AN AGRICULTURAL POLICY TO EXPEDITE THE ECONOMIC DEVELOPMENT OF LATIN AMERICA

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# CONTENTS

<table>
<thead>
<tr>
<th></th>
<th>I. Introduction</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>II. Possible bases for a Latin American agricultural policy</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>III. Possible instruments and measures for agricultural development</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>1. Investment in rural public works and in the improvement of the rural infrastructure</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>2. Land reform and supplementary measures</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>(a) Land reform</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>(b) Education and training of personnel</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>(c) Research and extension services</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>(d) Marketing</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>(e) Credit and subsidies</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>(f) Industrialization in rural areas</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>(g) Living conditions</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>(h) Co-operatives</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>3. Liberalization of inter-Latin American trade</td>
<td>34</td>
</tr>
</tbody>
</table>

/I. INTRODUCTION
I. INTRODUCTION

1. It is perfectly obvious that industrialization can help underdeveloped countries to increase their income more quickly than their exports and that only an industrial society can foster the spirit of technical innovation which is now a feature of the advanced countries.

2. World demand for primary commodities expands slowly over the long-term, not only because industrial incentives at high levels of development tend to become weaker, but also because technological advances have led to import substitution in respect of food and fibres in some countries. On the other hand, Latin American demand for manufactured goods is very elastic. There is therefore a discrepancy between the purchasing power generated by Latin American exports and the requirements of the domestic market. Industrialization is thus necessary in order to maintain the balance of payments between Latin America and the rest of the world. Moreover, industrialization makes it possible to offer more productive employment to redundant agricultural workers when conditions of full employment exist at a specific level of technique and also helps to enhance the value of agricultural commodities.

3. The disparity between agricultural growth and the growth of the other sectors of the economy should be examined. Agriculture has developed slowly in most Latin American countries over the past few years. Where it has developed rapidly, the growth was caused by the incidental development of export products, particularly those for which there is a slowly but steadily increasing external demand.

4. The slow growth of agriculture has acted as a powerful deterrent to balanced general economic development. Moreover, the structural framework in which agricultural activities develop and the pattern of income distribution prevalent in that sector have also delayed the emergence of an adequate market for the absorption of the products of domestic industry.

1/ The terms "agriculture", "agricultural", etc., as used here, cover agricultural activities proper (crops) as well as animal husbandry and forestry.

/5. Action
5. Action to remedy the situation described above and to find ways and means of achieving the rapid development of agriculture and a more equitable distribution of agricultural income must therefore be taken without delay. This action might lead to the following:

(a) Use of idle or underemployed resources, particularly labour;
(b) Expansion of demand for industrial goods and services as well as the food and fibres produced by farmers;
(c) Import substitution in respect of foodstuffs and raw materials of agricultural origin — particularly those from outside the area — with a view to freeing foreign exchange which could be used to import capital equipment both in order to achieve a more rapid process of industrialization and to provide agriculture with better equipment and a higher level of technique and production;
(d) Avoidance of an unduly rapid process of urbanization;2/
(e) Improved living and nutritional conditions in rural areas.

6. A faster rate of agricultural development which would have far-reaching effects on the steady economic development of Latin America would call not only for full employment of the rural labour force throughout the year but also for the widespread adoption of improved agricultural techniques. In the first stage of an effort of this kind, production techniques should be adapted to the general conditions of abundant manpower and lack of capital, without forgetting that the degree of emphasis will vary depending on the area concerned. In other words, pilot stations should endeavour to introduce techniques calculated to produce the best combination of factors through full employment of the labour force and higher productivity by means of improved seeds, fertilizer, pesticides, and hand-tools.

2/ Recent experience in Latin America shows that, in countries with a high population growth rate, the manufacturing sector — even with a very high growth rate of the product of 8 to 10 per cent annually — is unable fully to absorb the natural growth of the urban labour force and is even less able to absorb redundant rural workers.
They should also seek to improve the quality of farm work and to undertake such projects as irrigation and drainage in order to lengthen the useful period of the farm year as much as possible. None of these improvements — nor the more equitable income distribution needed in order to expand the market — can be achieved without thorough institutional reforms designed to shake producers out of their present indifference to economic incentives aimed at achieving the selective increases in agricultural production required by a growing economy.

7. Full employment of the rural labour force may cause severe short-term disequilibria in the supply-demand balance and a surplus of food and other traditional products in Latin American countries suffering from heavy population pressure. In areas with a low percentage of rural population, a relatively high level of technique and a nearly optimum use of labour, much of the farm work will have to be mechanized in order to achieve an effective increase in production. In cases where production is uncertain because of a shortage or excess of water, full employment in agriculture cannot be attained without establishing a proper infrastructure. Moreover, improvement of means of communication to facilitate or permit agricultural development is essential throughout Latin America.

8. It is therefore felt that the accelerated development of agriculture in Latin America will require an intensive public works programme for the following purposes:

(a) to provide work for those who cannot immediately be employed in agricultural production proper because of the danger of surplus supply;
(b) to reduce seasonal unemployment as much as possible;
(c) to establish an adequate infrastructure as a basis for more efficient agriculture.

Instead of adopting "imported" methods based chiefly on labour saving through mechanization.
Inherent in the above programme is the construction, in due course and on a staggered basis, of irrigation and drainage works, roads, warehouses, schools and other public buildings, improvement of rural housing, etc. In order adequately to supplement this sort of escape valve for the rural labour force, processing industries suitably distributed in rural areas must also be established. Public investment in the rural sector will not only lead to the benefits already mentioned but will also compensate for the sluggish rate of investment in the Latin American agricultural infrastructure. It should nevertheless be borne in mind that, while the coefficient of foreign exchange needed for this investment is very small, it does require domestic savings. It is therefore obvious that high priority must be given to these works until the bottleneck created by agriculture has been removed. Once this has been done, however, agricultural investment should be considered in the light of other investment possibilities within the broad framework of the economy as a whole, so that priority may be given to investments which would contribute to the best relative increase in the total product.

