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PROGRESS TOWARDS THE LATIN AMERICAN COMMON MARKET

The Working Group on the Latin American Regional Market, set up under resolution 116 (VII) of the Commission, met at Santiago, Chile, for the first time in February 1958 with a view to taking a more decisive step towards the objective set forth in the relevant resolutions previously adopted by the Trade Committee. The *Bulletin* published the *Bases for the formation of the Latin American regional market*, which constituted the main conclusions of the Group's discussions embodied in its report.¹

A year later, from 16 to 27 February 1959, the Working Group held its second session in Mexico City to consider those bases more specifically and to make recommendations to Governments through the Secretariat of the Commission which collaborated closely with the Group, both in the preparation of documents and in the discussions themselves. The following members attended the session, which was opened by Mr. Philippe de Seynes, under-Secretary for Economic and Social Affairs of the United Nations; *Carlos D'Ascoli*, Senator (Venezuela); *José Garrido Torres*, Executive Director of the Department of Currency and Credit of Brazil; *Rodrigo Gómez*, Director-General of the *Banco de México*; *Flavian Levine*, Director of the *Banco Central de Chile*, Professor of the University of Chile and Manager of the *Compañía de Acero de Pacífico*; *Carlos Lleras Restrepo*, Senator (Colombia); *Eustaquio Méndez Delfino*, President of the Buenos Aires Stock Exchange and former President of the Honorary National Commission of Economy and Finance of Argentina; *Raymond F. Mikesell*, Professor of the Economics Department of the University of Oregon, United States; *Juan Pardo Heeren*, former Minister of Finance of Peru, and *Galo Plaza*, former President of the Republic of Ecuador.

The Group elected Mr. Galo Plaza and Mr. Carlos Lleras Restrepo Chairman and Rapporteur respectively. It began its work on the basis of the report *Possible alternatives for the establishment of the Latin American regional market*,² which the ECLA Secretariat submitted for its consideration. The results of its discussions are contained in the report entitled *Recommendations concerning the structure and the basic principles of the Latin American common market*. (E/CN.12/C.1/WG.2/10). In view of the importance of this document, the Secretariat considers it necessary to give it the widest possible publicity and to include it in this *Bulletin*, excluding only the pages dealing with the background data, which in any case are summarized sufficiently in this note.

The Working Group's report has already been transmitted by the ECLA Secretariat to member Governments and will be submitted to the Trade Committee at its second session to be held at Panama City in May 1959, immediately prior to the eighth session of the Commission. The report contains the Group's recommendations on the structure of the common market and the basic principles which might govern its operation. Further progress on this project will depend on the attention which Governments devote to these recommendations and on the decisions taken with regard to them at the next session of ECLA. Indeed, should the Governments at Panama City approve the structure and basic principles recommended by the Group in its report, sound bases will be established for drawing up the common market agreement, and as the idea of the common market matures in the minds of the Latin American public, the time will have come for practical action.

¹ See Vol. III, No. 1, March 1958, p. 1 *et seq.* The note preceding the Bases contains all the background data for the session mentioned. The complete text of the Group's report was published in document E/CN.12/C.1/WG.2/6.

² See document E/CN.12/C.1/WG.2/7. The session

also had before it two other documents: *Informe sobre la marcha de los trabajos relativos al inventario de la industria latinoamericana* (E/CN.12/C.1/WG.2/8) and *Government policies affecting private foreign investment in a Latin American regional market* (E/CN.12/C.1/WG.2/9).

RECOMMENDATIONS CONCERNING THE STRUCTURE AND BASIC PRINCIPLES OF THE LATIN AMERICAN COMMON MARKET

I. INTRODUCTION

At its first session, the Working Group prepared a series of bases or points of view designed to serve as a guide for further studies on the gradual and progressive establishment of the Latin American common market. At the same time, it requested the Secretariat of the

Economic Commission for Latin America to carry out additional studies and research which would help the Group to continue its work during its recently completed second session.

The Secretariat's contribution proved highly useful

during that session and enabled the members of the Group to crystallize, in the form described in this report, their ideas on the structure which the common market should assume and on the basic principles which should govern its operation.

The Group feels that if, at the eighth session of ECLA to be held at Panama City in May 1959, member Governments give their general approval to the recommendations set out in this report, the Secretariat could then prepare, in close collaboration with the Governments concerned, an initial common market draft agreement which would help to bring together those countries interested in putting the idea into immediate effect.

The task is not easy. But the existence of a ready-made structure and of some clearly-defined working principles, approved by Governments, would make it less difficult. Even so, the method of expressing this structure in terms of specific projects and of setting targets for reductions in duties and similar taxes and restrictions will require an effort of considerable magnitude as regards both time and concentration. However, this work must be done, and one of the advantages of approving these recommendations would be that a specific model would be provided. Otherwise, the work would prove extremely complicated and time-consuming.

Given the essential character of these recommendations, which are presented to the Secretariat for transmission to member Governments, and given the Group's terms of reference, the members of the Group have never had any intention of formulating a specific agree-

ment.¹ The definition of terms and their scope, required in such a draft, have not been considered in this case. It was felt preferable to put forward basic ideas, bring out their general content and avoid those special cases or problems which require individual interpretation. The Group feels that what is required at the moment is to sketch the general outline of the common market so as to provide the Secretariat with a basis for entering upon a new stage in its work. Governments, with this clear outline before them, will be in a better position to weigh the advantages of the common market and its repercussions on their respective economies. Progress towards an agreement for actually setting up such a market will thus be facilitated.

Of course, more time than was available to the Group at this second session would have been needed to tackle further problems of the common market's establishment and operation. Approval of these recommendations by Governments would constitute the essential starting-point for entering into these other matters.

Mr. Raymond Mikesell stated that he was unable to agree with every point of detail in the report.

¹ Trade Committee resolution 3 (I), under which the Working Group was set up, assigned to it the following functions:

(a) To define the characteristics of the regional market, bearing in mind the differing degrees to which the countries of the region are industrialized;

(b) To study its possibilities and projections;

(c) To submit recommendations on basic principles and procedures for its establishment, within the terms of reference of the Trade Committee as defined in resolution 101 (VI) (E/CN.12/410).

II. BASES FOR A POSSIBLE AGREEMENT SETTING UP THE LATIN AMERICAN COMMON MARKET

A. STRUCTURE

I. Objectives

1. The agreement setting up the common market is designed to help expedite the balanced economic development of Latin America, its progressive industrialization and the introduction of improved techniques in its agriculture and other primary activities, with a view to promoting higher levels of living for its peoples, through:

(a) The establishment of a preferential system for trade among Latin American countries; and

(b) The growth of its foreign trade as a result of the expansion of industrial exports and the promotion of exports of agricultural and other primary commodities, both within Latin America and with the rest of the world.

II. Juridical form

2. The juridical form contemplated in this agreement is that of a free-trade zone designed to be transformed gradually into a customs union, it being understood that this form may be adapted to the actual requirements of Latin America.

III. Customs and liberalization régime

3. In order to establish the common market gradually and progressively for all products included in the inter-

national trade of the Latin American countries, the reduction of customs duties and other similar taxes and restrictions will be carried out in two stages.

The first stage, lasting ten years, will involve the substantial reduction, among the parties to the agreement, of customs duties and other taxes similar in their effect and the elimination of other restrictions converted, where necessary, into customs duties.

The reductions referred to in this section will be irrevocable, except as provided in sections II and VIII of the Basic Principles, and will be effected in the following manner:

(a) Within one year from the entry into force of the agreement, a uniform percentage reduction will be applied to each of the customs duties, together with an equivalent reduction of other restrictions;

(b) Within five years from the entry into force of the agreement, non-tariff restrictions will be eliminated or converted into customs duties, except as provided in section VIII of the Basic Principles; and

(c) During the first stage of ten years, customs duties and other taxes similar in their effect will continue to be reduced to the point where they reach the average levels fixed in accordance with the criteria laid down in paragraphs 5 and 8 below.

The Committee will supervise the implementation of the provisions set forth in this section and of any additional pacts entered into by member countries in carrying out the agreement, for the purpose of effecting

gradually and progressively the reductions which are specified.

4. During the second stage, the reduction of duties and similar taxes will proceed further, and, as this reduction progresses, the preferences referred to in paragraph 10 will be gradually abolished in order to complete the organization of the common market.

Before the end of the first stage, the Committee will make arrangements for negotiations to fulfil the above purpose.

IV. *Classification of products*

5. With a view to carrying out the measures referred to in paragraph 3, products will be divided into the following three categories:

Category I. Primary goods;

Category II. Capital goods, motor vehicles, other durable goods, intermediate articles and others for which demand tends to grow relatively intensively or a large import substitution margin exists;

Category III. Manufactured goods for current consumption in respect of which demand tends to grow relatively slowly and import substitution possibilities may become exhausted or considerably strained, except for the import substitution margin in those countries which are in the incipient stage of development referred to in paragraph 7.

V. *Programme for the first stage*

6. During the first stage, the reduction of customs duties and of other taxes similar in their effect will be carried out in the following manner:

(a) Abolition of such duties and taxes in the case of products in category I, with the exceptions to be agreed upon—when they are indispensable and with particular reference to agricultural commodities—in order not to affect certain branches of production so long as it is impossible to put the productive factors involved to more economic use;

(b) For products in category II, the target will be reduction or abolition of customs duties to the point where, within this category, the lowest possible average is achieved in order to intensify regional trade in these items;

(c) For products in category III, the target for the reduction of customs duties will be lower than that for category II to ensure that the specialization of existing industries and their adaptation to common market conditions is effected gradually and without creating difficulties which impede the regular employment of the productive factors involved.

VI. *Régime for relatively less developed countries*

7. In order to encourage the development of countries in the early stages of industrialization and to make the benefits of the common market available to them on bases of effective reciprocity with the industrially more advanced countries, they will be given differential treatment.

For this purpose, the Latin American countries will be classified as follows according to their respective available margins of import substitution and their respective export possibilities in each of the categories of goods listed in paragraph 5:

Group A. Countries of more advanced development in categories II and III.

Group B. Countries of relatively advanced development as regards manufactured goods for current consumption (category III), and whose production of capital goods and other goods in category II is incipient or non-existent.

Group C. Countries of incipient development as regards manufactured goods for current consumption (category III) and undeveloped as regards capital goods and other goods in category II.

8. The following procedure will be adopted for according differential treatment to countries of incipient development in groups B and C:

(a) The agreement will establish their reduction targets during the first stage, for categories of products in which their development is incipient, at average levels of duty moderately higher than those generally laid down for parties to the agreement:

(b) Negotiations will be held within the Committee whereby a given group of countries will grant special concessions to countries whose development is incipient as regards products in categories II and III. (Such concessions may be made by countries in group A to those in group B or C or by countries in group B to those in group C). If the concession is made to a country in group C, it will be automatically extended to the other countries of this group; if it is granted by a country in group B, it will be extended automatically to countries in groups B and C.

In return for these special concessions, countries in the early stages of development may in turn grant facilities for imports of capital goods or other goods in Category II from countries in group A or B or for imports of current consumer goods from countries in group B, either by reducing customs duties below or within the average level fixed for them or by increasing their duties *vis-a-vis* the rest of the world if that should prove necessary to establish an effective preference in respect of given items. The facilities which countries in groups A and B receive by virtue of this reciprocity will be extended automatically to all the parties to this agreement.

VII. *Size of the market and initial groupings*

9. The common market must include all the Latin American countries or the greatest possible number of them. This aim will not prevent an initial group of countries from launching the common market provided (a) all the countries of Latin America are invited to the initial negotiations; and (b) those that do not sign the agreement at the outset are allowed to do so later in one of the following ways:

(i) within the first year of operation of the agreement, in which case the new members will be allowed

the same periods of time for reducing their customs duties as those fixed for the original signatories:

(ii) after the agreement has been in operation for more than one year, in which case the new members will be allowed the periods of time still remaining to the original signatories for achieving the targets specified. However, it may be agreed upon after negotiation that the period of ten years laid down in paragraph 3 should start from the date of accession of the new signatory, both as regards the reductions it is to grant and those to be granted to it by the other signatories.

VIII. *Specific complementarity and specialization agreements*

10. For the purpose of promoting industrial complementarity or specialization, two or more participants, linked by geographical proximity or common economic interests, may, with the Committee's approval, agree upon reduction or abolitions in respect of customs duties which are not designed to be extended automatically to the other members. Such reductions or abolitions will not be calculated at the average level of customs duties laid down as a general target for all parties to the agreement.

IX. *Treaties on trade or economic matters not covered by the agreement*

11. Member countries which consider it necessary may conclude treaties among themselves for settling specific trade or economic matters not covered by the agreement, such as those relating to their border trade or the pooling of natural resources from adjacent national zones.

Such treaties must be submitted for the Committee's approval.

X. *Most-favoured-nation treatment*

12. In each signatory country, the products and services originating in the other signatory countries, or exported to them, will enjoy in all respects treatment no less favourable than that granted to any country, whether a party to the agreement or not.

Hence, all the reductions of customs duties—as well as the reduction or abolition of taxes and other restrictions which, in fulfilment of the established targets or of any higher ones, a country may make unilaterally, bilaterally or multilaterally—will be extended to the other signatories, except for the following:

(a) Special concessions granted reciprocally to countries in the early stages of industrial development, in accordance with paragraph 8;

(b) Reductions resulting from the industrial complementarity and specialization agreements referred to in paragraph 10, and the treaties mentioned in paragraph 11;

(c) Existing preferential concessions, the elimination of which must be brought about gradually in order to avoid disrupting normal trade channels;

(d) The concessions provided for in the instruments of the Central American common market.

The temporary differences in customs duties resulting from the accession of additional countries to the agree-

ment, in accordance with paragraph 9, will not be affected by the application of the rules set forth in the first and second sub-paragraphs of this section.

XI. *Committee*

13. For the purpose of administering the agreement and facilitating the attainment of its ends, a Committee on Trade Policy and Payments composed of representatives of all the member countries will be set up to carry out the negotiations arising from the agreement.

B. BASIC PRINCIPLES

The Working Group considers that the structure which has been recommended for the establishment of the Latin American common market should be supplemented with a series of basic principles which cover various aspects of the actual operation of the market, so as to ensure the successful attainment of its aims.

For this purpose, the Working Group recommends the adoption of the following basic principles which will have to be worked out in further detail during the negotiations required for the adoption of the agreement itself:

I. *Reciprocal trade benefits of the common market*

1. For the success of the common market it is important that all the member countries should have the opportunity of expanding their exports at the same time as they take action to reduce their duties, taxes and other restrictions on imports. To this end, member countries which, as a result of the facilities granted to them, increase their exports to the common market without a proportionate increase in their imports, should accelerate the rate at which they reduce their duties, taxes and other restrictions.

The Committee, after consulting member countries, will submit recommendations for the attainment of this objective.

II. *Stability in reciprocal treatment*

2. Member countries will not increase among themselves the duties, taxes and other restrictions in force in each of them at the time of their accession to the agreement nor those resulting from the reductions and abolitions they may subsequently make, either in fulfilment of the targets set in the agreement or within the régime of special concessions referred to in paragraph 8 of this report relating to the structure.

The following cases will constitute exceptions to this rule:

(a) Cases in which a member country wishes to modify its customs tariff in order to enable the tariff to absorb the effects of non-tariff restrictions. Such a transfer may be effected only during the first five years of operation of the agreement;

(b) Emergency cases provided for in section VIII of the Basic Principles;

(c) Other exceptional cases agreed upon among the member countries during their negotiations preceding the conclusion of the agreement.

III. *Determination of the origin of goods*

3. As soon as it has been constituted, the Committee will lay down the criteria or principles to be followed for determining when a product originates from one of the member countries, for the purposes of applying the preferential treatment accorded in the free-trade zone.

IV. *Equalization of customs duties*

4. At regular intervals, the Committee will specify the products in respect of which it will be necessary to arrange for the equalization of customs duties for imports from third countries, either for the purpose of establishing an adequate regional preference or in order to solve other problems resulting from lack of uniformity in existing duties. As regards these products, member countries will agree, through negotiations in the Committee and bearing in mind the Committee's recommendations, upon the common duties to be adopted and the form and time-limit or gradual stages for their adoption.

V. *Co-ordination of trade policy*

5. Through the Committee, the member countries will endeavour to conduct jointly or, if this is not possible, in co-ordination, trade negotiations with third countries to ensure the common protection of their interests and to see that any concessions which may be granted to third countries do not preclude a suitable margin of preference within the common market or that such concessions do not impede the application of the agreement and the attainment of its objectives.

VI. *Special programme for the reduction of high customs duties*

6. The Committee will consider the desirability of drawing up regulations to secure the reduction among member countries of very high customs duties. To this end, the Committee may establish a periodic compulsory percentage reduction of those customs duties which exceed the value of the products in question by a certain percentage.

VII. *Rules of competition*

7. In order to contribute to the smooth working of the common market, exports from one member country should not be allowed to interfere, through unfair competitive practices, with the activities of other participants, either as a result of competitive currency depreciation or in any other way.

Member countries must also refrain from discriminatory practices, so that the export prices of each article remain the same irrespective of the market of destination.

The Committee will be the judge of when a member country is engaging in discriminatory or unfair practices in its trade with the others and will take action to remedy the situation.

VIII. *Measures to remedy balance-of-payments disequilibrium*

Member countries whose over-all balance-of-payments has improved as a result of the reduction policy will ac-

celerate the rate at which they lower their duties, taxes and other restrictions. The Committee will make recommendations for the achievement of this objective.

Those members which, as a result of this reduction policy, have incurred a deficit, or increased an existing one, may temporarily slow down the rate of reduction after consulting the Committee. However, this slowing down will not absolve the debtor countries from the obligation of taking action to correct their disequilibrium.

IX. *Emergency measures (safeguard clauses)*

8. If the application of the measures for reducing customs duties and other taxes and restrictions provided for in the agreement should give rise to serious disturbances in any important sector of a country's economic activity, or cause considerable unemployment of labour which cannot be absorbed in other activities, the country concerned may suspend temporarily, as an emergency measure, the application of concessions already granted as well as the granting of new concessions. At the same time, it may put into effect special measures to protect the national interests involved.

The Committee will be duly informed of the suspension, will promptly examine the underlying causes and will initiate whatever collective measures it deems necessary for remedying it.

If the suspension of concessions should be prolonged for more than one year, negotiations will be held, at the request of any member country, with a view to re-establishing the reciprocal situation prevailing before, or to finding new ways and means of ensuring equilibrium.

IX. *Customs and statistical co-ordination*

9. Within five years from the entry into force of the agreement, member countries will adopt a standard customs nomenclature, as well as common customs definitions, procedures and regulations, and will co-ordinate their national statistics, bearing in mind the different needs which will arise from the implementation of the agreement and the operation of the common market.

The Committee will lay down the necessary criteria in order to facilitate the implementation of this provision.

X. *Participation of representatives of economic activities*

10. In the organization and operation of the common market, the Committee will maintain close contact with representatives of the different economic activities and enlist their help in the preparation of appropriate measures.

XI. *Payments régime*

11. The effective operation and development of the common market will require the organization of a payments and credit régime to facilitate the multilateral liquidation of transactions among member countries.

The criteria to be adopted in this respect should envisage the opening of sufficient credit to encourage a substantial growth of trade within the common market.

III. COMMENTS ON THE RECOMMENDATIONS

A. COMMENTS ON THE STRUCTURE

1. Objectives

In support of the conclusions reached by the Working Group during its first session at Santiago in February 1958, the report recommends to Governments the gradual and progressive formation of a Latin American preference zone as a further step towards constituting the common market. In this zone, all products, both primary and industrial, of Latin American origin should receive, in trade among the various countries, preferential treatment *vis-à-vis* the rest of the world.²

The Group considers that, at the present stage of Latin American economic development, this preferential system is essential to boost industrialization. Apart from the beneficial effects which it will have on the level of living of the population, it will enable Latin American industry to develop its industrial exports to the rest of the world and thus invigorate its international trade.

2. Juridical form

The Group considered that, to begin with, the common market should be legally constituted as a free-trade zone. It thus does not explicitly recommend the immediate establishment of a common customs tariff for all the Latin American countries *vis-à-vis* the rest of the world, as in the case of a customs union, although gradual progress must be made towards this objective to facilitate the development of the common market.³

In this respect the Group feels that Latin America should work out a solution suited to its actual requirements, i.e., in harmony both with the conditions and with the possibilities of its economic development. Consequently, the choice of the free-trade zone and its gradual evolution towards a customs union does not in any way imply strict adherence to pre-conceived formulae but an effort to adapt these formulae to the actual Latin American situation.

3. Specific objectives and stages for their attainment

The *final objective* of the common market is the elimination of all duties and restrictions among the Latin American countries.

² As regards this trade in traditional commodities, the Trade Committee in its resolution 4 (I), paragraphs 2 (a) and (b), recommends to Governments:

"That such products be marketed among the Latin American countries at international prices and on terms similar to those prevailing for the region's trade with the rest of the world; and that, prices and other conditions being equal, the commodities in question be purchased as far as possible within Latin America, to the extent permitted by the foreign trade régime of the countries of the region;

"That, in accordance with prevailing world market conditions, countries which cannot meet their own needs purchase such products as far as possible from the usual sources of supply within Latin America, in so far as the producer countries are in a position to meet the requirements of their regular customers, and, in the case of countries maintaining payments agreements, when the payment availabilities created in the consumer countries so permit."

³ Under Basic Principle IV, the Committee is to specify at regular intervals the products in respect of which customs duties on imports from outside the common market should be equalized or standardized in the member countries.

The Group began by considering in detail whether: (a) an attempt should be made from the outset to secure an *absolute undertaking* by all the participating Governments to abolish completely customs duties and other similar restrictions within a given period; or (b) whether it would be more desirable to divide the common market process into stages and to try to fix *limited objectives* for an initial stage, leaving for subsequent negotiation, during a second stage, whatever measures seem advisable in the light of the experience gained.

To accept an absolute undertaking from the outset in a field in which Latin America is completely lacking in experience might prove to be a real leap in the dark. Fortunately, such a course is unnecessary. The final aim of achieving the common market and the possibility of reaching initial agreement on limited but very specific and well-defined objectives are perfectly compatible. The gradual attainment of such objectives should provide Governments with experience of the best way of reaching the final objective within a more or less short period.

In this context, it is felt—and this report so recommends—that the most suitable type of agreement would be one under which participating Governments would undertake to eliminate all their restrictions or convert them into customs duties and reduce the amount of these duties in such a way that, after a period of ten years, the average level of customs protection does not exceed a certain level. Once this aim has been achieved, the Governments, profiting from the experience gained, would enter into new general negotiations with a view to agreeing in what form, to what extent and within what period of time the reduction of duties could be continued during a second stage.

The main advantage of a formula of this kind is that it combines a cautious attitude with a firm decision to reduce the present levels of protection among the Latin American countries. Even though the undertaking is only a partial one, it nevertheless sets specific objectives which pave the way towards the common market. The idea would court failure in actual practice if Governments merely expressed pious intentions without any agreement on a substantial reduction of present tariff levels. In the Group's opinion, such an undertaking is the minimum required as a starting-point for the formation of the common market.

Reference has just been made to the idea of reducing import duties to a certain average level, after a period consisting of a given number of years.⁴ This procedure offers two essential advantages: (a) it will allow Governments great *flexibility* in the application of reductions; and (b) it will facilitate negotiations for the *accession of new countries*.

So far as flexibility is concerned, the average will enable each Government to initiate and continue the reduction of duties and restrictions in the form best suited to its interests, always provided that the average level agreed upon is finally reached. Within the margin of flexibility

⁴ It should be emphasized that what is contemplated under the average-level procedure is not an undertaking to reduce the initial level of duties by a given percentage but an undertaking to bring those duties to a certain agreed average level on the completion of a stipulated period of years.

of this average-level procedure, each Government would be free to continue introducing unilaterally the reductions to be effected in fulfilment of the undertaking made, or to negotiate such reductions bilaterally or multilaterally with other contracting countries. However, it is important to stress again that these reductions would not be carried out haphazardly but according to a clear-cut plan: that of not exceeding, at the end of the first stage, the average level of import duties agreed upon.

An example will throw further light on this idea. Suppose that, within a given category of goods, the present level of customs duties in a given country is 40 per cent and that the Governments agree to reduce the average in question to 10 per cent at the end of the ten-year period. This in no way signifies that customs duties will have to be reduced to 10 per cent for all the products in that category. On the contrary, the Government of the country in question may reduce duties in the manner it considers most convenient. It is conceivable, for example, that for a third of the imports in this category duties may be eliminated altogether; for another third, the average might be reduced to 5 per cent; and hence for the remaining third an average of 25 per cent could be maintained.⁵ This latter average would include duties higher than 25 per cent to compensate for other relatively low duties. In other words, the system is extremely flexible and will enable Governments to take expedient measures without infringing the undertaking to reduce the average level to the agreed figure.

In order to achieve even greater flexibility, the manner in which these reductions in the average are to be carried out periodically would not be laid down in the agreement but would be left for a subsequent decision by Governments in a committee of representatives, whose establishment is also recommended by the Working Group. In this way, if the gradual reduction of import duties among member countries were not proceeding at the proper speed for the purposes of the agreement, measures might be worked out for increasing the tempo and intermediate targets might even be adopted.

The averages system also offers great advantages in connexion with the accession of new countries. For if an initial group of countries had begun to form the common market, any country wishing to join it later could be incorporated simply by accepting the averages agreed on by the others.

If this procedure were not followed, the incorporation of a new country would give rise to difficult and troublesome negotiations, negotiations which would be the more protracted the greater the number of contracting countries. Moreover, it would be difficult to determine the equivalence of concessions between the countries already in the common market and the one wishing to join it.

All this is avoided by the averages system. The new participant will merely have to undertake to reduce average customs duties in the manner agreed on by the other parties to the agreement to become a member.

The Working Group did not consider it advisable to

⁵ This would happen if the import figure, and hence the weighting in the average, is equal for each of the three parts into which the products in this category have been divided for the purpose of the illustration.

specify the amount of the desirable reduction in duties in exact terms. It believes that for the moment it is enough to establish the procedure for making the reduction, and the stages by which the plan should be carried out. If at the forthcoming session at Panama, Governments should take a decision with regard to the procedure recommended in this report, the problem of the actual target figure for the reduction of import duties can then be taken up. Once the relevant recommendation had been approved by Governments, the secretariat, together with such experts as it may be decided to appoint, would carry out a careful investigation with a view to submitting to Governments for their consideration, the alternatives considered most suitable.

In addition to the averages system as a means of reducing customs duties and equivalent charges within a period of ten years, the Working Group recommends that this process should be initiated at once, within the first year of operation of the agreement, by means of an initial reduction (not in the form of an average) of each and every customs duty and restriction (of the order say of 5 to 10 per cent) with a view to introducing the preferential system forthwith and giving it an initial impetus which might perhaps be decisive for Latin American trade. These cuts would later be counted as part of the reductions towards the average to which reference has already been made.

Similarly, the Group recommends to Governments that within the first five years of operation of the agreement all currency, quota or financial difficulties, etc. hampering Latin American trade should be lifted. Since these restrictions are due, in a number of countries, to the fact that the customs tariff has lost its effectiveness in practice, partly as a result of inflation, the Group recommends that Governments should be left to decide whether or not and to what extent, to convert these restrictions into customs duties before abolishing them.⁶ Naturally, the customs duties thus increased would be subject to the levels agreed on and to the reduction rate or procedure fixed for the gradual attainment of those levels.

The Group recommends that in principle the reduction of customs duties and other equivalent charges (as also the elimination of other restrictions) should be irrevocable, so as to ensure the stability of the reciprocal treatment—with exceptions which will be dealt with in the appropriate place.⁷

4 & 5. *Classification of products and programme for the first stage*

The Group considered it advisable to recommend to Governments that in the initial common market agreement products should be divided into three categories according to their nature and to the degree of development of the industries concerned in the various Latin American countries. These three categories are as follows:

Category I. Primary goods.

⁶ See sub-paragraph (a) of Basic Principle II.

⁷ Basic Principle II provides more specifically for an obligation not to increase the duties, charges and restrictions referred to, whether original or already reduced, but indicates certain exceptions which should be made, in the Group's opinion, to this rule.

Category II. Capital goods, motor vehicles, other durable goods, intermediate articles and others for which demand tends to grow relatively intensively or a large import substitution margin exists; and

Category III. Manufactured goods for current consumption in respect of which demand tends to grow relatively slowly and import substitution possibilities may become exhausted or considerably strained.

The position of these three groups from the point of view of possibilities for the reduction of duties and the addition of restrictions recommended for the first ten years stage is very different. Thus, for example, the primary goods which are for the most part traditional items in inter-Latin American trade offer the greatest importance possibilities, in the Group's view. Many of them, especially mineral products and other raw materials, could in a relatively short time be freed from tariff and other restrictions.

In the sphere of agriculture, however, there are important instances in which the Working Group urges proceeding with caution, for the two reasons given in the comments on Basis II in its previous report.⁸ In the case of some of these products, the gradual improvement of agricultural techniques would be a first step towards their full incorporation in the common market, with a view to establishing satisfactory conditions of inter-Latin American competition. As regards other articles, it is possible that future increases in their consumption will in some cases tend to reduce the exportable surpluses of producing countries in Latin America and that will compel other Latin American countries to maintain or increase their production even at costs above international prices, with a consequent need for protection against the rest of the world.⁹

To look at the matter from another point of view, the rapid growth of the population of Latin America and the absolute need to improve the quality of their diet call more and more urgently for the better use of the land available through a gradual improvement of techniques. The common market will greatly assist this productive development by permitting countries which, owing to unsuitable ecological conditions, are able to produce certain foods (or raw materials) only at relatively high costs, to obtain them on more favourable terms from other Latin American countries and use their land for other types of production.

The lack of a common market, and more particularly the lack of satisfactory payments arrangements among the Latin American countries, has been one of the factors hampering this better use of the productive capacity of the land. To change this situation will require a careful combination of measures of trade policy with adequate programmes of agricultural development.

It will be seen from the foregoing that special attention needs to be given to the agricultural products

⁸ See document E/CN.12/C.1/WG.2/6, page 10.

⁹ Since the Working Group made this observation, recent studies by the Secretariat have shown that this is in fact taking place in such important products as wheat, with regard to which it is very unlikely that the present supply-deficit of Latin America as a whole can be reduced in the next twenty years. It would be unwise therefore to drop the present system of protection without introducing other measures to stimulate domestic production of this and of other foodstuffs.

at present subject to duties or restrictions, and that they should be dealt with, in view of their small number and special problems they present, through product by product negotiations.

The other two categories relate to industrial products. Category II comprises products of industries which might be described as dynamic, in view of the intensive expansion which may be expected of them in coming decades in the industrially more advanced countries of Latin America without, however, excluding the possibility that they may take root and prosper in the hitherto less developed countries.

The dynamic industries are in the main those producing capital goods, intermediate or semi-finished products and certain durable consumer goods (in particular the products of the metal transforming industries). These industries are characterized by their high degree of capital intensity, their reliance on a substantially expanding market —by virtue both of the growth of demand and of the extensive possibilities such goods offer for import substitution— and by the fact that they are new industries or industries which do not yet exist in Latin America. They thus have rapid growth prospects and offer broad and immediate possibilities of complementarity, specialization and reconstruction without the serious adjustment problems which the regional market would entail for already established and consolidated industries or industries limited to a vegetative rate of growth. In other words, it is in these dynamic industries that the greatest benefits could be derived with the fewest disturbances and adverse reactions.

This fact is of decisive importance for the common market. It is not a matter of one country —in any static sense— increasing its production at the expense of others; there is room for all, if the basic conditions are created which will permit the specialization of production; and this will be the easier the more rapid the growth of demand and production in the dynamic development of the common market.

The position of the dynamic industries would thus seem to be highly suited to a policy of relatively rapid reductions of tariffs and restrictions, subject to the differential treatment provided for in the case of countries in which these industries are at an early stage of development.

The situation is quite different as regards the industries included in Category III, industries producing goods for current consumption. In the more developed countries, these industries are already fully established; in many of them, import substitution has been completed for some time, and the growth of production will tend to be slower than in the dynamic industries, gradually following the population growth. It is clear, however, that if a common market is established and export possibilities are opened up, some of these industries might receive a strong impetus towards expansion.

With regard to the less developed countries, although they offer room for the expansion of these industries because the import substitution margin has not yet been closed —on the contrary, it remains very wide in some of them— the competition of the more developed countries could, if caution is not exercised, have unfavourable immediate consequences for certain branches of industry.

These considerations induced the Working Group to recommend different targets for these two different groups of industrial products. For Category II, which covers capital goods and other products of the dynamic industries, it recommends as a target a low average rate of duties which will stimulate Latin American trade in these products to the greatest extent possible. For Category III, consisting of manufactured goods for current consumption, a higher average is recommended, in order not to force during the initial stage of ten years a reduction of duties which could perhaps cause disturbances to existing industries. The reduction will have to be graduated in such a way as to facilitate the progressive development of these industries towards forms of specialization and greater productivity which will enable them to develop within a broad system of inter-Latin American competition.

Furthermore, to set a higher average rate of duties as the target for this category of products would not prevent those countries in which the manufacture of certain goods of current consumption showed dynamic characteristics from obtaining from others—with respect to such products and within the general programme of reductions—substantial tariff cuts, perhaps even greater than those fixed for products in Category II.

6. System for less developed countries

It will be recalled that the main concern of the Working Group at its first session was to arrive at common market formulae which, far from placing difficulties in the way of the industrial growth of the less developed Latin American countries, would give them a vigorous impetus towards industrialization; at the present session the Working Group reached final conclusions on this very important aspect of the matter. The Group accordingly considers it advisable that the agreement should contain a classification of countries according to the degree of development in them of the industries in Categories II and III, as follows:

Group A should comprise the countries which might be called the economically more advanced countries of Latin America, countries in which the industries producing goods for current consumption—those in Category III—are in full process of development, while the capital and other durable goods industries—those in Category II—are already making steady progress in response to the demands of their economic development. Group B comprises those countries in which the industries manufacturing goods for current consumption have also developed in a manner similar to those of countries in the previous group, while yet retaining a wider import substitution margin, but in which, on the other hand, the capital-goods and other industries in Category II are either incipient or non-existent. Group C comprises countries in which the industries producing goods for current consumption are still in the early stages of development and in which there is a wide import-substitution margin and no capital-goods industries—apart from certain exceptions, usually concerned with intermediate products.

The Working Group believes that differential treatment should be given for the benefit of countries in

groups B and C. To this end, it proposes that in the common market agreement, with respect to these two groups of countries, and as a target to be achieved during the first stage, a moderately higher average level of duties should be established for the categories of goods produced by industries at the incipient stage of development. Thus, for instance, if it were established as a general target for the capital and other goods in Category II that in ten years a level of customs duties should be reached of not more, on an average, than 10 per cent of the value of imports, then for the countries in groups B and C an average level of duties of, for instance, 15 per cent could be established for this category of products. The same could be done with respect to consumer goods in category III; in the case of these, an average level could be established for countries in group C higher than that generally agreed on for countries in groups A and B.¹⁰

The Working Group attaches considerable importance to such differential treatment, for if all countries were considered equal from the point of view of economic development the common market agreement would embody a manifest inequality of treatment. In point of fact, if treatment is to be equal the inequality of countries must be fully recognized. But this is not the only way in which the Group has tried to provide for favourable treatment of the less developed countries; it also recommends that Governments should make special concessions in favour of these groups of countries. This requires some explanation.

In establishing a higher level of customs duties as the target for the less developed countries the Working Group, while not wanting to encourage them to adopt anti-economic forms of industrialization, wishes to recognize the fact that owing to their lower productivity and their smaller over-all resources—in comparison with the more advanced countries—they require a greater degree of protection for the time being. These countries, however, will have to be given strong additional incentives in order to ensure that, while receiving this greater degree of average protection, they are able to embark on vigorous industrialization with the common market in mind. This is the idea behind the special concessions. An example will help give a clearer idea of the scope and purposes of the latter. Let us suppose that a country in group C at an early stage of development agrees by negotiation—through the Committee—with one or more advanced countries in group A to abolish customs duties for certain capital goods in which the latter are interested, either within the average applicable to them or within a lower average, if the country in question considered that desirable. In exchange for the facilities it thus granted, the group C country would receive special concessions from the more advanced countries, for example, exemption from duties for the entry into their territory of certain products which the group C country was in a position to produce

¹⁰ One member of the Working Group particularly urged the Secretariat, in its report to Governments, to consider the case of countries with a high level of internal costs. He felt that it would be advisable, in order to facilitate the incorporation of these countries in the common market agreement, for them to be allowed the average fixed for countries in group C, even if they had well-developed consumer industries.

economically and to export to the group A countries' market. In order that the concession thus received by the group C country should be effective, it would be extended automatically only to other countries at an early stage of development in the same group, and not to countries in groups A and B. Thus, the group C countries would have available to them the broad and growing market of the group A country as a stimulus to their industrialization and their industrial export trade.

