concerted action of the world community at large. These two sets of problems are, of course, interrelated. No international action can be a substitute for those measures that have to be taken by each country for itself, in its particular environment; thus a lack of internal planning may, for example, be reflected in an apparent scarcity of industrial projects that might qualify for international financing, or in a relatively small scale of requests for technical assistance for the promotion of industry. Equally, efforts by individual countries, particularly if they

3/ It has been estimated, for example, that in the countries of Latin America, taken as a group, the manufacturing sector has absorbed about 16 per cent of the increment of the economically active population during the period 1945-60. See, United Nations, The Economic Development of Latin America in the Post-War Period (Sales No.: 64.II.G.6).
are small, may readily be frustrated through the failure of the international community to remove the bottlenecks arising out of the existing pattern of international interrelationships. The international community is certainly able to help the progress of industry in the developing countries through concerted trade and aid policies. It is nevertheless analytically convenient to organize the discussion of the scope for national action separately from that of international action. Accordingly, Part II of this paper will be concerned with the former, and Part III with the latter.
II. NATIONAL ACTION

A. The Need for Programming

6. There is a broad measure of agreement that industrial programming is an essential element in mobilizing resources for industrial development. Recent years have seen some narrowing in the differences between countries in the extent of their government programming both for the economy as a whole, and for the industrial sector in particular. The controversy is no longer one between the advocates of administrative and centralized planning and those who would place primary reliance on the operation of the market mechanism. A considerable area of common ground has emerged. It has, on the one hand, been increasingly accepted that making the best use of available resources may call for a purposeful co-ordination of efforts and reconciliation of objectives, even within an economic system based mainly or entirely on private enterprise. In particular, it has been recognized that even the transmission of external assistance presupposes the existence of a national economic plan with an ordered set of priorities.

7. The importance of planning in under-industrialized economies derives from the fact that action taken in a particular field may, when the industrial structure is still rudimentary, have important effects on the whole. Furthermore, the possibilities for development in any one area may not only be invisible within a horizon of individual action but may, even when known, depend on simultaneous development in other areas, so that only a concerted programme, planned and reasonably assured of implementation as a whole, can promote entrepreneurial activities in any particular field. Moreover, in conditions of economic under-development, the material resources, such as capital, and the data and methods both of a commercial and technical nature which are accessible to private individuals, are necessarily limited. This makes some measure of centrally co-ordinated action, and some determination of priorities by a central authority, almost inevitable.

8. On the other hand, those who once favoured the utmost centralization of economic decision-making have now come to accept the need for decentralization in a complex process such as economic growth, and have even veered towards the reliance, within certain limits, upon regulatory mechanisms closely akin to market
forces. Moreover efforts are being made to reconcile the system of central planning with the use of the criterion of profit maximization in making a variety of detailed decisions.

9. So far as the developing countries are concerned there remains for the present a wide range of practice with respect to the implementation of industrial programming. The prevailing institutional framework is characterized by the combination of public and private sectors in varying proportions. The issues of planning relate essentially to the manner in which the two sectors operate to encourage or carry out the process of industrial development, and the extent to which the Government is prepared or able to establish a set of interrelated industrial targets, and formulate and evaluate industrial projects consistent with the goals to be achieved. A variety of sub-issues arise in this connexion. There is first the problem of the relationship of industry to other sectors of the economy, in the context of the over-all national economic plan. Within industry broadly concerned, there is secondly the problem of allocating resources as between different sectors and of the relationship of modern to traditional industry. There is thirdly the problem of choosing between alternative techniques of production in each sector. There is lastly the problem of deciding what institutional structure is to obtain in the industrial sector and how far planning is to influence the prevailing mix of private and public sectors.

10. It is clearly beyond the scope of this paper to enter into a comprehensive discussion of all these issues. However, an attempt at outlining some very general considerations involved in each of these areas will be made.

B. The relationship of industry to non-industrial sectors of the economy

(1) Industry and its infra-structure

11. So far as the first of the issues enumerated above is concerned, there is little dispute as to the need for according high priority to the creation of an infra-structure in any programme for industrialization of the developing countries. In many of these, where industry is in its very earliest stages, an infra-structure is the most immediate need. Assuming that there are urban communities providing an adequate supply of labour as well as a potential market for certain types of manufacture, it may still be necessary to provide the
necessary power, transport and other facilities essential for industrial growth. These constitute the economic infra-structure in the narrow sense. Where urbanization has to be accelerated, and where industrial growth is limited by the availability of labour of the required minimal level of skill, the development of the social infra-structure may be necessary, i.e. the provision of housing, health services, education, technical training, etc.

12. With regard to this last category of investment there has in recent years been a quite remarkable change in thinking. It was customary to treat investment in education, health, etc., as consumption expenditure as contrasted with more productive kinds of capital investment. The implication was that a concern with economic development should emphasize the latter type of investment at the expense of the former. It has, however, been increasingly realized that there is a feed-back process involved here and that in the absence of a certain minimum level of development of the social infra-structure, so-called productive investment might be frustrated through declining efficiency. This illustrates a theme which recurs throughout the problem of industrial development, namely, the conflict between short- and long-run choices.