9. The interest shown by countries in this type of programme as a means of relieving social tensions through accelerated agricultural development, and the possibility that international assistance in this field may increase, point to the desirability of studying the general lines of an agricultural policy for Latin America, particularly with respect to the major institutional changes required for an adequate growth rate with which to achieve the desired objectives. This task requires governmental action in agriculture and other sectors of the economy. Until now this form of guidance - which has always existed to a certain extent - has at times been incomplete, sporadic and disjointed. Hence the importance of development programming, which is essentially nothing more than the orderly arrangement of governmental action in the economic field to promote the achievement of well-defined targets for the welfare of the community.
II. POSSIBLE BASES FOR A LATIN AMERICAN AGRICULTURAL POLICY

10. In spite of the efforts made and the favourable conditions which prevailed during the first ten post-war years, Latin America has not succeeded in achieving a position enabling its growth rate to exceed that of its exports. The growth rate of the product in Latin America is currently much lower than it was in the period 1945-55 and prospects for improvement seem to be somewhat limited unless the countries concerned adopt decisive measures to overcome certain obstacles, particularly of an institutional character. There are two major aspects to the problem. On the one hand, the external sector of the regional economy has weakened with the fall in prices, the deterioration in the terms of trade and the difficulty in securing outlets for agricultural (and other) products on the world market. On the other hand, the rate of expansion of the internal sector has been inadequate. The Latin American markets are growing too slowly, largely because of the unequal income distribution, aggravated in some countries during the past few years by monetary stabilization measures which were not accompanied by adequate investment programmes.

11. The situation created by the internal sector of the Latin American economies is largely attributable to the inadequate development of agriculture. A study of the growth rate and conditions obtaining in this sector point clearly to problems which would seem to require the urgent attention of Governments with a view to establishing a general process of expansion of the Latin American economy on a proper and durable basis.

12. The background to the problem of Latin American agriculture is the low average income level of the rural population. Taking Latin America as a whole, the contribution of a rural worker to the gross product is, on an average, less than one third of the contribution of a person engaged in activities other than agriculture. Moreover, available figures indicate that, in absolute terms, the differences are increasing instead of diminishing. Thus, between 1945-47 and 1955-57 the average income of a rural worker in Latin America, in terms of constant purchasing power, rose...
power, rose from 325 to 390 dollars, whereas that of an urban worker increased from 1,120 to 1,315 dollars.

13. The gap between rural and urban income is only part of the problem, because income distribution in agriculture itself is also very uneven. Although data on this point are lacking, it is perhaps in the rural sector that the sharpest contrasts may be found. In fact, while the vast majority of small landowners, landless peasants and rural wage-earners barely earn enough to live at a minimum subsistence level, a relatively small group of large entrepreneurs and property owners have huge incomes. The average income per major category — much of it being undisclosed, particularly at the upper end of the scale — shows that the per capita income of the entrepreneurial group is from 20 to 40 times larger than that of the vast majority of urban workers.

14. Although a situation similar to that prevailing in Latin America obtains in virtually every country in the world, there are factors which help to widen the gap in under-developed countries and, on the contrary, to narrow the breach in those industrial countries which, in addition to their high level of agricultural technology, have a better system of land distribution. Besides the vast differences in rural and non-rural income, there are also differences in the productivity of the persons employed in the various sectors of the economy. Agricultural productivity is usually low because of the uneven distribution of property, the inadequate systems of land tenure and use, and the archaic rural labour and recruitment systems which still obtain in many areas of Latin America. To all this must be added the shortage of capital and the lack of a proper infrastructure for the development of productive activities, widespread ignorance of — or failure to apply — agricultural techniques through which a better combination of factors under existing conditions can be secured and, very often, the absence of a policy of economic incentives and of structural changes directed towards the achievement of specific development targets.

15. Under the conditions described above, the growth of Latin American agriculture has been sluggish in most countries during the past few years. Taking Latin America as a whole, total agricultural production /and the
and the output of foodstuffs—expressed in per capita terms—are now less than they were before the last war. In the few cases in which agricultural output has grown rapidly, this was achieved primarily through the incidental development of export commodities—e.g., coffee, cotton and bananas—the foreign demand for which is slowly but steadily increasing. Serious surplus problems are confronting both coffee and cotton and it is doubtful whether steady and vigorous development can be maintained on these bases. The main feature as regards banana production is the shift in the production pattern, output remaining static in Central America but increasing substantially in Ecuador.

16. The slow development of the agricultural sector in face of a rapid growth in population and in the total income generated by the economy has had important consequences for Latin America. On the one hand, the growing domestic demand for foodstuffs and agricultural raw materials has compelled some countries to withhold an increasing share of their staple export items, particularly meat, wheat, pulses, oilseeds and milk derivatives. On the other hand, many countries have found it necessary to expand their imports of foodstuffs to prevent a cut in supplies which might have increased existing inflationary pressures and depressed the nutritional level, already low and inadequate in large areas of Latin America. In the circumstances, the gap between agricultural imports and exports narrowed considerably. Fortunately, the capacity to import did not suffer as much as might logically have been expected during the first ten post-war years. On the contrary, there was a marked improvement in the terms of trade as a result of which the purchasing power of net per capita exports declined by only 14 per cent at a time when the quantum dropped by over 40 per cent. However, the situation has changed substantially since 1957 because of the sharp drop in the price of a few agricultural commodities on the world market.

17. Notwithstanding the aforementioned structural defects and the relative stagnation of production, agriculture continues to be the chief economic activity for Latin America as a whole. Its contribution to the
gross national product is close to 24 per cent.\textsuperscript{4} Agricultural exports account for about two thirds of the total value of Latin American exports. Lastly, over 50 per cent of the economically active population is engaged in farming.\textsuperscript{5} That is why agricultural problems are so important and must be speedily solved in order to achieve a more rapid rate of general development and greater stability in the Latin American economies.

18. Two closely-related problems should be mentioned in this connexion. The first is linked to the level of income in the sector which has the most Latin American workers. The figures mentioned in earlier paragraphs include the value of foodstuffs produced and consumed in rural households. Food accounts for from 30 to 50 per cent — sometimes more — of the rural family's budget. Thus, in terms of money, the annual income per person engaged in the farm sector - particularly at the bottom of the income scale - is even lower than the figures indicate at first sight. Moreover, rural families tend to be larger. Hence, the difference between the per capita income of rural and urban inhabitants is even greater than a comparison of their respective incomes per active person would suggest. Indeed, if agricultural income is divided among the total rural population, and the same is done for the other sectors, it appears that for each dollar of constant purchasing power obtained by a rural inhabitant, a person engaged in industrial activities or construction receives 4.40 dollars, in mining 11.20 dollars, and in transport and public utilities 6.10 dollars.