For their part, the group B countries which have made considerable advances in their consumer industries could similarly enter into special negotiations with the countries at an early stage of development in these goods—those in group C—in order to arrange reciprocal concessions of the same kind.

All this means that within the preferential Latin American system there would be a system of special preferences for the relatively small countries, with a view to creating conditions likely to attract domestic or foreign capital and to ensuring the use of their skills in their industrialization programmes, not only for the benefit of their domestic markets but also for that of the common market. It should, however, be pointed out that these preferences would be in their favour only and that whatever facility an industrially advanced—group A— or moderately advanced—group B— country received in return for these concessions would automatically be extended to all member countries by virtue of the most-favoured-nation clause.

7. *Extent of the market and initial groupings*

The Working Group has already, in its first report, expressed the view that the common market should embrace the largest possible number of countries. This does not necessarily mean that it could not begin with an initial nucleus of countries having a more active interest in its formation. But in order that the market should from the very outset be of the kind desired, the Working Group considers it of vital importance to put two proposals before Governments: the first, that all Latin American countries should be invited to the initial drafting of the agreement; the second, that countries which for one reason or another decide not to participate at the beginning should be enabled to do so at any later stage without entering into complicated negotiations. This possibility has already been referred to in commenting on the advantages offered by the averages system in connexion with the accession of new countries.

There are possible identities of interest which might facilitate the formation of a broad orbit of countries. Thus, the fact that the trade of seven countries in the southern area makes up about 90 per cent of the total trade among Latin American countries (petroleum excluded) readily suggests that these countries might act as the initial nucleus of the common market. But there are other countries geographically remote from them which, for reasons of common interests, might wish to participate in this nucleus. The area of identity of interest might still be found in the field of the dynamic industries. Apart from other things, this common denominator would be a very strong factor, both for the present and for the future, in broadening the initial

nucleus of the common market, and in the opinion of the Working Group everything should be done to prevent any weakening of this constructive force.

Nothing of all this, however, can be hoped for if a static viewpoint is adopted. The common market is not intended as a means for freezing present trade relations; on the contrary the intention is to create a new pattern of trade in accordance with the profound structural changes which the Latin American economy must undergo in coming decades if it is to show vigorous growth. And geographical distance in a rapidly industrializing Latin America cannot have the same significance as it had when the countries of Latin America concentrated almost entirely on primary production for the large industrial centres. All this tends to reinforce the idea of the broadest possible grouping.

The Working Group believes that the formation of other types of groupings of countries, through exclusive arrangements, could be an obstacle to the creation of a Latin American common market. On the other hand, it is clear that geographical proximity will create, within the common market, very tightly-knit trading areas among certain groups of countries; this, however, must be the spontaneous result of the facts themselves, and not the consequence of a policy of excluding other Latin American countries solely because of their remoteness—a remoteness which will, in any case, be overcome as transport improves.

8. *Specific agreements for complementarity and specialization*

The above considerations should not prevent countries which are closely linked by their geographical proximity or by an identity of interests from making complementarity of specialization arrangements among themselves in order to increase the productivity and reduce the costs of certain industries. These arrangements would not—as would be desirable—be easy to put into effect if the exemptions from or reductions of customs duties agreed on among the countries concerned were at once extended to other countries by virtue of the most-favoured-nation clause. Hence, the latter clause should not be applied in such cases. This situation would, of course, have to be temporary in character, lasting until such time as the industries in question had been able to strengthen themselves through their complementarity or specialization. In addition, the Working Group considers it essential that the customs duties thus abolished or reduced should not be counted in connexion with the average levels laid down in the agreement; they would, in other words, be *additional* to those granted generally and would in no way affect the obligation to fulfil promises undertaken in the agreement.

9. *Other special agreements*

In addition to the special arrangements just mentioned, the Working Group considers that the agreement should permit other special agreements among countries designed to stimulate border trade of the development of zones or basins of interest to two or more of them. It therefore recommends that such agreements should be permitted, subject, however, to the Committee's approval.

10. *Most-favoured-nation treatment*

The members of the Working Group are convinced that the sound operation of the regional market depends on the granting of equality of opportunity to all participating countries, apart from the differential treatment to be accorded, for the reasons already explained, to countries at the earliest stage of industrial development and that resulting from specialization and complementarity agreements and other arrangements of a temporary nature. In addition, the Group explicitly recognized an exception in favour of the preferences and other concessions resulting from Central American economic integration—which amounts to considering the Central American countries as an economic unity.

11. *Trade and payments policy committee*

The common market agreement will have to lay the foundations of a policy for the gradual and continuous economic integration of Latin America within the market. But in addition this policy must pursue constant aims and must be continuously adapted to changing circumstances. With this end in view the Group considers it advisable that there should be set up an inter-governmental committee formed of high-ranking representatives of the contracting countries. This committee would be responsible for considering problems of trade policy, payments and the administration of the agreement. Mention has been made in the course of this report of the need for countries to undertake negotiations on particular matters dealt with in the agreement; it would be useful if these negotiations could take place within the committee even if they were to be carried on between restricted groups of countries, in order to ensure the correlation of common interests. Owing to the nature of the Working Group, this report does not go into detail regarding the functions of the committee; it would be desirable that in preparing the draft agreement the Secretariat should expressly enumerate these functions and clearly specify which matters should be decided by a simple majority and which should require the unanimous assent of the member countries.

B. COMMENTS ON THE BASIC PRINCIPLES

As they supplement or amplify the principles recommended in the part of this report dealing with the structure, the meaning and purpose of most of the so-called "basic principles" proposed are obvious. However, the Group felt that some comments were called for on certain of them to which it has given special attention.

I. *Reciprocal trade benefits of the common market*

The Group considered the possibility that the progressive establishment of the common market through the gradual reduction or abolition of customs duties and other taxes and restrictions might bring substantially greater benefits to some countries than to others. These greater benefits would probably be reflected in a persistent tendency, on the part of those to whom this was more advantageous, to export more to other common-market countries than they imported from them. In the

Group's view the countries which find themselves in this position should increase the rate of reduction of their duties and other taxes and restrictions in order to promote their imports and so offer the others greater opportunities of participating adequately in the reciprocal trade benefits of the common market.

II. *Co-ordination of trade policy*

Apart from the recommendation concerning the need for member countries to carry out their trade negotiations in co-ordination with third countries, the Working Group agreed to recommend that the Latin American countries should endeavour forthwith to initiate negotiations with a view to securing recognition of regional preference through the inclusion of a Latin American waiver clause in the agreements in force, or in process of approval, with third countries; and that they should also bear the advantages of this objective in mind in the negotiations they will have to undertake with the members of the European Common Market or with other countries members of GATT.

III. *Special programme for the reduction of high customs duties*

Customs duties which, because they are too high, restrict or even render impossible the importation of the products on which they are levied will have very little effect on the determination of the weighted average level of duties, and perhaps none at all, since such weighting is based precisely on actual imports of each product. It might thus be possible for a member country, by the end of the first stage contemplated in the agreement, to reach the duty averages set as the target, or even much lower ones, while maintaining high duties on a large number of items. Furthermore, it is conceivable that the average level of duties reached by a given country (calculated in the manner described) will rise as that country reduces the duties on certain items, if the volume of imports of these is thereby increased to any great extent.

It is for this reason that the Working Group stresses the advisability of the Committee's laying down rules designed to ensure or promote the effective reduction of very high duties, for example by establishing a compulsory periodic percentage reduction for customs duties whose effect on the value of the products concerned exceeds a certain percentage.

IV. *Measures to remedy balance-of-payments disequilibrium*

The success of measures to reduce duties, taxes and restrictions will depend to a large extent on the attitude of the contracting countries towards the achievement and maintenance of their balance-of-payments equilibrium. It is possible that, as a result of such a policy, a contracting country might improve its balance-of-payments situation. In that event, the Committee should advise it to adopt further liberalization measures so that, through the resultant increase in its imports, it can help the debtor countries in their development.

Similarly, these countries could, after consulting the Committee, take steps to reduce the rate of liberalization if that proved necessary.

V. *Escape or safeguard clauses*

As has already been said, the countries whose exports inside the common market increase more than their imports as a result of the concessions granted to them ought, in the view of the Working Group, to increase the rate of reduction of duties and other restrictions in order to allow other member countries to participate more fully in the benefits of trade liberalization. Similarly, the Group considered the possibility of the reverse situation, in which the concessions granted by a member country within the common market cause it serious balance-of-payments problems or provoke serious disturbances in some important industry or substantial unemployment among workers who cannot be absorbed in other branches of economic activity. In this case it recommends that the agreement should contain safeguard or escape clauses to allow countries in this kind of situation temporarily to suspend the concessions granted, or to withhold the granting of further rebates, without prejudice to any other measures which it may or ought to take to correct its imbalance, especially if it is of a structural kind.

VI. *Payments system*

The Group also noted with satisfaction the efforts

of the Secretariat to formulate a draft payments system among the Latin American countries, and hopes that it will be possible, at the next session of the Central Banks, to reach definitive formulae, because an effective payments arrangement and the smooth working of the common market are closely interrelated. Without wishing to interfere in the deliberations of the Central Banks, the Working Group would like to stress the desirability of considering, in these arrangements, the possibility of granting extensive credits, through a suitable payments system, in order to facilitate inter-Latin American trade and to prevent restrictive measures from being taken owing to payment difficulties.

VII. *The inter-Latin American financing agency and the common market*

The Working Group took note with satisfaction of the statements made by the observer sent by the Inter-American Economic and Social Council to the effect that, at the meetings being held at Washington with a view to the establishment of a Latin American financing agency, special interest is being taken in the credits and investments intended for setting up industries for the common market. The Group also considers it pertinent at this stage to point out the desirability of introducing a system of short-and medium-term credits in order to encourage exports from the industries of the Latin American countries, and it would welcome a study of this aspect of the problem.

THE PROBLEM OF THE ECONOMIC DEVELOPMENT OF ARGENTINA

INTRODUCTION

During the past decade, Argentina's production of goods and services, measured on the basis of the gross national product, increased at a less rapid rate than the population. Because of this disparity, average *per capita* availabilities of goods and services now stand at a slightly lower level than ten years ago.

The stagnation of the Argentine economy coincided with a period of almost unprecedented economic expansion throughout the whole world. Over the same decade, the annual increments registered in the *per capita* product in the United States and in Latin America, excluding Argentina, were 2.2 per cent and 3.0 per cent respectively. The cause of Argentina's failure to develop, therefore, must not be sought beyond its frontiers or in purely adventitious circumstances. Something of more vital importance lies behind the ills besetting its economy, the discovery of which was the main objective of the Secretariat study on the economic development of Argentina.¹

At the root of Argentina's problem is a structural disequilibrium. In the case of certain commodities or groups of commodities existing demand exceeds the capacity to supply it, and the imbalance is too great to be remedied by the simple expedient of modifying relative prices. This point is important enough to call for a brief explanation.

It is common knowledge that with every change in the level of national income a change takes place in the composition of internal demand. As a rule, a higher income level is accompanied by a proportional contraction of demand for foodstuffs and agricultural commodities and a proportional expansion of demand for manufactured goods and services. In a country without foreign trade relations, at each income level the composition of production by types of goods must correspond to the composition of demand, except over short periods. On the other hand, where foreign trade exists, external demand for certain goods is superadded to domestic demand, and if it increases rapidly, causes an alteration in the structure of domestic production which is not in keeping with the change in the composition of internal demand. In relation to this latter, production of export items expands quickly, while other lines develop slowly. The discrepancies are covered by exporting surpluses and importing goods of which there is a deficit. This is why it is characteristic of an economy whose development is channelled towards the external sector for the structure of internal demand to differ from that of domestic production. The latter rather resembles what might be expected

in a country with a lower income level but a closed economy.

Consequently, a rapid expansion or a radical reduction of demand for exports necessitates a transformation of the structure of production. The changes entailed by an expansion of demand for exports are usually easy to effect, especially with the backing of capital and technique contributed by more developed countries. In contrast, the evolution of those imposed by a contraction in exports is slow and difficult.

During the last 75 years, the Argentine economy has three times been confronted with the need to make relatively sweeping changes in the structure of its production. The last quarter of the nineteenth century witnessed the opening of a phase of rapid externally-directed development which ended in 1930 with the slump on the world market for primary commodities. A second phase then began, characterized by a contraction and stagnation of external demand and lasting until the Second World War, when it became clearly evident that once again the Argentine economy needed remodeling on new lines.

While on the two occasions mentioned Argentina succeeded in adapting itself to the changes in the factors conditioning its development, it proved unable to do so after the Second World War. The form currently assumed by the disequilibrium referred to is familiar enough. Argentina's external resources are inadequate to import those goods that are essential for its economic growth, and barely suffice to meet the ever-increasing requirements of its industrial development in respect of raw materials and intermediate products. Moreover, the transport situation is unsatisfactory, the energy deficit is considerable and agricultural activities have declined to such an extent that *per capita* production today is 7.6 per cent less than in the period 1930-55.

Notwithstanding the magnitude of these structural maladjustments, the Argentine economy is potentially capable of developing a great deal more rapidly than in the past. If the necessary transformations are brought about, the gross internal product may increase by as much as 40 per cent by 1962 and 77 per cent by 1967.² The analysis which follows will be largely concerned with describing the nature and significance of these changes.

¹ See the mimeographed text (Spanish only) of *El desarrollo económico de la Argentina* (E/CN.12/429 and Add. 1 to 4). The printed edition will consist of three volumes. The first of these, containing Part One of the study, will already have gone to press by the time this article appears.

² 1955 is taken as the base year. This general criterion was followed as being that adopted in the study *El desarrollo económico de la Argentina*, *op. cit.*, on which work began in 1956. Since the present article is based on that report, it was considered best to keep the same base year. The adoption of a more recent year would have implied a radical revision of certain statistical series used here, and, above all, would not have altered the conclusions reached in these pages.

1. ECONOMIC DEVELOPMENT IN THE FIRST THREE DECADES OF THE CENTURY

During the first 30 years of the present century, Argentina's gross domestic product expanded at the remarkably rapid annual rate of 4.5 per cent. On the other hand, as a result of immigration, the annual rate of growth of the population was among the highest recorded in the world during that period—3.3 per cent; and as this rise in population absorbed a substantial share of the increase in the total gross product, the *per capita* product grew at the modest rate of 1.2 per cent yearly. The significant expansion of the total product in any case entailed a considerable investment effort, which in a country like Argentina, where there was no domestic industry manufacturing capital goods, could be achieved in only two ways: (a) through its export trade, which provided the financial means of importing the necessary capital goods; and (b) by virtue of foreign investment and loans. This was what did in fact take place. During those first three decades, Argentina earmarked 31.6 per cent of its gross domestic product for investment, one of the highest proportions ever registered in the whole world over so long a period. Foreign investment and loans helped to finance this capital formation effort to the extent of 33 per cent. Argentina itself was able to defray the cost of the remainder, thanks to its export trade, which expanded at an average annual rate of 4.5 per cent, and thus provided the necessary foreign exchange.

It is a well-known fact that a major proportion of Argentina's exports consists and throughout the whole of the century has consisted of agricultural commodities, some of which undergo a certain amount of industrial processing. Consequently, the rapid development of this trade is an index of the intensity with which world demand for Argentina's agricultural commodities increased during the period in question. Furthermore, domestic demand for these goods also expanded, as a result of the high rate of population growth and the rise in *per capita* income. The ample availabilities of first-class land and the timely construction of a transport network to carry Argentina's agricultural production to domestic and foreign markets help to fill in the picture of the agricultural sector's striking progress during the first thirty years of the twentieth century.

The external demand referred to also had a dynamic effect on other activities. For example, it stimulated the growth of trade. In addition, thanks to the incentives provided by immigration and the improvement in *per capita* income, large urban centres came into existence, and this in turn promoted the development of certain consumer manufactures. Such industries, which in the first five years of the century had contributed 13.8 per cent of the domestic gross product, accounted for 17.7 per cent in 1925-29. By virtue of this development, the proportion of domestic consumption which was satisfied with imports of non-durable finished manufactured goods fell from 12.4 per cent at the beginning of the century to 9.3 per cent in 1925-29. Nevertheless, the growth process which took place in the period under review was unquestionably typical of what is known as "externally-directed development"; in other words, it was one of integration with the international market and adaptation of the production effort to world market demand.

2. THE FIRST STRUCTURAL CRISIS

The directing of the economy towards the world market produced a discrepancy between the structures of domestic production and demand. At the time when the world depression began in 1929, Argentina's agricultural production was far greater than domestic demand for such commodities, while internal demand for capital goods, manufactured consumer goods and fuels notably exceeded domestic production of these items. The balances, of course, cancelled each other out through international trade.

The depression directly affected exports and foreign investment, which represented the driving force of the economy. The capacity to import, which in 1925-29 had averaged about 1 600 million dollars³ *per annum*, dropped in the following five-year period to 744 million, and the purchasing power of exports fell from 1 982 million dollars to 1 214 million. The net inflow of foreign capital decreased from 199 million to 120 million dollars.

The decline in the capacity to import was the characteristic feature of the second phase of Argentina's development, since the levels registered before the crisis were not regained except for a short period between 1937 and 1939. As the population continued to increase, although at a much more moderate rate than before, the *per capita* capacity to import declined still more steeply.

As a result, an abrupt contraction was registered in aggregate domestic demand. If market forces had then been allowed free play and no attempt whatever had been made to offset their effects, internal income would have diminished until demand for imports fell into line with foreign exchange availabilities; and, in consequence, demand would have undergone a structural transformation, contracting most sharply in respect of capital goods, durable consumer goods and other manufactures, a major proportion of which Argentina was at that time obtaining through the medium of its foreign trade. In the case of all those goods which were imported in sizable quantities, a balance between demand and availabilities would have been achieved, but where exportable commodities were concerned, the gap between internal demand and supply capacity would have widened.

The price paid for the adoption of a policy of this kind—which has in fact been pursued by some Latin American countries in similar circumstances—would have been economic stagnation, a deterioration in the standard of living of the whole population and possibly a long period of unemployment which would have affected a considerable proportion of the labour force.

Argentina chose a different path. It attempted to keep internal demand at the highest level possible in the circumstances, but in doing so maintained a structure of demand such that with respect to many items demand exceeded domestic production capacity and foreign exchange availabilities. It then devoted attention to the development of those lines of production in which the disequilibrium was most marked, or, in other words, to import substitution. At the same time, it supplemented this policy by applying selective controls to the demand

³ With 1950 purchasing power. It should be noted that, unless otherwise indicated, all monetary values, both in Argentine pesos and in dollars, are invariably expressed in terms of their purchasing power in that year.

for imports, raising tariffs, devaluating the exchange rate more for some goods than for others, imposing quantitative restrictions and, in short, resorting to all the procedures recommendable in such cases.

The task of guiding Argentina's productive resources into new channels, although in itself by no means easy, was facilitated by several circumstances. In the first place, a substantial proportion of available foreign exchange was being used for imports of non-durable or semi-durable consumer goods which could be produced in Argentina at reasonable cost. The relative volume of imports of this kind, which in 1925-29 had represented 9.3 per cent of total consumption of goods and services, dropped to only 2.4 per cent in 1940-44. Their progressive replacement by domestic production gradually left at Argentina's disposal the margin of foreign exchange required for those imports of capital goods, raw materials and fuels which the economy needed for its normal operation and for the expansion of its production capacity.

In the second place, as very large amounts had been invested in basic social capital in the preceding period, especially in the transport sector, it was possible to expand production of other goods without further investment in those fields. Lastly, the rate of domestic saving was relatively high, and, although it declined during the 'thirties, permitted the development of non-agricultural activities on the basis of a reduction of investment in agriculture, trade and transport and transfer of the corresponding saving to the manufacturing sector.

As the outcome of the policy adopted, the gross domestic product remained at fairly high levels even in the worst years of the depression, and actually increased during those which followed. However, since its growth failed to match that of the population, only in 1945 did the *per capita* product regain the level registered in 1929.

These developments are not surprising in view of what happened with respect to demand for agricultural commodities. Before the crisis, the agricultural sector represented one third of Argentina's economic activity, and about half its production was sold abroad. When external demand for agricultural commodities ceased to grow, only the expansion of domestic demand was left to provide incentives for the development of the sector in question. This demand increased to some extent as a result of the rise in population, but the stimulus thus afforded could not be great and was of course inadequate to replace the dynamic influence previously exerted by the demand of importer countries. Domestic consumption of agricultural commodities in fact increased by 58 per cent between 1925-29 and 1940-44.⁴ Since foreign demand, as reflected in exports, declined by 33.6 per cent, the 34-per-cent increment in agricultural production was more than sufficient to satisfy both the greater internal and the reduced external demand. It may thus be asserted that the demand situation from the time of the world depression to the end of the Second World War was not such as to allow the expansion of the *per capita* product in a sector which at the beginning of

the period had contributed one third of Argentina's total product.

Obviously, in view of the limits set to the growth of so important a sector, it was materially impossible for the total *per capita* product to increase to a significant extent. To cite an example, for the total *per capita* product to have risen by 2 per cent annually at a time when agricultural production was not developing, non-agricultural activities would have had to increase 2.3 times in the short space of 16 years, 4 of which fell within the period of the war when the supply of capital goods was severely restricted. Again, since services, especially trade, were quite well developed at the beginning of the period, the redirection of the economy necessitated by the world depression was clearly too sweeping to leave room for what might be considered a satisfactory increase in the *per capita* product. The maintenance of the pre-depression situation was the most that could be expected.

3. THE SECOND STRUCTURAL CRISIS

The year 1945 may be said to have witnessed the initiation of a third phase in the economic life of Argentina during the present century. The year referred to was chosen mainly for analytical purposes, as, apart from the end of the Second World War, no event or group of events which constituted an unmistakable milestone was registered in this as in the preceding phase.

At the end of the war, Argentina's position was very different from its situation at the beginning of the world depression. Its population was almost 40 per cent larger, its total gross product had also risen by 40 per cent, and its industrial production was 65 per cent higher. Again, in consequence of the expansion of internal activity, the amount of foreign exchange required to keep the economy operating normally was much greater, a fact which in turn reflected import requirements in respect of raw materials, fuels and capital goods to replace equipment which was wearing out. At the same time, the relationship of exports to the aggregate product of the economy declined from 24 to 13 per cent, leaving Argentina with a very small foreign exchange balance to finance the imports of capital goods which it needed to achieve a significant increment in the *per capita* product, as distinct from those required to maintain the level of activity. Argentina had come to be in the position of a large enterprise which has working capital at its disposal but lacks resources to finance its expansion.

The foregoing circumstances were combined with at least four other factors. In the first place, so far as finished consumer goods were concerned, the import substitution process which had taken place during the preceding period made it almost impossible for additional foreign exchange to be released by this means. Secondly, idle capacity no longer existed in the transport sector as it did in the early 'thirties; on the contrary, so long a time had elapsed without adequate replacements being effected that it was becoming essential to earmark large sums for capital formation in this sector. Thirdly, by the beginning of the 'twenties agriculture in the pampas had exhausted the possibilities of expansion through the incorporation of new land. While this limitation

⁴ This figure is based on an estimate of effective as distinct from apparent consumption, which increased to a much greater extent and reflected the destruction of surpluses during the war.

had been of little importance during 1933-44, because of the slow growth of demand, it must be borne in mind that a fresh impetus was given to such demand as from 1945 and supply difficulties became clearly apparent. For Argentina's agricultural sector to regain its previous vigour, its production methods would have had to be altered and its typical organization patterns remodelled. Lastly, the very development of industry and motorized transport caused a marked increase in demand for fuels, especially petroleum. Anxiety to keep down petroleum prices had a two-fold effect. On the one hand, it accelerated the growth of demand; on the other, it reduced those financial availabilities which would have enabled domestic production to expand at a much more rapid rate. As things were, it was on the balance of payments that the pressure of demand was exerted.

In these circumstances, Argentina found itself faced with the inescapable necessity of steering a new course, of redirecting its production efforts. If the growth of production was to outstrip that of the population, Argentina could no longer confine import substitution to finished consumer goods, since this process had almost reached its zenith and could not produce more foreign exchange than was indispensable for maintaining the existing level of economic activity.

Two alternative ways of effecting the necessary transformation were open to Argentina, and, furthermore, were not mutually incompatible. One was the expansion of exports; the other, import substitution in the field of intermediate products—especially fuels—and of capital goods themselves.

Immediately after the Second World War, as distinct from in the early 'thirties, Argentina was very favourably placed for steering this new course. Indeed, from 1946 onwards, a notable improvement was registered in the terms of trade and this, in combination with the considerable foreign exchange reserves accumulated during the war, afforded plenty of scope for the new substitution efforts needed to expedite development. But advantage was not taken of the opportunity. Available resources were utilized to import goods which would have ranked very low on a satisfactory list of priorities and to nationalize foreign investments producing a far lower economic yield than others might have offered, had they been effected. This largely accounts for the inadequacy of capital formation in transport, energy—especially petroleum—and industries manufacturing capital goods, which in turn is perhaps the cause of the most serious bottleneck in the Argentine economy.

The defective distribution of investment also produced an adverse effect on the distribution of manpower among the various types of employment, and on the productivity of the labour force. An exceptionally high proportion of the increment in the active population was diverted from the sectors concerned with the production and transport of goods to others not directly productive. Moreover, within the production and transport sectors themselves, very serious defects were observable in the distribution of the manpower increment. The labour shortage affecting agricultural production was not accompanied by a corresponding transfer of active population to industry. On the contrary, in the last decade industry employed relatively little additional manpower.

Construction and rail transport were foremost among the sectors which absorbed unduly large proportions of the labour force, with a correlative decline in productivity.

Thus there was a notable discrepancy in the trends followed by productivity in the Argentine economy. While in industry it steadily and persistently improved, it deteriorated in other branches of the production and transport of goods, as well as in those sectors towards which an abnormally high proportion of the manpower increment was diverted. All this neutralized the beneficial consequences of the rise in industrial productivity, and in recent years has been partly responsible for the stagnation of the average *per capita* product throughout the economy.

As regards the expansion of exports, too, Argentina lost a favourable opportunity. After the war, world markets for Argentina's export commodities underwent a striking expansion, in which, however, Argentina was unable to avail itself of its share; on the contrary, its relative position as a world supplier deteriorated (see table 1). Several factors brought about this situation. In the first place, there was little to attract investors towards agriculture, owing to the policy of redistributing income in favour of the urban population through the maintenance of low relative prices for agricultural commodities and direct consumer subsidies, and to the resulting need for other measures—such as the freezing of rents—aimed at preventing the monetary costs of agricultural production from rising. These same measures led to an unduly large increase in consumption of foodstuffs and, therefore, to the reduction of exportable surpluses. Secondly, Argentina paid no heed to the necessity of reforming agricultural production methods and did little to further the research and extension efforts which were essential requisites for an expansion of production in this important sector. Thirdly, the agricultural subsidies policy pursued by the United States led to the accumulation of large surpluses which were unloaded on the world markets first through the Marshall Plan and later by means of the surplus disposal programmes.⁵

To the reduction of exportable surpluses was added, from 1950 onwards, the loss of those earnings derived in previous years from terms-of-trade movements, which bore the main brunt of the effects of the United States surplus disposal policy. However, the gross product continued to increase and with it the amount of foreign exchange required for the maintenance of the level of economic activity. Thus the margin of foreign exchange available for the expansion of Argentina's productive capital gradually disappeared, and exports barely sufficed to finance imports of intermediate products, fuels and capital goods required for replacement purposes.

Given Argentina's state of economic stagnation, efforts to redistribute income in favour of the urban areas, on the one hand, and to maintain the level of investment on the other, were, because of their incompatibility, almost inevitably bound to lead to an inflationary pro-

⁵ Although this was undoubtedly a basic factor, its influence is often over-estimated. Even if the United States had not put the policy in question into effect, Argentina would not have been able to take full advantage of the world market situation for lack of sufficient production.

Table 1

SHARE OF ARGENTINA AND UNITED STATES IN WORLD EXPORTS OF SOME AGRICULTURAL COMMODITIES,
IN SELECTED YEARS

Period	World total (Thousands of tons)	Argentina		United States		Rest of the world	
		(Thousands of tons)	(Per-cent. age)	(Thousands of tons)	(Per-cent. age)	(Thousands of tons)	(Per-cent. age)
MAIZE							
1934-38	10.200	6 256.8	61.4	797.7	7.8	3 145.5	30.8
1945-49	4 265	1 828.0	42.8	1 661.9	39.0	775.1	18.2
1950-54	4 890	1 029.0	21.0	2 560.0	52.4	1 301.0	26.6
1955	4 800	362.3	7.5	2 752.6	57.3	1 685.1	35.2
1956	6 200	1 065.1	17.2	2 976.4	48.0	2 158.5	34.8
WHEAT ^a							
1934-38	17 300	3 340.5	19.3	1 259.4	7.3	12 700.1	73.4
1945-49	23 790	2 079.6	8.7	11 203.5	47.1	10 506.9	44.2
1950-54	25 450	2 186.3	8.6	8 982.7	35.3	14 281.0	56.1
1955	25 200	3 714.0	14.7	7 390.0	29.3	14 096.0	56.0
1956	31 800	2 568.0	8.1	12 669.0	39.8	16 563.0	52.1
LINSEED ^b							
1934-38	2 282	1 541.5	67.6	1.2	0.1	739.3	32.3
1945-49	799	243.5	30.5	42.8	5.4	512.7	64.1
1950-54	1 335	580.2	43.5	253.9	19.0	500.9	37.5
WOOL ^c							
1934-38	660	77.4	11.7	—	—	582.6	88.3
1945-49	794	110.9	14.0	—	—	683.1	86.0
1950-54	712	71.3	10.0	—	—	640.7	90.0
MEAT ^d							
1934-38	1 180 ^e	468.6	39.7	—	—	711.4	60.3
1945-49	1 134	396.4	35.0	—	—	737.6	65.0
1950-54	939	176.0	18.7	—	—	763.0	81.3

Source: See *Economic Survey of Latin America, 1957* (United Nations publication, Sales No.: 58.II.G.1), special study on "Trade in Agricultural Commodities in Latin America", table XXIV.

a Including exports of wheat flour, expressed in terms of wheat.

b Including linseed oil in terms of seed.

c Clean base.

d Beef, mutton, lamb and pork (fresh, chilled or frozen).

e Total sample.

cess. As was already stated, the redistribution of income in the direction described curtailed exportable surpluses and hence the supply of capital goods. Measures designed to keep up investment levels by means of a generous fiscal and monetary policy swelled the demand for imported capital goods and for foreign exchange in general. Efforts to modify this situation might conceivably encounter political obstacles.

4. DEVELOPMENT PROSPECTS

Argentina can emerge from its state of economic stagnation if it adopts and steadily applies an economic policy calculated to remove the factors responsible for the bottleneck mentioned above. It has enough natural resources to enable a considerable improvement on the present standard of living to be achieved and a population capable of carrying out the effort involved in their mobilization.

Study of Argentina's economic conditions and problems has led to the conclusion that the domestic gross product may be increased 40 per cent by 1962 and 77 per cent by 1967 in relation to 1955. These growth targets represent a ceiling beyond which it would be extremely difficult to go, unless an appreciable improvement were to take place in the external factors conditioning Argentina's development. Furthermore, the at-

tainment of such targets would imply considerable and unflagging effort, without which it might be a fairly long time before they were reached.

Neither these objectives nor the estimates of the capital investment and other requisites needed for their attainment should in any sense be looked upon as forecasts. They should be taken simply as points of reference designed to facilitate an assessment of the necessary effort in quantitative terms and to provide a clear picture of the economic policy that should be pursued.

5. CHANGES REQUIRED IN THE STRUCTURE OF PRODUCTION

In order to increase its *per capita* product with the intensity indicated, Argentina must substantially enlarge the volume of investment, but in a rapidly developing environment it will not need to raise the investment coefficient registered in previous years. Consequently, the growth of *per capita* consumption can keep parallel with that of investment. Development can be expedited by means of a rechanneling of investment with a view to the elimination of bottlenecks, for which purpose a strict order of priorities will have to be followed.

The establishment of investment priorities must be based on an analysis of the function of each of the sectors of production in the over-all development process.

If the *per capita* product increases, demand for the different goods and services expands at varying speeds, which find their technical expression in the size of the elasticity coefficient of demand. Consequently, if sectoral disequilibria between supply and demand are to be avoided, a larger proportion of investment will have to be earmarked for those sectors where demand is expected to increase more rapidly.

Again, with the growth of internal demand for each commodity or group of commodities demand for imports also expands, as part of that corresponding to finished goods is satisfied with purchases abroad, while at the same time domestic production needs imported goods, both intermediate and capital, in proportions varying in every individual case. The larger the proportional increase in demand for imported goods deriving from the increment in demand for the products of any sector, the more severe is the pressure on the balance of payments and the greater the economic development difficulties resulting from the increment in question. To prevent such pressure the growth of domestic production will have to outstrip that of demand, and for this purpose investment in the sector concerned will have to be given an even higher priority than that suggested by demand elasticity.

Lastly, in the establishment of investment priorities due account must be taken of the capital formation deficit which may previously have accumulated as a result of lack of foresight or mistaken economic policy. This deficit, the elasticity of demand and the pressure exerted on imports by the growth of the deficit are the three most important factors that have been taken into consideration in determining the directions in which investment resources should be channelled during the period under study.

An analysis of the various sectors of production making up the Argentine economy enables them to be classified in four groups, in accordance with the criteria mentioned above. The most important of these groups—called here the “dynamic sectors group”—contributed 23.4 per cent of the gross product in 1955, and it is for the goods produced by this group that demand will expand most rapidly. Such a development would entail a heavy increment in demand for imports unless the proposed substitution programme were carried out. The second group is formed by agricultural activities, which accounted for 17.3 per cent of the product. The third consists of the so-called vegetative growth sectors, which were responsible for 18.1 per cent of the product. Lastly, the fourth—“other sectors”—includes the Government,

services and housing, which contributed 41.2 per cent.

The most serious shortcomings as regards accumulating capital and setting the course of economic policy were registered in the dynamic sectors group. It is on this group, therefore, that a major effort will have to be concentrated during the next ten years. The study on the Argentine economy and its development prospects is concerned primarily with these and the agricultural sectors.

The dynamic sectors group comprises machinery, equipment, vehicles and metals; paper, board, and printed matter; chemical products; cement and building materials; petroleum; electricity; communications and other services, and transport. The third group—to which the vegetative industries were assigned—is composed of the remaining manufactures and mining activities.

Demand for the products of the activities included in the first group tends to rise 1.7 per cent for every 1-per-cent increment in the gross product. In addition, its import coefficient is very high (21.5 per cent in 1955). This group of industries, which accounts for barely 13.4 per cent of the aggregate product of the economy, absorbs 71.9 per cent of imports (see table 2). Thus it is the zone of the Argentine economy which is most vulnerable to external fluctuations and contingencies and where the principal import substitutions will have to be achieved.

From a comparison of the foreign exchange requirements noted in table 2 with Argentina's foreign exchange availabilities, which were estimated on the basis of an analysis of market prospects for exportable agricultural production and the surpluses that might exist, it can be seen that an essential prerequisite for the attainment of the postulated rate of development is a far-reaching substitution effort, the magnitude of which is implicit in the need to reduce unit import requirements in those sectors where they are highest.

By virtue of detailed study of each of the most important sectors of production, it has been possible to define the lines on which the structure of production observed in 1955 would have to be modified if the projected development levels were to be attained without the risk of a serious balance-of-payments disequilibrium. The corresponding data are given in table 3.

It should be stressed here that the figures indicating targets for the gross value of production by sectors in default of the import substitutions recommended serve only illustrative purposes, their aim being to show the effect of the production efforts implied by import substi-

Table 2
ARGENTINA: ELASTICITY COEFFICIENTS OF FINAL DEMAND AND IMPORT REQUIREMENTS

Sector of the economy	Global coefficient of elasticity of final demand in relation to product	Imports 1955 ^a			Share in total gross product at factor cost
		Percentage distribution by industries of origin	Coefficient of elasticity of potential demand in relation to total gross product (1955-62)	Coefficient of imports in relation to final demand	
Dynamic sectors	1.75	71.9	2.21	21.5	23.4
Sectors developing less intensively ^b	0.82	28.1	0.09	2.8	76.6

^a Consumer goods, intermediate products by sector of origin, and machinery and production equipment by sector of destination.
^b Including construction.