(2) Industry and agriculture

13. There is far less agreement on the relative importance of the primary and principally agricultural sectors, on the one hand, and industry, on the other, though even these differences of view have perhaps narrowed in recent years. Those who, in the past, were inclined to see the salvation of the developing countries arising mainly from the further exploitation of their apparent static comparative advantages, that is, mainly from the growth of the primary sectors, have come to see that rising productivity on the land is likely to be labour-displacing and thus to increase the need for alternative industrial employment rather than reducing it. On the other hand, those who saw industrial development as the spearhead of general economic growth are prepared to recognize that the possibilities of development and the prosperity of the industrial sector are closely linked to rising productivity and incomes in agriculture. For the latter not only must provide the main market for the products of industry, especially in economies in which the population is bound to remain rural for a still
considerable span of time, but also the agricultural surpluses necessary to sustain industrial expansion. Past experience has shown that when the interrelationships between the two sectors are left to spontaneous forces, adverse developments may occur and, having once become established, turn into serious obstacles on the path of further development. Thus inflation may be the result of a programme of industrial expansion unaccompanied by the measures of institutional reform in the agricultural sector that may be required to stimulate the farm output demanded by industrial labour. In many cases such structural change undertaken along with improvements in techniques and organizational procedures can liberate incentives that result in dramatic increases in output while making comparatively slight demand on the limited resources of capital available to most developing countries. However, deliberate measures are always necessary to co-ordinate the development of the agricultural and industrial sectors, and prevent their impeding each other, within a broad framework of rationally conceived inter-sectoral relationships.

C. The choice of industry

14. Once a suitable relationship has been established between agriculture, infra-structure and industry, the next problem concerns the choice of industries. At least two interrelated issues may be distinguished in this connexion. There is first the question of the relationship of new industry to the already existing "traditional" industry. There is next the problem of the allocation of resources between the various sectors of modern industry. The interrelationship between these problems stems, of course, from the fact that certain products of modern and traditional industries are interchangeable.

(1) Modern and traditional industry

15. The case for paying some degree of attention to the traditional sector is that, as with agriculture, substantial increases in output may be secured with a relatively small investment of scarce capital resources. This may be achieved by modernizing and increasing the productivity of traditional industries where the skills required do not necessitate great quantitative or qualitative changes. For some time, and as long as the demand structure in the developing countries
does not undergo profound changes, the types of goods produced by the
traditional industries may be sufficient to supply not only the existing
demand but also a substantial increase if sufficient productivity gains can
be obtained. If this can be done with relatively little investment of capital
it becomes a rational course to follow, for the developing countries can devote
the limited resources in capital and high-level skills primarily to those
industries where traditional methods of production cannot be a substitute for
really modern industrial techniques.

16. A further consideration is that the neglect of traditional industry in
an over-all industrial programme may aggravate the problem of unemployment that
a developing economy has to face. The creation of superior and competitive
modern industry often tends to destroy traditional industries and the rural
communities dependent on them, thus accelerating the drift to the towns and
compounding the problems of urban industrialization. The long-run solution
is, of course, an adequate expansion of the capacity of modern industries.
It may nevertheless be necessary in a transitional period to provide for
sufficient improvement in traditional industries to enable them to continue
functioning until such time as the change-over to modern industry can be achieved
with a minimum of dislocation.

17. At the same time, the modernization of traditional industries and the
raising of their productive efficiency must not be confused with long-run
industrial development proper. It would be erroneous to suppose that the more
dynamic modern industries are likely, as a general rule, to grow out of improved
traditional industries. In most cases the transition to modern industry involves
not only quantitative growth but also qualitative change. It is a well-known
fact that the major problem of developing economies is industrial diversification,
not merely quantitative increases. Moreover, modern industry requires new types
of installation and equipment, as well as ready access to a variety of supplies
and services. It should not be forgotten that an economic structure, once
developed, has a tendency to perpetuate itself and this may impede any subsequent
changes that may be required in moving to a higher level of industrial
development. Undue emphasis on the traditional sector might therefore delay
many of those thoroughgoing changes which are a necessary condition for achieving
self-sustained economic growth in the long run.
18. Above all it must be realized that only those traditional industries which produce a surplus over and above what accrues to the workers engaged in them, make any contribution to over-all economic growth. There has sometimes been a tendency to treat certain kinds of cottage industry as a necessary form of social subsidy without preparing for the transition to more viable forms of production. There may be a case for exploring the potentialities of technologies that could supersede existing unprofitable techniques of traditional industry, and that could be accommodated within a rural environment. Advantage might be taken of the experience of village based industry in such countries as India and Japan. However, it is important to note that even in these countries, rural industrialization has not been conceived of as an alternative to urban factory-based industry, and it is the latter that has provided the main impetus to growth.

(2) The sectoral allocation of resources within modern industry

19. The historical experience of developing countries has an important bearing on the nature of the choice that these countries may make regarding the sectors of industry to be promoted. Except in a handful of relatively advanced developing countries, industrial development has hitherto concentrated almost exclusively on consumer goods industries, and producer goods industries are conspicuous by their absence. Thus the industry of most developing countries is essentially a dependent industry - dependent in the sense that it relies on external sources of supply for renewal and expansion. The dependence is even greater where the newly-established industries draw substantially upon imported raw materials and components.