An economy in which half the wage-earning population lives at such a precarious level must certainly be hampered in its attempts to progress and develop. Industrialization requires markets, but under the aforementioned conditions, agriculture can hardly live up to its role as a substantial consumer of industrial goods and services or even as a broader market for its own products within the framework of a balanced economic development.

\textsuperscript{4} The industrial sector, next in importance, represents about 20 per cent.

\textsuperscript{5} The population classified as "rural" constitutes about 58 per cent of the total population of Latin America.
economic development process. Thus, agricultural income must be redistributed.

19. The second problem is the insufficient use of Latin American agricultural resources, particularly manpower and land. This under-utilization appears in varying degrees and forms depending upon the Latin American country concerned. While the reserve of potential labour remaining idle because of overt or seasonal unemployment cannot be readily estimated, it must indeed be large. This phenomenon is apparent from the reduced average number of days worked during the year and from the low level of efficiency of the rural worker vis-à-vis the growing internal demand for foodstuffs and primary commodities which must often be satisfied by means of imports. Thus, for example, a rural worker works an average of 218 actual days a year in Argentina, 210 in Chile, about 200 in Colombia and barely 180 days in El Salvador.  

The position is even more serious if national averages are set aside and the particular case is considered of individual areas where farming depends on circumstances or where a single main crop is grown for export - especially, coffee, sugar cane and cotton - and labour is needed only for a short period every year. There the rural worker only works from 80 to 100 days a year and often has to travel great distances in search of work.

20. Moreover, it should be pointed out that in many important areas of Latin America women are not employed in agriculture but do household work. There is therefore a large potential labour force which could be used if required.

6/ Sources: Argentina: El desarrollo de la Argentina (E/CN.12/429/Rev,1) United Nations publication, Sales No.59.II.G.3, Vol. II; Chile: Development Corporation (CORFO), Planning Department; Colombia: The Economic Development of Colombia (E/CN.12/365/Rev.1) United Nations publication, Sales No.56.II.G.3; Ecuador: research by the Joint ECIA/FAO Agriculture Division carried out in co-operation with the Ministry of Development and the National Planning Board; El Salvador: El desarrollo económico de El Salvador (E/CN.12/495), United Nations publication, Sales No.60.II.G.2.

7/ In the same connexion, the example of India is worth mentioning. Its Second Five-year Plan states that "...with present techniques of agriculture being continued, if cultivating units were to approach what might be described as family holdings affording possibility of fairly full-time work in agriculture for a family of average size, agricultural production could be maintained with about 65 to 75 per cent of the number of workers now engaged in it." (FAO, The State of Food and Agriculture, 1959, chapter, IV, p.156).
21. In Latin America – which has one of the highest population growth rates in the world – underemployment of the rural labour force is partly related to the unequal distribution of land ownership. On the one hand, vast areas are occupied by great estates and single-crop entrepreneurs with idle resources; on the other, there are armies of small producers – e.g. farm-owners, sharecroppers, tenant farmers, etc. – who do not have enough land to keep fully employed throughout the year. Generally speaking, between 3 to 8 per cent of the total number of farms in Latin America occupy 60 to 70 per cent of the productive land. On the other hand, between 75 and 80 per cent of the holdings cover only 5 to 10 per cent of the suitable land. To this must be added the problem of landless peasants who have no work until they are required by an entrepreneur whose production policy does not necessarily take into account the national interest as regards the general level of employment and the total supply of agricultural goods.

22. Besides the unequal distribution of land, other factors affect the degree of employment of the rural labour force. In areas which suffer from long dry seasons, agricultural work comes to a virtual standstill for weeks and months on end. The same happens in areas with too much rainfall, where the fields are sodden for long periods. In both cases there is a lack of communal works – irrigation or drainage – which would lengthen the work cycle. In most cases, means of communication must be extended or improved in order to permit easy access to existing or potential farmland or as an outlet for produce. Hence, what has to be done is (a) to redistribute land resources so that they are accessible as a means of production to all rural workers; (b) to improve the agricultural infrastructure and to diversify production with a view to reducing seasonal unemployment to a minimum.

23. Latin America must take decisive steps to attain a high rate of agricultural growth within a short period of time. Accelerated agricultural growth can help the economies of the region to embark on a period of real and steady development, mainly in three ways: (a) by increasing the national product; (b) by supplying the additional foodstuffs and primary commodities required by other sectors of the economy; (c) by producing a larger share
larger share of the economic resources required to raise the rate of investment.

24. The post-war pace of economic development in Latin America might well have been more rapid were it not for the sluggishness of the agricultural sector. In fact, while the gross national product of all other activities taken as a whole increased at an annual rate of over 5 per cent between 1945 and 1957, the annual growth rate of agriculture during the same period was similar to that for the population, namely, 2.5 per cent. Moreover, reference has already been made to the low level and unequal distribution of income generated by the agricultural sector as well as to the very low purchasing power of the rural population, who constitute the bulk of Latin America's inhabitants.

25. The unsatisfactory institutional framework in which farming is carried on is the most serious impediment to the development of productive activity in Latin America. There may be several reasons for this and it may appear in several forms, but it is generally characterized by the unsatisfactory distribution of land resources and the perpetuation of archaic methods - already left behind in countries with more advanced economies - in the recruitment and remuneration of labour.

There are further institutional shortcomings in the educational system, the distribution of goods, the tax system and the methods used to promote agriculture. 8/

26. One of the chief characteristics of the Latin American economy is the inefficient and inadequate use of all the productive factors in agriculture, including the scanty capital available to the sector. From the economic and social point of view, the most pressing and obvious problem is the underemployment of labour. It would therefore not be an overstatement ot say that the success of any programme of accelerated and steady development will depend upon the possibility of mobilizing this reserve labour force, Latin America's most abundant and growing resource.