Table 3

ARGENTINA: PERCENTAGE INCREMENTS REQUIRED IN GROSS PRODUCTION BY SECTORS, WITH AND WITHOUT IMPORT SUBSTITUTION

Sector of the economy	Proposed changes		Changes with out import substitution	
	1962	1967	1962	1967
1. Agriculture	30.3	53.0	35.1	56.7
2. Deposits, quarries and mines . . .	98.2	186.7	32.5	68.1
3. Foodstuffs, beverages and tobacco	28.4	48.5	28.1	47.7
4. Textiles, wearing apparel and other made-up textile goods, and leather	37.8	65.7	37.3	64.5
5. Wood and building materials . . .	53.2	113.8	42.7	86.4
6. Paper and printed matter	66.1	126.0	48.4	90.3
7. Chemicals and rubber	62.5	130.3	46.7	84.3
8. Fuels, electricity and public health works	62.0	114.2	46.8	82.8
9. Metals	92.5	176.1	47.2	87.0
10. Vehicles and machinery	111.3	164.2	77.5	129.4
11. Construction	24.0	74.3	24.0	74.3
12. Services in general	43.2	79.4	40.9	74.6

tution and the sectors in which the substitution effort is relatively most essential. The figures referred to must on no account be interpreted as realistic objectives, since they signify so great a balance-of-payments deficit that they would not be feasible. On the other hand, the production targets to be reached if the suggested substitutions are effected represent practical possibilities.

It is worth while pausing to examine in some detail the changes which will be required in the structure of production. In the manufacturing industries as a whole—both those of a dynamic and those of a vegetative character—output must increase 107 per cent by 1967. Agricultural production, on the other hand, according to the projections prepared, would expand by only 53 per cent. Consequently, a change would take place not only in the structure of Argentina's industry, through the development of activities characterized by greater technical complexity than existing vegetative industries, but also in the structure of the economy, since the relative importance of industry would increase and that of agricultural production would decline. The latter's share in the aggregate product was 17 per cent in 1955 and would fall to 15 per cent in 1967, while that of industry would rise from 23 to 27 per cent over the same period.

Changes such as these, in the direction of a higher degree of industrialization, are not the reflection of a special preference. They are due to the fact that domestic demand increases more intensively in the case of industrial goods than in that of agricultural commodities, a disparity which is only partly offset by the expansion of agricultural exports. This happens both in Argentina and in other countries, when the *per capita* product follows an upward trend. The inequality of the growth rates of industrial and agricultural production will thus be accentuated, since not only will demand for industrial goods be more intensive, but an increasing proportion of it will have to be met by means of import substitution.

This point is of great importance for an under-

standing of the orientation of economic policy, and is often discussed in Argentina. Given a specific increase in internal and external demand, the relationship between agricultural and industrial production is not arbitrary. The two are closely interdependent, as are all the sectors of the economy. Industrial production cannot develop independently of agriculture. To state the case in outline, given a particular rate of growth of exports, the aggregate product of the economy can increase at a higher rate only if domestic production is substituted for a certain quantity of imports of industrial goods as well as other items. Otherwise, both industrial production and the aggregate product would necessarily decrease because of the external disequilibrium which would be registered.

Thus, equilibrium between industrial and agricultural production does not imply that their growth trends must run parallel and that the evolution of demand should not be taken into account. It is a dynamic, changing equilibrium, which is constantly being readjusted to prevailing internal and external conditions. The reason why it is disturbed in Argentina is not that industry has greatly expanded, but that the import substitutions required to enable the dynamic sectors to effect their essential imports have not been achieved. Paradoxical as it may seem, agriculture can emerge from its present stagnation only if the expansion of industry is accelerated.

The implication is that, if Argentina's industrial development has slowed down perceptibly, this is not because it has been excessive (since it is still below the level that might have been attained and that is needful in the national interest), but because import substitution has been inadequate and exports have declined. Hence the significance of vigorous action in these two fields, as well as in that of petroleum.

6. CHANGES REQUIRED IN THE CHANNELLING OF INVESTMENT

On the basis of output targets, current capacity and replacement and equipment needs, the volume of gross fixed investment by sectors can be determined. The relevant figures are given in table 4.

A comparison of the allocation of investment in the future with that registered in 1955 gives a fairly precise idea of the great effort required as regards redirecting the Argentine economy—an effort which will also be reflected in the distribution of employment of the active population.

7. FINANCING OF THE INVESTMENT PROGRAMME

In 1955-57, domestic saving (excluding foreign investment) averaged 14 230 million pesos (at 1950 prices) yearly, or about 20.6 per cent of the gross product. The correct procedure would have been to calculate future savings possibilities on the basis of this coefficient, but in view of the variations it customarily displays, and to avoid financial over-optimism, it was felt preferable to base the estimates in question on a coefficient of 19.4 per cent.

If the rate of saving were maintained at the level contemplated, and the product were to increase by 40 per cent between 1956 and 1962, the economy would

Table 4
ARGENTINA: ESTIMATE OF GROSS FIXED INVESTMENT BY SECTORS, 1956-67
 (At 1950 prices)

Sector of the economy	1955		1956-62 a		1963-67 a	
	Gross fixed investment	Percentage of total	Gross fixed investment	Percentage of total	Gross fixed investment	Percentage of total
Dynamic	4 665	30.3	6 234	36.9	11 076	43.0
Dynamic manufactures	1 285	8.3	1 084	6.4	2 575	10.0
Petroleum	} 596	3.9	792	4.7	740	2.9
Electric energy			590	3.5	1 196	4.6
Transport	} 2 784	18.1	3 519	20.8	6 183	24.0
Communications			249	1.5	382	1.5
Agricultural sector	1 515	9.8	3 279	19.4	3 393	13.1
Other sectors producing goods b	1 207	7.8	1 825	10.8	2 078	8.1
Rest of the economy c	8 040	52.1	5 551	32.9	9 232	35.8
Total	15 427	100.0	16 889	100.0	25 779	100.0

a Annual average for the period.
 b Including vegetative manufacturing industries, mining and construction.
 c Including the public sector, trade, finance, personal services and housing.

generate domestic saving equivalent to 111 073 million pesos for the whole period, that is, 7 147 million less than the value of the investment postulated for those seven years. This sum would have to be financed with loans and net foreign capital investment. In terms of dollars, it would represent 1 060 million ⁶ and would correspond to barely 1.3 per cent of the product and 12.2 per cent of total exports in the period. If export and import substitution targets were attained, foreign investment to this amount could be amortized without difficulty, provided that the time limits allowed were sufficiently ample.

It was previously pointed out that for the economy to generate savings sufficiently large to finance a major proportion of investment in 1956-62, the product would have to increase by 40 per cent. For this purpose it would be essential for investment to be carefully distributed over the period, in conformity with a strict order of priority, such that the first to be affected would be the investments exerting the greatest influence on the whole economy and those for which the best prospects of external financing existed. Only in this way would it be possible to secure the expansion of the product and

⁶ Dollars with 1955 purchasing power. The repatriation of Argentine capital amounting to 216 million dollars is also assumed. Otherwise, net foreign investment would have to be raised to 1,276 million dollars.

the generation of a larger volume of national savings to finance heavier investment. The principal function of foreign capital is precisely that of contributing to this process of self-generation of savings.

The measures proposed for the solution of the balance-of-payments problem, in combination with a policy of austerity in the current expenditure of the public sector, would enable the rate of saving to be raised to 23.0 per cent of the product in 1963-67. If this rate of domestic saving were achieved, and the product increased to the extent projected, the volume of savings generated would suffice to finance practically all gross investment and, according to estimates, only 184 million dollars' worth of net foreign capital investment would be necessary in the 5-year period referred to.

A more specific idea of financing problems can be formed if they are studied in the light of a national saving and investment budget, as given in table 5.

This table shows that in 1955 investment exceeded the savings generated by the public sector by the equivalent of 2.3 per cent of the aggregate product. The difference was financed by dint of borrowing from the private sector through various financial instruments, such as the issue of bonds, credit from suppliers, etc. The increment in public saving postulated for 1956-62 is considerable, although still insufficient to finance the

Table 5
ARGENTINA: NATIONAL SAVING AND INVESTMENT BUDGET, 1955, 1956-62, 1963-67
 (In percentages of the gross product)

	1955		1956-62 a		1963-67 a	
	Investment	Saving	Investment	Saving b	Investment	Saving b
Private	16.5	18.5	13.7	11.8	13.3	13.0
Public c	5.9	3.6	8.3	7.6	10.0	10.0
Domestic	—	22.1	—	19.4	—	23.0
Foreign	—	0.3	—	1.3	—	0.3
Total	22.4	22.4	20.7	20.7	23.3	23.3

a Annual averages.
 b As net figures are given for foreign loans and investment, amortization of the external debt is not considered separately.
 c For 1956-62 and 1963-67, most Government investment in transport and energy up to 1955 is included under the public sector. In the future, however, such investment may be financed by the private sector. In that case, the saving and investment of the private sector will increase and those of the public sector will decrease.

sector's own investment.⁷ Nor do estimates suggest that the private sector will generate savings in excess of its investment. In both cases, the differences would be balanced with external loans and investments.

The 23-per-cent increase in domestic saving projected for 1962-67 does not seem unduly large in the light of Argentina's experience. It could be achieved in its entirety if the tax rate were successfully maintained at the current level and if the Government's consumer expenditure were reduced to 14.2 per cent of the aggregate product.

8. PRODUCTION AND IMPORT SUBSTITUTION TARGETS

It has already been pointed out that import substitution policy would have to be implemented mainly in the dynamic sectors. The implication is that an increasing proportion of the capital goods and raw materials used by these sectors would have to be domestically-produced. To give a preliminary idea of the magnitude of the import substitution effort required and of its distribution among the various dynamic industries, table 6 was prepared, showing in very brief outline the results of wide research carried out in collaboration with Argentine experts and leading industrialists.

Table 6

ARGENTINA: IMPORT REQUIREMENTS, WITH AND WITHOUT IMPORT SUBSTITUTION, BETWEEN 1955 AND 1967
(Millions of dollars)^a

Sector of the economy	Effective imports 1955 (A)	Potential demand for imports 1967 (B)	Effective demand for imports 1967 (C)	Import substitution (B)-(C) (D)
<i>Dynamic sectors (excluding petroleum)</i>				
Steel making	201	380	184	196
Non-ferrous metals	42	79	63	16
Machinery, vehicles, equipment and other durable goods	303	738	625	113
Chemical products	79	212	88	124
Pulp and paper	52	136	102	34
Miscellaneous	63	233	138	95
<i>Total</i>	<i>740</i>	<i>1 778</i>	<i>1 200</i>	<i>578</i>
Petroleum	166	372	63	309
Sectors developing less intensively	266	425	282	143
<i>Grand total</i>	<i>1 172</i>	<i>2 574</i>	<i>1 544</i>	<i>1 030</i>

^a At 1955 prices.

What would these import substitutions imply? Potential demand for imports⁸—excluding petroleum—would expand by about 1 197 million dollars between 1955 and 1967 if the aggregate product of the economy were to increase as postulated. Since in the same space of time the value of industrial import substitution would

⁷ See, however, table 5, note c.

⁸ The demand that would be generated in default of the necessary import substitution.

Table 7
ARGENTINA: PROJECTION OF EXPORTS
(Millions of dollars)^a

	1955	1962	1967
Agricultural	878	1 361	1 592
Industrial	52	120	170
Total exports	929	1 481	1 762
Net services	19	24	28
<i>Total</i>	<i>948</i>	<i>1 505</i>	<i>1 790</i>

^a At 1955 prices.

reach about 721 million dollars, effective imports would increase by 476 million, an amount which, though smaller than the increment in demand, is still substantial. Considerable importance attaches to this conclusion. If Argentina's means of external payment proved insufficient to cover these irreplaceable imports, the growth target for the aggregate product could not be attained, and would have to be lowered correlatively with the reduction in the resources available for purchases abroad.

Hence the need to expand exports and cut down imports of petroleum. According to estimates, agricultural exports might be increased by 714 million dollars and industrial exports by 122 million, giving a total of 842 million, which includes a small increment in net exports of services (see table 7). As regards petroleum, it is calculated that imports could be reduced by 103 million dollars between 1955 and 1967 if the production projections were fulfilled.

Thus, the expansion of agricultural and industrial exports and the contraction of petroleum imports would be sufficient to cover the increase in imports as well as the additional financial payments entailed by the servicing of new foreign investment. The relevant estimates are shown in table 8. Those for 1962 are added with a view to shedding more light on the problem.

The analysis of these figures affords an opportunity for once more laying stress on the character of the estimates or projections which they represent. Their sole purpose is to give some idea of the nature and magnitude of the subsidiary targets which would have to be attained in order to achieve the main objective—that of increasing the product. Forecasts as to import substitution, the expansion of exports and the curtailment of imports are not attempted here. Attention is simply called to the fact that an essential requisite for the growth of

Table 8

ARGENTINA: ELIMINATION OF EXTERNAL BOTTLENECK IN THE ECONOMY
(Increment in millions of dollars)^a

	Between 1955 and 1962	Between 1962 and 1967	Total
1. Increase in demand for imports	942	460	1 402
2. Import substitution	600	430	1 030
3. Increase in effective imports (1 - 2)	342	30	372
4. Increase in exports	552	280	832
5. Difference available for financial services and new reserves (4 - 3)	210	250	460

^a At 1955 prices.

the product is that these three subsidiary objectives be attained in combination and on the approximate scale suggested. The pattern in which they are combined is not arbitrary, nor the outcome of abstract juggling with numbers, but results from a thorough and careful analysis of practical possibilities.

Thus, the present attempt to state the position in quantitative terms aims only at providing economic policy, and development programming in particular, with more specific and precise analytical instruments than can be derived from general statements, devoid of any attempt to assess approximate magnitudes, with respect to the basic variables of economic growth.

It was mentioned above that in the dynamic sectors of the economy the import coefficient was very high, namely, 21.5 per cent. In the rest of the economy, which accounts for 75 per cent of the product, the corresponding coefficient is barely 2.8 per cent, the over-all figure being 7.5 per cent. At first sight it might seem surprising that the import problem should have come to play so decisive a role in the development of Argentina, since the relative significance indicated by this coefficient is so slight. But the imports involved are to a large extent essential ingredients of the economic process, so that, if they were not increased, the product could not expand either, except in so far as import substitutions were effected. Moreover, such resources are concentrated in the dynamic sectors, and it is there above all that the external vulnerability of the Argentine economy makes itself felt, just as it is precisely in the dynamic industries that the principal substitution process will have to take place.

From another point of view, it should be pointed out that a change has taken place in the nature of Argentina's external vulnerability. In former times, when exports accounted for a very high proportion of the aggregate product, any variation in these exerted so marked an influence on aggregate demand that it would have been extremely difficult, if not impossible, to counteract the effect of their fluctuations. Today the relative importance of exports has greatly decreased, and Argentina has the means of offsetting the fluctuations in question at its disposal. In this sense economic development has notably reduced Argentina's external vulnerability. But from another standpoint, that same development has increased its vulnerability on the import side. Argentina has always depended upon imports of capital goods and of raw materials and intermediate products; but it also used to have to purchase consumer goods abroad. In earlier times, curtailment of the latter imports enabled it to continue financing those other external purchases of essential goods—especially raw materials and intermediate products—which could not be deferred. This reducible margin has finally disappeared. Argentina can no longer draw upon it in order to expand essential imports, and the problem thus assumes a different form.

In fact, so long as the rapid restriction of imports of consumer goods was possible, Argentina could do without a farsighted import substitution policy, since the immediate effects of such restrictive action gave it time to achieve the necessary substitutions. Now the disappearance of the reducible margin compels it to look ahead, especially as the industries that need to be established take a much longer time to set up, on account of

their very complexity, than current consumer industries. (This is exemplified by a comparison between steel making and petrochemicals on the one hand, and the textile industries on the other.)

There is another aspect of import substitution policy which cannot be disregarded here. When it is carried out within certain reasonable bounds imposed by economic considerations, import substitution is an indispensable requisite for economic growth. In developing countries where primary production is predominant, the growth of the aggregate product generally tends to outstrip that of exports, and demand for imports to expand more than the product. The resultant trend towards disequilibrium can be counteracted only by a slackening of the rate of increase of the product—impossible to contemplate as a desirable end—or by means of import substitution.

Fundamentally, this phenomenon is due to the fact, to which attention has so often been drawn in ECLA reports, that as the *per capita* product rises, once it has passed a very low level, demand for industrial goods follows a much more intensive upward trend than demand for primary commodities.

Domestic production to replace industrial imports generally costs more than the similar goods which were formerly imported. However, this difference in cost is the price which a country must pay for increasing its product on a much larger scale. What is involved, in other words, is a loss of product in certain sectors which is self-compensated in that it generates a much larger increment in the product of other sectors.

This does not mean, however, that import substitution of any kind is advisable. On the contrary, a strictly selective criterion must be adopted, giving priority to all those substitutions which fulfil the following two primary requisites: (a) the least difference in cost as between the domestic and the imported article; and (b) the greatest saving of foreign exchange. This criterion has been applied to the possible substitutions suggested here, although always provisionally, until the study of specific projects enables more definite conclusions to be reached.

It has just been stated that import substitution represents a loss of product over against an increment which is much greater. In reality, this loss would affect a relatively small import coefficient. As already shown, in 1955 the coefficient was 7.5 per cent, and by 1967 the necessary substitutions would bring it down to 5.6 per cent. The incidence of the loss would therefore be borne by barely 5.6 per cent of the aggregate product.

However, the problem should not be dismissed lightly on this account. It is important, and in fact extremely so, since the extra costs are superimposed on those which have long accompanied the gradual development of the substitution process ever since the initial stage of industrialization. Argentina needs to increase its productivity intensively, and has ample possibilities of doing so. In this connexion it would not be enough to increase *per capita* investment, improve technique and utilize manpower more efficiently. Action would also have to be taken with respect to the import coefficient.

The coefficient of 5.6 per cent projected for 1967 represents an extremely low proportion—lower, for

example, than that of 19 per cent registered in the countries of Western Europe in 1956. Such a coefficient had already been attained by the United States in the period preceding the world depression (1920-24). But at that time it had 110 million inhabitants (4½ times more than it is assumed that Argentina will have in 1967), which meant that there was a market of considerable size for any article in respect of which substitution was effected, and permitted a high degree of specialization and division of labour on a truly continental scale. If in addition the immense variety and importance of the natural resources of the United States are borne in mind, it will be understood that, although the size of the import coefficients in the two countries is similar, Argentina's situation is very different indeed from that of the United States during the period under consideration.

What is more, in so far as future prospects can be described at present, Argentina will have to pursue a more far-reaching substitution policy with respect to imports from the large industrial centres after 1967, and will always be handicapped by the lack of certain natural resources and by specialization difficulties of the same kind as are experienced by other Latin American countries. All this is of vast importance for the problem of inter-Latin American trade, and accounts for Argentina's interest in the discussion of regional market possibilities.

9. THE BASIC ROLE OF EXPORTS IN THE ECONOMIC DEVELOPMENT PROCESS AND THE INTRODUCTION OF IMPROVED AGRICULTURAL TECHNIQUES

The expansion of the export trade is just as vitally necessary as import substitution for the vigorous development of industry and, consequently, for the rapid growth of the *per capita* product. Unfortunately, the world market for agricultural commodities is no longer what it was in former times, when it absorbed all that Argentina could export. Its absorption capacity is now limited, and competition from the United States is an additional factor in the case of certain very important items. Nevertheless, some Latin American countries have managed to increase their share in the world market, whereas that of Argentina has declined. Such is the consequence of the sharp downward movement in its export trade.

It is common knowledge that the price policy formerly adopted discouraged agricultural production for export, while domestic consumption continued to increase; hence the regrettable situation just described. But the trouble cuts deeper. Argentina still needs to make a great effort to bring its agricultural production into line with the demands of its own development and the new conditions prevailing on the world market. As regards technical progress, it has lagged behind other comparable countries, and in the pampas, which are the source of most of its agricultural exports, average yields have not improved in the last three decades, except during the 5-year period 1940-44.

This fact is all the more serious if it is taken into account that the whole of the productive land in the pampas is already in use and that production can no longer be rapidly expanded, as in earlier periods, by extending the frontier of agriculture to include new land. Hence the imperative need to increase yields. By 1967 the average yield of grain and oil seeds should be at

least 17 per cent larger than in 1953-57, so that by this means, in conjunction with the enlargement of the area farmed, higher production levels may be attained.

The same applies to stock farming. Beef production might rise from the present approximate figure of 50 kilogrammes per hectare used for stock farming in the pampas to about 77 kilogrammes by 1967. It is considered that the average yield of stock farming land might progressively increase until by 1967 it had risen 58 per cent above the 1953-57 average.

To this end, a programme is needed consisting in technical action based on systematic research and progressing from simple measures of which the effect would be immediate to others which would take a longer time to yield results. All these would of course have to be subordinated to clearly-defined economic ends.

Without a vigorous programme for the introduction of improved techniques, crop production would develop only at the expense of stock farming, as has been happening in recent years, and the substantial production increments which Argentina requires could not be achieved.

If the postulated targets were attained, agricultural production and exports might register the increments shown in table 9.

Table 9

ARGENTINA: INCREMENT REQUIRED IN AGRICULTURAL PRODUCTION AND EXPORTS BETWEEN 1955 AND 1967

	Percentage increment in relation to 1950-54 ^a	
	1962	1967
Agricultural production	51	78
In the pampas	54	81
In the rest of the country	47	71
Exports	89	125

^a The period 1950-54 has been chosen to prevent the comparison from being affected by the exceptional yields registered in 1955.

But the matter does not end with the application of technical measures to increase production and exports. There are institutional aspects of the question whose importance cannot be overlooked. To the consequences of a traditional land tenure system have been added those of the freezing of rents. Of the farms in the pampas, 53 per cent are in the hands of rent-paying tenants and sharecroppers, who work 54 per cent of their productive land. With the highly laudable aim of protecting such farmers against the effects of the unfavourable price movement, rents were frozen in 1944 and eviction was prohibited. Measures of this kind are quite inadequate to replace really fundamental reforms in the land tenure system. Unquestionably, those adopted served their direct purpose, but at the same time they put a stop to the system of rotation of crop and stock farming, to the definite detriment of yields per hectare.

How far is the traditional land tenure system compatible with the energetic introduction of more advanced techniques? There can be no doubt that tenants and sharecroppers might very well put into practice the simple and immediately effective measures postulated for the next few years. But their interest might flag as techniques improved and such practices were adopted

as soil conservation, rotation of crops, application of fertilizers, expansion of the area under permanent artificial pastures, etc.

Moreover, it should be borne in mind that the impossibility of bringing new land under cultivation creates other needs. From the economic point of view, so long as there was still available land in the pampas the existence of inefficiently cultivated areas was not of decisive importance. But now that the basic problem is to increase yields, it implies a waste of production capacity which weakens the power of the economy to expand. It is not only that there are large tracts unsatisfactorily farmed. Another problem existing in Argentina is that of fragmentation of the land, which has led to a multiplicity of holdings of anti-economic size. In fact, it is estimated that nearly two-thirds of the farms situated in the pampas in 1957 were smaller than the area considered to be an economic unit, according to the relevant concept established by the Ministry of Agriculture and the Rent Control Boards (*Cámaras de arrendamiento*), i.e., a farm large enough to provide the livelihood and absorb the labour of a standard family. In Argentina as a whole, farms of under 10 hectares represent one-fifth of total farms, consist on an average of 4 hectares each and occupy 0.24 per cent of the total productive land. At a more general level, all this has unfavourable effects on yields and impedes technical progress.

Lastly, in face of the sweeping technological and social reforms required in Argentina's rural sector if it is to make an effective contribution to the development of exports and of the economy as a whole, due consideration must be given to the historical implications of the current land tenure system. In the last analysis, the technical progress achieved in production and transport has raised the value of the land. This is the permanent and conclusive fact. What is purely circumstantial is the temporary improvement in the position of the tenant or sharecropper. Moreover, prospects of an increase in the product per hectare, whether through technique or

prices, have frequently tended to be reflected in advance in a revaluation of the land which has made it more difficult for the tenant or sharecropper to establish himself, as the value thus acquired by the land is exaggerated in relation to its current yield, especially if the revaluation phenomenon is accentuated by the lands becoming a refuge against inflation, as is happening at the present time.

This repercussion of technical progress on the value of the land is another of the reasons why the introduction of improved farm techniques must inevitably be linked to the industrialization process. One of the dynamic functions of this latter is to absorb, in conditions of high productivity, the manpower released from agricultural employment by the introduction of more advanced techniques. If it were not for industrialization, the existence of this redundant manpower would prevent the increase achieved in the *per capita* product by virtue of new techniques from being transferred in adequate measure to the effective wages of rural workers, and the result would be that the trend towards revaluation of the land could develop entirely unhindered.

Again, the improvement of agricultural techniques calls for more widespread use of capital goods and intermediate products of industrial origin, which, if they were not supplied by domestic production, would have to be imported. Where there is a serious foreign exchange shortage it will be very difficult to decide in favour of the latter procedure, and this throws into still clearer relief the truth of the assertion that industrialization is a necessary complement of the introduction of more advanced farm techniques and the improvement of agricultural productivity.

Thorough discussion of this very complex problem is outside the scope of the present article, but in briefly touching upon the topic of improved agricultural techniques it was necessary at least to call attention to its close connexion with the time-honoured problem of the land tenure system.

SOME OBSERVATIONS ON THE INDUSTRIAL DEVELOPMENT OF PERU *

The main object of the study on the industrial development of Peru, which was undertaken in response to a request addressed to the ECLA Secretariat by the Peruvian Government, was to present an examination of the relevant problems and prospects. Its purpose was, in effect, to provide the background material and analysis which might help to answer the following three questions:

(a) How intensively and at what rate would Peruvian industry have to develop in the future in order to make a positive contribution to the growth of the economy as a whole and to a gradual improvement in the level of *per capita* income?

(b) What simultaneous changes would have to be made in the composition of industrial production and in the structure of the productive capacity of the manufacturing sector?

(c) By what means and incentives could this growth and these changes be achieved?

The purpose of the study having been stated in such terms, it is clear that it could not be confined to strictly industrial matters, isolated from the prospects and problems of all other economic activities. On the contrary, an appraisal of the industrialization process must, if it is to be sound, be based on an appreciation of the present conditions of the Peruvian economy as a whole, the characteristics of its growth and its development possibilities. Hence Part One of the study is devoted to a comprehensive survey intended to provide a general background for an examination of the special problems of industrial development, although, clearly, it does not claim to be a thorough or particularly detailed analysis.

1. THE PRESENT STAGE OF PERU'S DEVELOPMENT

The first task was to systematize the main data needed to portray the present stage of development of the Peruvian economy.

According to the relevant estimates, the average level of *per capita* income amounted to some 187 dollars in 1955, which is probably equivalent to not more than two-thirds of the present average *per capita* income in Latin America as a whole.

During that same year, about 60 per cent of the population was living in the rural areas and the same percentage of the total labour force was engaged in agricultural activities, which contributed 30 per cent to-

wards the national income. This fact already shows the relatively low level of productivity in the farming sector. By contrast, there was one sector of high productivity—the extractive industry—which, however, generated only 7 per cent of the national income and employed less than 2 per cent of the total active population. Among the manufacturing activities, the income generated by industry proper, which is still relatively new, added to the income derived from cottage and small-scale industry, represented 17 per cent of the total national income. Finally, there were services of various kinds and at different stages of development. The most important of these was trade, with a share of the total income higher even than that of registered industry.

The picture would not be complete unless some indications were given, besides these over-all figures, of the marked contrasts which exist in the various parts of the economy. Two different economies—that of the coastal belt and that of the sierra—exist side by side. They are linked together only to a very small extent, and the differences in their *per capita* income are in the ratio of one to three. A modern export agriculture is offset by a subsistence agriculture which is very backward technologically, while an efficient and concentrated industry is counterbalanced by scattered artisan activities in which four times as many persons are employed, and so on.

The relative importance of the external sector was rather high, witness the fact that the import coefficient (relationship between the value of imports and the gross national product) reached the figure of 18 per cent, while exports in 1955 amounted to some 5 100 million soles, an average of about 30 dollars per person. Incidentally, this latter figure does not compare very favourably with that registered in recent years in other Latin American countries.¹ To some extent it dispels the relatively widespread belief that Peru enjoys a fairly favourable foreign trade position. Nor can it be discounted as the possible source of potential disequilibria in the balance of payments, which have not assumed as severe a form as might have been expected because of expansion, the favourable effect of the terms of trade and the level and pattern of income distribution.

In short, it may be concluded that in 1955 Peru displayed the typical features of an under-developed economy in which, moreover, the averages and *per capita* mean values could not be interpreted directly because of the marked contrasts noted in the various parts of the economy.

On the other hand, Peru continued to have rich natural resources, a relatively high investment coefficient and a high rate of economic growth.

* The text of this article is based on a lecture delivered by Mr. Pedro Vuskovic, an economist in the Industrial Development Division of ECLA, at the Institute of Economic Studies, Lima, in which he summarized and explained the main ideas of Part One of the study *The Industrial Development of Peru* (E/CN.12/493), Volume VI in the series *Analyses and Projections of Economic Development*, which is being published by the Secretariat. The latter considers that, in addition to giving a comprehensive picture of the research undertaken, the following pages help towards a better understanding of Peruvian industrial and development problems.

¹ It is barely higher than that of Bolivia (29 dollars) and much lower than that of Argentina (49 dollars), Chile (70 dollars) and Colombia (46 dollars).

2. GROWTH DURING THE PERIOD 1945-55

The rate of growth during this period may be illustrated more clearly by a brief reference to the increase in the gross product from 1945 onwards. Following a moderate rise during 1945-50 and a more rapid one between 1950 and 1955, the gross product expanded throughout the whole decade at an annual average cumulative rate of 2.9 per cent *per capita*, representing a total increase of 63 per cent. This rate of growth compares very favourably with that registered in most Latin American countries over the same period and its continuance would not only bring about a gradual rise in the living level of the population but would also enable Peru to go on improving its relative position in Latin America as regards national income.

While the gross product was increasing, an urbanization process of some magnitude was taking place. The relevant estimates indicate that, while the total population increment was 34 per cent, that in the rural areas was 23 per cent and that in the urban centres 52 per cent. At the end of the period, the urban population thus represented 40 per cent of the total.

Yet the significant economic growth registered during the decade under review was not accompanied by equally intensive structural changes. The agricultural sector expanded its output in real terms by 47 per cent (what is even more striking, agricultural production for export increased by 59 per cent, while that for domestic consumption rose by only 35 per cent) and its relative share in the total national income fell from 33.5 to 30.2 per cent. The manufacturing industry almost doubled its volume of production but its relative share of the national income rose only slightly (from 15 to 17 per cent). On the other hand, the extractive industries maintained almost unchanged their share of the national product following a decline in their quantum of production at the beginning of the period and a very rapid rise in the subsequent years. Finally, there was an increase in the share of some services—building and transport for example—and a contraction in others (including the public sector).

From the point of view of goods and services available for consumption and investment, the expansion of the gross product was accompanied by other advantages, in particular the favourable trend in the terms of trade and an increasing net influx of foreign capital. The terms of trade were in fact positive every year after 1945 until 1955. The influence of the foreign capital inflow may be more clearly appreciated if it is remembered that there was a rapid change from a surplus of exports to one of imports. Consequently, while in 1945 available goods and services came to 1 000 million soles less than the gross product, in 1955 they exceeded it by more than 350 million soles. This undoubtedly facilitated investment and at the same time made a rapid rise in consumption possible.

There was also another favourable factor. In order to achieve the increase in the gross product which has just been described, it was unnecessary to expend an investment effort of similar intensity. This is because, in the final analysis, the amount of the gross product obtainable depends largely on two determinants: (a) the total stock of capital which it has been possible to ac-

cumulate; and (b) the extent to which it may be utilized, a concept known as the "product-capital ratio". According to one estimate, the stock of capital in Peru in 1955 was approximately 80 000 million soles. If this sum is compared with the gross product obtained in that year, a product-capital ratio of 0.40 would result. Such a ratio is not only high when compared with that of the other Latin American countries but is also far greater than that registered at the beginning of the decade. (The ratio improved steadily from 0.34 in 1945 to 0.39 in 1951, a level at which it remained relatively stationary thereafter.) As a result, the pressure on domestic investment was undoubtedly relieved, while at the same time there was a substantial contribution from foreign investment. During 1951-55, the latter represented 20 per cent of aggregate investment so that foreign capital constituted 15 per cent of Peru's total stock of capital.

The rise in the import coefficient from 13 per cent in 1945 to 18 per cent in 1955 shows that the external sector played a very dynamic role. This factor might be construed as highly favourable, were it not for other factors which suggest that it should be regarded with some circumspection. Account must be taken first of the form in which the additional imports were financed and, secondly, of the changes which occurred in their structure. Actually, the growth of imports was not accompanied by even a comparable expansion of exports. While the former went up (in real terms) by 120 per cent, the rise in the latter was of only 40 per cent. But the factors which explain this divergence—the improvement in the terms of trade and the influx of foreign capital—cannot be considered as permanent and will therefore probably not play the same part in the future. As regards the structure of imports (analysed at 1955 constant prices), the improvement which might have been expected after such a marked expansion was not in fact achieved. On the contrary, the share of consumer goods rose from 20.7 per cent in 1945 to 26 per cent in 1951 and 24 per cent in 1955, while the share of capital goods fell from 49.7 to 44.1 per cent.

These trends reveal a very high elasticity of demand for imported consumer goods. Over the period 1945-55 it amounted to almost 2.0. To maintain such a high import elasticity for a long period would be very difficult. It would mean in practice that each increment of one per cent in the national income would have to be accompanied by a rise of more than two per cent in imports and corresponding increases in the capacity to import.

The comments and figures mentioned above provide a clearer illustration of the magnitude of the industrial growth achieved during this period. Although in absolute terms the expansion of manufacturing output was very marked, the rise in the import coefficient, the increased share in imports represented by consumer goods (in stiff competition with domestic production) and the larger proportion of building materials (also partially produced in Peru) in imports of capital goods all show that industrial development was perhaps not intensive enough and that, to a certain degree, domestic industry did not seize all the opportunities of expansion offered by the increase in domestic demand.

In short, the Peruvian economy expanded very considerably between 1945 and 1955 to judge from the annual rate of increase of the gross product and *per capita* consumption (2.9 per cent and 3 per cent respectively). However, this expansion was the result not only of internal efforts but also of the concurrence of certain favourable factors, including a relatively moderate rise in population, an increase in available goods and services relatively higher than that of the gross product (thus facilitating a more rapid expansion of consumption), an improvement in the terms of trade, a marked rise in the product-capital ratio and a higher import coefficient.

It is now pertinent to consider whether the concurrence of such factors will be equally favourable in the future or, otherwise, what must be done to maintain a similar rate of economic growth in the years to come.

3. SOME HYPOTHESES REGARDING FUTURE ECONOMIC PROSPECTS

The future prospects of some of the factors which have just been mentioned will now be briefly reviewed.

Between 1940 and 1955, the population increased at an annual average cumulative rate which fluctuated between 19 and 19.9 per mil. Towards the end of the period, it was already apparent that it was tending to grow vegetatively as a result of a drop in the death rate (brought about mainly by the improvement in health conditions) and a more detailed examination of the age structure, an average rate of growth of about 24 per mil may be estimated for the period 1955-60 and of about 25.6 per mil for the period 1960-65. Over the decade as a whole, the total population should thus increase by about 2.5 million and should amount to almost 11.5 million in 1965. As an initial consequence, total consumption would have to expand by 75 per cent in a decade instead of only 65 per cent as registered in the previous decade. However, these estimates lead to the more significant conclusion that between 1955 and 1965 the active population will increase by almost one million. This is probably one of the key factors which will exert the greatest influence on the future development of the Peruvian economy. One million persons will have to be given the opportunity of productive employment in the various branches of economic activity and provided with the necessary capital resources.

There is little to be said about the second factor—the terms of trade—the future of which is of course much more uncertain. From 1955 up to the present, they have followed an unfavourable trend. Any hypothesis which assumes that they will recover and remain at a level similar to that of 1955 might therefore be considered somewhat optimistic, especially if it is remembered that they depend not only on export prices but also on those of imports. This will also have important consequences for future development, as compared with the previous period, because it means in practice that the increments in consumption will require proportionately greater efforts.