20. This has come about through a readily explainable process. Starting out from an initial structure in which primary production predominates, and where the demand for manufactures, principally consumer goods, has been met in a relatively high proportion by imports, there has been a natural tendency to direct much of the industrial development effort into import-substituting consumer goods industries. This has especially been the case where industrialization has been accompanied by import restrictions imposed primarily for balance of payments reasons. Only in a second stage, when the development of consumer goods industries builds up a heavy demand for imported capital goods,
does the need to conserve foreign exchange begin to lead countries towards the establishment of capital goods industries. Even then the limited size of domestic markets in most developing countries may impede the growth of capital goods sectors.

21. Import substitution concentrating on consumer goods is apt to meet with serious difficulties. In the first place, there may be no long-term release from the balance of payments problem. Imports of machinery for the consumer goods sector will continue so long as a domestic machine-making sector is not established. The new industries may also rely substantially on imported raw materials and components. In some cases, in fact, the over-all import-generating effect may well be as great, even in the long run, as the import-substituting effect. This is particularly apt to happen where Governments seek to encourage the production of domestic substitutes by charging low tariffs on imports of raw materials, while imports of the finished goods are subject to high duties. Import substitution may then lower the price and increase the total demand for the product, so that total import requirements may not be reduced significantly.

Thus, while the structure of imports may change - imports of finished consumer goods being progressively replaced by imports of raw materials, components and machinery - the pressure on the balance of payments may scarcely be eased.

22. In the second place, there are very definite limits to the extent to which import substitution can proceed, as will become evident when one considers the course it usually takes. As already noted, under the pressure of balance of payments difficulties, frequently created by the process of development, Governments tend to impose heavy duties in an effort to restrict the imports of commodities regarded as least essential to the economy. Generally, the resulting high domestic prices of these commodities will make their production advantageous from the private point of view. Yet the establishment of such industries may contribute little to over-all economic growth, while scarce resources, in particular foreign exchange and skilled labour, may be dissipated on products going into luxury consumption. In other words, the protection of the domestic market and the incentive to local production may well be greatest where the needs of the economy are least.
23. Thus there are obvious dangers in assuming too readily that developing countries should concentrate on the consumer goods industries, and import all the machinery and equipment they require for this purpose. However, where domestic markets are limited, development of intermediate and capital goods industries may call for regional co-operation, notably in the form of co-ordination of investment plans accompanied by arrangements for specialization and exchange.

24. These problems are considered more fully below. Even within a national framework, however, a beginning ought to be possible. There are certain quantitatively not insignificant types of engineering production that could readily be established in developing countries. Such industries would encourage the acquisition of those skills that can be developed only by actual experience, and the development of which is an essential part of the industrial growth process.

D. The Choice of Techniques

25. The theoretical literature on the choice of techniques has been concerned with whether developing countries should prefer relatively capital-intensive or labour-intensive techniques of production in each branch of industry. Historically speaking, the proponents of labour-intensive techniques were the earliest in the field, basing their argument on the relative abundance of labour and scarcity of capital in developing countries. The advocates of more capital-intensive techniques have based their case against this on the more favourable implications for economic growth of these techniques as compared with the labour-intensive alternative.

26. There is little doubt that the issue involved is a very real one and one on which project planners especially require explicit guidance. The amount of capital invested or embodied in a technique per unit of labour employed in operating it - a convenient working definition of capital intensity - may vary widely from technique to technique. In weaving cloth, for example, there is a wide range of alternatives to choose from, ranging from the throw shuttle hand loom to the automatic power loom. In transport there is a choice between trains, trucks and ox-carts; in farming, between various kinds of ploughs and tractors. And these examples could easily be multiplied.

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27. The technique to be preferred in any given case depends partly on economic criteria, and partly on the ultimate objectives of policy, which in turn rest on non-economic value judgements. It appears that the degree of capital intensity is not the only factor to be considered in the choice of techniques. Any given technique is associated not only with a particular contribution to employment per unit of investment in the technique (the reciprocal of capital intensity as defined above) but with a particular contribution to total output and hence a particular output per man employed in operating that technique. Any technique which makes a higher contribution to both total output and output per man is to be preferred as being superior, irrespective of employment per unit of investment or the degree of capital intensity. Conversely, the technique which results in both a smaller total output and output per man is to be dismissed as being inferior, again irrespective of capital intensity.

28. Thus a meaningful problem of technological choice arises only when one technique yields a lower total output with a higher output per man and a higher capital intensity than another. In this case, at any given real wage rate, there may be a conflicting choice between a relatively capital-intensive technique that maximizes the surplus available for reinvestment - and hence for accelerating growth; and a relatively labour-intensive technique that maximizes current employment and output, but generates a smaller surplus and a lower rate of growth.