In view of the fact that rural inhabitants are in the majority in virtually every country in the area, the present situation could be radically altered by an effective increase in agricultural output and a better distribution of the income it generates. On the other hand, failure to improve conditions in this sector would frustrate and render ineffective for some time to come such advances as may be achieved in industrialization. International assistance, however valuable, cannot replace an effective marshaling of the rural labour force.

27. Economic development plans and programmes which fail to take the above conditions into account cannot produce the desired effect, although savings and investment projections may appear in theory to balance. It must be pointed out that solutions applicable to highly industrialized countries cannot simply be transplanted to Latin America, where institutional reforms designed to remove obstacles inherent in the environment in which farming is carried on are as essential here as are immediate measures to solve, on a selective basis, the severe bottlenecks that continue to arise in the process of development. The tremendous potential benefits which may be derived from these reforms should be emphasized, since they probably represent one of the most promising prospects of progress in the use of the vast human resources now idle and the little capital that is available.

28. So long as Latin American agriculture suffers from its present high rate of unemployment - both overt and covert - the economically proper way to step up production is to find work for the unemployed. Thought should preferably not be given to increasing the productivity of the currently employed labour force until full employment has been achieved. If this course is followed, the manpower released by improved technology might provide an impetus to further expansion, thus providing real opportunities for achieving a rising level of production at a correspondingly mounting level of remuneration for the worker. It would be a mistake to base a rise in the product on labour-saving devices which would just increase unemployment. Under present conditions, and in the first stage of accelerated growth, urban areas will have enough manpower available for industry without requiring migrant workers.
migrant workers from rural areas. Industry can recruit urban labour overtly or covertly unemployed and can also rely on a high population growth rate in the urban areas themselves. A great many people living in towns are either unemployed, employed part-time, or engaged in activities of very low productivity such as the retail trade, hawking, domestic and other personal services. Hence, an increase in agricultural production should be sought first and foremost through full employment of the labour force and the adoption of improved techniques which save land and absorb manpower. These would include public works and practices designed to reduce seasonal unemployment - irrigation, diversification of enterprises, a higher level of processing of agricultural products on the farm - the use of improved seeds, fertilizers, pesticides and weed-killers, and better growing and management practices.

29. There is a wide range of aspects to the problem of the inadequate use of Latin American agricultural resources. Underemployment of the three chief factors - labour, land and capital - is usually one facet of a difficult and complicated situation which, however, is not the same in the humid pampas of Buenos Aires as it is in the sierra and inter-Andean valleys of Bolivia, Ecuador and Peru. The matter will be clearer if the area is divided into three specific groups: (a) areas with a high population density and subsistence farming or with a single export crop; (b) areas in which farming depends on conditions because of insufficient or excessive rainfall; (c) areas with a higher degree of agricultural technology and diversification.

30. It may happen that the adoption of agricultural techniques based on a combination of high labour intensity and low capital intensity - insufficient machinery - does not by itself solve the problem of the full employment of currently unemployed or underemployed resources in areas with a high population density and a traditional or single-crop agriculture. There are many very large areas of this type in Latin America. Moreover, even if the employment problem could be solved in theory, short-term surpluses of agricultural commodities - chiefly staple foodstuffs - might be created which would not be absorbed immediately under
immediately under current internal and external market conditions. That is why agricultural development programmes must be combined with rural public works projects which would:

(a) provide work for unemployed workers unable to find jobs immediately in agricultural production, keeping them more or less in the area in which they usually live, with the consequent savings in housing, transport and urban services of all kinds;

(b) bridge the off-season gap, characteristic of subsistence farming and commercial farming of the plantation type, in order to absorb seasonally unemployed labour;

(c) increase the basic social capital and efficiency of agriculture by building dams, irrigation canals, drainage systems, soil conservation works, roads, warehouses and storerooms, etc., the operation and maintenance of which will subsequently provide opportunities for permanent employment;

(d) raise the effective demand for food and fibres of the rural inhabitants, who constitute the majority of the population, simultaneously and at the same rate that increases occur in agricultural production, in order to avoid surpluses or inflationary pressures on food prices in the first stages of the process of accelerated development.

31. In certain areas where crops depend on conditions because of insufficient or excessive soil humidity or a lack of means of communication, the first step towards an increase in agricultural production should be a very intensive public investment programme aimed at creating a proper infrastructure. In these cases a completely different situation may arise - a food shortage - for a fully employed population with a higher level of effective demand than before. The problem cannot be solved in the early stages by local production. Fortunately, the existence of food and fibre surpluses in several industrial countries - particularly in the United States - which could be obtained on special terms through aid programmes established for the benefit of underdeveloped countries, could overcome this difficulty without undue sacrifice.

32. Lastly, other solutions aimed at increasing the product must be sought in areas where the level of agricultural technique and diversification is higher and there is less underemployment of resources, or
none at all at the present levels of population and technique. Here the existing technique and infrastructure should be improved but machinery would also have to be used as far as necessary.

33. The scope of a programme of accelerated agricultural development combined with a public works programme in rural areas has usually been under-estimated in some "models" of economic development hitherto proposed. This is largely due to the premises on which these models are based. It is considered axiomatic that the process of economic development must be based on the shift of the labour force from agricultural activities of low productivity to industrial activities and skilled services of so-called high productivity, on the assumption that full employment exists and that industry is a very dynamic sector as regards the absorption of manpower. The first hypothesis is essentially correct, but the second and third have not been borne out by recent facts in Latin America. In this connexion, the following comments should be taken into account:

(a) The labour force is not fully employed in Latin America. The problem has not been gone into very fully. However, reference has been made earlier to its nature and scope so far as agriculture is concerned. The urban sector provides multifarious and glaring examples of under-employment: hawking and a proliferation of retail trades. Moreover, the problem is magnified if the rates of industrial and population growth are projected into the future, in spite of recently high industrial growth rates; 2 /

(b) Industry has not always been able to absorb the labour force at the accelerated rate indicated by the increase in the product. The following figures, which are for Latin America as a whole, give an idea of the annual percentage growth rates of the volume of production and employment in the manufacturing sector. 10 /

2/ See, for example, chapter III of the Analysis and Projections of Economic Development, VI, The Industrial Development of Peru (E/CN.12/493), United Nations publication, Sales No: 59.II.G.2.