Finally, reference has already been made to the moderate improvement in the product-capital ratio between 1945 and 1955 and also to the fact that its present

level is relatively high. Its future evolution depends on opposing factors—on the one side, the additional expansion requirements of activities characterized by a higher capital intensity and, on the other, the possibilities of achieving a more intensive utilization of the present stock of capital. At all events, the hypothesis put forward in the report that the product-capital ratio will remain at a level similar to that of 1955 does not seem pessimistic.

Under the conditions described, it seems unlikely that Peru can maintain a similar tempo and pattern of development as that achieved in the previous decade, particularly in the external sector. A significant potential deficit in the balance of payments as well as a heavy demand for foreign capital and imports are therefore to be expected. Foreign capital needs may be more clearly appreciated with the help of some illustrative figures resulting from a series of calculations in which allowance is made for the limitations already mentioned. It may be concluded that, in order to increase total consumption from 26 200 million soles in 1955 to 45 000 million soles in 1965 (an annual *per capita* average rate of 3 per cent), with a simultaneous rise in the gross product from 32 000 to 54 600 million soles (a *per capita* growth of 2.9 per cent per year), a surplus of available goods and services valued at some 1 780 million soles in excess of the gross product would be required. This sum could only be obtained if there were a net inflow of foreign capital. Discounting the high import elasticity registered in the decade 1945-55 (2.0) and assuming the more moderate figure of 1.57 of the period 1948-55, the demand for imports in 1965 would still amount to some 14 000 million soles at 1955 constant prices (as compared with only 5 700 million soles in 1955). Would it be reasonable to expect that both the foreign capital and import requirements can be met?

According to information available, the total foreign capital invested in Peru amounted to some 590 million dollars in 1955. Gross investment in that year totalled about 71 million dollars and remittances abroad under various heads—amortization, profits, interest—were almost 59 million. The net inflow was thus only 12.2 million. If future prospects are assessed on the basis of the estimate made in certain circles that total foreign capital will probably amount to about 1 000 million dollars in 1965 and if the probable changes in the rates of amortization, reinvestment and interest are rather carefully analysed, it may be concluded that a gross influx of new capital amounting to 90 000 million dollars will be accompanied by a net outflow of foreign capital amounting to about 28 million dollars. A total capital of 1 200 million dollars and a gross investment volume greater than 100 million dollars a year would be needed to establish a balance between total receipts and the total outflow of foreign capital. However, only in exceptional circumstances would it seem possible to secure a net inflow of 1 780 million soles as required.

A study of the potential demand for imports leads to an equally negative conclusion according to the detailed projections presented in the report on agricultural and mining exports. As regards the former, it is assumed as an initial working hypothesis that the cultivated area could be increased by between 400 000 and 500 000

hectares, a considerable expansion over the present total of 2.5 million hectares. In view of the rise in population and its higher income level, it is estimated that the increase in the production of those goods in which Peru is now self-sufficient might require 360 000 hectares and the replacement of those imports which are at present most important (also allowing for heavier future demand) would require some 195 000 hectares. There would thus remain 140 000 hectares available for the increase in export crops, which would mean in the aggregate an expansion in production of 40 per cent over the present volume of export items. In the case of the extractive industries, the relevant estimates are based on the principal plans of the enterprises concerned. It is assumed, for example, that in 1965 exports of copper will amount to 210 000 tons, of lead 151 000, of zinc 286 000, of iron ore almost 7 million tons, etc. This implies that the present levels of such exports would rise by 148 per cent in real terms.

In short, the volume of total exports might double between 1955 and 1965, reaching in the latter year some 10 000 million soles.² But this would still be insufficient to meet the potential demand for imports which, it will be remembered, were estimated at about 14 000 million soles.

In the light of these considerations, it seems highly unlikely that the same rate and pattern of growth as in the previous period can be maintained. Hence, the most probable hypothesis put forward in the study assumes briefly (a) that, as a starting point, the aim is to maintain the rate of increase of the gross *per capita* product (2.9 per cent per year); (b) that an increase of the same intensity will be registered in available goods and services since additional favourable factors are not likely to arise; and (c) that, as a result, the expansion in consumption will have to be somewhat less than the rise in the gross product (2.2 per cent per year *per capita*). In their turn, these hypotheses imply at least two requirements: (i) that the investment coefficient can be raised from 19.2 to 23.7 per cent; and (ii) that the income elasticity of demand for imports can be reduced from 2.0 or 1.57 to only 1.2 while additional changes must be made in their structure.

Both requirements appear feasible. The investment coefficient had already reached, although in isolated years, figures very close to those indicated. To maintain them consistently at this relatively high level would undoubtedly require a strenuous effort, but it does not appear beyond Peru's possibilities. As regards the reduction in the income elasticity of demand for imports, even in these circumstances, a somewhat more rapid increase in imports than in the gross product is assumed. In this respect the problem in Peru is likely to be much less serious than in the other Latin American countries where the anticipated capacity to import remains far below any reasonable rate of increase in *per capita* income.

4. THE CONTRIBUTION REQUIRED OF INDUSTRIAL DEVELOPMENT

Such then, in very broad outline, is the background for calculating industrial development needs. At least

² At constant purchasing power equal to that of 1955.

two factors emerge which are of decisive importance as regards intensifying the industrialization process: the role of industry in the absorption of manpower and its contribution to import substitution.

The first factor will undoubtedly acquire considerable significance. The increase in the labour force during the next decade will be extremely large not only in absolute terms—one million active persons—but also in relative terms, since it will represent an increment of 27 per cent over the present level of employment. This fact in itself might constitute a serious problem which may well be aggravated by the tendency, already observable in various economic sectors, to economize manpower so far as possible.³ This tendency is also to be expected in sectors which must continually strive to improve their competitive position in the world market, or in those branches of domestic industry which are facing stiffer competition from imports. But it may well be asked whether, in all these cases, the relative manpower and capital resources available in Peru are ideally distributed.

This aspect may be illustrated by quoting some of the more significant statistics. The additional agricultural production necessary to meet the growth of domestic demand, to replace many of the present imports and to increase exports, may well represent an increase of 46.2 per cent over existing levels. In view of the present low level of farm productivity, population pressure in certain zones and the inevitable adoption of certain modern techniques, it must be admitted that some improvement in output is bound to occur. Assuming that it represents on the average 20 per cent during the ten years, agriculture would be in a position to absorb 490 000 persons, which would still leave 500 000 persons to find employment in non-agricultural activities. If industry increased its share of such activities to a very moderate extent (merely from 40.5 to 42 per cent), it would have to absorb 230 000 persons. Of these not less than 100 000 would probably have to be engaged in industry proper, which in 1955 employed a total of just over 120 000 persons.

Its task would be no less arduous as regards import substitution needs. As will be recalled, an initial approximation suggested that total substitution needs might amount to some 4 000 million soles by 1965. Assuming that Peru itself can meet all its agricultural requirements—except for a deficit in wheat, and with a very low level of fruit imports—and bearing present petroleum prospects in mind, it may be concluded that more than three-quarters of these total substitution requirements would have to be met by manufacturing production. Considering the secondary needs which would arise from this substitution, it may be estimated that the industrial expansion required for this purpose alone would represent an output value of some 4 400 million soles, or 30 per cent of the total value of manufacturing production in 1955.

In short, in view of the need to increase employment and to effect import substitution and bearing in mind the pressure of expanding domestic demand and the need

³ For example, expansion plans in the mining industry provide for considerable increases in output which in many cases will be accompanied by only a very small rise in employment.

to maintain the necessary balance between the growth of industry and that of the other economic sectors, it may be concluded that the volume of industrial production would have to increase by 118 per cent between 1955 and 1965. For this purpose the present stock of capital in this sector would have to be doubled and not less than a quarter of Peru's total gross investment would have to be channelled into industry. Only thus could industry play a positive role in the task of maintaining the tempo of economic development. At the same time, the relative position of industry proper (or registered industry) would be strengthened, the average productivity of this sector would be increased by about 58 per cent, and its share in the national income as a whole would rise to 21.3 per cent.

This then is the tentative reply which the report makes to the first of the questions posed at the outset.

5. CHANGES NECESSARY IN THE PATTERN OF INDUSTRIAL PRODUCTION

A brief reference may now be made to the second of these questions concerning the changes necessary in the pattern of industrial production and in the structure of industrial productive capacity that would have to accompany this economic growth.

All the branches of manufacturing production obviously could not be developed with the same intensity. Development itself makes certain changes necessary, because the various kinds of manufactured products have different demand elasticities. Indeed, the improvement in income levels is inevitably accompanied by a tendency on the part of consumers to modify their consumption pattern, the consumption of certain goods expanding more quickly than that of others. Suffice it to mention by way of illustration that, according to the estimates used in the study, the average elasticity for manufactured goods as a whole would be somewhat greater than unity, while it would be only 0.94 for processed foodstuffs, compared with 2.07 for paper products, 2.8 for chemicals, 3.0 for goods produced by the metal transforming industries, etc. Furthermore, present import substitution possibilities are also different in the various manufacturing branches, a fact which may be particularly important because of the considerable overall substitution needs.

A cursory glance at the present structure of Peruvian industry reveals that it is concentrated around three industrial branches: processed foodstuffs, beverages and textiles. These absorb more than half of total industrial employment and represent almost 60 per cent of the value of production, while the joint output of the chemical and metal transforming industries constitutes less than 10 per cent of the total. From another angle, more than two-thirds of production is of consumer goods, while capital goods represent less than 5 per cent. This is actually a normal stage in the industrialization process at which efforts are made to cover first the lines of production which are usually technically less complex and which call for a small capital outlay. However, in the course of very rapid industrial development, such as occurred in former periods, there are no very marked changes aimed at producing increased diversification.

For example, between 1948 and 1955 the share of consumer goods in the total dropped merely from 60 to 58.5 per cent and there were no such changes in the structure of productive capacity. The three branches mentioned represented, in 1955, some 63 per cent of the book value of assets available and accounted for 60 per cent of the total purchases of machinery and equipment in that year.

Another important consideration concerns the share of domestic supply covered by the various branches of Peruvian industry. In 1955, imports of manufactured goods⁴ represented a quarter of total requirements for such goods. Although imports were registered for practically all manufacturing branches, two were of particular importance: chemicals and products of the metal transforming and metallurgical industries. They represented 69 per cent of the total imports of manufactured goods. The share of imports was also quite appreciable in the supply of goods from the pulp and paper industries (50 per cent), timber (30 per cent), rubber (25 per cent) and non-metallic minerals (22 per cent). On the other hand, it was relatively small in the case of processed foodstuffs, beverages, textiles, footwear, and wearing apparel and other made-up items, but even these amounted to 804 million soles, i.e. they represented about 15 per cent of Peru's total capacity to import. Generally speaking, no notable improvements were recorded in this respect. On the contrary, between 1948 and 1955, total availabilities of manufactured goods in Peru rose by 71 per cent as a result of an increase of 90 per cent in imports and only 67 per cent in domestic production.

If these two factors are considered jointly in the light of the hypothetical projections presented in the study, the trend and magnitude of the changes which might take place between 1955 and 1965 will become apparent. The relevant estimates show, for example, that, although all the branches increased their volume of production in varying proportions, the relative importance of the food industries would decline from 36.4 to 29.2 per cent and that of textiles from 11.3 to 10.8. By contrast, there would be an increase in that of the chemical industries (from 3.4 to 4.3 per cent), the metal transforming industries (from 4.6 to 5.8) and the basic metal industries (from 7.3 to 14.2), etc.

6. THE INSTITUTIONAL FRAMEWORK OF INDUSTRIAL DEVELOPMENT

Increased domestic demand, import substitution requirements and the need to absorb manpower make it essential to achieve a certain tempo of industrial expansion and to effect a series of changes in the production patterns by industrial branches. This involves the enlargement and diversification of productive capacity and the consequent financing and effective channelling of investment. Can Peruvian industry carry through this over-all expansion and these changes? This leads to the third question which raises an undeniably difficult problem involving internal aspects of the enterprises themselves and other aspects bearing on tax policy, credit, protection, etc., which finally constitute what has been termed in the study the "institutional framework" within

⁴ Expressed in c.i.f. values, which implies that they were to some extent undervalued.

which industry evolves. No attempt has been made to examine the question in detail, much less to reach final conclusions. Some of the existing facts and certain information that could form the subject of special research are briefly analysed.

Once the expansion needs of production have been established, the investment effort required will depend to a large extent on the manner in which the present stock of capital is used, i.e. on the product-capital ratio achieved in industry. The practical analysis of this specific aspect is not at all easy because there are hardly any reliable statistics on the actual amount of capital invested in this sector. All that is available is partial information about the book value of assets, which is of little use in view of the fact that it relates to investments accumulated in different periods and depreciated according to bookkeeping rather than realistic criteria, etc. However, an attempt at indirect measurement led to the conclusion that total fixed capital—depreciated at replacement cost—employed in industry in 1955 was probably about 13 000 million soles. This would mean a fairly favourable product-capital ratio: 0.41 as compared with only 0.33 in 1945. In other words, the phenomenon noted for the economy as a whole, whereby a prior improvement of the product-capital ratio subsequently relieved the pressure on investment, was repeated and in a more marked degree. However, the favourable level of 1955 should not be construed as indicating that capital already invested was being utilized with any great intensity—on the contrary, there was still plenty of room for improvement in that respect—, but should be attributed rather to the large share of cottage and small industries (with very limited capital resources) and to the predominance of industrial branches of less capital intensity. In the future, the increased relative importance which industry proper will undoubtedly continue to acquire and the more marked role of industrial branches of higher capital intensity will tend to lower the product-capital ratio. The only remedy would be to ensure a better utilization of the present stock of capital, a task which depends mainly on what can be done within the enterprises themselves.

Even if the product-capital ratio is maintained, the main problem will be the incentives which can be offered for the enlargement and diversification of investments. As a result two basic questions: (a) methods of financing and (b) industrial protection, will assume greater importance.

Adequate consideration of the first aspect would require a detailed analysis of the possibilities of enlisting resources both within and outside the enterprises. If, for this purpose, some of the developments during the period 1947-55 are examined, it may be observed, from a very broad though variable sample of enterprises, that their total assets rose from 1 500 to 9 000 million soles. Almost 40 per cent of this increment was the result of capital gains, a resource which cannot be considered as altogether external to the enterprises because it is derived to a large extent from the issue of bonus shares, i.e. a form of reinvestment of profits. A sixth of this expansion was financed with such typically internal resources as increases in reserves. A small proportion was financed with temporary resources and

almost 40 per cent with typically external resources. In short, the information available is such that no very firm conclusions may be drawn. In other words, this is one of the further problems which merits more detailed inquiry. In the meantime, the analysis confines itself to a very cursory examination of some of the principal ways of mobilizing resources for industrial investment.

One of the sources which might acquire considerable importance not only for the enlargement but also for the diversification of industrial investments is the capital market. At the moment, most enterprises are legally constituted as limited companies. Nevertheless, there is no control of such companies nor are there any bodies with sufficient powers to supplement the somewhat restricted activities of the stock exchange. Furthermore, under the existing system, most securities are not quoted at all on the exchange, where apparently only a very small proportion of total transactions take place. Thus, for example, while in 1956 the total new capital registered was 776 million soles and capital gains amounted to 247 million, the total movement of securities of the stock exchange was valued at only 14.8 million.

The ploughing back of profits will undoubtedly play an important part in the future expansion of industrial productive capacity. During the period 1947-55, the total net profits of registered industrial enterprises amounted to some 2 500 million soles. Of this sum less than 25 per cent was capitalized, a proportion which would probably be much lower if allowance were made for the large number of minor establishments not included in the statistics. Of course, the scale on which profits are reinvested depends on many factors which are outside the immediate scope of the study. Suffice it to mention briefly only two of them here. In the first place, tax policy does not appear to offer very powerful incentives for reinvestment because it does not differentiate for the purpose of taxation between distributed and undistributed profits. Even more important is the tax policy followed with regard to the constitution of depreciation reserves. Calculations are based on the cost price instead of the replacement cost of assets. Since insufficient reserves would thus be formed, they are supplemented with additional reserves, which thus become liable to tax as though they were actual profits.

However great the investment effort made with internal funds, the necessary expansion of industrial productive capacity could probably not be embarked upon without adequate provision of credit resources. On 31 December 1955, total bank credit granted to industry amounted to 1 154 million soles or less than 10 per cent of the assets of the manufacturing enterprises. About 95 per cent of this credit came from commercial banks which used for this purpose roughly a quarter of their lending capacity. This represented a slight improvement in the share of industry as compared with the years immediately before. The situation was different in the case of credit from development banks. Of the total credit granted by them (898 million soles), less than 10 per cent went to the industrial sector, as compared with more than 40 per cent in 1945. These changes in the relative magnitude of the credit sources available to industry have both a qualitative and quantitative significance because of the different interest rates and

above all the differences in the terms of amortization which are applied in each case.

Finally, there are other sources of financing whose relative importance has been somewhat restricted in the past. For example, in 1955 total public investment amounted to 1 764 million soles of which only 70 million could be considered as directly related to industrial development. Foreign investment in manufacturing, on the other hand, has increased considerably—from 14.9 million dollars in 1951 to 26.8 million in 1955—, but its volume is still slight as compared with that of total industrial investment or with the share which foreign capital represents in other economic activities.

In addition to these factors, which principally affect the various financial aspects of industrial expansion, there remain a whole series of incentives which may be offered through protective and development measures. Although there is no direct participation by the public sector in industrial activities, the Government can of course exert a powerful influence in their development not only by providing the basic social capital—transport, energy, etc.—essential for industrial growth, but also by providing numerous incentives many of which are included in the General Industry Act (*Ley General de Industria*) which is now being given favourable consideration.

One particularly important aspect is the protection of domestic industry against competition from imports. Since 1949, when direct import controls were scrapped, the protection machinery has been mainly confined to the customs tariff. This, however, is framed for fiscal purposes rather than for the deliberate purpose of protection

or with a view to industrial development needs. In 1955, total customs duties represented 11 per cent of the value of imports, a relatively low proportion compared with that of other Latin American countries. A more detailed comparison with the tax systems in force in Colombia, Chile and Venezuela shows, moreover, that in Peru customs duties are relatively lower for consumer goods and intermediate goods and very similar in the case of capital goods. Sometimes, the tax is heavier on goods produced by very complex industrial processes while it is relatively lighter on other goods which could be replaced very soon by domestic production. However, this is a very difficult problem to assess in general terms because of the conflicting elements which must be taken into account. For example, the low level of protection may have discouraged the establishment of new import-substitution industries, while at the same time competition with imports has made domestic firms more concerned with productive efficiency than is normally apparent in other Latin American countries. Perhaps the most important problem here is how to achieve enough flexibility to meet varying future conditions and to ensure that Peru's industrial development goes ahead at the required speed.

In short, the study of the economic aspects of Peruvian industry carried out by the Secretariat of the Economic Commission for Latin America is intended to provide a picture which will help in the formulation of an industrial policy designed to enable industry to play a positive rather than a negative role in the arduous task of maintaining—in conditions which are now less favourable—a satisfactory rate of growth of the Peruvian economy as a whole.

COFFEE IN LATIN AMERICA: THE PRODUCERS' PROBLEM

by Onno Van Teutem *

I. INTRODUCTION

The reappearance of an imbalance between world production and consumption of coffee has, during the last year, focused much attention on the Latin American coffee industry. A number of conferences were held between the main producing countries, at times including non-Latin American producers, and some major consumer countries. In October 1957, seven of the principal Latin American coffee producing countries (Brazil, Colombia, Costa Rica, El Salvador, Guatemala, Mexico and Nicaragua) concluded the so-called "Mexico agreement" to regulate their exports for one year through the retention of part of the crops. Further deliberations led to the establishment, in early 1958, of the International Coffee Organization, with its seat in Brazil, for purposes of stimulating world trade and consumption of coffee and of improving coffee production conditions.

In June 1958, an International Coffee Study Group was established in Washington for the discussion of additional economic measures. The Latin American coffee-producing countries within this group reached an agreement to retain a proportion of their 1958/59 crops, in order to ensure the orderly marketing of coffee in the period October 1958-September 1959. These countries agreed to retain 5 per cent of all exportable production, up to a volume of 300 000 bags of 60 kg, and 10 per cent of further exportable quantities, but the retention share of Colombia was fixed at 15 per cent and that of Brazil at 40 per cent of the exportable crop.

The current crop retention agreement is an emergency measure. Exportable world production of coffee has increased sharply in the previous two crop years, from an estimated 34.4 million bags in 1956/57 to 44.4 million bags in 1957/58, and to about 51 million bags in the current 1958/59 season.¹ While world production thus increased 29 per cent and 15 per cent in successive years, world consumption continued its normal annual increase of about 2 per cent.² As a result, a considerable accumulation of stocks took place, especially in Brazil, the uncontrolled sale of which might have led to serious drops in world prices, for coffee consumption is notably inelastic with respect to changes in price.³

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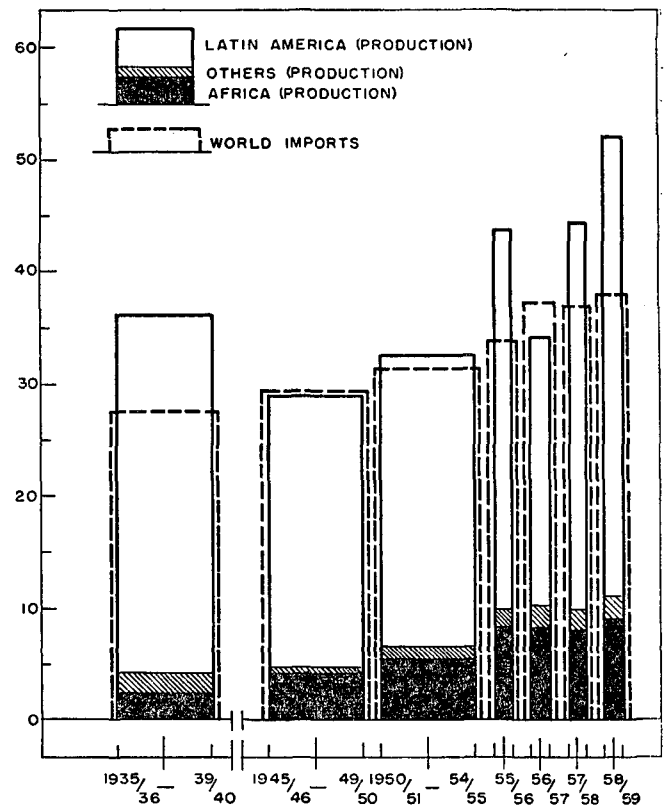
¹ United States Department of Agriculture, Foreign Agriculture Circular, Coffee, 13 October 1958; this estimate was later revised to about 52 million bags.

² See, FAO *The Latin American Coffee Industry*, November 1958, document LARO 58/18, presented to the Fifth Regional Conference in Latin America, San José, Costa Rica, November 1958).

³ The price elasticity of the demand for coffee depends on

But although chaos in the world coffee market has been avoided by the retention agreement, these marketing measures do not directly affect the level of annual production or of consumption. Nor do they strengthen the competitive position of Latin American coffee producers at a time when increased production in other parts of the world threatens this region's traditional export markets.

Figure I
EXPORTABLE PRODUCTION AND CONSUMPTION
OF COFFEE
(Millions of bags)
NATURAL SCALE



SOURCE: United States Department of Agriculture and Panamerican Coffee Bureau.

many variables, the main ones of which appear to be the level of income per head of population and the price level of coffee itself. In a recent study, FAO estimates average price elasticity at about 0.2 (Committee on Commodity Problems, document CCP 56/6, April 1956, Appendix II). On a purely hypothetical basis, this coefficient could be used in connexion with recent data on

It is therefore apparent that consideration should now be given to additional measures which would permit the re-establishment of a more fundamental equilibrium in the coffee market, by making more far-reaching changes in agricultural production in the coffee zone than is possible through export regulation alone.

In producing countries, any effective measures would have to take into special consideration the intricate problem of production structure. Production conditions are, on the whole, not so well known as those of international trade and consumption, especially in the case of tropical export crops, such as coffee. In recent years, however, the ECLA/FAO surveys of coffee production in various important Latin American producer countries have shed additional light on the farm problem. The findings of the surveys in two countries, Colombia and El Salvador, have recently been published⁴ and an additional study is being prepared in the State of São Paulo, Brazil.

coffee trade and prices. For instance, the difference between actual world imports in 1957 and the world exportable crop in 1958/59, some 13.5 million bags, would have been absorbed by an uncontrolled market only at prices between 10 and 15 cents a pound in New York, if average price elasticity were to remain at 0.2 over such a wide range of prices. The great number of imponderables in the coffee market however do not permit definite estimates under present conditions.

⁴ *Coffee in Latin America, Productivity Problems and Out-*

Another way of solving the coffee problem might be sought on the consumption side, for instance through campaigns stimulating consumption and through other promotional activities. Among the serious existing problems are the tendency in the United States to make greater use of soluble coffees and to prepare weaker brews, both of which affect the level of imports. Furthermore, many European countries still levy import duties or consumption taxes on coffee. To some extent it may therefore prove possible to reduce the current gap between consumption and production (see figure I) by increasing consumption. But it is unlikely that such an improvement would reduce the need for the more fundamental adjustments in the production structure discussed below.

The present article does not aim at evaluating the stabilization measures that have been so far adopted with respect to coffee, nor does it deal with consumption aspects. Its objectives are rather, firstly, to explain some relevant facts about the producers' situation, as they have been revealed through the productivity surveys, and, secondly, to indicate possible alternative solutions to the coffee surplus problem at the farm level.

look: 1. Colombia and El Salvador (E/CN.12/490), United Nations Publication, Sales No. 58 II.G.4.

II. UNDERLYING CAUSES OF LATIN AMERICA'S COFFEE PROBLEM

In the past, coffee production has traditionally reacted slowly and belatedly to a new market situation. These lags have been responsible for the recurrence of periodic cyclical fluctuations in the development of the industry. The present difficulties are also largely caused by increases in production reflecting the resumption of the cyclical movement in the postwar period.

Thus, although coffee production increased rather suddenly in the last two crop years, the problems of the world coffee industry in general, and of the Latin American industry in particular, lie deeper than in an incipient imbalance between production and consumption. The real causes are of a long-term nature. They are the outcome of developments that started in the 1930's, or even before, and that have been aggravated recently, especially in the decade, 1949-58, when coffee prices were favourable. They may be grouped under three headings: (1) the excessive new coffee plantings in major Latin American producing areas; (2) the increased competition of non-Latin American zones, notably those of the African continent; and (3) the persistently low technological level and productivity of coffee cultivation in Latin America, and the slowness with which improved cultivation methods are introduced on a commercial scale.

1. EXCESSIVE PLANTINGS IN LATIN AMERICA

In recent years, new coffee plantings have been established in many parts of the world, at rates in excess of those needed to supply prospective world coffee requirements. Latin America itself has been responsible for most of these plantings.

The most important factor determining the volume

of new coffee plantings in a given period is, logically, its relative profitability as compared with that of competing uses of land and capital. In the case of coffee, this is determined mainly by the level of world prices.

In the 1930's, coffee prices were extremely low as a result of the world-wide depression, combined with excessive production. In the principal coffee producing country, Brazil, large stocks accumulated, and much of this unexportable surplus was disposed of by burning. Furthermore, a large-scale abandonment of old coffee plantings took place, and new planting was virtually suspended. Indications are that the situation was different in other Latin American coffee producing countries and that few plantings or none were actually abandoned. Nevertheless only very limited new investments took place in the coffee sector.

The loss of a large part of the world coffee market in the war years only accentuated these tendencies. Huge stocks were held in producing countries and there was no incentive to undertake new plantings. Similarly, the first part of the post-war period brought few changes in this picture, and production was, especially in Brazil, considerably less than before the war. The increased world consumption of coffee was met by depleting previously accumulated stocks, and coffee prices only rose moderately until these stocks became exhausted in the course of 1949.

At that time, however, a sudden shift took place in the world coffee market. Prices of Brazilian grades rose in less than a year, from about 30 cents per pound in New York, to more than 50 cents. While sharp fluctuations took place in subsequent years, prices remained above this level until the second quarter of 1958.

The natural result of this powerful price stimulus, which was immediately felt by producers, was a sharp increase in new plantings. No accurate figures are available on the total numbers of trees planted in each area. But it is common knowledge that the most spectacular increases took place in the Northern Parana area of Brazil, where climatic conditions were considered marginal for coffee growing because of the periodic occurrence of frosts, but where the quality of the soils and the topography are especially favourable. In the course of the present decade, coffee cultivation spread to large parts of the virgin lands of Northern Parana, between the borders of São Paulo State and Paraguay. In many cases excellent planting material was used and this caused yields in good years to be exceptionally high. Thus, despite great fluctuations due to frosts, average returns per hectare appear to be well above marginal levels.

Although the Parana plantings had grown greatly in the early 1950's and approached full maturity when some four years old, their full impact was not really felt until the 1958 harvest. Twice, in 1953 and again in 1955, frosts occurred which killed the young plants and damaged older coffee trees, so that production was greatly reduced for at least the two subsequent crops in each case.

However, after each frost the damaged plantings were immediately replaced. The net effect was therefore that the maturity date of the young plantings was postponed by several years, and that the average age of all plantings declined accordingly. A large proportion of the trees is estimated to be currently between three and seven years old.

As a result, it was not until 1958 that many of the Parana plantings produced their first full crop, and production on these plantings will tend to increase for several years.⁵ On the other hand, new planting has fallen off from the peak levels of the early 1950's, and it can be estimated that in the State of Parana, maximum production may be reached in about five years' time,

⁵ The ECLA/FAO surveys have shown that, in Colombia and El Salvador, maximum yields are reached when the trees are between 10 and 12 years of age and that gradual declines then take place unless compensating measures are taken. Preliminary data available for Brazil seem to confirm this pattern, at least in the case of the existing trees. New varieties are available which mature earlier and reach maximum yields more quickly (see E/CN.12/490, *op. cit.*, p. 81).

barring new frosts. Since Parana's production, in the current crop year, represented about one third of total production in Latin America, these changes in production will profoundly affect the coffee industry of the entire region.

Although the establishment of new plantings in other parts of Latin America has been much less spectacular, some planting has taken place in nearly all countries. Consequently, production has increased considerably in the present decade. In 1958/59, the exportable coffee outputs of Mexico, Central America and Colombia were respectively 23, 31 and 15 per cent greater than the averages of 1950/51-1954/55. These figures compare with a 77 per cent increase in total Brazilian exportable production over this period.⁶

While some expansion in capacity was no doubt justified, on the basis of the post-war rises in demand, it is apparent that capacity has increased excessively, laying the basis for a period of over-production which seems as yet not to have reached its greatest intensity.

2. COMPETITION BY OTHER REGIONS

The expansion in coffee cultivation has not remained limited to Latin America alone. In fact, for the first time in the history of coffee, another continent, Africa, is emerging as a major competitor in the world market. The steep increases in African coffee production that have occurred since the 1930's, and the prospects for still further expansion of coffee growing on that continent, have posed serious additional problems for Latin America, superimposed on the region's own difficulties.

Table 1 reviews the course of world coffee production by major production areas since the pre-war period. It can be seen that virtually the entire increase in world production with respect to 1934-38 has occurred in the most recent period. The greatest relative gains are shown by Africa, which currently produces about four times as much coffee for export as before the war. In Brazil, on the other hand, production only recently exceeded the pre-war level. The increases in the production of other Latin American countries, however, have also been considerable.

Brazil's pre-war share of 61 per cent fell to less than half of the world total in the 1950's, excepting the crop

⁶ United States Department of Agriculture, *op. cit.*

Table 1
COFFEE: WORLD EXPORTABLE PRODUCTION BY MAJOR REGIONS

Region	1935/36- 1939/40	1950/51- 1954/55	1958/59	1935/36- 1939/40	1950/51- 1954/55	1958/ 1959
	(Million bags)			(Per cent)		
Latin America	32.0	26.1	41.0	88	80	79
Brazil	22.0	14.7	26.5	61	45	51
Other countries.	10.0	11.4	14.5	28	35	28
Africa.	2.4	5.7	9.1	7	18	17
Rest of world	1.8	0.8	2.0	5	2	4
Total	36.2	32.6	52.1	100	100	100

SOURCES: 1935/36-1939/40: Pan American Coffee Bureau, *Coffee Statistics*, Nos. 14 and 15; 1950/51-1954/55: United States Department of Agriculture, *Foreign Agriculture Circular*, 13 October 1958; 1958/59: latest estimate of the United States Department of Agriculture.

year 1958/59. In contrast, Africa's share more than doubled over the same period, reaching 17 per cent of the world total in the current year. Increases in the share of the other Latin American producing areas were insufficient to offset fully the long-term proportional decline in Brazil, and Latin America's share in world coffee production fell from 88 per cent before the war to 79 per cent in 1958/59.

Several factors account for the rather spectacular rises in African coffee production. The most important is perhaps the fact that Brazil's unilateral action to support world market prices in the 1930's functioned as an umbrella, under which production in other areas could increase profitably. In the pre-war period, it seems that both Africa and other Latin American countries benefited from this price umbrella by increasing their share in the market. The present retention agreement has modified the situation to the extent that all Latin American countries now participate in defending world coffee prices, though Brazil still shoulders the major burden. But it has not so far been possible to extend the coverage of the retention agreement to African producers, and it appears that the present situation again favours Africa in relation to Latin America.

African coffee production would probably not have risen as much, merely as a result of this factor. Actually, the Governments of many African territories have actively promoted the expansion of coffee cultivation by a variety of measures. Notable progress has been made, especially in the Belgian Congo and in British East Africa, in overcoming technical production difficulties. In these and other areas, modern experimental stations are in operation and effective agricultural extension services have been established on a scale not common in Latin America. Price support systems are also functioning in several areas, and African coffee is given preferential treatment by European importing countries with which they have special relationships. In France, for instance, a 20 per cent *ad valorem* duty is applied to coffee from "foreign areas", and the European common market will also favour coffees from the associated territories over those of Latin America.⁷

As is well known, a special factor favouring the use of African coffees has been the recent shift in the consumption pattern of the United States, and some other smaller importing countries, towards an increased use of soluble coffees. Whereas in 1949 only two per cent of United States coffee imports were destined to be used in the manufacture of solubles, this percentage increased to 20 in 1957. In 1958 this tendency seems to have continued. A large proportion of the coffee used in this process is of the *Robusta* type, which constitutes 80 per cent of African coffee production.⁸

Finally, the prevalence of wage levels below those of Latin America has also helped the expansion in African coffee cultivation. This factor, and the higher yields of *Robusta* varieties, have made African plantings profitable, despite the fact that world market prices for African *Robusta* coffees have been considerably below

the average prices obtained by Latin American coffees, which are exclusively of the *Arabica* type.

The increased competition by non-Latin American producing regions has therefore become an important and permanent feature of the world coffee market. In the difficult period ahead, this competition is almost certain to become still stronger. The Latin American coffee industry as a whole will therefore have to make every effort in its power to strengthen its competitive position.

3. LEVELS OF PRODUCTIVITY IN THE LATIN AMERICAN COFFEE INDUSTRY

One of the aspects to which little attention has been paid so far in either international or national debates on the coffee situation has been that of the relative efficiency with which coffee is produced. Yet low productivity is a major cause of the present difficulties of the Latin American industry, and any serious attempt to solve them must necessarily deal at length with the intricate coffee productivity structure.

Partly as a result of this lack of attention to productivity problems, insufficient data have been available for most Governments in Latin America to reach firm conclusions on these problems or to determine the relative importance of each. The ECLA/FAO Coffee Surveys, referred to above, have been the first to investigate productivity on a national scale through extensive and representative field investigation. The following discussion is therefore based mainly on the observations made in these surveys.⁹

One of the principal conclusions of the studies made in El Salvador and in Colombia is that, on a large proportion of coffee farms, primitive production meth-

Table 2
COFFEE: FREQUENCIES OF MAIN CULTIVATING PRACTICES IN COLOMBIA AND EL SALVADOR
(Percentage of the total productive coffee area)

	Colombia 1955/56	El Salvador 1954/55
Weeding	97	99
Pruning	27	49
Fertilization	13	34
Soil conservation	15	11
Pest and disease control	22	52

SOURCE: *Coffee in Latin America*, Productivity problems and prospects: I. Colombia and El Salvador (E/CN.12/490), United Nations Publication (Sales No. 58.II.G.4).

ods prevail. Only very few cultivating operations are undertaken, and, consequently, average returns per hectare or per man-hour are very low. This is illustrated by the following table which shows the frequency with which the principal practices are applied in the two countries.