29. If the objective of policy is to increase employment and output in the short run, the labour-intensive technique is likely to be preferable. If, on the other hand, the objective is the greatest long-run growth of output and employment, then the choice may lie with the capital-intensive technique. The growth path of output over time with a labour-intensive technique, though commencing at a higher level of output, will generally be less steep than with a capital-intensive technique. Until the paths intersect, the labour-intensive technique will necessarily yield the higher aggregate outputs. But there will always be some period of time thereafter when the aggregate output of the two techniques will have become equal; from then on the capital-intensive technique will be superior in the sense of producing a larger and increasing volume of output. The precise choice depends on the time preference of the community. Given an arbitrary planning period, the preferred technique becomes that which provides the larger aggregate output over that period.
30. One important assumption underlying the foregoing exposition is that of constant returns to scale in production. In fact, of course, there could also be diminishing or increasing returns to scale, which would affect the problem of choice in particular cases. For example, even a theoretically "superior" technique may have to be ruled out if it can only be used above a certain scale of production which would not be justified by market considerations. Thus the range of meaningful choice may be considerably more restricted in practice than in theory.

31. A similar narrowing of the range of feasible choice becomes evident when one distinguishes between basic or "core" processes and "ancillary or auxiliary" activities such as materials handling, warehousing, packaging, maintenance shops, etc. The range of alternatives in the former may, for technological reasons, be quite restricted. There may, on the other hand, be considerably more flexibility as regards the latter operations.

32. The preceding discussion is based on the assumption of a perfectly elastic supply of homogeneous labour at the given real wage rate. If, however, labour is not homogeneous, and particular skills are scarce, the technique which maximizes the rate of growth will tend to be correspondingly more capital-intensive; and the technique which maximizes current output may even have to be ruled out altogether as producing a loss. In other words, to the extent that particular skills are scarce in developing countries, there may be a case for moving to more capital-intensive techniques, whatever the criterion employed.

33. Industrial planning also needs to take account of the rise of wages over time. This furnishes a reason for the adoption of rather more capital-intensive techniques in choosing between alternative kinds of durable plant expected to remain in operation for a relatively long period of time. Per contra in the construction phase of a project the choice of technique is less material. In the future life of, say, a factory building it matters relatively little whether it was constructed with more or less capital-intensive methods.

34. It is also necessary to take account of the fact that different types of enterprise have different propensities to consume out of profits. Labour-intensive techniques are frequently associated with small-scale establishments - often family businesses and partnerships - with a relatively low propensity to save out of profits and correspondingly low rates of growth of output. This must be viewed
in the light of the characteristic imperfection of capital markets in most
developing countries, where investment is financed largely from savings out of
profits. Small establishments, if less well run, may also imply a lower
productivity per man for any given level of techniques. Thus not only is the
surplus available for reinvestment likely to be larger where capital-intensive
techniques are employed, but the proportion of the available surplus actually
ploughed back into industry may tend to be substantially higher.
35. This is not to say that the maximization of the reinvested surplus should
be regarded as the decisive criterion in all circumstances. It may be a matter of
great urgency to sweep as large a proportion of the rural population as possible
into the ambit of the "advanced" sector, as a way of relieving under-employment
and wretchedly low levels of living. To leave them to wait it out in the
"subsistence" sector until an "advanced" sector based on capital-intensive
techniques catches up with them may well be beyond the capacity of governments to
accomplish. It is at this point that labour-intensive techniques become relevant
from the standpoint of generating greater immediate employment opportunities,
albeit at the cost of a diminished surplus; and the conscious search for islands
of quasi-modern industry may be undertaken within the subsistence sector itself.
36. One possible compromise between immediate employment needs and long-run
growth potential might be to opt for the most capital-intensive techniques in the
capital goods sector, with the highest growth potential (though there may be
substantially less scope for technological choice in this field as most techniques
may tend to be relatively capital-intensive anyway) while preferring relatively
more labour-intensive techniques in the consumer goods sector. This, of course,
is not without its disadvantages on other counts. For instance the consumer goods
produced may be of inferior quality when compared with those resulting from more
capital-intensive techniques; and certain kinds of heavy industry may be ruled out
for reasons connected with the limited size of domestic markets. There is also
the problem that consumer goods that are produced with obsolete or obsolescent
techniques may be less readily saleable in export markets. All that can be said
at this very general level of discussion is that no universal formula for
technological choice can be prescribed, and that the competing alternatives need
to be carefully examined in each particular case.

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E. The Institutional Framework of Plan Implementation

37. The final issue - the question of the relative proportions of the private and public sectors - essentially belongs, so far as it is an economic issue, to the realm of plan implementation. Once a country has settled for itself the broad strategy of industrial development that it intends to follow, and has determined the priorities of its various economic and social objectives, the government has at its disposal a variety of direct and indirect means for promoting the achievement of the industrial goals desired. Where principal reliance is placed on private initiative, chief importance attaches to the expectations of entrepreneurs regarding long-term prospects for economic growth in the country concerned. The task of the authorities may be of two kinds. They may in the first place assist in creating those expectations among entrepreneurs which will ensure that investment will reach the rate determined in the plan and that it will be channelled in the directions considered desirable from the point of view of the economy as a whole, that is in accordance with the priorities laid down in the plan. In the event that private entrepreneurial action falls short of what is desired, the question arises of extending the sphere of direct public activity.