The figures for the final period considered are particularly significant because the higher growth rates of the product in manufacturing have been accompanied by rates of increase in employment in the same sector which were not sufficient to absorb even the natural growth of the active population. This problem, with which students of economics are deeply concerned, has also emerged in countries with a very high annual cumulative industrial growth rate, such as El Salvador (8 per cent), Brazil (9 per cent) and Venezuela (11 per cent). The main reason for this is that industry - in order to be efficient - develops on the basis of imported technology and labour-saving production methods that are characteristic of the advanced countries. Industry's inability to absorb labour may also be largely due to the relatively static condition of the light manufacturing industry and the development of skilled services, in which a high proportion of the active population in the major industrial centres is employed. If this is the case, then perhaps the inability of industry to absorb manpower is not chiefly a structural and technological phenomenon of industry alone, but only one aspect of the inability of the Latin American economies to raise, substantially and steadily, the incomes of the vast majority of the population;

(c) Agriculture, which presents opportunities for investment with a very high input-output ratio, can also absorb manpower by employing it intensively in the construction of infrastructural projects requiring little capital and which, by their very nature, do not have much effect on the balance of payments;[13]

[13] This is true both in respect of the need to import the few capital goods required for this type of work and of the consumer demand it would generate, which normally would have to be met out of internal resources or - in the specific cases mentioned - by importing surpluses payable in local currency. /d/ Agricultural
(d) Agricultural growth in under-developed countries does not necessarily require the use of imported labour-saving methods nor the same degree of mechanization as is found in industrial countries. Agricultural productivity can be raised by introducing an indigenous technology based on the intensive use of manpower working with hand-tools, small machines, fertilizers, pesticides, etc., and on improvement of the soil through irrigation, drainage and the construction of conservation works.

34. This does not in any way imply that the rate of industrialization should either be arrested or slowed down. On the contrary, the argument implies the need for even more rapid industrialization, but supported by a sound and vigorous agriculture, with a higher effective demand than at present.

35. Some of the theoretical schemes for accelerated economic development proposed for Latin America\(^\text{12}\) assume a per capita income growth rate so high that (a) low-income groups would immediately find their living conditions improved as a result of the combined effort called for in the programme; (b) there will be a gradual but steady narrowing of the income distribution gap which will not be such as to discourage private investment. In other words, growth must not only be continuous, but, at the same time, its rate must permit a redistribution of income while maintaining, in absolute terms, the position of the high-income groups which lose in relative terms.

36. The desirability or possibility of redistributing income growth, or the need for additional measures, can only be determined in the light of the specific conditions obtaining in each country. In any case, the speed of development proposed by such schemes and the redistribution of income can be expected to increase the demand for food and other items to such an extent that the agricultural product — particularly in the domestic consumption sector — would have to grow

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at an annual cumulative rate of 4 to 5 per cent, i.e., almost twice the figure registered in recent years.

37. In order to achieve this high growth rate in an activity where output has always been slow to develop, and to effect a significant income redistribution, action will have to be taken to redistribute the land and to ensure its more productive use. Among the most stubborn obstacles arising from the inadequate institutional framework in which farming is currently carried on is the indifference of many producers to price incentives and technical progress. The owner of a large estate is not interested in investing more in agriculture and increasing his income from that sector, since he cannot do so without additional managerial and administrative staff. He prefers to use his present methods of working on his estate and to invest his profits therefrom in business, industry and other urban activities which are easier to control, present fewer risks and provide a high yield. As population pressure grows, the conditions under which labour is recruited and paid become more stringent because, in the final analysis, it is the landowner who possesses that scarce resource — land. On the other hand, in those cases where better farming practices have been applied, the extra profit usually goes to the landowner. 13/

38. The small landowner — whether he works his own plot of land or one belonging to someone else under the share-cropper, inquilinato or huasipungo system — produces food for himself and his family. The small size of his plot and his lack of capital prevent him from solving problems inherent in the use of modern farming techniques; irrigation, drainage, soil conservation and use of production factors. This type of farmer is usually outside the monetary economy and he can hardly respond to incentives based solely on price increases.

13/ An example of this may be given, based on observations made in many areas of the Andean sierra and altiplano. The daily wage for ploughing and planting a hectare of potatoes is "a furrow of potatoes" one hundred metres long which the labourer cultivates for himself. However, when fertilizer is added and the yield is trebled, the owner prefers to pay cash wages equivalent to the value of the product of the original furrow and keeps the rest for himself.

/39. There
39. There are therefore several reasons why land reform is both essential and urgent. Elimination of the inefficient small holding and the subdivision of large estates which do not make full use of their resources should not be considered mere social welfare measures but a prior condition to development from a purely economic point of view. In other words, the institutional framework must be changed in order that the instruments of the capitalist economy may function.

40. However, land reform alone will not by itself ensure fulfilment of the objectives of accelerated growth and income redistribution. New farmers must be given greater economic incentives to produce, and this requires a change in the terms of trade in favour of agriculture for the domestic as well as for the export market.

41. The first measure will require co-ordinated action designed to raise the prices actually received by the farmer. This must be done through (a) improvement of distribution machinery in order to reduce marketing margins and thus to increase the farmer's profits without placing the burden on the urban consumer; the efforts of efficient farmers, particularly those producing for the domestic market, are often vitiated at present by the action of speculators, distributors and other middlemen who sometimes also act as money-lenders and absorb the price increases which the consumer has to pay; (b) a reduction in the protection afforded to domestic industrial monopolies which force farmers to pay unduly high prices for production factors; it is only fair that industries protected by customs tariffs, income tax exemptions, low-interest loans backed by the State and other advantages, should submit to strict price controls; (c) the granting of subsidies and credit to farmers for the purchase of equipment, tools, fertilizers and other input which enable them to increase their efficiency and cut unit costs.