Even in El Salvador, which is generally considered to have the most advanced methods, two-thirds of the area did not receive any fertilizers in 1954/55; on

⁷ FAO, Commodity Series No. 29, Agricultural Products and the European Common Market, 1957.

⁸ FAO, The Latin American Coffee Industry, document of the Fifth Regional Conference for Latin America, November 1958.

⁹ For obvious reasons it is not possible to discuss here all the aspects of these surveys. The reader is referred to the publication: *Coffee in Latin America*, cited in footnote 4, for detailed productivity analysis of coffee cultivation.

nearly 90 per cent no attention was paid to soil conservation, despite the predominance of hilly land; and about half of the plantings were not pruned or protected from diseases and pests, which are very common when coffee is grown under shade (as it is in both these countries). In Colombia, even less intensive production methods were found, as shown by the survey covering the year 1955/56. Modern production methods in that country are only rarely applied to coffee growing, and it may be estimated that well over half of all coffee plantings receive no care at all, except for a small amount of weeding. This applies particularly to the new coffee farms recently established in outlying areas, such as the departments of Boyaca, Huila and Magdalena where average yields per hectare are low.¹⁰

Furthermore, a tendency has become apparent to cultivate coffee on a very small scale and under primitive conditions. In Colombia 36 per cent, and in El Salvador 50 per cent, of all coffee farms had under one hectare of productive planting each.¹¹ It is extremely difficult to apply efficient techniques on such farms, and many of them yielded reasonable returns only because of the favourable coffee prices prevailing in the last ten years.

Another indication of the structural difficulties facing the industry is the fact that a large proportion of existing coffee trees are old and in need of replacement. As yields per tree tend to decline gradually from their maximum, which in the case of these two countries tends to be in the age group 10-12 years, average production costs per unit increase to the point where the maintenance of the old planting finally becomes uneconomic.

In El Salvador and Colombia, it was found that 63 and 61 per cent respectively of all existing plantings were older than 15 years, in the years the surveys were held. A significant portion of these older plantings may be considered to produce uneconomically, especially since a general decline in farm coffee prices has now set in, which tends to advance the economic obsolescence of older plantings.

Data available for other Latin American countries generally point to the existence of similar or even more critical problems. In Brazil, for instance, many of the coffee plantings in the State of São Paulo are known to be in poor condition due to excessive age, insufficient

¹⁰ Source: ECLA/FAO Coffee Survey in Colombia.

¹¹ E/CN.12/490, *op. cit.*, page 30 and page 109. These small farms were responsible for 5 and 4 per cent of total output respectively.

III. POSSIBLE SOLUTIONS TO THE LONG-TERM PROBLEM AND SOME POLICY IMPLICATIONS

Despite the gravity of the situation, Latin America possesses the tools, resources and experience required to bring about structural adjustments. Yet these adjustments are not likely to be effective unless the producer acquaints himself with the various types of solutions open to him, and unless the relative feasibility of various alternatives is studied at the national policy-making level as well. In current conditions, the weight of moderate, but effective, Government policies would do a great deal to relieve the prevailing uncertainty among

care and the predominance of low-yielding tree varieties. At late-1958 price and wage levels, it was estimated that per hectare yields of at least 500-600 kg would be required to make cultivation economically feasible. Indications are that some 500 million trees out of a total of 1 400 million, or about 36 per cent, at present fall short of this minimum standard.

Apart from these technical factors affecting major producing areas, where coffee production is otherwise well suited, the existence of coffee cultivation in ecologically marginal areas constitutes a further problem. In each country zones are to be found where coffee is being grown at excessively high or low altitudes or on very steep terrains or inadequate soils. In Colombia, for instance, nearly 10 per cent of the coffee plantings were found at altitudes of less than 1 000 metres above sea-level, a height which in that country is considered a minimum for efficient production.

In certain parts of Latin America, general economic factors which have no connexion with the coffee production pattern as such have also had serious repercussions on production costs. The most significant example is found in Venezuela, where rural wages have shown a sudden and strong rise following developments in the petroleum industry and the rapid urbanization which has occurred there. The magnitude of the wage increases was such that coffee-growers were unable to match them with technological improvements, and the industry is currently in a state of decline. Though such an extreme situation does not exist in other Latin American countries, the Venezuelan example merits attention, for similar development elsewhere could be accompanied by comparable effects on the sensitive coffee sector.

Paradoxically, the past 10 years of favourable coffee prices seem to have accentuated, rather than lessened, the problems of low productivity. In this period, farmers have not been under great pressure to concentrate on measures to lower production costs, or to introduce new techniques. Furthermore, the tendency of coffee cultivation to become excessively dispersed and the apparent increase in the number of very small plantings have made it more difficult to acquaint coffee farmers with better production methods.

The Latin American coffee industry is therefore faced today with an important structural problem of low productivity, caused by a variety of factors. This problem is likely to emerge more clearly now that competition has become stronger, and it requires early solution if the basis of the industry is to be safeguarded.

farmers regarding the industry's future. Government policies, however, take into account the country's foreign exchange position, as well as the long-term coffee productivity problem and the economic situation of the coffee-growing population.

These solutions and some of the ways in which they may be applied may be grouped under the following two headings:

1. Possibilities of improving the efficiency of coffee

- production and reducing unit production costs through increases in yields;
2. Shifts in the resource allocation of agriculture in coffee-producing zones which imply:
 - (a) The elimination of excess production capacity through abandonment or clearing of marginal areas;
 - (b) The substitution of alternative agricultural and livestock enterprises as a means of strengthening coffee farmers' incomes and of making use of displaced resources.

A sound coffee policy combines *both* these approaches. It is apparent that reductions in production capacity would benefit the Latin American industry most when combined with gains in average productivity and with a greater diversification of agricultural production in coffee zones. Yet policies designed for these purposes must be carefully balanced so as to prevent the increase in total coffee production which could result from the large-scale adoption of improved cultivating methods. From the point of view of the industry as a whole, it would seem best to establish a policy link between productivity increases and capacity reductions on the basis of appropriate incentives.

1. POSSIBILITIES OF RAISING PRODUCTIVITY IN COFFEE GROWING

From the point of view of the individual coffee producer, the most acceptable solution to the coffee problem is one that enables him to maintain his total net income, even if coffee prices decline. One of the ways to achieve this is to improve his coffee cultivation system and to raise the productivity of the principal resources used in coffee growing: land, labour and capital.¹²

One of the keys to an increase in the productivity of coffee growing is the improvement of coffee yields per hectare. The coffee surveys, undertaken by the ECLA/FAO Programme, have shown the close connexion between yields and labour productivity, as may be seen in table 3. Labour productivity on the highest yielding coffee plantings, for instance, was two-and-a-half times as high as that of the lowest yield group, which comprises nearly a fifth of all plantings.

The magnitudes of these differences in productivity between important sections of existing coffee plantings, in a country of relatively homogeneous production methods, show that the productivity structure of coffee growing is more varied, and may well be more flexible, than is sometimes supposed.

A considerable part of the productivity differences found in Colombia seems to be due to differences in natural production conditions rather than to those in technology, between various parts of the country. This

¹² Labour costs generally constitute over 70 per cent of all current operating costs in Latin American coffee growing. For purposes of simplification, the term "labour productivity" will henceforth be used to mean the total amount of coffee produced per unit of labour employed in one crop year, disregarding the separate effects of land and capital. In all cases reference is made to the total volume of labour used, i.e. including substantial quantities of non-wage family labour.

Table 3

COLOMBIA: AVERAGE LABOUR PRODUCTIVITY AND PROPORTION OF COFFEE PLANTINGS FOR VARIOUS YIELDS, 1955/56

Yield per hectare (Kg of green coffee)	Labour productivity (Kg per man-hour)	Proportion of total plantings (Percentage)
Up to 250	0.33	19
251 to 400	0.52	24
401 to 550	0.49	16
551 to 700	0.60	17
701 to 850	0.65	11
851 to 1 100	0.65	8
more than 1 100	0.81	7
Country total	0.66	100

SOURCE: ECLA/FAO Coffee Survey, unpublished figures.

is explained by the fact that, in general, little cultivating attention is given to coffee trees, once planted, and that the production process largely consists of collecting the crops periodically.

Under these conditions, which seem to prevail in many parts of Latin America, low yields therefore often correspond to unfavourable growing conditions. Policy-making authorities may find, therefore, that improvements can be obtained by discouraging coffee production in these zones and by concentrating output in the most suitable areas, more easily than by improving cultivation methods in the others.

The greatest benefit per unit invested in extension services and similar technical programmes often occurs in high-yielding zones which already have better than average production systems, but where nevertheless there are still great possibilities of improving coffee cultivation. The problem is one of setting priorities for the use of the limited funds available, considering the national interest as a whole.

The existence of a relationship between low yields and unfavourable natural growing conditions should, however, not obscure the existence of a second important relationship: between yields and the technology of production. Although coffee cultivation is virtually based exclusively on human labour and little opportunity of using labour-saving equipment has so far presented itself (a factor which may raise labour productivity considerably in other types of agriculture), it appears that there is nevertheless considerable scope for improving coffee productivity. The basis for such improvements seems to lie frequently in a more balanced and effective use of existing labour in the various cultivating operations, through a moderate intensification of these, aided by a wider use of improved tree varieties, fertilizers and other yield-raising items.

A significant practical example of what is technically possible has been demonstrated by a long-term research programme in the State of São Paulo. Here, despite favourable natural conditions, low levels of technology have frequently caused producing areas to become unecconomic. Under the pressure of the preceding coffee surplus period of the 1930's, the Campinas Agronomic Institute has, over the last quarter century, carried out research on the integrated use of factors of produc-

tion and of techniques in coffee production, leading to the development of the "new system", adapted to São Paulo conditions. This system includes the use of high-yielding trees, their closer spacing, intensive fertilization, and soil and water conservation. These combined improvements have resulted in coffee yields per hectare four or five times as high as those obtained on the traditional plantings. Total unit production costs are also considerably reduced by those methods, although the large savings in the use of land and labour are partly offset by the increased fertilization costs.

The Campinas production system has already been commercially adopted on many progressive São Paulo farms, without special economic incentives. At the present time, however, the more general introduction of the "new system" might well be helped by a moderate programme of financial assistance. Such a programme would serve to stimulate the adjustment process already started, acquainting farmers with profitable production opportunities.

In most other Latin American countries no such research has been done, and definite recommendations cannot yet be made on the priorities for various technical improvements in each area. The productivity surveys in Colombia and El Salvador have thrown new light on this problem and may provide some guidance, but they are not substitutes for integrated research and experiment programmes specifically designed to provide a long-term solution to the productivity problems of the areas concerned.

There is a great need to determine the improvements in yields and in labour productivity which can be expected from various practical alternatives already available to farmers, under present conditions. It is not sure, for instance, whether any additional cultivating labour would best be invested in replantings, more pruning, or in more and better weeding; and greater attention could well be paid to such basic practical problems. On the other hand it is also necessary to undertake long-term projects such as those designed to evaluate the significance of shading coffee trees, versus production without shade, as in Brazil. The present difficulties of the coffee industry show the urgency of increasing efforts to coordinate existing technical programmes in the region so as to find integrated solutions.

One concrete example of the improvement of yields which may result from the application of more advanced techniques under commercial production conditions, is provided by the study of fertilizer responses made in connexion with the ECLA/FAO Coffee Survey in Colombia.¹³ For this purpose, a number of farms were selected in the major production department of Caldas, where fairly homogeneous growing conditions prevail. After allowing for the effect of differences in the use of labour and in altitude, the relationship between coffee yields and the level of fertilization was isolated. The resulting data are shown in table 4.

The increases in yields on these farms were low with small fertilizer applications. They then increased, reaching a maximum of between 201-300 and 301-400 kgs. of fertilizer per hectare, and subsequently fell rapidly. This is a normal pattern, showing increasing marginal

¹³ *Coffee in Latin America, op. cit.*, pages 60-62.

Table 4

COFFEE: NET^a RELATIONSHIP BETWEEN FERTILIZATION AND YIELDS ON COMMERCIAL FARMS IN CALDAS, COLOMBIA (Kilogrammes per hectare)

Fertilizer input ^b	Coffee yield	
	Total	Marginal
0	710	—
1-100	730	20
101-200	800	70
201-300	890	90
301-400	1 235	345
401-500	1 320	85
501-600	1 360	40
601-700	1 380	20
701-750	1 390	10

SOURCE: *Coffee in Latin America, op. cit.*

^a Allowing for differences in labour use and in altitude.

^b Includes mineral fertilizer and organic materials, the latter in terms of the former (on a value basis).

returns with very low fertilizer application and diminishing marginal returns at higher levels. The practice of fertilization is clearly one of the important factors affecting coffee productivity. But conditions vary and it would be necessary to evaluate the costs and returns of fertilization in each region and compare them with those of alternative cultivation improvements before it would be possible to find the level of optimum use of fertilizers.

Among the policy tools applicable for purposes of raising coffee productivity, the fuller use of production credit deserves special mention. In most areas, coffee production credit for all purposes is at present provided by purely commercial sources, which do not always take fully into account the particular problems of the coffee industry. It is the general experience in agricultural programmes that one of the most effective ways to influence techniques is through the use of different interest rates for various types of production credit and through a technical inspection of the use made of the loans. Since many coffee farmers currently depend on credit, and since credit institutions are widely available in most coffee-producing areas, the use of supervised credit could have a considerable effect, notably on small farms which have so far made little use of improved methods.

The flow of credit represents currently one of the few effective links between coffee producers and the rest of the economy. No major additional overhead costs or technical innovations would be required for its expansion in most production areas, since existing financial institutions could be employed for this purpose, and these could be assisted by the extension services.

2. SHIFTS IN RESOURCE ALLOCATION ON COFFEE FARMS

Increases in efficiency by themselves cannot provide a solution and are only one phase of the whole problem of structural change. In fact, unless the proper policy is followed, an increase in productivity might well result in an even greater total output. It is, therefore, necessary to consider improvements in productivity simultaneously with the reduction of production, and to look for measures that can promote both these seemingly contradictory objectives.

The only way in which the rise in production can be checked is by taking part of the producing area out of production. But farmers are unlikely to take existing coffee plantings out of production, unless they can use the land, labour and other resources so freed for alternative enterprises, which provide them with equal or higher incomes.

(a) *The reduction in productive capacity*

The concept of "excess production" with reference to coffee is not easy to define. Unlike other commodities, it does not depend only on the level of prices. Productive capacity itself is constantly changing as a result of the entry into production of young coffee plantings, the development of the yield cycle in adult plantings, and the replacement or abandonment of the very oldest plantings. It would therefore be exceedingly difficult to maintain a balance between production and consumption, even if long-term equilibrium prices were somehow prevailing in the world market.

Under existing demand conditions, prices could hardly be stabilized at the levels prevailing in July 1958, when the current crop year began, without some decline in output. This is shown by the fact that even the withdrawal of about 12 million bags by Latin America, or 29 per cent of the region's 1958/59 exportable production, has been insufficient to stabilize world prices.¹⁴ Between July and December 1958, Santos grades fell from about 47 to 41 cents per pound in New York.

The magnitude of the problem of over-capacity is even greater when the maturation of additional plantings, and probable further increases in production in the coming years, are taken into consideration. For a period of several years it seems likely that, judging by present trends and unless special measures are taken, the surplus in Latin America will be at least one third of total output.¹⁵

There is little prospect that producers would, on their own initiative, undertake to reduce their coffee production by such a large amount. Previous experience has shown that, even in periods of very low coffee prices, such as the 1930's, the abandonment of coffee plantings or their replacement by other crops was a very slow process, and that in many areas no such reduction in capacity took place at all. At the relatively high farm prices which are currently being paid for coffee, and which reflect the fact that the world market is being supported by the retention of a proportion of available supplies, little incentive would therefore seem to exist to reduce coffee production. The reason for the reluctance of coffee farmers to eliminate even their least productive plantings in response to changes in the world market is not only the difficulty of finding alternative sources of cash income but also the fact that producers consider these plantings a valuable investment, the loss

of which would have to be compensated in some way. Furthermore, the elimination of plantings itself and the preparation of the land for alternative agricultural and livestock enterprises would require a new investment which would have to be made at a time when current farm incomes were on the decline.¹⁶

These considerations suggest a number of possibilities for Government coffee policies. Special financial assistance to overcome each of the obstacles mentioned might well result in the quick adaptation of coffee growing to the new market conditions and in a shortening of the period of excess production. Unfortunately no precedents in this field are available in Latin America, and a careful appraisal is therefore required to establish the effectiveness and applicability of various measures, or their cost.

Government funds used in the execution of coffee policies have so far been devoted mainly to acquiring, transporting and storing unexportable quantities of coffee and have not been used on a large scale for the specific purpose of stimulating structural production adjustments or of influencing cultivation methods. As a result large stocks have accumulated which not only burden the world market and provide a constant source of price uncertainty, but also represent a costly and unproductive investment, which Latin American countries can ill afford at the moment.

In Brazil, for instance, the 1958/59 coffee programme includes the purchase by the Brazilian Coffee Institute (*Instituto Brasileiro do Café*) of 40 per cent of the exportable crop, or more than 10 million bags, requiring an investment of 12 700 million cruzeiros. If part of these resources were earmarked for the purpose of taking old plantings out of production (e.g. by loans to farmers who are willing to stop growing coffee), and of stimulating new lines of agricultural production, more economic results might be achieved. Lacking any previous experience of this kind, it is not easy to predict the impact of a strong Government policy of eliminating, for instance, low-yield plantings. But the amount spent in 1958/59 would be ample, for instance, to compensate São Paulo farmers for the capital represented by 500 million of the lowest yielding trees, and thus to reduce productive capacity permanently by some 2.5 million bags.¹⁷

In some cases it might even be worth considering whether replanting should be encouraged. One advantage of partial replacement of old and low-yield coffee plantings by highly productive new ones would be that productive capacity would in the first place actually fall. The maturing of the new plantings would take place only in three or four years' time, when market conditions may have improved somewhat, if other policies are effective. This alternative might also be acceptable to coffee farmers, for it would enable them to stay in their traditional business while diversifying their pattern of output,¹⁸ and strengthening their competitive position

¹⁴ United States Department of Agriculture, Foreign Agricultural Circular, *op. cit.*

¹⁵ A reduction of this magnitude would pose an enormous problem at the farm level. Since the lowest yielding plantings would presumably be the first ones to be taken out of production, a cut of one third in production might require the elimination of over half of all Latin American coffee plantings, affecting millions of people.

¹⁶ The problem of alternative production possibilities in coffee-growing areas will be dealt with separately below.

¹⁷ These estimates assume the average value of low-yield coffee trees at about 20 cruzeiros each.

¹⁸ Since average yields on new plantings would, in São Paulo, frequently be four or five times as high as those on the ones to be eliminated, this procedure might result in a reduction in the

Table 5
PRICE INDICES OF COFFEE AND OTHER AGRICULTURAL COMMODITIES IN BRAZIL AND COLOMBIA, 1948-58
(1948 = 100)

Year	Brazil			Colombia		
	Domestic export price of coffee	Wholesale prices of agricultural commodities excluding coffee	Ratio 1 + 2	Domestic coffee price	Wholesale price of food products	Ratio 4 + 5
	(1)	(2)	(3)	(4)	(5)	(6)
1949	122	105	116	130	106	123
1950	203	106	192	188	127	148
1951	213	132	161	227	139	163
1952	216	155	139	243	145	168
1953	252	181	139	262	152	172
1954	464	214	217	359	168	214
1955	452	266	170	302	162	186
1956	482	318	152	404	173	234
1957	487	355	137	457	215	213
1958 ^a	533	378	141	468	240	195

SOURCE: 1. United Nations, *Monthly Bulletin of Statistics*; 2. *Conjuntura Económica*, Brazil; 4 and 5. *Revista del Banco de la República*, Colombia.
^a Preliminary, based on the first 8-10 months.

in the world coffee market. On the other hand, unless the newly established productive capacity were considerably smaller than the capacity eliminated, the burden of excess production would merely be shifted forward some years.

The prospects for executing a plan to reduce total coffee production capacity by the elimination of marginal plantings seem to be more favourable now than they were in the 1930's. World demand for coffee is at a record level, and coffee production has only recently begun to exceed consumption requirements. At the same time the possibilities for diversification have improved notably as will be seen in the next section. Experience shows, however, that a reduction in total output is one of the most difficult objectives to achieve for any sector of agriculture, and that great effort will be required in the case of coffee to achieve satisfactory results.

(b) *The diversification of agriculture in coffee-producing zones*

The way of solving the problem of over-production of coffee which is likely to receive most serious attention is to shift resources, now employed in coffee growing, towards other agricultural and/or livestock activities. Such a development would make total farm incomes less vulnerable to declines in coffee prices.

In general, much improvement is possible along these lines. In comparison with previous periods of over-production of coffee, such as that of the 1930's, the range of alternative possibilities open to coffee farmers has considerably deepened and widened. A rapid development of the internal markets in coffee-producing countries has taken place, which has resulted in sharp increases in the demand for all food and agricultural commodities. Many of these could be produced in areas now mainly specialized in coffee growing.

The high level of coffee prices of the postwar period, however, has so far largely prevented this increased

planted coffee area of up to 80 per cent, freeing much of the land for other purposes.

demand for alternative products from being reflected in the production structure of coffee-growing areas. Though the rises in world coffee prices, which gathered momentum in 1949, were not fully passed on to producers (being partly absorbed by export taxes, exchange rate differentials, or other special levies),¹⁹ domestic coffee prices generally advanced until 1954 much more than the prices of other agricultural commodities (see table 5). Moreover, Government measures prevented the full impact of the decline in coffee prices from being passed on to the producer in the period 1954 to 1957.

The 1958 figures in the table do not yet fully reflect events in the second half of the year, when coffee prices (in local currencies) fell notably and prices of other agricultural commodities advanced sharply. At any rate it appears that the effect of recent price shifts has been to reverse the price gains of coffee relative to other agricultural commodities since the beginning of the post-war coffee boom in 1949, and domestic price relationships between coffee and other commodities have become much less favourable to coffee again.

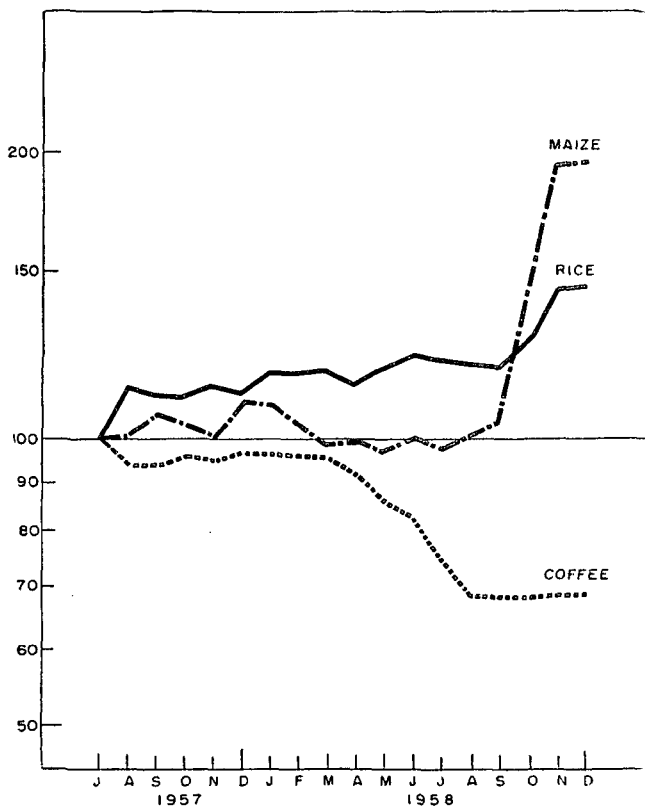
Table 6
PRICE INDICES OF MAJOR AGRICULTURAL COMMODITIES
RELATIVE TO COFFEE IN BRAZIL AND COLOMBIA
(Price relationship to coffee in July 1957 = 100)

Commodity	Colombia		Brazil	
	July 1958	December 1958 ^a	July 1958	December 1958 ^a
Rice	115	159	163	211
Beans	120	141	99	159
Maize	139	179	131	285
Meat	123	175	...	...
Milk	135	179	...	...

SOURCES: Wholesale prices in Bogotá market: *Boletín Mensual de Estadística*; Average prices received by farmers in the State of São Paulo: Department of Agriculture.
^a Preliminary.

¹⁹ Prices in local currency rose more than New York prices, but allowance must also be made for general increases in local prices. Consequently relative prices of coffee did not rise by as much as would have been justified by changes in world prices.

Figure II
 BRAZIL: SELECTED AGRICULTURAL PRICE INDICES ^a
 (July 1957 = 100)
 SEMILOGARITHMIC SCALE



Source: Department of Agriculture.
^a Average prices received by farmers in São Paulo State.

A major change in price relationships appears to have occurred in both Brazil and Colombia since the middle of 1957, when coffee prices started to recede (see table 6). By the end of 1958, farm coffee prices had fallen nearly 30 per cent from their 1957 peak levels in the main producing areas, while prices of other agricultural commodities continued to rise steadily. Consequently, in this 18-month period, the prices of staple foodstuffs in Brazil and Colombia, for instance, rose sharply relative to coffee prices. Shifts of this magnitude, which may well develop further over the next few years, are unlikely to leave the farming structure unaffected. Figures II and III further illustrate the recent price changes in some primary commodities that have taken place in the two main coffee-producing countries. The recent declines in farm coffee prices in domestic currencies reflect the tendency on the part of Governments to let producers shoulder an increasing proportion of the financial burden caused by over-production.

Indications are that the new price situation is already changing coffee farming in certain areas. In north-eastern São Paulo State, for instance, sizeable reductions in low-yielding coffee plantings seemed to be taking place in late 1958.²⁰ Much of the land freed was being

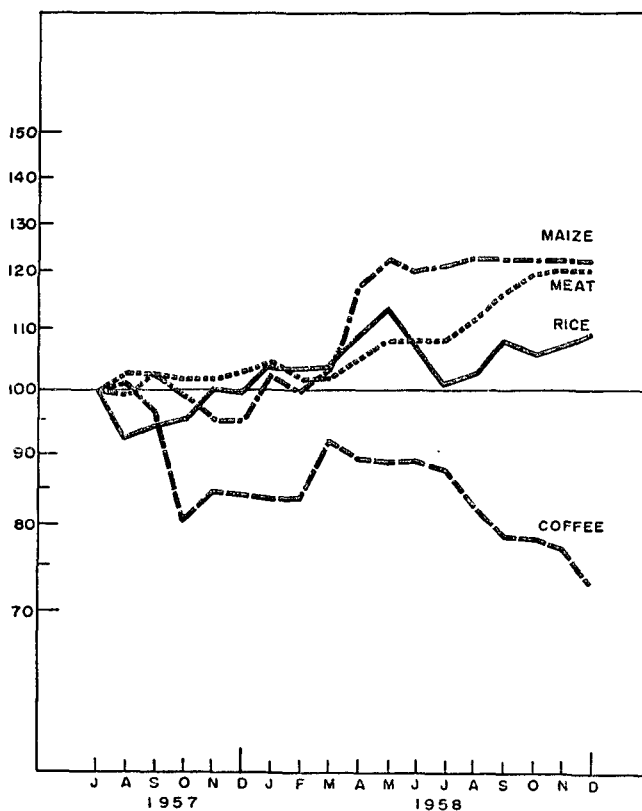
²⁰ Observations based on a field trip made in November 1958.

turned into pasture for dairy cows and in annual crops such as maize, but nearly always a certain proportion of it was replanted with coffee trees according to the "new system". These changes were effected without any special financial incentives other than the modified price relationships for coffee. Many farmers also seemed to be only awaiting further policy statements before changing to other crops. But in most parts of Latin America no such spontaneous production shifts have been reported so far, and diversification may prove more difficult.

While the price structure has thus become more favourable to non-coffee products, a situation which can be expected to last, there are several important general obstacles to a rapid increase in the production of these commodities on coffee farms, for example marketing and transport difficulties.

The great importance of coffee cultivation in Latin America is in no small degree due to the special handling advantages this commodity has over other agricultural products. Once processed on the farms, the high unit value of coffee makes its transport economical over long distances, and coffee can be stored for long periods without any deterioration in quality. It is apparent that, since efficient transport facilities are not

Figure III
 COLOMBIA: SELECTED AGRICULTURAL PRICE INDICES ^a
 (July 1957 = 100)
 SEMILOGARITHMIC SCALE



Source: National Administrative Department of Statistics, *Boletín Mensual de Estadística*, Bogotá.
^a Wholesale prices in Bogotá.

common in rural Latin America, many outlying coffee districts will not be able to supply on a competitive basis more bulky and/or more perishable agricultural commodities to the consuming centres. Transport costs would first have to be lowered and handling facilities improved.

Moreover most coffee farmers have very little experience in the commercial production of agricultural commodities other than coffee, so that technical extension campaigns would have to be conducted to assist them. Since the existing technical services have also been concerned principally with coffee cultivation, a new emphasis would have to be laid on commodities other than coffee by all concerned. In many areas the prevailing attitude towards diversification possibilities has been formed in periods differing greatly from the one now beginning. Therefore there is a general need to reappraise the various opportunities offered and to establish study groups for this purpose.²¹

Finally, the relatively small size of coffee farms in many parts of Latin America may also slow down the replacement of coffee by other commodities. Since coffee cultivation is based on a relatively intensive use of human labour, efficient production can take place on small planting units. This is less true for other crops. Consequently, labour requirements may be different for other types of farming. This implies that production switches on coffee farms must be studied from the point of view of labour, as well as from that of land.

A wide range of other crops is encountered on the coffee farms of most countries. In many areas these are mainly produced to supply the food requirements of farm families or those of the immediate neighbourhood, but commercial production has in places gradually evolved out of this pattern. In nearly all cases, however, these crops are destined for domestic consumption in the coffee-producing countries themselves, not for export.

In Colombia, for instance, the majority of coffee farms reported the production of one or more crops in addition to coffee.²² Bananas and plantains were the most frequent other crops, followed at a considerable distance by sugar cane, root crops, maize, cacao and minor food crops. But in most cases the value of these secondary crops amounted to a relatively small proportion of the total value produced on coffee farms, and production on a commercial scale was encountered only exceptionally. It was also found that the degree of specialization of coffee farms increased sharply as the average size of coffee plantings rose, further evidence of the subsistence nature of non-coffee crops on the smallest farms.

In El Salvador, the relative importance of alternative crops in coffee areas is even smaller, as land in the higher ranges is almost exclusively planted to coffee. Partial data available for other producing areas indicate that conditions do not differ greatly from those in Colombia or El Salvador, with the exception of parts of Brazil.

In Brazil, diversification is most highly developed in the State of São Paulo. In the last 25 years, the total area in coffee plantings has declined notably and many

alternative crops have increased in commercial importance. Among these are cotton, sugar cane, rice, maize, beans and citrus fruits. More recently, in certain cases, it has been found that coffee farming may be profitably combined with the growing of eucalyptus trees, castor seed, sisal and even fruits such as grapes and figs. The dynamic economic development of this State has greatly stimulated the adoption of these new crop combinations.

As the production of these new crops gradually improves, under the spur of local and national competition, the possibility of growing some of them for export has to be considered. At present, quantities of sugar, citrus fruit, and groundnuts are already exported by São Paulo, when the domestic market for such products is saturated. But regular large-scale exports of the commodities that might be produced on marginal coffee land would require the establishment of suitable market organizations, and so far the main impulse to their production has been provided by the growing domestic market.

The possibilities of increasing the production of alternative crops, in partial substitution for marginal coffee plantings, are therefore different in the various coffee-producing countries, and in their sub-regions. But, in general, it seems that they have been underestimated in the past, and that much can be done to increase crop diversification, especially as coffee cultivation tends to become less profitable.

Another possibility of diversification is the expansion of livestock farming on coffee farms. Such an expansion is feasible in view of the rapid rise in the potential market for livestock products in Latin America, as a result of their high income-elasticity of demand. *Per capita* consumption of meat, milk and poultry products is generally low, notoriously so in the region's coffee producing areas. Increases in livestock production, in connexion with changes in the coffee-growing structure, would be useful for another reason: the need to obtain organic fertilizer.

At present, coffee-livestock, combinations already occur fairly frequently. In Colombia, for instance, it was found that 15 per cent of all coffee farms reported livestock products as their principal source of income after coffee. Nearly one half of the value produced by all non-coffee activities on coffee farms could be attributed to livestock, and the value represented by this production amounted to 10 per cent of the value of coffee. It is clear therefore that livestock production is feasible in coffee areas, even in periods when coffee prices have been generally favourable to producers.²³

In the case of Colombia, the explanation of the importance of livestock farming in coffee areas seems to lie in the broken topography of the country, which often makes the cultivation of annual crops very difficult. Elsewhere in Latin America, the pattern may be different, but livestock production in combination with coffee is increasingly found in many areas where coffee growing is firmly established.

At any rate, the expansion of livestock production would be a serious possibility for most Latin American coffee regions. The specific pattern of production in

²¹ In Colombia, the National Federation of Coffee Growers has recently established such a group.

²² *Coffee in Latin America, op. cit.*, chapter IV.

²³ E/C.N.12/490, p. 28; the year of reference is 1955/56.

each case would naturally depend on a farm's site, the market situation and the quality and quantity of the land available for this purpose. In relatively highly developed areas, the combination coffee-dairy, or coffee-poultry might be the most successful, whereas in more remote areas beef production would probably have better prospects. In all cases, the manure produced could be used on the farm's coffee plantings. In certain parts of São Paulo, the high prices of fertilizing materials have even led to manure being the most highly valued product of the livestock held on coffee farms.

In general, the expansion of livestock production would require more land and less labour than an increase in non-coffee crops. This is especially the case with the raising of beef cattle. To some extent, this affects the Colombian situation, where the small coffee farm is typical. Nevertheless, it has been established that the average amount of agricultural and pastoral land per Colombian coffee farm was 20.1 hectares, as compared with only 3.3 hectares actually planted with coffee. Consequently, livestock production prospects there are not as unfavourable as is sometimes supposed.

On the whole, prospects for increasing livestock out-

put in the coffee-producing regions of Latin America appear to be moderately favourable, especially if technical, financial and marketing guidance is given to farmers and detailed local studies are made to establish the most profitable use of available resources.

Although the specific measures to stimulate the replacement or abandonment of marginal coffee plantings would depend on local conditions in each area, one possibility is a combination of direct subsidies with the application of technically supervised credit. Cash subsidies might be paid to farmers in compensation for eliminating productive coffee trees, and their payment would be contingent upon proof of such action. Technically supervised credit on the other hand could provide the basis for a readjustment in the production structure, both through stimulating non-coffee production on coffee farms, and through improvements in the productivity of the remaining coffee trees.

It would therefore seem to be possible to achieve simultaneously a reduction of the area under coffee plantings and of total production, with an increase in the productivity of coffee growing and with greater diversification.

IV. SUMMARY

1. For the first time since the Second World War, the Latin American coffee industry is faced with a serious problem of over-production caused by the maturation of large plantings established in the past decade. This problem is aggravated by the rise of African coffee production.

2. Although world coffee consumption is at a record level and may increase further, prospects are that the increased supplies cannot be absorbed by consumers at prices which producers would consider reasonable.

3. Coffee market prospects will therefore depend very largely on whether policies are adopted in producer countries to bringing about adjustments in the structure of production. National and international measures so far adopted have helped to achieve a temporary stabilization in the world market, but the question is now whether measures are needed at the farm level, directed at the roots of the problem, and, if so, what measures would be effective.

4. The elimination of excess productive capacity is one possibility deserving special attention under present conditions. Since a fall in coffee prices alone would hardly bring about the necessary reduction in the area planted, Government policies might aim specifically at obtaining this through financial assistance to farmers. If output declined in the least productive, and the worst situated, coffee areas this would increase the competitive strength of the industry.

5. The shift from coffee production would be greatly encouraged if profitable alternative uses could be found

for the resources freed. Although coffee farms are traditionally highly specialized, the growth of domestic markets has opened new opportunities of increasing the output of alternative crop and livestock production in coffee zones. Recent changes in farm price relationships tend to favour this development.

6. The principal long-term problem of coffee cultivation in Latin America remains its low average productivity of labour and land. Available technical improvements could raise productivity significantly, even though coffee cultivation may remain dependent on an intensive use of human labour. Greater efficiency would aid Latin American producers to meet increased world competition.