38. Many governments use the traditional policy measures of a fiscal, financial and monetary nature to encourage entrepreneurial activity in industry. The success of a country in creating conditions favourable to industrial growth may, however, depend on factors quite outside the field of industrial incentives, narrowly considered. Such factors may range from the vigour with which the reorganization and modernization of the rural economy are undertaken to the effectiveness of general government policies in mobilizing physical and financial resources for development and in creating confidence in the economic future of the country. In the absence of such a favourable framework for industrial development, particular incentives may entirely fail in their objectives.

39. Even where the general environment for industrial growth is favourable, considerable uncertainty exists regarding the extent to which the traditional incentives may be effective in accelerating the advance of industry. This is because no thoroughgoing assessments of comparative experience in this field have
have yet been made. It is frequently assumed both by governments and by their advisors that tax holidays, liberal credit policies and low interest rates, preferential exchange rates for certain purposes and other forms of fiscal, monetary and financial incentives provide an important inducement to enterprise, whether domestic or foreign. On the other hand, it has been suggested that in many cases such devices as tax holidays have merely deprived governments of revenue from enterprises that would have been set up in any event, because of the underlying profitability of the business operation in question. While the efficacy of incentive measures is not to be belittled in certain circumstances, much more evidence and empirical analysis are needed of the extent to which governments ought to rely on them in their development efforts.

40. It is sometimes not sufficiently realized that even indirect policy measures actually amount to the subsidization of certain economic undertakings in preference to others. Where the industrial sector is not large, indirect measures of policy may in fact be tantamount to the direct favouring of specific enterprises. If this were understood clearly it might often be found preferable to provide for such direct support in a manner lending itself to proper quantitative evaluation instead of adopting measures the direct cost of which is difficult to estimate and the indirect effects of which can hardly be ascertained. All indirect measures of support should, wherever possible, be of such a form as to lend themselves to modification and termination when the need arises. Where direct contributions or subsidies by governments are contemplated, it is important to establish not merely whether the enterprise concerned can ultimately be expected to become viable without continued assistance, but also whether the funds involved could not be expanded to better effect in some other way. This requirement brings out clearly the dangers inherent in indirect forms of support; for in these cases, it is very difficult to estimate the cost of resources for which alternative uses could have been found.

41. There is always the danger, moreover, that injudicious use of particular incentives may undermine the integrity of the tax system and the consistency of the fiscal and monetary system; the government may be deprived of revenue which could otherwise have been applied for development purposes; vested interests may
become entrenched and may seek to uphold such concessions beyond the limits of their usefulness in point of time or area of applicability; and a distortion of income distribution may arise to the detriment of long-run development. While fiscal incentives are useful and necessary in their proper field, their pros and cons have to be weighed with somewhat greater care than is often the case.

42. Similar considerations apply to the use of special incentives to attract foreign investment. It has been observed, for example, that the bulk of private foreign capital flowing to Latin America has been absorbed by Argentina, Brazil and Venezuela, even though these are not the countries that have done the most to create the sort of climate that is favourable to foreign investment, if these conditions are defined in the narrow sense. The important thing seems to have been that these were the countries that appeared to offer the best long-run over-all growth possibilities, and this factor was decisive despite the existence of considerable uncertainties in some respects although, of course, serious danger of expropriation or of indefinite interruption of transfers of profits and dividends would certainly create a strong discouragement.

43. There is a wide diversity of principle and practice among developing countries regarding the boundaries between the public and private sectors. It has traditionally been assumed that the state should be responsible mainly for infrastructure activity, leaving the bulk of productive and profitable activity to private entrepreneurship. A number of developing countries have moved beyond this concept. Many of them have given an exclusive franchise over substantial areas of heavy industry to the public sector. The rationale here is only a little removed from that of the traditional position. For profit prospects in some of these areas may not be immediately attractive to private enterprise, while their present development may be essential for the long-term growth of the economy. The question has also been raised, however, whether the public and private sectors should compete in currently profitable areas of economic activity. On the one hand it has been held that the public and private sectors should be complementary rather than competitive, so that scarce resources could be conserved. On the other hand, state participation in certain types of manufacturing production may be a useful check on the development of private monopolies, which might initially arise in many small developing countries. Moreover, the performance of public enterprise could serve as a guide to profitability and taxable capacities in the private sector.
44. A number of countries go still further in considering that public enterprise is, as a matter of political, economic and social policy, to be preferred to private enterprise, at any rate in certain key sectors of the economy. The basic issues here go beyond the purely economic sphere and as such do not call for comment in the present context. At the same time, it will be apparent that public enterprise should, no less than private enterprise, be judged in terms of the fundamental criteria of profitability, broadly interpreted to include dynamic as well as static considerations, viewed in terms of the development of the economy as a whole.
III. INTERNATIONAL ACTION

45. International action in the field of industrial development may take the form of regional co-operation among developing countries themselves and of co-operation between developing and developed countries.

A. Co-operation between developing countries

46. As already noted, the small size of domestic markets in developing countries sets fairly rigid limits both to the extent to which industrialization based on import substitution can usefully proceed, and also to the creation of viable domestic capital goods industries, providing a way out of this impasse.