42. The second measure will require a greater measure of co-operation among the Latin American countries themselves, with other under-developed countries producing primary commodities, and with the highly developed countries, so as to negotiate long-term multilateral agreements for trade in primary commodities which would guarantee quantities and prices within certain
within certain limits. Arrangements of this kind cannot be made unless producers agree explicitly to keep supply within limits consis-
tent with demand in order to avoid the accumulation of unmanageable surpluses. These arrangements - most important as a means of ensuring the continued action of external incentives in the Latin American economies and the supply of foreign exchange to finance imports of capital goods required chiefly by industry - would not only apply to traditional products which form the bulk of current trade, but also to a series of "new" products in which Latin America is comparatively at an advantage over countries in the northern hemisphere because of its tropical climate and the reversal of the seasons. The programmes of economic integration and liberalization of inter-Latin American trade which have already been launched might provide excellent oppor-
tunities for furthering the objectives outlined in these pages. A well-defined agricultural integration policy, for instance, would help to promote import substitution within the broader context of Latin America's total resources and would expand the consumer markets for some items for which outlets cannot easily be found in the traditional markets.
III. POSSIBLE INSTRUMENTS AND MEASURES FOR AGRICULTURAL DEVELOPMENT

43. In order to achieve the objectives of a policy of accelerated agricultural development and redistribution of income, Governments could give earnest consideration to a series of instruments and measures. All of them are proper subjects for broad international co-operation. They cannot be carried out efficiently unless a development programme is formulated for each specific case and programming machinery is established on a continuous and permanent basis. This is not the place to go into details concerning the establishment and functioning of that machinery, particularly since both ECLA and FAO have been concerned with the structure and application of an agricultural development programming technique within the context of overall economic development. It should be pointed out, however, that the measures listed here are calculated to form a consistent whole and should be applied simultaneously. If any one of them can be considered a prerequisite to the success of the others, it would certainly be land reform.

1. Investment in rural public works and in the improvement of the rural infrastructure

44. The chief objectives of public investment in agriculture are to provide full employment as soon as possible to all rural workers who - in accordance with the targets of agricultural production - are unable to find immediate employment in agriculture proper, to eliminate seasonal unemployment and to provide agriculture with the means for producing efficiently. The most important projects to be carried out should include, in principle, the following:

(a) dams, tapping of rivers, canals and other irrigation works wherever feasible;
(b) levelling of irrigated areas to make better use of the water;
(c) drainage canals and other works to clear swampy farmland;
(d) terracing, tree-planting and other soil conservation measures wherever required by the topography and condition of the land;
(e) construction
(e) construction of roads of all kinds both to improve communications in existing agricultural areas and to open up new areas;
(f) building of warehouses, silos and storerooms for the storage and orderly distribution of products;
(g) improvement of rural housing and public buildings, particularly the building and reconditioning of schools.

45. The scope of the action taken must be in proportion to the labour requirements arising out of the agricultural production programme proper. Thus, projects being carried out with seasonally unemployed labour should be suspended or slowed down during the busy season (harvest time). The extent to which machinery and other imported capital and intermediate goods are used should be studied carefully with due regard to the following:

(a) the pressing need for infrastructural projects with which to achieve the increases in agricultural production required by the economy;
(b) the available supply of foreign exchange, taking into account the equipment requirements of industry, energy and transport.

46. Generally speaking, these public works are not very capital-intensive and very labour-intensive and do not therefore affect the balance of payments by needing substantial imports of equipment. A given amount of foreign capital invested therein may and often does have a greater effect on capital formation in agriculture than in industry. Taking machinery and intermediate goods as an example, very little would have to be imported in order to build an irrigation system or a road, which represent capital formation based chiefly on local resources. For smaller works, machinery may be dispensed with altogether, and use made of locally available labour exclusively.

47. Under these conditions, the problem of financing this type of work can be reduced to manageable proportions so far as foreign exchange is concerned and does not present insoluble problems with respect to local currency. Nevertheless, a public works programme of the magnitude envisaged here might place a considerable financial burden on any Latin American country, particularly
country, particularly those with a very inadequate infrastructure and where nature is particularly stern. In some cases, it might perhaps be necessary to introduce methods representing a minimum cash outlay. In other words, an attempt might be made to induce farmers who will derive direct or indirect benefits from the public works programmes to participate in the work of carrying them out, particularly in the case of smaller works the purpose and desirability of which is readily appreciated by rural communities.

48. The study of investment alternatives should not be carried too far. Rapid and prompt action seems to be a prerequisite to success, and in this connexion attention should immediately be given to the early, direct benefits to be derived from the projects under consideration. To await a detailed analysis of the cost-profit ratio of investments in minor irrigation works when a feasible major irrigation project has already been studied would be tantamount to impeding progress and losing time which it would be most difficult to make up later.

2. Land reform and supplementary measures

(a) Land reform

49. The main purpose of land reform as an instrument of economic and social development is the redistribution of income and the increase of productivity. Land reform calls not only for settlement programmes to develop virgin State-owned land and schemes and for the regrouping of small holdings into units of more efficient size, but also - and these are its primary purposes - the redistribution of large holdings, a complete change in the relationship between labour and employers still existing in certain areas and certain types of agriculture in Latin America, and also the establishment of minimum wages and social security systems. In addition, land reform is considered necessary to overcome the indifference of many producers to the economic incentives designed to help achieve the selected increases in agricultural output which a growing economy demands.

50. The mere redistribution of land resources will not by itself guarantee expeditious, spontaneous and immediate agricultural growth. So profound a
change requires the simultaneous solution of many problems and the reform of many aspects of the institutional framework of agriculture which are different from that of land tenure and bear no relationship to it. To achieve the aims referred to — increases in production and productivity, redistribution of income and the broadening of the market — overall agrarian reform should be bolstered by such services as will ensure that the new landowners can accurately measure demand and co-operate in fulfilling the production targets set in the development programme. From a political point of view, there should be no insuperable obstacles, so long as the present landowners are properly compensated in accordance with the customs and circumstances of each country.

51. The financing of land reform — and above all the payment of compensation to the former landowners — are usually considered to be more or less impossible. This is not, however, true, and for the following reasons:

(a) Many of the present producers — particularly in latifundia and minifundia — are producing at the lowest levels of efficiency. As rural reorganization of the type outlined here would make for a considerable increase in yields, the new producers could contribute to the payment of compensation over a suitable term and it would not then be necessary for the State to assume additional obligations;

(b) In cases where, for internal reasons, compulsory land reform cannot be carried out, and in other cases where the expropriation and reorganization of farms must proceed over a relatively long period, a possible solution would be to levy taxes directly proportionate to the productive capacity of the land. Such taxation would make it possible to hasten the process of the spontaneous splitting up of the land owned by inefficient producers, as they would then be obliged to sell their land or hand it over to the State. Although
much has been said about how well-administered tax measures would in themselves be sufficient to achieve the aims of land reform, such methods might well prove too slow and would furthermore require highly efficient administrative machinery. Tax measures are therefore suggested here as ancillary to land reform. Their execution would first require the establishment of a land map and register, which would be costly and require specialized teams and experts, although international co-operation might well be forthcoming in this connexion.