7. In most producing areas insufficient evidence is available on which to base integrated programmes for the improvement of the coffee industry, dealing with problems of excess capacity, low productivity, and diversification opportunities simultaneously. One of the first requirements in this connexion would be a co-ordination and strengthening of the many existing technical services and the establishment of national study groups considering the problem as a whole.

8. The financial resources required for the implementation of an effective farm programme for the Latin American coffee industry would be found, for example, by using part of the funds currently invested in inventory accumulation. One of the financial tools which could be used to influence farmers is technically supervised credit (to encourage the adoption of the recommendations formulated for each area).

1. 2. 3. 4. 5. 6. 7. 8.

STATISTICAL SUPPLEMENT

CONTENTS

<i>Table</i>	<i>Page</i>	<i>Table</i>	<i>Page</i>
GENERAL		10	Production of selected manufactures and semi-manufactures.
1	Latin America: selected short-term economic indicators (quarterly). 46		53
FINANCE		INTERNATIONAL TRADE	
2	Latin America: gold reserves. 47	11	Value of exports and imports (quarterly). 55
3	Latin America: foreign exchange reserves. 47	12	Quarterly export indices (1950 = 100) 56
4	Latin America: balance of payments with the United States (quarterly) 48	13	Quarterly export indices (1955 = 100) 57
MINING PRODUCTION		14	Quarterly exports of principal commodities. 58
5	Latin America: volume of mining production 49	15	Latin America: exports of principal commodities by destination. 62
6	Refining of non-ferrous metallic ores 49	16	Imports from Latin America. 66
7	Production of selected minerals. 50	17	Exports to Latin America 68
MANUFACTURING PRODUCTION		PRICES	
8	Latin America: volume of manufacturing production. 51	18	World market prices for principal Latin American exports. 70
9	Manufacturing production in selected Latin American countries 52	19	Wholesale prices in selected Latin American countries 71
		20	Cost of living in selected Latin American countries 71
		EXPLANATORY NOTES. 72	

INTRODUCTION

Over the past ten years, a considerable amount of statistical data for the Latin American region has been tabulated by ECLA. Some of the series have been shown in the annual *Economic Survey* or in the studies presented at various conferences. Many of the series, however, have been used only as background material upon which ECLA's economists have based their analyses and as a result have not been available to the public. It has thus not been possible for the reader to obtain consecutive series.

While in the past, the resources at ECLA's disposal did not permit the systematic publication of the data, the *Economic Bulletin* and the *Economic Survey* will henceforth contain statistical supplements showing annual and quarterly series basic to ECLA's work. The first set of such tables appeared in the most recent issue of the *Economic Bulletin* —Volume III, No. 2— when basic data relating to population, national income, capital formation, finance, balance-of-payments, prices and trade were published. The present issue brings up-to-date the

quarterly series published in that *Bulletin*. In addition, it contains new series relating to mining and industrial production and the destination of leading products exported from the region. Trade index numbers calculated to the base 1955 (which has now been adopted for ECLA's current studies) are also shown. Series relating to agricultural production have not yet been published as certain incomparabilities in national data (notably the statistical treatment given to harvests which overlap the calendar year) have yet to be eliminated. Work is however proceeding on this problem and it is hoped to present these series at an early date.

It is emphasised that tables given represent merely the data adopted or elaborated by ECLA for internal use. In no event are they to be considered as a substitute for statistics published officially by the country concerned or by the U.N. Statistical Office. It should also be noted that data for the most recent periods shown in the tables are to be considered as provisional, and in certain cases are estimates based on partial information.

Table 1
LATIN AMERICA: SELECTED SHORT-TERM ECONOMIC INDICATORS (QUARTERLY)

Series	Unit	1956				1957				1958		
		I	II	III	IV	I	II	III	IV	I	II	III
<i>Production</i>												
1. Mining	1955 = 100	108	108	113	115	124	127	124	120	116	114	119
2. Manufacturing	1955 = 100	99	107	109	104	103	109	114	111	106	113	116
<i>International trade</i> ^a												
3. Total imports: values	Millions of dollars	1 893	1 946	1 956	2 133	2 272	2 320	2 381	2 528	2 044	2 174	2 129 *
4. Total exports: values	"	2 145	2 130	2 076	2 177	2 281	2 165	2 092	2 112	2 011	2 023	1 972 *
5. Trade balance: values	"	+ 252	+ 184	+ 120	+ 44	+ 9	- 155	- 289	- 416	- 33	- 151	- 157 *
6. Imports from United States	"	882	906	884	1 096	1 037	1 124	1 110	1 195	1 041	1 017	972
7. Exports to United States	"	1 007	905	908	820	1 030	900	881	957	933	908	818
8. Imports from Western Europe ^c	"	448	482	460	560	544	548	584	677	573	552	547 ^c
9. Exports to Western Europe ^c	"	589	614	618	656	743	761	698	628	621	622	586 ^c
10. Total exports: quantum	1955 = 100	→ 109 ←				115	108	108	112	108	108	110 *
11. Total exports: unit value	1955 = 100	→ 98 ←				99	100	97	94	93	94	89 *
<i>Prices and finances</i>												
12. Exports of foodstuffs and raw materials: price index												
(a) Total	1955 = 100	100	100	101	101	104	102	98	97	95	93	91
(b) Total excluding petroleum	1955 = 100	100	100	100	100	104	101	97	95	92	90	87
13. Gold and foreign exchange holdings ^e	Millions of dollars	3 550	3 525	3 525	3 680	3 700	3 995	3 865	3 805	...	...	...

SOURCES AND METHODS: See Explanatory Notes.

^a The data are indicated at f.o.b. values except for total imports (item 3). ^b Two months only. ^c Excluding Finland, Spain and Yugoslavia. ^d Including an estimate for Belgium based on a two-month period. ^e End of period.

Table 2
LATIN AMERICA: GOLD RESERVES ^a
(Millions of dollars)

Country	1957				1958		
	March	June	September	December	March	June	September
Argentina	193	181	166	126	126	125	...
Bolivia	1	2	2	1	1	1	1
Brazil	324	324	324	324	324	325	325
Colombia	57	58	58	62	65	67	70
Chile	46	43	40	40	40	40	40
Ecuador	22	22	22	22	22	22	22
Peru	35	35	35	28	20	20	20
Uruguay	183	183	183	180	180	180	180
Venezuela	669	669	719	719	719	720	720
Sub-total ^b	1 530	1 517	1 549	1 502	1 497	1 500	...
Costa Rica	2	2	2	2	2	2	2
Cuba	136	136	136	136	136	136	135
El Salvador	32	31	31	31	31	31	31
Guatemala	27	27	27	27	27	27	27
Honduras	—	—	—	—	—	—	—
Mexico	166	165	182	180	158	153	147
Nicaragua	1	1	1	1	1	1	1
Panama	—	—	—	—	—	—	—
Dominican Republic	11	11	11	11	11	11	11
Sub-total ^b	375	372	391	388	368	360	354
Grand total: Latin America ^b	1 900	1 890	1 940	1 890	1 865	1 860	...

SOURCE: *International Financial Statistics*, October 1958 and February 1959.

^a At end of specified month.

^b Including estimates for non-specified countries. In some cases, the sum of the figures for the specified countries exceeds the total for Latin America in the source utilized.

Table 3
LATIN AMERICA: FOREIGN EXCHANGE RESERVES ^a
(Millions of dollars)

Country	1957				1958		
	March	June	September	December	March	June	September
Argentina	206	242	206	185	...	...	...
Bolivia . . . . .	...	1	...	...	...	...	...
Brazil	249	124	122	150	39	120	152
Colombia	152	154	74	83	52	42	68
Chile	26	24	13	6	10	7	9
Ecuador	10	15	18	17	10	10	15
Peru	24	24	8	6	9	7	8
Uruguay	18	7	—	—	—	—	—
Venezuela	258	656	704	726	518	585	355
Total ^b	945	1 250	1 145	1 175	...	...	...
Costa Rica	17	17	13	10	14	20	14
Cuba	341	399	370	305	301	289	275
El Salvador	26	30	19	8	14	16	6
Guatemala	55	51	41	47	44	42	28
Honduras	20	24	18	16	17	13	10
Mexico	303	240	240	272	239	177	191
Nicaragua	12	18	10	10	21	23	11
Panama	37	39	37	29	32	38	42
Dominican Republic	24	27	26	34	28	30	32
Total ^b	855	855	780	740	720	648	609
Grand total: Latin America	1 800	2 105	1 925	1 915	...	...	...

SOURCE: *International Financial Statistics*, *op. cit.*

^a At end of specified month.

^b August.

^c Including estimates for non-specified countries.

Table 4
LATIN AMERICA: BALANCE OF PAYMENTS WITH THE UNITED STATES (QUARTERLY)
(Millions of dollars)

Item	1957				1958		
	I	II	III	IV	I	II	III
A. Goods and services							
Total balance ^a	— 231	— 486	— 445	— 463	— 262	— 274	— 316
Goods: balance	— 6	— 225	— 227	— 241	— 92	— 89	— 97
Exports to the United States	+1 062	+ 945	+ 926	+ 996	+ 967	+ 950	+ 892
Imports from the United States	—1 068	—1 170	—1 153	—1 237	+1 059	—1 039	— 989
Services: balance	— 225	— 261	— 218	— 222	— 170	— 185	— 219
Imports from the United States	— 473	— 504	— 488	— 482	— 417	— 434	— 468
Including: investment income	— 251	— 271	— 243	— 250	— 206	— 211	— 226
Exports to the United States	+ 248	+ 243	+ 270	+ 260	+ 247	+ 249	+ 249
B. Movement of private United States capital and others (total)	+ 241	+ 595	+ 306	+ 315	+ 141	+ 243	+ 40
Private United States capital	+ 232	+ 583	+ 295	+ 306	+ 134	+ 234	+ 32
Donations	+ 9	+ 12	+ 11	+ 9	+ 7	+ 9	+ 8
C. Credit or debit balance resulting from transactions in goods and services, donations and private United States capital (A + B)	+ 10	+ 109	— 139	— 148	— 121	— 31	— 276
D. Loans from United States Government (excluding military aid), and others (total)	+ 45	+ 55	+ 73	+ 94	+ 94	+ 75	+ 248
Loans	+ 14	+ 24	+ 49	+ 59	+ 57	+ 39	+ 222
Donations	+ 31	+ 31	+ 24	+ 35	+ 37	+ 36	+ 26
E. Variations in foreign holdings of gold and assets abroad (total)	— 17	— 354	— 8	+ 205	+ 84	+ 35	+ 223
Long-term variations in assets	— 10	— 1	—	+ 7	+ 4	+ 66	+ 6
Short-term variations in assets	— 13	— 366	— 23	+ 151	+ 80	— 31	+ 205
Gold purchases and sales	+ 6	+ 13	+ 15	+ 47	—	—	+ 12
F. Errors, omissions and inter-regional dollar transfers	— 38	+ 190	+ 74	— 151	— 57	— 79	— 195

SOURCE: *Survey of current business*, June, September and December 1958.
^a Excluding military transfers.

Table 5
LATIN AMERICA: VOLUME OF MINING PRODUCTION
 Gross output at 1955 international prices
 (1955 = 100)

	Weighting 1955	1945	1948	1950	1951	1952	1953	1954	1955	1956	1957
A. By product											
Coal	4.7	75	81	79	83	88	93	94	100	102	99*
Crude petroleum	69.9	44	63	71	80	84	83	89	100	113	125
Iron ore.	3.2	8	29	34	47	51	65	83	100	127	167
Copper ore.	11.6	105	98	87	91	94	86	86	100	114	112
Lead ore.	2.3	76	79	96	99	106	101	97	100	99	107
Zinc ore.	1.0	64	57	72	68	85	85	88	100	97	94
Tin ore.	1.4	152	132	112	118	114	124	102	100	96	99
Silver	2.1	113	104	100	99	113	104	92	100	94	99*
Gold	1.6	123	97	109	104	108	110	99	100	96	91*
Sulphur	0.4	8	5	7	13	21	16	30	100	150*	200*
Sodium nitrate	1.8	90	119	104	109	93	92	102	100	75	84*
Total	100.0	57	70	75	82	86	82	89	100	110	121*
B. By country											
Argentina	2.5	79	80	81	85	91	95	97	100	101	111
Bolivia	2.0	126	120	103	110	107	111	96	100	100	104
Brazil	2.3	66	72	75	80	88	93	89	100	102	124*
Colombia	4.2	60	60	80	89	88	93	96	100	111	111
Chile	12.9	100	105	90	94	96	89	89	100	108	108*
Mexico	12.3	71	77	87	89	93	89	92	100	104	104
Peru	4.3	62	51	66	74	79	84	96	100	109	120
Venezuela	58.7	40	60	67	77	82	80	87	100	115	130

SOURCE: ECLA, based on country data given in table 6. (For methods used, see Explanatory Notes.)

Table 6
REFINING OF NON-FERROUS METALLIC ORES
 (Percentage of domestic ores smelted or refined in the country)

Country	Copper			Lead			Zinc			Tin		
	1945-	1950-	1955-	1945-	1950-	1955-	1945-	1950-	1955-	1945-	1950-	1955-
	47	52	57	47	52	57	47	52	57	47	52	57
Argentina.	a	a	a	94	94	88	12	65	56	76	84	85
Bolivia.	—	—	—	—	—	—	—	—	—	—	—	—
Chile	98	95	94	—	—	—	—	—	—	—	—	—
Mexico.	88	89	83	98	90	95	27	25	22	99	66	50
Peru.	79	73	72	74	52	51	2	2	11	a	a	a
Total	92	88	90	89	74	74	19	18	20	2	2	2

SOURCES AND METHODS: See Explanatory Notes.
 a All refined ore is of foreign origin.

Table 7
PRODUCTION OF SELECTED MINERALS

Country	1945	1948	1950	1951	1952	1953	1954	1955	1956	1957
COAL (thousands of tons)										
Argentina.	3	18	26	40	112	82	93	133	152	206
Brazil	2 073	2 025	1 959	1 963	1 960	2 025	2 055	2 268	2 234	2 060 *
Colombia.	730	882	1 010	1 115	966	1 230	1 500	1 800	1 900	...
Chile a	2 078	2 271	2 181	2 211	2 417	2 336	2 267	2 308	2 277	2 096
Mexico.	915	1 057	912	1 119	1 317	1 432	1 314	1 342	1 408	1 421
Peru.	201	189	197	186	225	281	258	115	129	140
Venezuela	17	18	26	28	25	29	32	31	31	35
Total	6 017	6 460	6 311	6 662	7 022	7 415	7 519	7 997	8 131	...
CRUDE PETROLEUM (thousands of tons)										
Argentina.	3 274	3 323	3 357	3 501	3 552	4 079	4 229	4 367	4 440	4 860
Bolivia.	50	60	80	68	67	78	221	351	417	466
Brazil	10	19	38	90	98	120	130	264	524	1 321
Colombia.	3 157	3 291	4 711	5 311	5 351	5 454	5 530	5 493	6 104	6 336
Chile	—	—	82	99	119	164	226	336	462	565
Ecuador	345	338	347	357	375	391	415	466	451	421
Mexico.	6 231	8 372	10 363	11 062	11 057	10 364	11 969	12 793	12 972	12 696
Peru.	1 827	1 872	2 051	2 139	2 259	2 126	2 280	2 302	2 544	2 556
Venezuela	47 304	71 672	79 975	91 007	96 571	94 229	101 186	115 168	131 521	148 380
Total	62 198	88 947	101 004	113 634	119 449	117 005	126 186	141 540	159 435	177 601
IRON ORE (thousands of tons of metal content)										
Brazil	442	1 069	1 351	1 637	2 150	2 460	2 088	2 300	2 073	2 780 b
Chile	173	1 681	1 771	1 961	1 426	1 723	1 365	940	1 663	1 678
Mexico.	175	227	286	313	340	331	314	429	489	575
Peru.	—	—	—	—	—	558	1 118	1 024	1 561	2 077
Venezuela	—	—	127	813	1 261	1 470	3 469	5 401	7 049	9 770
Total	790	2 977	3 408	4 724	5 177	6 542	8 354	10 094	12 835	16 880
COPPER ORE (thousands of tons of metal content)										
Bolivia c	6.1	6.6	4.7	4.8	4.7	4.5	3.7	3.5	4.4	3.9
Cuba	8.9	15.4	21.0	19.6	17.7	15.5	15.4	17.7	14.6	13.9
Chile	470.2	445.1	362.9	380.7	408.6	362.2	363.7	433.5	489.7	484.3
Mexico.	61.7	59.1	61.7	67.4	58.5	60.1	54.8	54.7	73.3	60.7
Peru.	31.9	18.1	30.3	32.3	30.4	35.4	37.7	43.4	46.2	58.5
Total	578.8	544.3	480.6	504.8	519.9	477.7	475.3	552.8	628.2	621.3
LEAD ORE (thousands of tons of metal content)										
Argentina.	18.2	25.5	24.9	29.3	24.9	19.0	21.4	26.8	29.2	30.7
Bolivia c	9.5	25.6	31.2	30.6	30.0	23.8	18.2	19.1	21.6	26.3
Chile	0.1	6.2	3.4	7.3	6.6	5.2	4.0	4.0	3.2 *	3.6 *
Mexico	205.3	193.3	238.1	225.5	246.0	221.5	216.6	210.8	199.6	214.9
Peru.	53.7	48.5	64.9	82.4	95.8	114.6	110.1	118.8	121.1	131.3
Total	286.8	299.1	362.5	375.1	403.3	384.1	370.3	379.5	374.7	406.8
ZINC ORE (thousands of tons of metal content)										
Argentina.	13.1	12.2	12.7	15.5	15.4	16.1	18.9	21.2	23.9	29.4
Bolivia.	21.0	21.1	19.6	30.5	35.6	24.0	20.4	21.3	17.1	19.7
Mexico.	209.9	179.0	223.5	180.1	227.4	226.5	223.7	269.4	248.9	243.0
Peru.	61.2	58.8	87.9	101.2	127.8	139.1	158.6	166.1	175.1	157.6
Total	305.2	271.1	343.7	327.3	406.2	405.7	421.6	478.0	465.0	449.7
TIN ORE (tons of metal content)										
Argentina.	1 101	284	261	241	265	156	97	86	85	184
Bolivia c	43 168	37 935	31 714	33 664	32 472	35 384	28 287	28 369	27 273	28 242
Mexico.	177	185	447	372	419	483	355	615	508	481
Total	44 446	38 404	32 422	34 277	33 156	36 023	29 739	29 070	27 866	28 907
SILVER (tons)										
Argentina.	223	212	235	240	340	223	155	100	52	42
Bolivia d	208	235	204	223	220	190	157	184	235	167
Colombia	5	3	4	4	4	4	4	4	3	...
Chile.	25	27	29	37	44	47	46	53	57	48
Honduras.	110	97	136	125	112 c	173 c	107 c	— c	— c	...
Mexico.	1 900	1 789	1 528	1 362	1 566	1 464	1 241	1 492	1 340	1 467
Peru.	404	289	416	541	597	611	635	714	700	787
Total	2 875	2 652	2 552	2 532	2 883	2 642	2 345	2 547	2 387	...

See Explanatory Notes at end of table.

Table 7 (Continued)
PRODUCTION OF SELECTED MINERALS

Country	1945	1948	1950	1951	1952	1953	1954	1955	1956	1957
GOLD (kilogrammes)										
Bolivia d	183	208	240	99	335	713	1 325 * e	2 296 e	750 e	1 460 e
Brazil e	5 073	4 051	4 082	4 228	4 252	3 604	3 718	3 409	3 802	3 547
Colombia	15 760	10 428	11 801	13 397	13 133	13 562	11 741	11 845	13 634	10 114
Chile	5 610	5 105	5 984	5 439	5 229	4 065	3 887	3 822	2 938	3 222
Ecuador	2 155	2 466	3 059	392	756	909	589	476	469	504
El Salvador	354	646	916	767	800	620	166	119	93	...
Honduras e	585	688	1 137	1 039	1 104	1 479	635	25	50	...
Mexico	15 530	11 434	12 694	12 237	14 289	15 038	12 034	11 909	10 893	10 771
Nicaragua e	6 419	6 850	7 157	7 792	7 921	8 058	7 252	7 141	6 728	6 212
Peru	5 370	3 458	4 602	4 923	4 073	4 412	4 585	5 311	4 948	4 786
Venezuela	2 390	1 547	1 072	89	149	849	1 744	1 902	2 111	2 803
Total	59 429	46 881	52 744	50 402	52 041	53 309	47 676	48 255	46 416	...
SULPHUR (thousands of tons)										
Argentina	11.5	8.4	7.8	7.7	18.6	19.0	21.3	18.7	18.9	17.3
Bolivia e	0.6	2.7	4.4	7.8	5.6	2.5	2.6	4.0	3.5	0.8
Chile	20.8	13.3	15.4	30.2	48.6	32.6	39.7	50.9	...	...
Mexico	8.5	5.2	11.4	29.1	49.1	34.1	114.5	521.3	94.6	1 068.7
Peru	1.2	1.0	0.1	2.3	5.1	5.0	—	—	—	...
Total	42.6	30.6	39.1	77.1	127.0	93.2	178.1	594.9	...	...
SODIUM NITRATE (thousands of tons)										
Chile	1 384	1 835	1 608	1 680	1 438	1 421	1 574	1 540	1 159	1 300 * f

SOURCES AND METHODS: See Explanatory Notes.

a Including lignite.

b Estimate based on export trend.

c Exports.

d Exports plus purchases by the Central Bank and the Mining Bank.

e Mined gold only.

f Estimate based on first 10 months.

Table 8
LATIN AMERICA: VOLUME OF MANUFACTURING PRODUCTION
Regional average of national series, using added value weights
(Indices: 1955 = 100)

Industrial group	ISIC Groups	Weighting 1955 a	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	
			A. ANNUAL										
Total manufacturing	2—3	100.0	73	74	79	83	83	85	93	100	105	109	
Including:													
Foodstuffs, beverages, tobacco	20—22	29.0	72	74	81	85	90	92	96	100	106	113	
Textiles	23	12.8	84	86	86	86	83	85	95	100	103	98	
Paper and paper products	27	2.1	64	66	76	82	77	81	91	100	111	123	
Chemicals, petroleum a	31—32	16.4	64	68	76	78	77	77	88	100	111	118	
Non-metallic mineral products	33	5.7	55	61	69	73	74	83	91	100	109	117	
Basic metals	34	4.8	62	68	78	81	82	84	92	100	107	113	
			1956				1957				1958		
	ISIC Groups		I	II	III	IV	I	II	III	IV	I	II	III
B. QUARTERLY													
Total manufacturing	2—3	99	107	109	104	103	109	114	111	106	113	116	
Including:													
Foodstuffs, beverages, tobacco	20—22	98	106	113	106	107	111	116	115	109	117	...	
Textiles	23	96	105	108	103	94	100	103	95	86	97	...	
Paper and paper products	27	107	111	114	111	121	115	132	123	122	127	...	
Chemicals, petroleum a	31—32	108	108	112	115	110	117	124	120	120	125	...	
Non-metallic mineral products	33	104	112	112	110	111	116	119	121	108	117	...	
Basic metals	34	108	110	109	99	108	112	112	118	114	124	...	

SOURCE: United Nations, *Monthly Bulletin of Statistics*, January and November 1958. Data for 1958 were supplied by the United Nations Statistical Office.

a Including coal products.

Table 9
MANUFACTURING PRODUCTION IN SELECTED LATIN AMERICAN COUNTRIES
(Indices: 1955 = 100)

Group	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
ARGENTINA										
Foodstuffs	89	89	91	87	90	95	96	100	117	111
Beverages	76	80	85	88	84	82	85	100	96	94
Tobacco	87	93	91	94	100	99	95	100	98	97
Textiles	109	113	110	109	90	89	95	100	102	95
Wearing apparel	122	118	106	100	89	93	84	100	97	90
Wood and furniture	125	113	115	115	99	104	106	100	99	107
Paper and paperboard	70	68	78	86	74	65	85	100	111	114
Printing and publishing	115	106	121	103	74	79	90	100	104	126
Leather and leather products	133	122	123	119	101	99	96	100	99	99
Rubber products	70	62	58	82	85	70	86	100	97	102
Chemical products	80	80	88	91	82	81	88	100	102	111
Petroleum refining	63	63	78	78	84	88	94	100	103	125
Cement, glass, china earthenware and pottery	88	93	98	96	87	85	91	100	107	115
Basic metal products	78	84	90	93	69	69	87	100	98	103
Metal products (excluding machinery)	79	71	76	83	72	66	80	100	90	108
Vehicles and machinery	120	86	78	83	83	79	85	100	83	103
Electrical machinery and appliances	53	54	62	69	78	75	79	100	98	110
Ship building and repairing	76	64	60	80	103	95	92	100	57	50
Miscellaneous	77	81	94	105	106	91	104	100	92	83
General index	91	88	91	93	86	84	90	100	99	102
BRAZIL										
Foodstuffs	64	68	75	82	87	94	89	100	...	...
Beverages	57	58	69	82	89	92	94	100	...	...
Tobacco	45	52	59	70	77	79	92	100	...	...
Textiles	66	71	75	73	77	81	95	100	...	...
Footwear	68	69	76	92	84	87	83	100	...	...
Paper and paperboard	60	69	79	83	83	93	96	100	...	...
Rubber and rubber products	50	62	70	80	86	97	97	100	93	98
Pharmaceutical products	76	80	94	117	109	112	121	100	...	...
Glass and china, earthenware and pottery	51	58	66	79	82	97	95	100	...	...
Cement	43	49	53	56	62	78	93	100	126	123
Iron and steel	43	51	66	72	70	85	98	100	114	121
General index	60	65	73	77	80	87	95	100	...	...
CHILE										
Foodstuffs	75	76	78	82	86	102	104	100	106	106
Beverages	67	70	70	70	82	95	92	100	108	108
Tobacco	94	90	92	86	93	96	98	100	100	85
Textiles	82	83	82	81	87	94	98	100	90	92
Footwear and wearing apparel	97	87	88	86	89	97	99	100	87	90
Paper and paperboard	75	77	78	81	84	91	100	100	98	111
Chemical products	91	92	93	104	107	101	104	100	106	113
Coal derivatives	99	102	102	97	95	102	101	100	100	98
Cement and glass	93	88	90	98	108	102	102	100	91	81
Iron and steel	30	39	25	84	105	112	119	100	144	149
General index	67	70	70	82	91	98	103	100	107	106
PERU										
Foodstuffs	65	71	75	76	80	90	94	100	101	
Beverages	43	45	53	64	86	103	95	100	99	
Tobacco	74	87	93	90	90	98	104	100	103	
Textiles	75	80	71	79	81	81	101	100	106	
Footwear and wearing apparel	37	40	47	56	64	74	86	100	112	
Wood and furniture	32	32	53	83	83	84	89	100	104	
Paper and paperboard	39	45	39	64	55	76	102	100	130	
Printing and publishing	35	61	52	68	65	69	85	100	113	
Leather	62	64	78	87	89	88	88	100	117	
Rubber products	53	52	50	79	68	105	99	100	93	
Chemical products	44	59	52	67	74	75	87	100	124	
Petroleum refining	81	83	82	91	93	94	98	100	105	
Cement, glass and china, earthenware and pottery	67	65	64	66	64	75	90	100	95	
Basic metal products	38	50	52	63	64	74	76	100	122	
Metal transforming industries	53	60	61	86	91	108	87	100	107	
General index	53	60	61	69	72	81	88	100	111	

Table 9 (Continued)
MANUFACTURING PRODUCTION IN SELECTED LATIN AMERICAN COUNTRIES
(Indices: 1955 = 100)

Group	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
VENEZUELA										
Foodstuffs	37	41	46	49	58	68	81	100	102	101
Beverages.	46	55	61	73	85	87	92	100	104	110
Tobacco	55	61	61	65	78	85	95	100	102	105
Textiles	40	39	38	54	65	76	93	100	105	127
Wearing apparel	21	23	27	31	43	66	80	100	122	103
Wood and furniture.	35	41	48	48	52	65	86	100	106	118
Paper and paperboard	96	92	84	98	101	96	92	100	109	128
Printing and publishing	19	28	32	37	47	58	65	100	96	102
Skins and hides.	64	64	67	64	71	77	87	100	105	112
Rubber products	11	8	27	33	41	57	96	100	122	142
Chemical products	39	39	40	44	59	80	91	100	111	134
Pharmaceutical products	30	38	38	41	65	75	89	100	91	90
Petroleum refining	8	17	45	59	68	73	76	100	108	125
Construction materials.	19	26	38	45	59	72	89	100	112	143
Metallurgical industry	4	8	15	26	34	47	83	100	93	117
Miscellaneous.	16	23	26	30	46	64	84	100	118	146
General index b.	31	36	43	51	61	71	85	100	105	118
GUATEMALA										
Foodstuffs	96	103	100	100	100	96	77	100	106	131
Beverages.	93	93	98	99	104	102	107	100	111	118
Tobacco	86	91	95	100	103	97	104	100	107	106
Textiles	121	103	104	82	106	95	105	100	111	121
Wearing apparel	88	86	87	76	86	91	88	100	106	137
Wood.	72	72	73	71	63	58	69	100	130	117
Skins and hides.	112	103	111	119	115	109	122	100	117	107
Chemical industries	60	94	91	93	99	104	96	100	104	131
Total index c.	89	91	94	92	97	95	95	100	109	121

SOURCES AND METHODS: See Explanatory Notes.

a Including leather footwear.

b Including electricity production and water supply.

c Including the non-metallic minerals group and excluding electricity.

Table 10
PRODUCTION OF SELECTED MANUFACTURES AND SEMI-MANUFACTURES
(Thousands of tons)

Country	1950	1951	1952	1953	1954	1955	1956	1957
CEMENT								
Argentina.	1 568	1 543	1 539	1 659	1 707	1 869	2 029	2 340
Brazil	1 386	1 456	1 619	2 030	2 477	2 720	3 267	3 211
Colombia.	580	648	700	873	962	1 046	1 220	1 211
Cuba.	316	382	419	405	420	463	613	651
Chile	513	698	818	762	775	804	771	727
Ecuador	58	79	89	91	95	145	152	155
Mexico.	1 388	1 535	1 640	1 672	1 766	2 086	2 277	2 519
Peru.	329	360	371	449	483	545	555	547
Dominican Republic	72	104	137	130	160	234	263	280
Uruguay	300	293	287	294	295	292	348	424
Venezuela.	501	621	840	982	1 213	1 282	1 451	1 747
Other countries	116	157	185	214	240	273	318	365
Total.	7 127	7 876	8 644	9 561	10 593	11 759	13 264	14 177
PIC IRON								
Argentina.	18	19	32	36	40	35	35	34
Brazil.	729	775	812	880	1 089	1 069	1 152	1 252
Colombia.	—	—	—	—	—	99	116	126
Chile	110	240	270	286	305	256	367	382
Mexico.	227	254	304	242	252	328	408	429
Total.	1 084	1 288	1 418	1 444	1 686	1 787	2 078	2 223

See Explanatory Notes at end of table.

Table 10 (Continued)

PRODUCTION OF SELECTED MANUFACTURES AND SEMI-MANUFACTURES
(Thousands of tons)

Country	1950	1951	1952	1953	1954	1955	1956	1957
STEEL INGOTS								
Argentina	130	132	126	174	186	218	202	222
Brazil	789	843	893	1 016	1 148	1 156	1 375	1 299
Colombia	—	—	—	—	—	77	100	129
Chile	56	172	243	313	321	290	381	388
Mexico	391	473	544	537	591	725	888	1 050
Uruguay	—	—	—	—	—	—	13	10
Total	1 366	1 620	1 806	2 040	2 246	2 466	2 959	3 098
FINISHED STEEL								
Argentina	268	302	301	286	538	677	631	703
Brazil	623	697	719	841	971	1 030	1 142	973
Colombia	—	—	—	—	—	35	81	112
Cuba	—	—	—	—	—	—	15	15
Chile	—	139	188	217	238	236	276	269
Mexico	383	465	526	431	503	586	710	880
Peru	—	—	—	—	—	—	—	6
Uruguay	—	32	—	—	26	32	30	30
Total	—	1 635	1 734 *	1 775 *	2 276	2 596	2 885	2 988
SULPHURIC ACID								
Argentina	77.2	64.5	60.4	56.6	54.0	100.0	122.5	117.5
Brazil	121.8	107.7	150.4	96.5	—	121.0	185.0	302.0
Colombia	6.5	6.5	6.5	8.2	8.0	10.0	10.5	9.8
Cuba	25.3	26.9	24.3	26.0	31.9	27.5	32.2	32.2
Chile	13.0	16.0	17.5	17.5	20.0	40.0	45.0	45.0
Mexico	43.4	56.7	92.2	102.5	110.0	126.5	158.8	181.6
Peru	10.7	12.4	13.1	13.1	15.1	14.8	13.2	20.2
Uruguay	3.4	4.4	5.3	6.3	6.0	8.3	8.0	8.5
Venezuela	—	—	—	—	5.0	3.0	4.0	4.0
Total	301.3	295.1	369.7	326.7	—	451.1	579.2	720.8
CAUSTIC SODA								
Argentina	8.7 ^a	—	—	11.1	12.2	28.0	31.0	32.0
Brazil	15.0	—	—	15.0	15.0	23.0	30.0	41.0
Colombia	0.2	—	—	7.0	10.0	12.0	17.0	15.2
Chile	5.4	—	—	3.7	4.0	4.0	3.8	3.5
Mexico	5.4	—	—	13.5	16.6	23.8	25.8	34.2
Peru	0.9	—	—	1.0	1.0	1.3	1.4	1.4
Total	35.6	—	—	51.3	58.8	92.1	109.0	127.3
SODIUM CARBONATE								
Colombia	—	—	—	6.6	11.0	14.3	14.2	16.9
Chile	9.8	—	—	9.3	11.1	17.2	17.5	17.5
Mexico	2.0	—	—	—	—	30.4	30.2	31.0
Total	11.8	—	—	15.9	22.1	61.9	61.9	65.4
WOOD-PULP								
Argentina	38	42	37	39	53	57	65	63
Brazil	152	163	175	180	175	186	209	221
Chile	15	16	17	15	19	18	20	34
Mexico	60	68	73	74	82	94	135	158
Peru	5	7	8	10	12	12	15	14
Total	270	296	310	318	341	367	444	490
NEWSPRINT								
Argentina	2.8	3.0	0.6	7.6	22.1	21.6	17.2	12.0
Brazil	37.9	41.1	43.2	41.5	30.6	37.2	39.4	49.0
Chile	11.0	11.0	12.0	9.0	12.0	11.0	11.2	19.5
Total	51.7	55.1	55.8	58.1	64.7	69.8	67.8	80.5
OTHER PAPER								
Argentina	208.2	227.6	199.4	166.8	222.7	262.0	290.3	290.6
Brazil	210.0	220.0	218.7	249.9	283.6	295.9	341.1	313.6
Chile	30.0	32.0	41.0	37.0	36.0	41.0	49.3	42.3
Mexico	179.6	190.0	184.8	192.7	207.2	228.6	254.9	307.0
Peru	14.9	22.3	21.5	23.9	26.9	28.5	34.6	34.3
Venezuela	8.4	8.6	8.9	9.3	10.4	12.3	14.9	18.9
Total	651.1	700.5	674.3	679.6	786.8	868.3	985.1	1 006.7

SOURCES AND METHODS: See Explanatory Notes.
^a Only surpluses for sale.