47. In overcoming these difficulties some of the newer developing countries may be able to profit from the experience of the pioneers. Where past industrial development has proceeded through a process of import substitution behind excessive protective barriers and has thereby established for itself a high level of costs, breaking out of the confines of the domestic market becomes correspondingly difficult. In Latin American countries, for example, where industrial development has gone somewhat further, on the average, than in Africa or Asia, the development of industry within the watertight compartments created by high national protectionism has given rise to serious problems of industrial stagnation and decay in certain sectors. This experience should prompt a reconsideration of industrial development policies so as to take into account not only the domestic, but also the external market, and especially the markets available in neighbouring countries. What is needed is to promote regional specialization and exchange with a view to realizing the economies of scale not available to small developing countries acting independently of one another.

48. At one time there was considerable scepticism about the establishment of customs unions or free trade areas among the developing countries because it was believed that since the economies of these countries were complementary rather than competitive, discrimination against the outside world would be more likely to result in trade diversion rather than trade expansion. Further experience and examination of the problem, however, have suggested that the most important effects of the economic integration of a group of countries may be the dynamic ones - the impact on new investment and the rate of growth. It is believed that
the prospect of access to region-wide markets would induce entrepreneurs to invest in substantial new enterprises which they would not have regarded as feasible within the narrower confines of national markets. At the same time, industries now operating at less than their optimum rates of utilization would be able to expand their output and thus reduce their costs in providing for the needs of broader markets, and opportunities for specialization between firms in the same industry would also be enhanced within the context of a multinational market.

49. The effectiveness of regional programmes of economic co-operation may depend not only upon measures to reduce mutual trade barriers but also on efforts to co-ordinate investment programmes. Once new industries are established under cover of protection, without regard to parallel activities undertaken in neighbouring countries, it becomes difficult subsequently to arrange for the opening up of region-wide markets through a reduction in regional tariffs and quantitative restrictions. Exchanges of information on investment plans and, where possible, efforts to achieve consistency in such plans, may therefore be of considerable importance in any programme of regional integration.

50. It may also be important to seek the agreement of the members of an economic grouping on a distribution of industry policy. In view of the well-known tendency for new industry to gravitate to the well-established production centres, the less developed countries in a grouping may tend to get less than their fair share of the industrial benefits of integration. If some means were not found of maintaining a reasonable balance of growth opportunities as between the various member countries, some of them would begin to question the usefulness of the integration programme in their own national context. It is for this reason that joint action may be needed to draw up and implement a distribution of industry policy providing for satisfactory avenues of growth for each country in a grouping.

51. While the long-run effects of regional economic co-operation among developing countries may be profound, the contribution of such co-operation to the solution of immediate problems may be more limited. These problems result from the fact that the expansion of exports of primary products has been too slow to permit developing countries to finance from the proceeds of those exports their requirements for imports of raw materials, intermediate goods and manufactures necessary for their development. With few exceptions, the growth of demand for
primary products has been sluggish, since demand for most of these commodities is relatively unresponsive to increases in income in the major markets. At the same time, there are factors that, unless offset, tend to bring about secular declines in the prices of primary commodities relatively to finished manufactures.

International action is needed not merely to deal with problems of primary product trade but also to provide an additional source of export earnings for developing countries through expanded exports of manufactures to the industrial countries. Such an expansion of export earnings would enable the developing countries to buy the capital goods and machinery which they must have for economic development. An expansion of the trade of developing countries with one another cannot provide them, in advance of industrial development itself, with goods of this kind. One of the main problems of industrial development consists precisely in the fact that the developing countries at their present stage of industrialization lack the capacity to produce capital goods on a scale commensurate with their development requirements. Greater economic co-operation and trade among the developing countries is thus only a partial solution for the problem of their dependence on imports from developed countries. There is today only limited scope left for triangular trade flows by which one developing country could cover a trade deficit with the developed countries through a surplus with other developing countries which enjoy a trade surplus with the developed countries. In any case it is, of course, not possible for all developing countries taken together to finance their imports from developed countries in this way.

52. Moreover, so far as the short run is concerned, the market potential in trade among developing countries is only a small fraction of the enormous market opportunities available in the developed countries, and will remain relatively limited even if economic co-operation among developing countries and their economic development proceed much more rapidly than hitherto. This may be seen from the fact that the consumption of manufactures in all developing countries combined is equivalent to only 10 to 15 per cent of that of the developed countries. Thus an increase in exports of manufactures that would be very large in relation to the current level of exports by developing countries, would be extremely small in relation to the consumption of manufactures by the developed countries. As was pointed out by the Secretary-General of the United Nations Conference on Trade and
Development in his report to the Conference, the increase in exports of manufactures from developing countries that would be necessary even if one were to assume that half of the trade gap of the developing countries in 1970 would be filled by such exports, would represent only some 4 to 5 per cent of the total increment in the consumption of manufactures of the developed countries from 1961 to 1970.

B. Co-Operation between developing and developed countries

53. It follows from the preceding discussion that economic co-operation and integration among developing countries cannot be regarded as an alternative to widening the access of the developing countries to the markets of the more advanced parts of the world, either from the standpoint of quantitative effects or from the point of view of the qualitative role fulfilled in the process of development by an increased exchange of goods with the developed countries. In a sense it may be said that such integration, where it can be achieved, may itself be an important means for increasing the obtainable productivity levels, and thus the export capacity of the developing countries and may thereby increase the flow of trade with the advanced countries.