52. At all events, it should be stressed that taxation of idle or ill-managed land is a necessary instrument of land reform, although for reasons different from those just outlined. The "price" of the productive factor that is land is unnecessarily high for various reasons; among these mention may be made of the relative scarcity of easily accessible fertile land, the social prestige attaching to land ownership in Latin American society, the reserve value that land represents in inflationary conditions, the tax evasion which it permits, etc. In such circumstances, land — in terms of yield on capital — seems a poor business proposition in comparison with investment in other sectors. The introduction of taxes involving a compulsory increase in the supply of land on the real estate market would tend to reduce the price of land and, as a result, raise the economic potential of agricultural concerns. To the extent that such an aim could be achieved, private investment in agriculture and the use of land as a productive factor would increase.

(b) Education and training of personnel

53. One of the main factors affecting productivity is the level of education of the rural population. In this respect, there are differences between the various countries of Latin America; the most notable of these, however, is the difference between educational levels in rural areas and urban centres. The difference between the educational facilities provided in the two sectors /is very
is very wide and places the rural areas in an extremely precarious position. Consequently, the absorption of new agricultural techniques and knowledge is made very much more difficult. Illiteracy, which is prevalent among the rural population, is not the best of allies for technical progress.

54. In addition to their inadequacy, rural education services are in many areas used much less extensively than the educational facilities provided in towns. It is well known that attendance at rural schools is low - particularly in the seasonal periods of high labour demand - and that the average period of attendance by pupils is extremely short; as a result full advantage is not taken even of the slight educational facilities offered. Accordingly, the need is not only one of increasing the number of schools and teachers but also of reforming the type of instruction provided in rural communities placing greater emphasis on practical training in more efficient work methods in order to give greater encouragement not only to pupils but also to parents.

55. At other levels, intermediate instruction should be given in schools of applied agriculture, engineering and rural crafts, and the training of experts and research workers in matters connected with agriculture should be increased. As regards the latter point, consideration should be given to the need for a higher degree of specialization in present courses in agricultural science.\[14/\]

(c) Research and extension services

56. To achieve a swift increase in production and an improvement in productivity, the use of more advanced farming methods and practices must be introduced and made general. Such methods must, however, be adapted to the characteristics of the agricultural economies of the Latin American countries. This remark is meant to show that there is no need to transfer to Latin America the type of technology which is labour-saving by nature and is characteristic of the industrialized countries. The pursuit of higher standards of technique implies in many cases the need to

(a) investigate the best possible techniques in each case by developing the most productive seeds, plants and livestock, as well as the best methods of cultivation, livestock care and feeding, application of fertilizers, insecticides, use of irrigation water, spacing, etc;

(b) disseminate such knowledge widely among all producers through a well-equipped extension service; 15/

(c) closely supervise inexperienced farmers through the same extension services to ensure the correct use of the new techniques during the period of apprenticeship and training which will doubtless be necessary.

57. In addition, extension services can be used to improve the educational levels of the adult rural population. The dissemination of information on farming methods is really a type of education carried out mainly on the farm and in the home. Its chief purpose is to explain the production and marketing methods which will bring about an increase in income, and to teach rural families how to achieve a more comfortable standard of living. Although for practical reasons it is sometimes advisable to concentrate on teaching only a few subjects at a time, one of the important aims of this service would be to make farmers more receptive to new ideas so that they can themselves seek the most suitable ways of improving their farms.

15/ In this respect, it seems that the problem is frequently not one of lack of knowledge, but the inability of the majority of farmers to put it into practice to any great extent.
(d) Marketing

58. The markets for agricultural products in Latin America suffer from a strong tendency to price instability. Among the factors accounting for this are (a) the seasonal nature of harvests; (b) the difficulties standing in the way of making output match demand, owing to uncertainty about weather conditions and yields; (c) the low price-elasticity of demand for some agricultural items in the high-income level importing countries; and (d) the delay with which — and sometimes the contradictory manner in which — supply responds to movements in the prices paid to the producer.

59. Accordingly, to achieve the increases in supply which a developing economy requires, and to raise the income levels of producers, it is essential to improve marketing systems by building warehouses, silos, refrigeration plants, storage facilities and distribution centres; by improving transport facilities and handling and classification methods; by establishing market information services and eliminating monopolistic interests and other middlemen who serve no useful economic purpose. In present circumstances, a very high percentage of the price paid by consumers for agricultural commodities remains in the hands of money-lenders and intermediaries, to the detriment mainly of the small farmers. The lack of storage facilities leads to considerable wastage of agricultural products and this has direct repercussions on farmers' incomes. Inefficient marketing tends to rob farmers of the favourable effects of expanding demand. The efforts made by a number of Latin American countries to improve marketing standards, have not only improved output and raised farmers' incomes, but have also contributed to reducing the prices paid by the consumer.

(e) Credit and subsidies

60. In most of the Latin American countries the agricultural credit institutions are unable — for want of funds or owing to legal limitations, especially with respect to acceptable securities — to give efficacious support to an agricultural development policy such as that outlined in the

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present paper. The availability of liberal credit facilities adapted to the real requirements and the juridical characteristics of the new enterprises created by agrarian reform is an essential requisite if these latter are to be in a position to equip themselves properly and purchase the inputs required by modern technique. The system of "supervised credit", which has been successfully tried out in several parts of Latin America, might be extended to benefit all the new agricultural entrepreneurs. Under this system, the granting of loans is linked to the programming of farm management in cooperation with the agricultural extension and marketing services and those concerned with the improvement of rural living conditions. In determining the value of the security required, the consideration which carries most weight is the borrower's capacity for payment, assessed with due regard to the possible result of the combination of the resources at his own disposal with the credit, extension services and administrative assistance extended to him. By its very nature, "supervised credit" is costly. But as the importance of its educational and formative aspects is appreciable, the educational costs of credit should be set apart, so that they are imputed not to the loan, but to special items in the national budget or international funds that might be earmarked for this purpose.