Table 11
VALUE OF EXPORTS AND IMPORTS (QUARTERLY)
(Millions of dollars)

Country	1956		1957				1958		
	III	IV	I	II	III	IV	I	II	III
(a) EXPORTS F.O.B.									
Argentina	232.2	268.4	279.6	243.4	215.2	236.6	242.8	254.3	223.8
Bolivia	21.9	42.2	20.1	27.7	22.6	27.3	14.9	17.6	...
Brazil	383.6	379.6	345.3	270.1	359.5	416.7	270.8	303.8	312.7
Colombia	128.0	120.7	140.1	108.2	138.2	124.1	105.7	94.3	134.3
Chile	132.2	152.8	125.9	118.5	104.3	110.6	103.0	66.4	...
Ecuador	29.8	26.9	20.1	21.0	32.0	25.6	19.6	20.1	33.1
Paraguay	8.5	8.5	6.2	8.6	10.3	7.8	5.2	9.1	10.2
Peru	82.7	83.8	71.1	80.8	76.9	92.6	61.2	65.6	78.8
Uruguay	33.3	65.4	57.3	29.4	24.9	16.7	44.6	28.7	27.2
Venezuela	535.3	567.8	597.6	614.2	588.8	566.0	567.9	560.5	567.4
Total	1 587.4	1 716.1	1 663.3	1 521.9	1 572.7	1 624.0	1 435.7	1 420.4	1 466.4 *
Costa Rica a	9.5	17.8	29.6	20.6	13.1	19.0	27.4	29.7	14.5
Cuba a	195.7	114.3	201.0	288.6	224.1	130.9	199.8	234.3	200.0
El Salvador	8.2	18.9	65.6	38.2	14.8	20.0	40.2	30.3	18.4
Guatemala a	15.5	38.3	39.3	24.5	16.6	33.9	35.0	30.6	16.1
Haiti	6.0	7.6	10.9	8.0	6.4	9.0	6.0	...	...
Honduras a	19.5	13.9	15.9	24.0	12.3	11.7	16.7	24.8	15.0
Mexico a	193.6	209.8	183.2	151.5	186.9	211.3	184.2	166.7	189.8
Nicaragua	7.2	3.7	22.1	27.1	8.0	7.0	24.0	21.9	8.7
Panama a	7.6	5.4	7.6	8.9	8.3	8.7	8.7	8.9	6.8
Dominican Republic	26.2	30.8	42.8	51.3	29.2	36.5	33.1	45.6	27.0
Total	489.0	460.5	618.0	642.7	519.7	488.0	575.1	602.8 *	505.3 *
Grand total: Latin America	2 076.4	2 176.6	2 281.3	2 164.6	2 092.4	2 112.0	2 010.8	2 023.2	1 971.7 *
(b) IMPORTS C.I.F.									
Argentina	268.9	284.3	305.6	333.5	328.7	342.6	288.7	312.7	316.5
Bolivia	24.2	28.2	12.9	25.0	23.9	30.3	15.7	18.6	15.4
Brazil	315.8	369.6	313.0	389.7	400.3	385.8	205.8	372.4	401.1
Colombia	164.0	133.2	91.5	98.2	135.4	156.3	109.6	101.6	91.8
Chile	86.4	89.6	106.9	105.9	112.7	117.0	122.0	105.4	...
Ecuador b	23.9	23.3	24.2	25.9	28.0	32.2	27.6	22.8	28.6
Paraguay b	7.0	5.9	5.9	8.6	10.0	7.2	10.3	11.3	8.7
Peru	94.5	100.0	86.9	113.3	98.2	101.0	91.7	85.8	84.4
Uruguay	54.1	54.6	58.4	60.0	56.3	51.7	22.9	24.0	31.4
Venezuela b c	297.5	354.1	562.0	436.2	479.5	575.1	426.8	388.9	371.7
Total	1 336.3	1 442.8	1 574.3	1 589.3	1 673.0	1 799.2	1 321.1	1 443.5	1 463.3 *
Costa Rica	22.5	24.9	21.9	27.4	25.9	27.6	24.4	27.0	24.2
Cuba b	157.8	213.3	231.2	227.3	208.1	224.6	241.6	216.7	204.0
El Salvador	26.2	28.6	30.0	28.8	28.2	28.0	27.4	26.8	27.6
Guatemala b	40.4	33.4	39.8	39.4	38.9	35.0	39.7	40.1	37.3
Haiti	10.8	12.1	10.1	8.3	7.7	9.4	...	...	...
Honduras b	17.1	19.4	18.8	20.2	19.4	20.6	17.2	18.8	19.4
Mexico d	270.9	282.7	270.4	299.4	296.1	289.3	288.6	316.0	272.2
Nicaragua b	20.2	16.1	16.5	18.6	25.6	20.1	15.8	17.5	24.5
Panama e	24.2	25.3	26.3	28.6	26.9	35.2	24.3	23.2	24.5
Dominican Republic b	29.8	34.8	32.5	32.4	31.6	39.5	35.4	35.7	32.0
Total	619.9	690.6	697.5	730.4	708.4	729.3	723.4 *	730.4 *	675.7 *
Grand total: Latin America	1 956.2	2 133.4	2 271.8	2 319.7	2 381.4	2 528.5	2 044.5 *	2 173.9 *	2 129.0 *

SOURCES AND METHODS: See Explanatory Notes.

a Adjustments have been made in the case of goods originally valued at nominal or arbitrary prices.

b F.o.b. values were adjusted so as to approximate to c.i.f. values, according to the percentages given in the Explanatory Notes.

c Including gold.

d Including imports from free zones at the frontier.

e Including imports from the Canal Zone.

Table 12
QUARTERLY EXPORT INDICES
(1950 = 100)

Country	1956		1957				1958		
	III	IV	I	II	III	IV	I	II	III
	(a) QUANTUM								
Argentina	91	109	115	100	92	98	106	102	91
Bolivia	82	154	81	122	73	142	63	76	...
Brazil	109	107	97	77	103	119	79	93	98
Colombia	108	102	108	82	121	118	106	94	162
Chile	111	132	122	123	114	126	128	86	...
Ecuador	151	138	110	131	171	156	109	114	214
Paraguay	83	89	59	88	108	88	59	99	109
Peru	182	172	151	167	161	196	152	166	194
Uruguay	64	120	104	47	45	35	100	64	63
Venezuela	170	182	194	198	187	179	178	174	179
Total	119	130	128	117	122	128	117	115	122 *
Costa Rica	52	90	154	115	76	110	155	179	86
Cuba	131	72	119	165	146	83	129	154	130 *
El Salvador	44	73	253	157	64	105	199	174	102 *
Guatemala	56	131	142	95	63	141	146	133	70 *
Haiti	67	70	98	75	63	89	58	...	...
Honduras	109	113	87	132	68	64	83	...	...
Mexico	153	163	118	94	158	173	150	137	165
Nicaragua	73	37	236	328	93	87	260	244	88
Panama	130	88	133	145	139	145	145	162	114
Dominican Republic	132	132	160	178	108	138	124	177 *	106 *
Total	125	109	129	136	133	120	139	148 *	131 *
Grand total: Latin America	121	125	129	122	124	126	123	123 *	124 *
	(b) UNIT VALUE								
Argentina	89	86	85	85	82	84	80	87	86
Bolivia	121	124	112	102	140	87	106	105	...
Brazil	105	106	105	104	103	104	102	97	94
Colombia	119	120	131	134	115	106	101	102	84
Chile	168	163	145	136	129	123	114	109	...
Ecuador	122	121	112	99	116	102	111	109	95
Paraguay	125	116	126	118	116	107	106	111	113
Peru	98	105	102	104	103	102	87	86	88
Uruguay	82	86	87	99	86	76	70	70	68
Venezuela	109	107	106	107	108	109	110	111	109
Total	107	106	104	105	104	102	99	100	97
Costa Rica ^a	136	147	143	133	128	129	132	124	125 *
Cuba ^a	89	95	101	105	92	94	93	91	92 *
El Salvador	108	131	152	142	135	111	118	102	105 *
Guatemala ^a	141	148	140	130	127	122	122	117 *	117 *
Haiti	97	119	120	116	109	110	112	...	...
Honduras ^a	128	119	130	130	130	130	142	...	...
Mexico ^a	96	98	118	124	90	93	94	93	88
Nicaragua	150	154	143	125	131	123	140	137	150
Panama ^a	112	117	108	117	113	115	115	105	114
Dominican Republic	92	108	124	133	125	122	123	119 *	118 *
Total	96	105	118	116	97	100	102	101 *	96 *
Grand total: Latin America	104	106	108	108	102	102	100	100 *	96 *

SOURCES AND METHODS: See *Economic Bulletin for Latin America*, vol. III, No. 2 (Santiago, Chile, October, 1958), Explanatory Notes.
^a Based on adjusted values (see table 11).

Table 13
QUARTERLY EXPORT INDICES
(1955 = 100)

Country	1956 (Year)	1957				1958		
		I	II	III	IV	I	II	III
		(a) QUANTUM						
Argentina	112	137	117	106	118	124	128	114
Bolivia	106	86	128	90	139	68	81	...
Brazil	109	98	78	101	120	76	90	97
Colombia	92	87	66	98	95	85	75	129
Chile	104	112	110	105	118	116	76	...
Ecuador	103	96	110	143	132	95	97	176
Paraguay	130	82	125	156	124	86	142	156
Peru	112	99	113	108	136	106	115	134
Uruguay	126	128	63	60	40	120	77	76
Venezuela	115	133	135	127	121	121	118	122
<i>Total</i>	<i>110</i>	<i>116</i>	<i>106</i>	<i>110</i>	<i>116</i>	<i>105</i>	<i>104</i>	<i>111 *</i>
Costa Rica	76	137	100	65	98	137	159	77
Cuba	112	113	155	130	79	125	141	132 *
El Salvador	103	224	143	56	88	165	144	90 *
Guatemala	105	135	94	63	136	141	128	68 *
Haiti	123	121	89	69	100	63	...	...
Honduras	144	140	195	96	98	127	204	116
Mexico	103	88	74	100	114	97	90	108 *
Nicaragua	79	120	160	40	49	147	137	49 *
Panama	85	101	113	104	111	111	113	88
Dominican Republic	108	113	135	84	120	108	153	91 *
<i>Total</i>	<i>105</i>	<i>112</i>	<i>115</i>	<i>100</i>	<i>100</i>	<i>116</i>	<i>121 *</i>	<i>107 *</i>
<i>Grand total: Latin America</i>	<i>109</i>	<i>115</i>	<i>108</i>	<i>108</i>	<i>112</i>	<i>108</i>	<i>108 *</i>	<i>110 *</i>
		(b) UNIT VALUE						
Argentina	91	88	90	87	87	84	85	84
Bolivia	107	98	91	106	83	92	91	...
Brazil	95	99	98	100	98	100	95	90
Colombia	100	111	113	96	89	85	86	72
Chile	110	95	90	83	79	75	74	...
Ecuador	102	95	86	101	88	93	94	85
Paraguay	80	86	78	75	72	69	73	74
Peru	103	106	106	105	101	86	85	87
Uruguay	91	97	101	90	90	81	81	78
Venezuela	97	94	95	97	98	98	99	98
<i>Total</i>	<i>97</i>	<i>96</i>	<i>99</i>	<i>95</i>	<i>93</i>	<i>91</i>	<i>92</i>	<i>88 *</i>
Costa Rica	110	108	102	100	97	100	93	94
Cuba	101	117	123	113	109	105	110	100 *
El Salvador	103	110	100	99	85	91	79	77 *
Guatemala	111	110	98	99	93	93	90	89 *
Haiti	95	100	100	103	100	105	...	...
Honduras	92	89	96	100	94	102	95	101
Mexico	100	103	101	93	93	94	93	88 *
Nicaragua	102	103	95	114	80	91	89	99 *
Panama	98	88	93	94	93	93	93	91
Dominican Republic	99	133 ^a	133 ^a	122	107	107	104	103 *
<i>Total</i>	<i>101</i>	<i>110</i>	<i>111</i>	<i>104</i>	<i>97</i>	<i>99</i>	<i>99 *</i>	<i>94 *</i>
<i>Grand total: Latin America</i>	<i>98</i>	<i>99</i>	<i>100</i>	<i>97</i>	<i>94</i>	<i>93</i>	<i>94 *</i>	<i>89 *</i>

SOURCES AND METHODS: See Explanatory Notes and notes to tables 11 and 12.
^a Six-month average.

Table 14
QUARTERLY EXPORTS OF PRINCIPAL COMMODITIES
A. Quantities in thousands of tons

Country	1956				1957				1958	
	I	II	III	IV	I	II	III	IV	I	II
Tropical-zone products										
	BANANAS									
Brazil	28.6	39.8	59.1	60.5	57.1	58.9	45.2	57.3	66.6	78.6
Colombia	56.7	67.6	48.1	43.5	60.6	55.7	37.5	37.4	57.1	54.1
Costa Rica	74.7	53.4	50.0	54.3	80.6	79.8	68.8	81.1	81.3	82.2
Ecuador	143.1	148.4	126.8	160.6	148.3	160.1	177.0	192.2	175.4	156.6
Guatemala	29.7	41.1	33.0	21.0	30.8	36.5	34.7	27.8	39.2	38.5
Honduras	57.4	125.5	118.6	91.4	102.8	124.6	49.7	60.2	76.3	155.2
Panama	73.0	71.7	66.7	36.4	69.7	74.9	69.1	75.8	82.5	76.6
Total	463.2	547.5	502.3	467.7	549.9	590.5	482.0	531.8	578.4	641.8
	SUGAR									
Brazil	14.5	—	—	4.1	4.8	38.3	211.2	169.6	211.1	113.4
Cuba	1 320.7	1 419.3	1 705.4	882.2	1 306.6	1 849.5	1 424.2	644.7	1 569.0	1 724.4
Peru	109.6	73.7	118.0	127.0	136.4	112.6	87.2	160.1	107.4	99.4
Dominican Republic	174.1	208.5	164.1	147.3	220.1	279.9	138.3	85.1	152.8	253.1
Total	1 618.9	1 701.5	1 987.5	1 160.6	1 667.9	2 280.3	1 860.9	1 059.5	2 040.3	2 190.3
	COFFEE									
Brazil	262.2	245.7	244.3	256.1	237.2	156.8	205.6	259.5	144.4	203.6
Colombia	86.9	81.8	71.5	63.9	69.3	51.1	86.2	82.8	70.2	60.4
Costa Rica	10.4	5.3	1.8	5.3	13.1	7.5	2.6	6.2	12.3	16.2
Ecuador	2.2	0.8	11.4	10.1	4.7	2.4	13.0	9.1	3.5	2.2
El Salvador	35.7	14.8	2.4	11.7	40.9	23.6	6.3	12.4	27.2	21.1
Guatemala	24.2	11.8	4.6	21.9	21.3	10.8	6.6	23.1	21.8	18.0
Haiti	12.6	7.4	2.8	4.7	6.7	3.8	2.3	6.7	—	—
Honduras	1.9	6.0	3.0	0.9	2.1	6.2	1.6	0.4	4.4	5.8
Mexico	33.1	21.6	8.2	11.1	32.0	28.6	6.4	21.8	22.4	29.5
Nicaragua	6.5	6.6	2.4	1.4	9.3	7.4	2.2	3.1	12.1	6.8
Dominican Republic	11.7	5.1	2.3	7.3	4.2	3.2	0.5	13.8	7.8	8.0
Venezuela	7.7	6.4	4.4	4.9	9.6	7.2	3.8	7.5	13.9	9.2
Total a	495.1	413.3	359.1	399.3	450.4	308.6	337.1	446.4	...	...
	CACAO									
Brazil	29.0	10.4	48.3	38.1	22.9	8.5	24.6	53.7	18.6	16.0
Costa Rica	1.5	1.7	0.6	2.4	1.7	1.9	1.4	2.4	1.8	2.6
Ecuador	3.6	12.1	7.8	5.7	5.4	10.5	6.7	4.1	6.0	8.1
Dominican Republic	3.0	7.6	4.5	2.4	2.5	13.1	6.0	2.4	5.6	12.1
Venezuela	4.2	7.1	4.8	2.4	4.7	5.8	1.9	2.6	5.4	5.7
Total	41.3	38.9	66.0	51.0	37.2	39.2	40.6	65.2	37.4	44.5
	COTTON									
Brazil	21.0	67.5	37.4	17.1	10.0	26.4	21.6	8.1	17.2	7.5
El Salvador	6.3	15.3	5.9	2.1	7.3	7.8	3.8	6.3	9.7	6.1
Mexico	130.3	43.0	128.0	120.5	34.0	9.8	131.1	109.0	65.4	27.4
Nicaragua	6.1	28.0	2.2	0.1	8.8	21.1	2.9	3.2	10.3	16.6
Paraguay	0.4	6.1	2.3	1.5	0.5	3.6	3.6	1.2	0.3	3.6
Peru	18.3	28.7	33.3	28.6	12.2	20.0	28.0	21.6	14.0	22.9
Total	182.4	188.6	209.1	169.9	72.8	88.7	191.0	149.4	116.9	84.1
Temperate-zone products										
	MEAT									
Argentina	90.7	87.2	91.8	106.1	99.3	83.8	87.9	103.0	108.7	99.8
Uruguay	8.0	2.9	12.2	30.0	20.2	17.3	17.9	4.7	8.0	8.8
Total	98.7	90.1	104.0	136.1	119.5	101.1	105.8	107.7	116.7	108.6
	WHEAT									
Argentina	719.9	580.2	589.8	635.7	639.0	810.0	607.0	604.0	321.2	572.3
Uruguay	122.4	130.6	76.5	89.3	81.9	25.8	20.4	7.7	64.0	99.2
Total	842.3	710.8	666.3	725.0	720.9	835.8	627.4	611.7	385.2	671.5
	MAIZE									
Argentina	5.3	217.4	481.8	360.7	14.6	10.9	221.6	312.0	150.0	377.2

See Explanatory Notes at end of table.

Table 14 (Continued)
QUARTERLY EXPORTS OF PRINCIPAL COMMODITIES
 B. Values in millions of dollars

Country	1956				1957				1958	
	I	II	III	IV	I	II	III	IV	I	II
Tropical-zone products										
	BANANAS									
Brazil	2.0	2.9	3.7	3.8	3.6	3.7	2.9	3.1	3.5	3.4
Colombia	5.9	8.8	6.6	6.8	9.0	9.7	2.2	2.2	2.3	2.2
Costa Rica	8.4	5.9	5.5	6.0	8.2	8.1	7.2	8.7	8.6	8.6
Ecuador	9.2	9.6	7.8	9.9	8.9	8.3	8.2	9.2	8.9	7.0
Guatemala	3.6	4.9	3.9	5.0	3.5	4.1	3.9	3.1	4.1	4.0
Honduras	6.4	14.0	13.1	10.4	9.8	12.2	5.2	6.5	8.0	14.5
Panama	6.6	6.6	5.3	3.9	5.8	6.3	5.9	6.4	6.9	6.4
Total	42.1	52.7	45.9	45.8	48.8	52.4	35.5	39.2	42.3	46.1
	SUGAR									
Brazil	1.3	—	—	0.3	0.4	6.1	25.7	13.7	17.1	10.1
Cuba	138.0	151.0	156.0	79.0	162.0	235.0	173.0	84.0	158.0	185.0
Peru	8.1	5.3	9.2	10.2	12.3	11.5	9.5	16.3	9.5	8.4
Dominican Republic	13.0	15.1	12.7	12.2	25.8	34.0	14.8	8.5	13.3	19.4
Total	160.4	171.4	177.9	101.7	200.5	281.5	223.0	122.5	198.0	222.9
	COFFEE									
Brazil	250.9	249.8	260.7	268.2	240.4	153.9	196.9	255.4	143.9	190.7
Colombia	117.9	111.0	97.0	87.1	103.4	85.3	112.7	90.0	80.5	68.8
Costa Rica	15.0	6.6	2.8	9.5	19.6	10.7	3.4	7.0	15.2	18.5
Ecuador	2.0	0.8	14.7	11.8	4.9	2.3	14.1	8.4	3.0	1.8
El Salvador	47.5	21.0	3.0	16.6	58.1	30.6	8.0	13.2	31.1	22.9
Guatemala	33.5	18.0	7.3	33.1	31.3	15.5	9.0	26.4	25.6	20.2
Haiti	13.3	7.9	3.0	5.6	7.8	4.4	2.5	6.3	...	...
Honduras	2.2	6.9	3.5	0.9	2.4	7.3	1.9	0.4	4.4	5.5
Mexico	45.1	30.7	13.2	16.1	42.3	35.1	8.0	23.4	23.8	30.0
Nicaragua	8.4	9.3	3.4	2.0	12.7	9.8	2.6	3.5	13.6	7.6
Dominican Republic	13.8	6.2	2.9	9.9	5.7	4.1	0.6	14.7	7.9	7.3
Venezuela	9.4	8.3	6.2	6.7	12.3	8.9	1.7	8.4	13.9	9.2
Total a	559.0	476.5	417.7	467.5	540.9	367.9	361.4	457.1	...	...
	CACAO									
Brazil	16.8	5.2	25.2	20.0	11.4	3.8	15.6	38.9	15.0	15.0
Costa Rica	0.8	0.7	0.3	1.1	0.7	0.8	0.8	1.6	1.5	2.1
Ecuador	2.3	7.3	4.6	3.2	3.1	6.5	5.1	3.7	5.5	7.5
Dominican Republic	1.7	3.6	2.4	1.2	1.1	6.9	3.6	1.9	4.6	10.5
Venezuela	2.6	4.1	3.0	1.4	2.8	3.8	1.4	2.0	4.5	5.1
Total	24.2	20.9	35.5	26.9	19.1	21.8	26.5	48.1	31.1	40.2
	COTTON									
Brazil	13.8	42.7	21.1	8.3	6.3	17.9	14.7	5.5	11.8	4.3
El Salvador	4.0	9.4	3.5	0.7	4.8	5.0	2.1	3.6	6.1	4.0
Mexico	85.7	28.2	76.6	72.6	22.9	6.3	78.6	65.1	39.0	15.7
Nicaragua	4.9	17.3	1.3	—	5.5	12.7	2.8	0.8	6.3	9.7
Paraguay	0.1	3.2	1.5	0.8	0.3	1.8	1.9	0.5	0.1	1.7
Peru	13.6	20.5	26.2	25.4	10.4	15.3	23.1	19.2	10.0	16.5
Total	122.1	121.3	130.2	107.9	50.2	59.0	123.2	94.7	73.3	51.9
Temperate-zone products										
	MEAT									
Argentina	32.4	29.0	32.1	35.9	32.5	29.5	29.3	34.4	35.3	36.0
Uruguay	3.8	1.5	6.1	10.7	8.5	7.4	9.4	2.2	3.4	4.4
Total	36.2	30.5	38.2	46.6	41.0	36.9	38.7	36.6	38.9	40.4
	WHEAT									
Argentina	42.3	37.2	36.4	39.0	39.2	46.8	35.9	37.0	19.2	34.5
Uruguay	8.0	7.2	4.5	5.3	4.8	1.5	1.2	0.4	3.5	5.2
Total	50.3	44.4	40.9	44.3	44.0	48.3	37.1	37.4	22.7	39.7
	MAIZE									
Argentina	0.2	14.3	28.7	20.1	8.0	6.0	12.0	18.6	8.0	16.9

See Explanatory Notes at end of table.

Table 14 (Continued)
QUARTERLY EXPORTS OF PRINCIPAL COMMODITIES
A. Quantities in thousands of tons

Country	1956				1957				1958	
	I	II	III	IV	I	II	III	IV	I	II
	HIDES									
Argentina	38.9	32.8	35.2	63.1	51.9	41.3	38.2	42.2	52.9	34.3
Brazil	5.5	2.4	4.6	0.6	3.0	2.4	1.6	7.3	5.7	4.3
Paraguay	2.3	2.6	2.8	2.2	1.7	1.6	2.2	2.3	1.6	2.1
Uruguay	7.9	7.4	5.8	13.6	8.7	3.9	7.2	6.5	6.8	2.4
Total	54.6	45.2	48.4	79.5	65.3	49.2	49.2	58.3	67.0	43.1
	QUEBRACHO									
Argentina	31.8	26.6	23.7	35.2	26.7	34.4	27.2	33.5	30.2	46.1
Paraguay	12.4	12.3	6.1	5.9	5.2	6.0	7.3	11.0	6.7	4.1
Total	44.2	38.9	29.8	41.1	31.9	40.4	34.5	44.5	36.9	50.2
	WOOL									
Argentina	41.7	27.7	17.4	22.2	38.5	28.9	10.9	9.5	24.8	13.8
Uruguay	27.1	16.3	4.2	16.2	18.0	4.8	1.9	3.1	23.3	8.4
Total	68.8	44.0	21.6	38.4	56.5	33.7	12.8	12.6	48.1	22.2
	LINSEED OIL									
Argentina	6.1	20.5	15.1	19.3	24.2	17.1	51.3	48.1	67.5	42.6
Uruguay	5.5	3.7	—	4.9	0.2	4.0	10.4	11.1	0.3	7.2
Total	11.6	24.2	15.1	24.2	24.4	21.1	61.7	59.2	67.8	49.8
Mining products										
	NITRATE									
Chile	384.2	388.0	103.6	341.6	313.6	297.1	317.1	324.4	336.6	...
	IRON ORE									
Brazil	707	669	701	667	610	1 021	1 003	893	801	571
Chile	380	460	551	80	538	628	802	1 107	726	...
Peru	468	340	375	447	526	555	573	573	440	351
Total	1 555	1 469	1 628	1 194	1 673	2 204	2 378	2 573	1 967	...
	COPPER									
Chile	67.1	127.8	109.8	143.4	124.2	117.0	114.8	129.1	124.9	...
Mexico	14.6	14.1	13.9	13.3	11.4	11.9	11.8	15.5	11.8	14.8
Peru	11.7	11.0	12.4	8.9	9.7	11.4	10.7	18.8	14.7	16.2
Total	93.4	152.9	136.1	165.6	145.3	140.3	137.3	163.4	151.4	...
	LEAD									
Mexico	36.5	37.9	34.8	49.7	51.6	33.2	35.8	51.1	38.3	42.8
Peru	31.3	30.9	27.8	30.9	27.5	29.3	21.9	40.9	39.4	36.2
Total	67.8	68.8	62.6	80.6	79.1	62.5	57.7	92.0	77.7	79.0
	ZINC									
Mexico	51.8	49.1	55.7	59.6	53.7	46.7	55.5	61.1	40.9	46.9
Peru	42.0	30.3	40.1	31.5	41.1	45.0	20.8	39.5	43.6	31.6
Total	93.8	79.4	95.8	91.1	94.8	91.7	76.3	100.6	84.5	78.5
	TIN									
Bolivia	5.1	7.3	6.6	8.4	5.6	7.5	6.2	8.9	4.4	5.2
	PETROLEUM ^b									
Colombia	958	997	1 045	952	1 222	910	1 016	882	799	841
Ecuador	10	42	51	13	44	41	48	32	18	41
Mexico	157	276	191	206	207	54	15	138	10	25
Peru	94	87	87	97	120	115	114	86	135	160
Venezuela	29 594	29 273	31 200	33 707	35 693	35 986	33 694	32 165	31 687	29 594
Total	30 813	30 675	32 574	34 975	37 286	37 106	34 887	33 303	32 649	30 661

See Explanatory Notes at end of table.

Table 14 (Continued)
QUARTERLY EXPORTS OF PRINCIPAL COMMODITIES
 B. Values in millions of dollars

Country	1956				1957				1958	
	I	II	III	IV	I	II	III	IV	I	II
	HIDES									
Argentina	10.4	10.9	10.6	17.4	12.2	10.2	9.0	10.3	14.1	8.7
Brazil	1.8	0.9	2.1	0.3	1.2	1.0	0.8	2.2	1.7	1.5
Paraguay	0.3	0.5	0.7	0.5	0.3	0.3	0.5	0.5	0.3	0.4
Uruguay	3.2	3.3	2.6	6.4	3.5	1.6	2.8	2.9	3.0	1.1
Total	15.7	15.6	16.0	24.6	17.2	13.1	13.1	15.9	19.1	11.7
	QUEBRACHO									
Argentina	7.3	6.0	5.3	7.7	5.7	7.1	5.6	6.4	5.6	4.9
Paraguay	2.3	2.1	1.1	1.0	0.9	1.0	1.1	1.5	0.9	0.5
Total	9.6	8.1	6.4	8.7	6.6	8.1	6.7	7.9	6.4	5.4
	WOOL									
Argentina	46.5	30.6	19.3	27.4	51.1	38.5	14.8	13.0	27.3	15.8
Uruguay	35.9	21.8	5.8	24.6	27.5	8.1	3.1	4.7	27.4	19.3
Total	82.4	52.4	25.1	52.0	78.6	46.6	17.9	17.7	54.7	35.1
	LINSEED OIL									
Argentina	1.8	6.3	4.9	6.0	6.4	4.0	11.6	10.6	16.3	13.1
Uruguay	7.1	0.6	—	1.3	—	1.0	2.3	2.5	0.1	1.7
Total	2.9	6.9	4.9	7.3	6.4	5.0	13.9	13.1	16.4	14.8
Mining products										
	NITRATE									
Chile	16.1	16.2	4.3	12.0	11.3	10.5	11.1	11.4	12.0	...
	IRON ORE									
Brazil	8.5	8.4	9.7	8.5	7.9	13.7	13.8	12.5	11.5	7.9
Chile	2.1	3.2	3.2	4.0	3.2	4.8	5.4	7.8	4.8	...
Peru	3.8	2.9	4.0	4.1	4.8	6.3	6.4	6.9	4.7	4.1
Total	14.4	14.5	16.9	16.6	15.9	24.8	25.6	27.2	21.0	...
	COPPER									
Chile	55.7	49.4	170.0	113.0	88.8	74.0	67.6	69.5	63.3	...
Mexico	22.7	21.5	16.5	12.9	10.2	9.4	8.1	9.7	7.0	8.6
Peru	9.9	9.3	8.8	5.6	5.1	6.0	5.2	8.2	5.1	5.7
Total	88.3	80.2	195.3	131.5	104.1	89.4	80.9	87.4	75.4	...
	LEAD									
Mexico	12.1	12.8	11.7	16.7	16.8	10.8	10.7	13.7	9.5	9.8
Peru	7.9	8.0	7.3	8.1	7.2	7.4	5.1	9.6	7.7	6.8
Total	20.0	20.8	19.0	24.8	24.0	18.2	15.8	23.3	17.2	16.6
	ZINC									
Mexico	9.8	9.4	10.8	13.3	11.9	8.8	9.9	11.2	4.6	4.9
Peru	3.9	3.2	3.9	3.1	4.4	5.2	2.1	3.4	3.7	3.1
Total	13.7	12.6	14.7	16.4	16.3	14.0	12.0	14.6	8.3	8.0
	TIN									
Bolivia	11.2	15.2	14.0	18.9	11.6	15.7	12.6	17.4	8.7	10.5
	PETROLEUM^b									
Colombia	16.5	16.9	17.8	18.7	18.9	16.9	19.8	20.7	15.4	16.2
Ecuador	0.1	0.4	0.4	—	0.4	0.3	0.4	0.1	0.2	0.2
Mexico	1.8	3.0	2.2	2.5	3.1	0.9	0.1	2.0	0.2	0.5
Peru	1.5	1.4	1.3	1.5	2.0	2.0	2.1	1.5	3.8	3.6
Venezuela	473.9	474.7	502.2	533.7	555.2	565.6	537.1	517.1	513.3	510.4
Total	493.8	496.4	523.9	556.4	579.6	585.7	559.5	541.4	532.9	530.9

SOURCES AND METHODS: See Explanatory Notes. Totals refer exclusively to the countries specified.
^a Excluding Peru which appears in the annual tables (see *Economic Bulletin for Latin America*, Vol. III, No. 2).
^b Petroleum derivatives are included only in the case of Venezuela.

Table 15
LATIN AMERICA: EXPORTS OF PRINCIPAL COMMODITIES BY DESTINATION

Destination	1950	1954	1955	1956	1957	1950	1954	1955	1956	1957
	Quantities in thousands of tons					Values in millions of dollars				
SUGAR										
Latin America	331	334	417	415	349	33.9	25.6	31.4	31.1	39.4
United States	2 868	2 454	2 671	2 879	2 916	312.4	271.6	285.4	240.2	340.2
Western Europe	2 194	1 695	1 375	1 699	2 169	222.1	81.7	100.3	194.6	265.1
Belgium	92	48	12	27	40	9.0	3.6	0.9	5.3	3.5
Netherlands	344	108	226	133	221	38.9	8.6	16.8	16.5	27.4
United Kingdom	1 300	626	484	822	1 053	130.5	43.4	33.4	108.0	128.0
Federal Republic of Germany	147	21	210	671	524	13.1	88.7	16.2	37.5	66.1
Switzerland	104	104	122	120	9	11.6	7.1	8.5	16.7	1.1
Eastern Europe	—	9	480	217	365	—	0.8	40.3	28.4	48.6
Japan	128	532	541	751	628	13.6	39.5	41.7	53.4	78.9
World total	5 921	5 236	6 304	6 604	7 048	638.1	483.5	527.4	584.0	849.5
COFFEE										
Latin America	42	43	42	36	43	34.3	62.5	40.1	32.2	41.7
United States	1 030	884	1 030	1 100	1 011	1 078.0	1 286.5	1 151.0	1 256.8	1 122.7
Western Europe	261	345	441	438	383	247.3	482.8	460.7	512.2	441.1
Belgium	33	16	25	50	20	31.2	13.4	28.3	62.8	23.9
Denmark	17	21	24	27	28	15.4	32.2	28.3	30.5	28.3
Finland	12	28	30	37	29	8.6	41.3	30.0	37.1	30.6
France	44	46	42	46	37	39.2	55.4	38.1	41.8	36.2
Italy	32	21	35	35	31	28.0	30.3	37.2	38.3	32.0
Netherlands	29	30	32	45	28	27.7	41.8	36.0	55.1	14.7
Sweden	38	40	50	33	55	40.5	65.6	62.4	33.8	60.3
Federal Republic of Germany	14	88	109	117	122	15.0	139.1	135.8	158.4	155.2
Eastern Europe	2	3	5	8	8	2.1	5.2	6.3	9.4	8.7
World total	1 436	1 308	1 530	1 648	1 502	1 414.4	1 897.3	1 750.0	1 877.6	1 672.1
CACAO										
Latin America	12.3	16.3	17.8	16.4	17.9	7.8	19.7	13.4	9.6	11.2
United States	126.5	85.8	117.1	111.2	44.1	77.5	91.3	81.8	58.7	62.3
Western Europe	60.4	84.1	41.7	48.0	47.6	36.1	13.8	32.7	27.2	30.9
Italy	6.1	6.9	5.9	5.2	4.4	3.8	7.8	4.7	3.0	3.4
Netherlands	10.2	8.9	7.2	18.3	16.8	7.1	9.4	5.4	10.0	10.4
Federal Republic of Germany	4.0	48.2	20.0	17.1	20.1	2.7	54.7	15.9	9.9	13.3
Eastern Europe	1.1	2.5	11.1	13.9	11.8	1.0	3.0	8.8	7.7	7.4
Japan	—	1.8	3.1	2.7	2.0	—	2.0	2.7	1.6	1.1
World total	204.6	196.6	195.2	197.8	182.5	125.0	215.5	142.7	108.1	115.7
COTTON										
Latin America	15.7	25.4	33.6	25.1	8.2	16.2	19.4	25.9	18.2	6.8
United States	146.6	189.1	250.3	279.7	198.6	90.9	110.6	134.4	124.8	78.9
Western Europe	182.1	323.2	208.5	228.8	139.6	147.3	229.7	148.1	144.8	87.4
Belgium	13.7	31.5	24.0	27.5	20.4	11.3	22.1	16.9	18.8	14.3
France	20.9	35.0	13.4	29.5	—	—	—	—	—	—
Italy	6.6	24.9	16.8	10.2	8.8	5.3	18.7	12.0	6.7	5.6
Netherlands	3.7	40.0	27.6	21.6	15.7	2.9	25.8	16.7	12.8	8.5
United Kingdom	101.3	81.2	35.9	57.8	30.8	79.1	57.1	24.1	35.0	19.0
Federal Republic of Germany	5.8	77.1	65.2	60.6	21.5	6.1	52.5	43.7	44.0	12.9
Sweden	5.0	5.1	4.4	3.8	1.8	4.0	3.9	2.9	2.3	5.6
Eastern Europe	3.2	2.3	2.3	6.4	7.7	3.3	2.0	2.0	4.8	5.9
Japan	18.9	127.1	128.6	143.7	92.9	17.4	85.9	82.8	79.7	48.6
World total	405.6	712.8	672.1	740.1	469.6	290.1	477.5	427.4	407.9	240.6
RAW TOBACCO										
Latin America	5.14	3.80	2.16	2.83	1.77	4.5	3.0	2.3	3.1	1.7
United States	8.83	12.05	13.92	12.00	14.38	22.8	27.0	28.0	25.6	28.8
Western Europe	42.46	37.84	40.52	42.66	38.43	22.1	22.7	23.0	25.0	22.5
Denmark	2.07	2.35	2.67	2.46	1.97	1.6	2.1	2.7	2.5	1.9
Netherlands	7.33	4.29	7.25	9.66	7.71	3.8	2.5	4.2	5.9	5.0
Federal Republic of Germany	9.90	10.64	7.52	9.05	8.49	6.2	6.2	4.2	5.1	4.5
World total	66.08	60.84	65.44	65.51	68.05	53.6	57.8	58.8	60.1	60.3

See Explanatory Notes at end of table.