54. It is therefore important for the world community to think in terms of a progressively evolving international division of labour in which the developing countries will be able to play a growing part in the manufacturing sector. It has long been apparent that the traditional forms of specialization between the developed and the developing countries, involving the exchange of manufactures against food and raw materials, have been becoming more and more unsuitable for the needs of a world-wide advance in the level of economic development. Indeed, the conventional lines of demarcation between primary commodities and manufactures have lost much of their relevance in this traditional division of labour between these groups of countries. As agriculture and mining have become increasingly industrialized, the former comparative advantage of the developing countries in these activities has been eroded. The most highly industrialized economy in the world - that of the United States - is also the one in which agriculture has undergone the most sweeping technological revolution; and it may well be that the United States has a comparative advantage in the production of food relative to
many developing countries. Similar considerations have shifted the order of preference of the primary as compared with secondary sectors, when looked at from the standpoint of the developing countries and their need to save capital. Certain types of primary production have emerged as relatively capital intensive and may thus no longer hold out the same advantage as they were believed to have had in the past for the developing countries. Experience in a number of countries seems to indicate that the gains in productivity which can be achieved by expanding the manufacturing sector may be greater than those which can be obtained by increasing the output of primary products. From a dynamic point of view, therefore, the developing countries may have a marked comparative advantage at least in certain sectors of manufacturing activity. What appears to be needed is a new division of labour in which certain types of primary products and manufactures would be produced to the greatest advantage by the industrially developed countries, while a growing role in the production of other types of goods, whether primary or manufactured, would be fulfilled by the less developed countries. It is reasonable to assume that one of the chief criteria for this division of labour would be not only natural endowment, but, to an increasing extent, the level of technology and skills available and the rate at which they can be increased.

55. But if new forms of specialization of this sort are to develop smoothly, it is obviously necessary that they should be foreseen and that appropriate adaptations should be made by both developed and developing countries alike. The latter, for their part, would have to be ready to take advantage of new market opportunities for exports of manufactures: it would be necessary to study the experience of countries that have already had some success in promoting such exports, and adapt that experience to the particular situations of individual countries. Above all, measures would have to be devised in countries which rely primarily on private initiative to overcome the reluctance of individual entrepreneurs to assume the risks of producing a relatively high proportion of their output for shipment to foreign markets. On the other hand, the industrially developed countries would increasingly have to accept the idea that progressive shifts in the structure of international trade are becoming necessary as industrial technology is assimilated by the developing countries. For some
considerable time, as the less developed countries advance up the scale of the
industrial arts, the more highly developed countries would remain ahead, seeking
always to trade the products of their more advanced skills and techniques against
the simpler ones embodied in manufactures produced by the developing countries.
The long-run objective would, of course, be the ultimate disappearance of the
gap in technological levels and incomes between developed and developing countries.
56. As the achievement of that objective is approached, the flows of trade
between different parts of the world will increasingly be based - as is, in fact,
already the case in trade among developed countries - upon specialization and
competitive exchange among broadly similar industrial structures rather than
upon exchanges of a complementary nature.

C. The transition difficulties and the adjustments required

57. The adaptation may involve short-term difficulties for a few domestic
industries in the developed countries, and time and patient effort may be
required to permit the necessary adjustments to take place. Assistance from
Governments may also be needed to facilitate the transition in order that
capital may be redeployed and labour retrained. But from the long-term
viewpoint, such a dynamic adaptation is as much in the interests of the developed
as of the developing countries. Experience shows that the export industries in
the developed countries are generally those which progress fastest and pay the
highest wages. In the United States, for example, it has been shown that the
average hourly wage paid in ten leading export industries in 1958 was $2.43,
while in the ten industries where the volume of imports was greatest, it
was $1.87.\(^4\)/ It would therefore be advantageous for the United States, as well
as for other industrial countries, to encourage a larger flow of imports of
manufactures from developing countries in the knowledge that the latter countries
would use their earnings to buy additional products of the export industries of
the industrial countries.

\(^4\)/ D.D. Humphrey - *The United States and the Common Market* (New York) 1962,
page 127.
58. It is frequently taken for granted in the developed countries that the low wages paid in developing countries give them a decisive advantage in the labour intensive industries. The case of textiles, where the combination of cheap labour and modern methods appears to have given certain of the developing countries a very strong competitive position, is assumed to be typical of a large sector of manufacturing activity. This example is, however, far from typical. The general rule is, in fact, precisely the opposite - namely, that the advantage of cheap labour, if that is the factor upon which the industry relies, is much more than offset by low productivity or by the tendency for other costs to be considerably higher in under-developed than in developed countries. The very fact that wages are high in developed countries and low in developing countries is itself a reflection of the superior productivity characteristics of the former countries.

59. Far from posing a competitive threat to the industrial countries, producers in developing countries usually find themselves at a cost disadvantage and it is this fact that provides the rationale for infant industry protection in the latter countries.