In addition to the type of subsidy referred to in the foregoing paragraph, consideration might be given, in accordance with each country's circumstances, to the granting of subsidies for the purchase of seed, stud animals, pesticides and machinery. Similarly, the transport of these inputs and of the farm produce itself might be subsidized. By these means, the farmer's real earnings could be improved without
improved without the urban consumer's being saddled with price increases. The burden could thus be shifted to the taxpayer, who bears a share adjusted to his income level.

(f) Industrialization in rural areas

62. The establishment of rural industries, and the decentralization of industrial development in general, constitutes another means of providing employment for rural labour without speeding up migration to the towns. This type of work could be arranged on a part-time basis to avoid reducing the manpower contingents available at busy seasons. It should be noted that many rural industries entail substantial capital investment, and sometimes seem to be more highly capitalized than certain of the large-scale urban industries in relation to their volume of production and the amount of employment they provide.\(^{17/}\)

63. The industries that seem best suited to the rural environment are connected mainly with the transforming of agricultural commodities and include dehydrating and packing of fruit and vegetables, extraction of oils, tanneries, dairies, mills, sawmills, etc. Also of interest are those producing articles and utensils to serve the immediate purposes of farms or works for public use - such as bricks, tiles, doors, windows and frames, cordage, and clay or earthenware household utensils -, as well as the repairing of machinery and the manufacture of simple tools.

\(^{17/}\) See FAO, *The state of food and agriculture 1959* (Rome).
64. A very important aspect of the problem, which is closely related to the question of public investment in rural areas, is the direct improvement of the living conditions of country families. In many parts of Latin America - particularly in the tropics - it is essential that the rural areas be sanitized and the diseases which reduce the population's energy and capacity to work (such as malaria and filariasis) be eradicated. Again, the problem of housing for settled families - already discussed in connexion with the public works programme - has an important counterpart in respect of the migratory labour force, which, in moving from place to place, often has to work in highly unsatisfactory conditions in the areas where coffee, cotton, sugar-cane, etc. are grown. An urgent need in these areas is the setting-up of conveniently-situated camps where the migrant workers and their families will find decent accommodation, schools, medical attention and other services. Such camps would also enable the necessary nutrition programmes to be arranged, especially for children.

(h) Co-operatives

65. The establishment of a new institutional framework for Latin American agriculture such as that described, might encounter serious difficulties with regard to the organization of the area affected by land reform in suitable farm units capable of absorbing modern technique. One method of solving the problem might consist in the organization of co-operatives. In this connexion, consideration would have to be devoted to two principal cases: (a) the organization of currently independent small-scale producers, who are running farms of very limited size; and (b) the management of large estates affected by the reform. Lack of financial and administrative capacity would make it difficult for the former to achieve the desired production and income increments. In the case of the latter, the mere division of the land into smaller units might, in an initial phase, force down efficiency and production to levels lower than those already attained. The formation of co-operatives which would permit the application of techniques proper to large-scale production might be a means of circumventing this stumbling block. The experience of other regions shows that
shows that the success of such a measure depends upon the introduction of specially-trained managers who will bring to the co-operative the benefit of their skill as leaders and organizers. Centralized accounting and auditing systems should also be established.

66. From another point of view, co-operatives may play an efficacious part in the organization of agricultural credit, commodity marketing and the establishment of rural industries.

3. Liberalization of inter-latin American trade

67. The trade integration and liberalization programmes now being launched would afford a good opportunity to expedite the attainment of the objectives sketched out in the various sections of this paper. In addition to basic institutional reforms, Latin American agriculture needs potent incentives to break the vicious circle in which it is developing at present and reach increasingly high aggregate levels of production and productivity. The expansion of markets resulting from the new arrangements and the possibility of much more efficient utilization of resources would create the right combination of circumstances for the achievement of these objectives.

Consequently, if the limitations in respect of agriculture which characterize some of the programmes already under way are perpetuated beyond what might be regarded as a reasonable initial period of readjustment, they might perhaps retard the success of the said programmes of economic integration and accelerated agricultural development. One way of mitigating the adverse effects of such provisions would be to adopt measures aimed at the gradual elimination of the real obstacles and at dissipating the apprehensions at present entertained with respect to the agricultural sector's full participation in the integration process. Such measures would primarily involve two basic aspects: (a) formulation of the principles that should be incorporated in a properly co-ordinated agricultural policy for countries on the road to integration; and (b) creation of adequate consultation facilities for the purpose of solving common problems at the regional level and, in general, for the periodic comparison of the measures being applied by the various countries in order to adapt the agricultural sector to the overall requirements of successful integration.

/68. It would
68. It would be well for the Governments concerned to make a careful study of general objectives and targets, as well as of particular cases, in order to establish the bases for an agricultural policy forming part of the economic integration programme. Presumably, however, the main objective of such a policy would be to place agriculture in a position to take the maximum advantage of the opportunities afforded by economic integration, as well as to contribute as far as possible to the ultimate success of integration programmes.

69. In order to adopt appropriate decisions, the Governments taking part in integration programmes would need to initiate a detailed analysis of the differences among their countries in respect of costs, prices, yields, overall productivity, current cultivation techniques, distribution and marketing practices, etc. In certain cases, some crops may be superseded by others as the result of integration. But there would be no reason for doubt as to the beneficial results of such measures, provided that the producers' income levels were satisfactorily maintained during the process, and that the changes took place gradually and on well-ordered lines. Moreover, integration appears to be the only way of eliminating the restrictions which at present burden inter-Latin American trade in agricultural commodities, and which would seem likely to continue in force until farmers become convinced that increased specialization, far from injuring their interests, is one of the most efficacious means of improving their situation.

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18/ For fuller discussion of the questions relating to the liberalization of inter-Latin American agricultural trade, see the report *The role of agriculture in Latin American common market and free-trade area arrangements* (E/CN.12/551).

19/ This is, of course, a general approach to the problem. In fact, in specific situations the aim pursued might, on the contrary, be a lower degree of specialization. A case in point would be the need to diversify agriculture in large coffee-growing areas.