60. For most manufacturing industries, it is probably true to say that even under conditions of completely free access to the markets of the developed countries, the producers in developing countries will find themselves at a competitive disadvantage for some time to come. If these disadvantages are compounded by trade barriers of various kinds, the obstacles to such exports may become insuperable.

61. The high level of industrial costs which is typical of most developing countries also creates severe problems in the determination of an exchange rate which will equilibrate foreign trade without deterring the expansion of manufactured exports. It has to be borne in mind that the exchange rate of the typical developing country necessarily reflects the level of money costs of production in the primary sectors of the economy and not in the manufacturing sector: for so long as primary products provide much the greater part of total exports and so long as the bulk of such products is intended for exports rather than for home consumption, competition will ensure that at any given rate of exchange, the money costs of primary products in terms of domestic currency will correspond fairly closely to the local currency equivalent of the prices ruling
in the world market. The exchange rate so established will generally overvalue the currency with respect to manufactured products, whether intended for the domestic market or for exports.

62. This is the basic justification of the now universally accepted principle that an under-developed country needs to protect its manufacturing activities from foreign competition by restricting imports in some way. Unless the difference between money costs and opportunity costs in manufacturing are equalized by tariffs or subsidies, it is impossible to secure the best allocation of resources, either from the point of view of a particular country or of the world as a whole.

63. It is less generally recognized that this gap between money costs and opportunity costs creates a problem not only as regards competition in the domestic market, but also in the field of competition in foreign markets. A rate of exchange that would make it possible for a developing country to gain export markets for manufactures would considerably undervalue the currency in terms of the primary commodities that form the great bulk of its exports. If such a rate were adopted, the rise in export proceeds, in terms of the domestic currency, would generate an inflation of domestic costs and prices that would neutralize the initially beneficial effects of the exchange rate on the profitability of exports of manufactures.

64. It is thus seen that the infant industry problem long recognized as far as import substituting industries are concerned, presents itself in a similar form in connexion with export industries. The difficulty here, however, is that while the use of tariffs and other devices for the protection of domestic industries has gained wide acceptance, equivalent measures for the protection of infant export industries are much more controversial. Part of the solution to this problem is being sought through the request that the developed countries grant preferences to imports of manufactures from developing countries. While helpful, such preferences could only equalize the opportunities available to manufacturers in the developing countries and those in the developed countries granting the preferences. It could not fully make up for the disadvantages that result from the under-development of industry. For the latter purpose, special aid to developing countries will be needed to make their industries viable, and
in the short run, other devices may have to be explored, possibly including special subsidies to export industries.

65. While the inward-looking character of industry in many developing countries has been encouraged by the obstacles encountered in external markets, efforts to remove such obstacles should go hand in hand with a redistribution of emphasis between import substitution and export promotion. Not only may an industry that begins by producing for the local market branch out into external markets as soon as it has gained the necessary experience and has taken the trouble to make foreign contacts, but the course of industrial development can also be set in such a way as to provide sufficient incentives for entrepreneurs to venture into export markets.

66. Since the developing countries can never become self-supporting at a high rate of growth if they do not create new capacities for the export of manufactures, technical assistance and economic aid should be directed in a more conscious manner towards this objective. The question has been raised whether sufficient emphasis has been given to industrial development in the context of existing aid programmes. On the other hand, it has been suggested that there are fewer suitable industrial projects available than there are national and international resources to finance them, and that in the technical assistance field likewise Governments have been slow in evaluating their own needs. There is no doubt a great deal of truth in both contentions, and a new momentum is needed in assisting developing countries to determine where their best industrial opportunities lie, to mobilize the capital and skills required for taking advantage of those opportunities, and to prepare projects that would attract the necessary financing.
IV. CONCLUSION

67. This paper has ranged over a fairly wide territory and has sought to focus attention only on some of the problems and issues that have to be faced if industrialization is to be accorded the kind of priority that is now universally agreed upon.

68. Perhaps the major conclusion that emerges from this survey is the vital need for a reconsideration in depth of the industrial division of labour between developed and developing countries. Familiar controversies thrown up by the traditional division of labour have lost some of their sharpness in the light of the discussion of recent years. As issues have gradually been clarified, it has become increasingly apparent that what were previously diverging points of view have come together on much more common ground than might have hitherto seemed possible. This is particularly true of the controversies regarding the relative roles of industry and agriculture, of modern and traditional industry, of capital goods and consumer goods, of capital-intensive and labour-intensive techniques. This is not, of course, to suggest that all controversy has been resolved. But sufficient headway has been made to bring about universal agreement that national and international policies should be directed towards

"... a modified international division of labour, which is more rational and equitable and is accompanied by the necessary adjustments in world production and trade." 5/

69. The work that lies ahead in achieving this objective will involve both the identification of the best approaches to industrial development in the developing countries and concerted planning for consequential adjustments in developed and developing countries alike. In this field national and international action are equally essential and mutually supporting. Industrial growth in the developing countries can be stepped up only if these countries plan for the best use of their resources in the light of available markets - national, regional and world-wide. And a new division of labour can be achieved with a minimum of dislocation only if the world community as a whole takes deliberate steps to facilitate adjustment, thereby creating conditions for a general advance in living standards in developed as well as in developing countries.

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