Table 15 (Continued)

LATIN AMERICA: EXPORTS OF PRINCIPAL COMMODITIES BY DESTINATION

Destination	1950	1954	1955	1956	1957	1950	1954	1955	1956	1957
	Quantities in thousands of tons					Values in millions of dollars				
CHILLED AND FROZEN MEAT										
Latin America	7.7	17.2	11.8	8.5	8.0	4.1	9.3	5.5	3.0	2.5
United States	0.4	11.8	7.1	5.4	9.4	0.2	3.3	1.9	1.1	2.1
Western Europe	314.4	177.6	255.6	453.8	467.7	98.9	88.4	112.2	153.5	155.0
Italy	11.2	3.0	2.0	19.2	37.6	4.9	1.0	0.5	3.3	13.8
Netherlands	8.0	2.6	1.0	2.1	5.2	3.2	1.3	0.3	0.7	2.1
United Kingdom	255.9	152.7	247.3	334.2	363.0	75.8	69.4	108.0	115.3	121.1
Federal Republic of Germany	11.4	14.0	4.0	82.1	40.3	5.1	8.5	2.8	29.1	9.2
Eastern Europe	—	60.0	29.7	5.7	11.5	—	25.1	8.0	2.1	4.4
World total	334.7	268.8	306.4	428.3	506.0	108.9	124.0	130.0	165.6	166.7
WHEAT										
Latin America	1 114	1 278	1 691	1 205	1 297	86.9	101.9	121.9	77.0	77.9
Western Europe	928	1 329	1 759	1 611	1 097	77.9	79.9	117.6	95.6	54.0
Belgium	5	132	146	24	46	0.5	7.9	10.8	1.3	3.8
Italy	513	107	568	385	131	46.8	6.7	37.2	24.6	10.0
Netherlands	6	144	181	269	211	0.6	8.4	11.7	15.9	12.2
United Kingdom	—	301	323	282	353	—	17.8	20.1	15.9	20.3
Federal Republic of Germany	184	535	256	378	335	14.7	32.6	18.2	20.6	20.1
Eastern Europe	—	98	267	40	—	—	5.9	16.0	2.2	—
Japan	195	228	71	42	—	15.7	17.6	4.3	2.3	—
World total	2 769	3 104	4 028	2 960	2 796	208.5	215.8	271.9	180.7	166.8
MAIZE										
Latin America	39	4	7	—	24	2.4	0.2	0.4	—	1.5
Western Europe	752	1 867	350	998	623	44.0	100.1	22.4	59.4	37.3
France	236	228	57	231	11	13.5	13.0	3.8	14.0	0.6
Italy	16	94	73	124	243	1.1	5.0	4.7	7.8	13.7
Netherlands	37	309	20	130	219	2.5	16.5	1.2	7.6	12.3
United Kingdom	348	421	37	132	3	20.1	22.0	2.2	8.0	0.2
Federal Republic of Germany	1	430	25	118	—	0.1	22.2	1.5	10.1	—
Japan	—	102	—	66	—	—	5.4	—	3.8	—
World total	794	2 185	362	1 065	789	46.2	117.3	23.3	63.3	44.6
HIDES										
Latin America	1.8	10.2	11.4	4.0	8.9	1.2	7.3	5.9	1.7	3.3
United States	66.3	5.4	8.2	9.7	9.4	35.4	3.7	3.8	6.0	2.1
Western Europe	189.8	119.9	117.8	122.0	468.7	108.0	62.3	57.8	42.5	152.6
France	22.0	17.2	16.8	24.2	1.2	15.9	13.7	13.4	13.9	0.4
Italy	7.6	14.6	11.2	16.8	36.6	4.8	6.2	3.2	5.0	13.4
Netherlands	15.7	22.7	21.1	12.5	5.2	7.6	10.4	7.7	3.6	2.1
United Kingdom	64.1	21.4	16.6	15.5	362.5	33.1	10.0	9.3	4.8	120.8
Federal Republic of Germany	27.3	19.0	17.2	18.2	57.7	16.0	10.0	8.0	5.1	13.4
Eastern Europe	54.4	63.5	69.6	60.6	9.9	39.9	40.3	36.6	20.2	3.8
Japan	9.5	1.1	4.5	9.1	—	6.3	0.6	1.5	1.9	—
World total	350.0	207.1	217.5	259.2	223.9	199.0	118.7	113.9	90.8	70.4
QUEBRACHO										
Latin America	33.5	20.5	19.6	22.8	22.2	5.7	4.8	4.5	5.5	4.8
United States	82.6	55.9	59.4	61.5	32.0	14.6	11.3	11.6	12.0	6.3
Western Europe	50.9	41.3	39.0	34.0	40.9	9.3	8.8	7.8	7.1	9.3
France	9.0	9.5	9.7	9.4	7.7	1.6	2.0	2.0	2.9	1.6
United Kingdom	9.5	9.2	6.9	4.7	5.5	1.8	1.9	1.5	1.6	1.1
Eastern Europe	15.2	10.1	6.8	16.5	4.8	2.8	2.2	1.4	3.2	1.0
Japan	10.8	3.0	8.8	7.8	0.7	1.9	0.7	1.9	1.7	0.1
World total	246.0	155.2	150.3	154.0	121.8	37.5	33.3	31.1	32.9	24.8

See Explanatory Notes at end of table.

Table 15 (Continued)

LATIN AMERICA: EXPORTS OF PRINCIPAL COMMODITIES BY DESTINATION

Destination	1950	1954	1955	1956	1957	1950	1954	1955	1956	1957
	Quantities in thousands of tons					Values in millions of dollars				
GREASY AND SEMI-WASHED WOOL										
Latin America	3.0	1.3	0.9	1.3	0.3	5.6	3.6	2.4	2.5	0.5
United States	157.7	54.9	50.9	49.9	34.4	220.4	64.7	60.8	56.8	40.0
Western Europe	75.8	77.5	89.7	104.3	71.2	99.8	110.6	103.8	127.0	99.4
Belgium	9.9	3.7	5.7	4.9	3.9	14.9	4.1	5.2	5.1	5.0
France	26.0	13.9	12.5	20.4	13.8	28.8	18.4	14.3	23.2	19.2
Italy	11.0	13.1	3.6	6.9	8.5	12.9	4.9	4.6	8.9	11.9
Netherlands	4.2	9.0	15.6	23.4	13.5	6.6	13.9	21.5	31.3	19.5
United Kingdom	9.7	29.8	33.8	31.9	21.4	12.6	42.5	35.5	35.5	27.4
Federal Republic of Germany	6.8	15.5	12.2	7.4	5.4	9.8	22.2	12.9	8.9	7.6
Eastern Europe	1.0	5.0	6.3	0.3	7.3	3.0	8.5	7.9	0.5	17.6
Japan	2.7	17.8	10.4	22.0	6.4	4.3	30.9	17.9	29.8	12.0
World total	246.8	159.2	165.1	186.3	16.3	344.1	222.9	202.9	228.9	43.4
WOOL FABRICS										
Latin America	0.60	1.25	1.04	0.79	0.22	2.3	6.0	5.7	3.6	6.1
Western Europe	1.39	9.13	10.41	13.11	4.80	4.6	25.6	25.2	30.0	13.1
Italy	0.25	0.56	0.90	1.97	0.90	0.6	1.7	2.3	4.6	2.5
Netherlands	0.09	4.96	7.34	8.27	3.72	0.4	13.5	17.6	18.8	10.0
Switzerland	0.35	1.19	1.16	1.46	0.01	1.2	3.3	2.8	3.5	—
Eastern Europe	0.02	—	0.63	0.55	0.08	0.1	—	1.6	1.2	0.3
World total	4.42	12.12	13.45	16.26	7.43	14.9	36.7	36.1	39.3	48.4
NITRATE										
Latin America	132	113	142	127	...	6.0	5.2	6.9	5.2	...
United States	590	674	589	471	...	25.5	28.9	24.6	18.7	...
Western Europe	521	542	464	453	...	28.7	23.5	19.2	19.8	...
Spain	192	115	137	160	...	8.3	5.0	5.8	6.5	...
France	147	133	84	95	...	6.1	5.8	3.7	4.0	...
Federal Republic of Germany	—	65	122	90	...	—	3.0	5.2	3.7	...
Egypt	378	112	23	95	...	15.8	4.6	0.9	3.9	...
World total	1 664	1 575	1 322	1 217	1 252	70.8	67.7	56.3	48.6	44.3
IRON ORE										
Millions of tons										
United States	^f 2.60	3.36	9.51	12.39	^e 9.89	^f 6.7	21.7	63.8	91.0	^e 86.9
Western Europe	—	0.87	1.69	3.02	4.47	—	10.4	16.0	27.1	42.0
Italy	—	0.02	0.12	0.22	0.74	—	0.2	1.0	1.7	6.1
Netherlands	—	0.03	0.21	0.37	0.09	—	0.4	1.5	2.7	1.2
United Kingdom	—	0.46	0.69	1.28	2.08	—	5.8	7.1	12.0	19.6
Federal Republic of Germany	—	0.31	0.63	1.12	1.51	—	3.5	6.0	10.3	14.5
Japan	—	—	0.01	0.48	0.52	—	—	0.1	3.2	4.6
Panama Canal zone	—	8.72	1.70	2.34	3.31	—	5.7	8.0	12.8	20.3
World total	2.60	5.33	13.29	18.39	18.72	6.7	42.4	92.6	136.2	161.6
COPPER (ore, blister, electrolytic, sheet, bars and ingots)										
Thousands of tons										
Latin America	18.8	8.8	13.0	8.2	—	^{e g} 10.5	5.7	11.0	8.4	—
United States	411.1	336.9	329.6	372.5	89.5	145.9	185.6	219.3	287.8	46.9
Western Europe	54.0	173.4	213.3	206.0	14.1	24.1	100.1	165.4	181.6	7.2
Belgium	0.6	2.6	3.0	1.2	—	0.3	1.7	2.2	1.0	—
France	16.4	0.9	0.3	3.0	—	7.0	0.5	0.2	3.1	—
Italy	24.6	46.6	32.3	22.7	0.1	10.4	12.8	25.3	19.8	0.1
Netherlands	1.2	16.3	31.9	50.0	5.7	0.6	10.8	24.0	39.6	2.7
United Kingdom	0.2	76.9	95.1	89.7	4.3	0.1	50.3	75.5	80.0	2.3
Federal Republic of Germany	8.8	25.2	44.6	50.5	2.8	4.2	16.4	32.8	30.7	1.5
Eastern Europe	2.0	—	—	—	—	1.0	—	—	—	—
Japan	—	14.5	2.3	9.3	8.4	—	1.2	0.2	1.3	1.2
World total	582.6	544.1	553.9	596.7	112.6	182.6	325.0	397.8	479.8	55.6

See Explanatory Notes at end of table.

Table 15 (Continued)
LATIN AMERICA: EXPORTS OF PRINCIPAL COMMODITIES BY DESTINATION

Destination	1950	1954	1955	1956	1957	1950	1954	1955	1956	1957
	Quantities in thousands of tons					Values in millions of dollars				
LEAD (including refined lead)										
					^{e h}					^{e h}
Latin America	9.7	4.8	2.2	3.3	6.4	2.3	1.2	0.6	1.1	2.0
United States	367.3	195.0	239.7	252.8	275.1	79.6	40.2	53.6	57.8	61.3
Canada	19.6	4.8	—	9.7	8.5	2.3	0.6	—	1.5	1.2
Western Europe	8.5	170.2	133.0	111.5	85.2	1.6	44.7	35.6	29.9	23.6
Belgium	5.2	14.5	11.1	11.2	10.2	0.9	3.3	2.8	4.3	3.0
Federal Republic of Germany	1.5	15.1	25.7	19.9	11.1	0.3	3.3	6.2	5.3	2.9
Japan	—	15.0	8.9	8.5	15.0	—	2.8	1.5	2.1	2.6
World total	406.2	391.9	384.0	386.3	421.0	85.3	90.1	92.1	94.8	91.9
ZINC (ore and refined zinc)										
					ⁱ					ⁱ
Latin America	4.4	9.5	5.4	5.1	3.2	1.2	1.8	1.3	0.8	0.7
United States	280.9	470.4	469.1	504.3	204.7	22.7	19.1	24.6	32.1	17.4
Canada	13.3	—	—	2.8	—	1.0	—	—	0.1	—
Western Europe	108.5	57.4	145.3	111.0	70.3	14.0	6.7	11.2	8.6	4.5
Belgium	75.9	24.4	100.2	90.1	49.2	5.9	1.3	5.6	5.6	3.1
France	18.6	2.5	2.0	1.0	—	1.3	0.2	0.1	0.1	—
Federal Republic of Germany	1.9	—	10.7	4.1	2.3	0.2	—	0.7	0.4	0.2
Japan	0.9	—	1.6	7.1	4.5	0.2	—	0.1	0.4	9.8
World total	411.7	538.1	550.6	589.5	285.5	35.9	27.8	38.8	43.9	25.8
TIN										
Latin America	0.28	0.33	0.23	0.69	0.51	0.5	0.6	0.4	0.8	0.6
United States	19.18	33.83	32.60	26.34	2.39	28.0	22.0	23.5	17.0	1.9
Western Europe	39.61	38.93	42.17	48.83	24.62	31.8	32.4	33.5	41.4	54.8
United Kingdom	39.20	38.93	40.09	45.50	66.28	52.4	32.4	32.6	39.9	51.6
Federal Republic of Germany	—	—	2.08	2.98	7.28	—	—	0.9	1.2	2.9
World total	59.33	73.09	75.00	71.86	77.53	54.6	54.9	57.3	59.2	57.4
PETROLEUM ^j										
	Quantities in thousands of millions of tons									
Latin America	3.34	7.25	9.28	11.37	13.77	64.2	146.2	173.2	239.8	254.7
United States	25.10	36.29	24.84	47.13	53.47	396.1	609.6	440.8	784.0	886.1
Canada	1.88	1.96	9.48	2.59	2.45	31.5	32.7	173.9	48.2	46.7
Western Europe	5.31	7.36	7.65	17.93	23.59	107.5	136.1	139.2	303.2	386.8
Belgium	0.17	0.55	0.19	0.63	0.59	4.0	11.5	3.7	28.3	26.6
Denmark	0.04	0.08	—	—	0.14	1.3	2.5	—	—	3.8
France	1.34	0.88	0.52	1.16	2.55	23.8	15.5	9.5	17.3	44.5
Netherlands	1.04	1.70	2.89	3.86	3.29	15.0	32.2	56.2	58.3	51.7
United Kingdom	1.55	2.08	2.23	7.12	10.87	43.3	40.6	42.6	142.5	131.6
Federal Republic of Germany	0.31	0.46	0.50	0.63	1.05	5.3	7.6	8.1	10.6	17.0
Sweden	0.47	0.81	0.13	1.48	1.63	9.9	18.9	4.1	33.1	29.0
Aruba	24.90	22.38	24.22	25.50	23.23	166.4	375.4	446.1	372.1	323.7
Curacao	15.84	16.16	15.52	18.06	16.98	228.5	242.8	280.0	268.4	232.1
World total	80.58	102.51	114.64	131.38	142.76	1 282.4	1 718.5	2 059.1	2 134.8	2 320.3

SOURCES AND METHODS: See Explanatory Notes.

NOTE: World totals include exports to other destinations not specified in the table. They may differ from the totals given in table 30 of the *Economic Bulletin for Latin America*, Vol. III No. 2, for the reasons stated in the Explanatory Notes.

a Excluding exports from Honduras.

b Excluding exports from Nicaragua.

c Exports from Paraguay are included only in the total.

d Excluding exports from Paraguay.

e Excluding exports from Chile.

f Excluding exports from Peru.

g Excluding exports from Cuba.

h Excluding exports from Mexico.

i Excluding zinc ore from Mexico.

j Including petroleum derivatives.

Table 16
IMPORTS FROM LATIN AMERICA F.O.B.^a
(Millions of dollars)

Country of origin	Importing country		United States	Canada	Federal Republic of Germany	Belgium and Luxembourg	France	Italy	Netherlands	United Kingdom	Sweden	Switzerland	Total Western Europe ^b	Japan	Total ^c
	Year	Half-year													
Argentina . . .	1957	I	76.5	2.0	57.5	23.0	28.5	37.5	37.6	145.6	7.8	7.6	374.9	7.1	460.5
	1957	II	52.8	2.8	58.6	17.9	17.5	45.7	26.8	117.4	5.0	10.5	325.3	9.3	390.0
	1958	I	62.8	2.3	61.3	23.0	15.0	29.1	28.7	124.5	10.2	6.6	325.5	7.7	398.3
Bolivia	1957	I	7.6	—	1.6	0.6	—	0.1	0.3	19.5	—	—	22.1	1.0	30.7
	1957	II	8.8	0.1	1.9	0.2	—	—	0.2	19.5	—	—	22.0	0.8	31.7
	1958	I	4.5	0.1	1.2	0.1	0.1	0.1	0.1	17.7	—	—	19.4	0.2	24.2
Brazil	1957	I	350.3	16.7	46.8	9.4	25.1	12.5	12.0	29.5	24.3	6.4	219.3	17.8	604.1
	1957	II	349.8	20.0	47.0	10.5	22.3	11.9	13.3	45.3	23.6	3.9	247.7	21.4	638.9
	1958	I	285.0	13.2	42.0	8.0	23.3	17.7	11.2	35.2	21.6	5.3	210.0	11.9	520.1
Colombia . . .	1957	I	168.3	9.7	17.6	4.6	3.1	0.3	4.9	7.3	6.5	2.5	51.9	0.7	230.6
	1957	II	215.1	9.2	20.2	3.1	2.0	0.3	4.1	3.4	5.2	1.8	43.9	0.2	268.4
	1958	I	146.7	8.7	21.3	3.9	1.0	0.5	8.1	3.8	5.5	2.8	48.8	0.7	204.9
Chile	1957	I	107.4	1.5	40.2	1.7	5.9	11.5	1.0	35.4	3.6	3.9	110.2	4.9	224.0
	1957	II	88.9	0.2	36.4	3.1	5.1	7.4	0.8	26.5	3.4	2.5	88.9	2.5	180.5
	1958	I	74.2	0.6	32.3	0.7	4.5	6.0	1.1	28.8	4.0	2.2	85.4	1.2	161.4
Ecuador	1957	I	20.7	1.8	10.6	2.1	0.5	2.2	1.2	1.6	0.6	0.8	21.3	0.2	44.0
	1957	II	37.3	3.0	11.9	1.8	0.7	2.0	0.9	0.1	1.1	0.9	20.9	0.1	61.3
	1958	I	21.8	1.7	14.7	2.2	0.9	2.3	0.7	0.5	0.6	1.7	24.7	1.0	49.2
Paraguay	1957	I	3.6	0.1	0.4	0.9	0.3	0.1	0.4	2.2	0.1	0.2	5.2	0.3	9.2
	1957	II	3.0	0.2	0.6	0.7	0.5	0.1	0.6	3.6	0.1	0.3	6.9	0.3	10.4
	1958	I	3.0	0.1	0.7	0.6	1.0	0.1	0.4	1.4	0.1	0.6	5.1	—	8.2
Peru	1957	I	65.5	1.6	21.3	6.0	4.6	3.6	4.0	18.4	1.2	3.0	66.8	14.0	147.9
	1957	II	71.7	1.3	25.2	5.4	6.4	2.2	3.8	15.9	1.1	7.7	70.0	20.1	163.1
	1958	I	60.6	0.6	19.1	4.0	4.4	3.3	2.6	12.6	1.2	4.2	53.4	8.0	122.6
Uruguay	1957	I	12.2	0.4	12.2	3.5	6.2	5.8	9.8	18.6	1.3	2.9	65.5	1.0	79.1
	1957	II	5.7	0.3	7.3	1.7	1.1	2.9	3.9	7.5	1.0	1.2	29.7	0.1	35.8
	1958	I	3.6	0.1	6.1	1.0	3.6	2.3	4.8	11.9	1.6	1.7	38.7	—	42.4
Venezuela . . .	1957	I	464.4	129.0	37.8	11.8	33.7	23.0	60.8	88.0	28.4	2.3	310.5	1.4	905.3
	1957	II	435.3	130.1	31.3	8.4	37.5	11.8	64.8	95.8	19.4	1.5	283.1	1.9	850.4
	1958	I	443.9	99.3	45.8	9.9	25.8	13.7	31.6	83.9	18.1	1.8	249.6	1.2	794.0
Total	1957	I	1 276.5	162.8	246.0	63.6	107.9	96.6	132.0	366.1	73.8	29.6	1 247.7	48.4	2 735.4
	1957	II	1 268.4	167.2	240.4	52.8	93.1	84.3	119.2	335.0	59.9	30.3	1 138.4	56.7	2 630.8
	1958	I	1 106.1	126.7	244.5	53.4	79.6	75.1	89.3	320.3	62.9	26.9	1 060.6	31.9	2 325.3

See Explanatory Notes at end of table.

Table 16 (Continued)
IMPORTS FROM LATIN AMERICA F.O.B.^a
(Millions of dollars)

Country of origin	Importing country		United States	Canada	Federal Republic of Germany	Belgium and Luxembourg	France	Italy	Netherlands	United Kingdom	Sweden	Switzerland	Total Western Europe ^b	Japan	Total ^c
	Year	Half-year													
Costa Rica . . .	1957	I	15.3	4.2	9.8	1.0	0.3	0.3	0.2	0.3	0.4	1.7	14.3	—	33.8
	1957	II	12.2	4.9	12.2	0.1	—	0.4	0.2	0.1	0.4	0.6	14.3	0.1	31.5
	1958	I	18.8	3.2	10.6	0.6	—	0.9	0.2	0.6	0.4	1.4	15.0	0.2	37.2
Cuba	1957	I	252.7	6.7	28.8	2.1	6.5	2.7	10.0	33.7	3.2	1.8	101.9	23.7	385.0
	1957	II	229.0	7.8	15.6	0.5	9.2	0.8	11.4	29.3	2.4	0.5	84.3	45.6	366.7
	1958	I	289.8	5.8	2.3	3.7	3.1	1.9	7.7	25.2	2.2	2.3	59.1	18.6	373.3
El Salvador . . .	1957	I	40.6	0.7	16.4	1.3	3.7	0.5	1.5	0.3	0.9	1.5	26.4	2.3	70.0
	1957	II	15.0	0.8	19.5	0.8	0.5	0.6	0.9	1.5	0.7	0.5	25.2	4.1	45.1
	1958	I	27.0	0.5	18.7	0.8	0.3	0.9	0.8	0.2	0.5	1.1	23.5	4.3	55.3
Guatemala . . .	1957	I	36.2	2.5	9.2	1.9	1.3	0.1	0.7	0.2	2.7	2.2	19.3	0.2	58.2
	1957	II	38.1	1.1	9.2	0.7	0.4	0.2	1.4	0.3	2.9	0.8	16.2	0.3	55.7
	1958	I	37.8	1.7	7.7	0.6	0.3	0.4	0.9	0.4	3.1	1.4	15.4	0.3	55.2
Haiti	1957	I	7.2	0.7	0.4	5.0	3.0	3.1	0.1	0.3	0.3	0.8	14.3	0.7	22.9
	1957	II	11.1	0.9	0.6	1.5	1.7	2.5	0.1	0.8	0.1	0.4	8.5	0.1	20.6
	1958	I	14.7	0.7	0.4	5.0	1.5	3.5	0.3	0.3	0.3	1.5	13.9	—	29.3
Honduras	1957	I	18.6	3.4	1.2	0.2	0.1	0.5	0.1	0.4	0.3	0.2	3.2	—	25.2
	1957	II	7.6	1.4	2.8	0.1	—	0.6	0.2	0.5	0.5	0.3	5.0	—	14.0
	1958	I	18.6	2.9	2.3	0.1	0.2	0.5	0.2	0.3	1.0	0.3	5.2	0.1	26.8
Mexico	1957	I	228.1	9.8	26.7	5.0	12.9	5.5	5.6	6.9	2.5	5.9	73.3	35.4	346.6
	1957	II	202.0	12.1	29.2	6.3	4.0	2.9	3.7	9.8	2.3	5.6	69.7	39.8	323.6
	1958	I	255.9	17.9	24.7	4.7	6.3	2.8	6.1	6.0	1.5	3.7	60.9	42.7	377.4
Nicaragua	1957	I	15.5	0.2	5.7	0.7	2.3	0.1	2.2	3.6	0.1	0.5	15.4	2.6	33.7
	1957	II	6.8	0.3	6.5	0.7	1.1	0.3	2.2	1.3	0.1	0.1	12.5	2.0	21.6
	1958	I	16.7	2.6	7.4	0.4	1.4	0.3	4.0	1.0	0.3	0.5	15.3	2.1	36.7
Panama	1957	I	11.8	3.3	0.5	0.3	1.0	0.7	0.2	0.2	—	—	5.8	3.7	24.6
	1957	II	12.5	4.2	1.6	0.2	—	7.6	1.0	—	—	—	12.0	0.7	29.4
	1958	I	12.9	4.1	1.6	0.6	—	0.6	0.1	0.1	—	—	10.4	0.9	28.3
Dominican Republic	1957	I	228.1	0.3	12.0	2.2	0.3	0.6	5.3	35.1	—	0.4	59.3	3.5	91.2
	1957	II	35.0	1.0	3.6	0.8	—	0.8	2.0	16.2	0.1	0.2	25.6	1.5	63.1
	1958	I	42.9	2.0	1.7	1.4	0.5	0.8	1.4	20.0	0.3	0.5	27.1	1.9	73.9
Total	1957	I	654.1	31.8	110.7	19.7	30.4	14.1	25.9	81.0	10.4	15.0	333.2	72.1	1 091.2
	1957	II	569.3	34.5	100.8	11.7	16.9	16.7	23.1	59.8	9.5	9.0	273.3	94.2	971.6
	1958	I	735.1	41.4	77.4	17.9	13.6	12.6	21.7	54.1	9.6	12.7	245.8	71.1	1 093.4
Grand total	1957	I	1 930.6	194.6	356.7	83.3	138.3	110.7	157.9	447.1	84.2	44.6	1 580.9	120.5	3 826.6
	1957	II	1 837.7	201.7	341.2	64.5	110.0	101.0	142.3	394.8	69.4	39.3	1 411.7	150.9	3 602.4
	1958	I	1 841.2	168.1	321.9	71.3	93.2	87.7	111.0	374.4	72.5	39.6	1 306.4	103.0	3 418.7

SOURCES: *Direction of International Trade*, U. N. Statistical Papers, Series T, and *Foreign Exchange Statistics Monthly* of Japan.

^a Imports from Europe and Japan were given c.i.f. but have been converted to approximate f.o.b. basis.

^b Including other countries of Western Europe.

^c Total for the countries specified.

Table 17
EXPORTS TO LATIN AMERICA F.O.B.
(Millions of dollars)

Country of destination	Exporting country		United States	Canada	Federal Republic of Germany	Belgium and Luxembourg	France	Italy	Netherlands	United Kingdom	Sweden	Switzerland	Total Western Europe ^b	Japan	Total ^b
	Year	Half-year													
Argentina	1957	I	159.0	9.3	52.4	18.3	16.9	26.2	8.9	43.6	16.2	12.5	211.2	2.6	382.1
	1957	II	120.4	5.9	53.7	37.3	19.2	23.7	14.1	49.2	23.3	10.9	251.6	5.7	383.6
	1958	I	103.1	5.0	51.4	34.2	19.6	24.1	10.9	47.1	11.0	10.4	226.5	8.6	343.2
Bolivia	1957	I	19.1	0.6	4.5	0.8	1.0	0.4	0.4	2.1	0.8	0.6	11.1	1.0	31.8
	1957	II	13.6	0.4	4.7	0.2	0.4	1.0	0.5	2.3	0.4	1.1	10.8	1.1	25.9
	1958	I	16.4	0.2	4.6	0.5	0.1	2.4	0.4	1.9	0.3	0.8	11.2	1.0	28.8
Brazil	1957	I	224.5	11.3	54.4	11.2	25.5	16.5	5.3	25.5	23.1	10.0	222.2	12.0	470.0
	1957	II	244.5	16.1	71.6	9.5	20.9	19.6	5.3	26.3	24.2	10.4	232.0	13.0	505.6
	1958	I	253.7	9.7	80.6	9.0	23.7	15.3	5.0	28.8	24.2	10.1	228.5	22.9	514.8
Colombia	1957	I	91.8	7.1	16.4	3.5	6.1	2.9	3.3	6.8	5.2	3.5	51.3	1.8	152.0
	1957	II	144.0	8.4	32.4	6.6	7.7	4.4	3.3	12.1	5.2	4.8	81.1	3.3	236.8
	1958	I	97.0	6.7	26.2	3.5	5.3	2.6	4.1	7.3	3.0	3.4	58.5	2.5	164.7
Chile	1957	I	101.1	2.7	26.2	2.8	4.0	2.7	1.1	8.7	3.8	3.2	59.8	3.4	167.0
	1957	II	89.8	2.1	25.3	1.2	6.2	3.8	1.7	10.8	2.7	7.2	67.7	8.5	168.1
	1958	I	76.2	1.9	18.5	2.1	4.9	2.2	1.1	9.4	1.4	2.5	46.7	3.4	128.2
Ecuador	1957	I	22.2	1.3	5.9	1.2	2.0	1.1	0.9	2.6	0.7	1.0	16.2	0.7	40.4
	1957	II	25.9	1.7	7.1	1.2	1.6	0.9	1.0	4.8	0.9	1.0	19.8	0.7	48.1
	1958	I	23.3	1.3	6.0	1.2	1.9	0.8	0.9	3.9	1.8	1.1	18.5	0.7	43.8
Paraguay	1957	I	5.1	0.1	1.7	0.8	0.3	0.1	0.1	1.5	0.2	0.3	5.5	0.8	11.5
	1957	II	5.4	—	2.3	0.5	0.5	0.1	0.3	1.7	0.8	0.4	7.5	0.7	13.6
	1958	I	6.3	0.1	2.4	0.6	0.2	0.1	0.2	1.1	0.3	0.3	5.7	0.9	13.0
Peru	1957	I	99.6	5.4	16.3	4.6	4.9	3.5	4.9	16.0	3.9	4.3	62.0	6.4	173.4
	1957	II	94.0	5.2	18.1	3.5	4.3	3.6	5.7	13.7	3.5	5.0	60.7	5.5	165.4
	1958	I	86.1	7.9	15.5	4.8	3.0	3.8	3.9	12.0	3.2	3.9	52.8	3.0	149.8
Uruguay	1957	I	27.9	2.2	11.0	4.5	3.3	2.0	2.1	11.1	3.6	2.8	43.8	1.1	75.0
	1957	II	20.1	1.9	10.7	2.6	4.1	1.9	1.8	11.2	2.9	2.0	41.7	0.6	64.3
	1958	I	8.6	0.5	2.3	0.4	7.5	2.0	1.3	3.6	0.7	1.7	20.9	—	30.0
Venezuela	1957	I	454.0	15.3	51.6	15.3	17.8	22.3	12.9	50.3	4.9	7.2	193.1	8.3	670.7
	1957	II	568.7	26.6	81.1	20.7	18.4	39.9	16.1	61.5	5.5	11.5	275.8	15.0	886.1
	1958	I	432.5	22.2	57.5	20.0	17.9	36.2	18.5	53.8	6.9	11.3	238.0	11.4	704.1
Total	1957	I	1 204.3	55.3	240.4	63.0	81.8	77.7	39.9	168.2	62.4	45.4	876.2	38.1	2 173.9
	1957	II	1 326.4	68.3	307.0	83.3	83.3	98.9	49.8	193.6	69.4	54.3	1 048.7	54.1	2 497.5
	1958	I	1 103.2	55.5	265.0	76.3	84.1	89.5	46.3	168.9	52.8	45.5	907.3	54.4	2 120.4

See Explanatory Notes at end of table.

Table 17 (Continued)
EXPORTS TO LATIN AMERICA F.O.B.
(Millions of dollars)

Country of destination	Exporting country		United States	Canada	Federal Republic of Germany	Belgium and Luxembourg	France	Italy	Netherlands	United Kingdom	Sweden	Switzerland	Total Western Europe ^b	Japan	Total ^b
	Year	Half-year													
Costa Rica . . .	1957	I	23.5	1.2	4.0	1.1	1.5	0.9	1.8	2.0	0.2	0.4	12.3	4.1	41.1
	1957	II	23.3	1.4	4.0	1.1	1.0	0.8	1.6	2.3	0.2	0.5	12.3	1.1	38.1
	1958	I	22.1	1.5	4.6	0.6	0.6	0.5	2.2	2.4	0.3	0.4	12.2	2.5	38.3
Cuba	1957	I	300.7	7.8	13.0	6.3	8.3	3.0	2.4	11.5	2.2	2.8	61.4	2.1	372.0
	1957	II	309.4	9.9	17.5	4.5	4.4	4.1	2.6	11.2	1.2	3.6	57.1	2.8	379.2
	1958	I	277.8	8.1	12.4	6.5	3.9	3.4	3.1	12.9	1.7	3.4	56.3	3.2	345.4
El Salvador . . .	1957	I	27.0	1.4	5.0	0.9	0.9	1.0	1.3	2.0	0.3	0.4	12.2	3.6	44.2
	1957	II	21.8	1.2	4.7	0.8	0.8	0.6	1.3	1.9	0.2	0.6	11.5	4.4	38.9
	1958	I	23.1	1.3	5.2	0.5	0.8	0.6	1.4	1.8	0.5	0.6	11.9	3.7	40.0
Guatemala . . .	1957	I	40.7	1.5	5.3	1.7	0.9	0.9	1.7	3.1	0.3	0.7	15.3	0.4	57.9
	1957	II	37.8	1.6	6.5	0.9	0.7	0.9	1.6	3.0	0.2	0.8	15.2	0.4	55.0
	1958	I	42.3	2.4	6.2	0.7	0.8	1.5	1.4	2.7	0.2	0.7	14.6	0.5	59.8
Haiti	1957	I	11.1	1.3	0.8	0.3	0.7	1.5	0.4	1.1	0.1	0.3	5.3	—	17.7
	1957	II	12.8	1.1	0.6	0.4	0.6	0.4	0.4	0.8	—	0.1	3.5	0.1	17.5
	1958	I	13.4	1.3	0.9	0.5	0.7	0.2	0.4	1.0	0.1	0.3	4.3	—	19.0
Honduras	1957	I	21.4	0.7	2.3	0.4	0.2	0.4	0.4	0.8	0.3	0.1	4.9	2.2	29.2
	1957	II	19.5	0.6	1.9	0.4	0.1	0.4	0.3	0.9	0.1	0.3	4.6	2.1	26.8
	1958	I	18.0	0.6	2.2	0.4	0.1	0.3	0.5	0.7	0.1	0.1	4.6	2.6	25.8
Mexico	1957	I	439.2	24.0	28.6	4.2	7.4	12.7	4.4	14.4	6.1	8.3	92.0	3.3	558.5
	1957	II	453.6	20.8	33.3	4.0	6.8	15.1	3.8	21.9	7.0	9.8	109.4	4.3	588.1
	1958	I	466.7	18.2	30.3	7.1	5.2	12.5	4.7	16.5	6.9	8.7	98.1	5.8	588.8
Nicaragua	1957	I	21.0	0.7	4.7	0.5	0.4	0.2	0.5	1.3	0.1	0.2	8.5	0.9	31.1
	1957	II	17.0	0.9	5.6	0.6	0.3	0.4	0.3	1.4	—	0.3	9.5	1.2	28.6
	1958	I	17.5	1.1	3.3	0.6	0.2	0.3	0.7	3.3	0.1	0.2	8.8	1.5	28.9
Panama	1957	I	38.1	21.7	4.7	0.8	12.7	3.5	1.0	14.2	0.4	0.6	45.7	10.8	116.3
	1957	II	45.0	10.5	3.4	0.7	1.0	5.5	5.4	3.7	5.8	0.9	43.3	11.8	110.6
	1958	I	35.0	3.1	1.8	0.6	0.9	11.7	3.8	3.0	1.0	0.8	25.3	19.7	83.1
Dominican Republic	1957	I	34.1	2.7	3.2	1.4	0.9	1.0	0.8	2.3	0.2	0.3	10.9	1.3	49.0
	1957	II	38.0	2.7	3.0	1.6	1.0	1.2	0.9	2.6	0.2	0.4	11.9	2.0	54.6
	1958	I	38.8	2.9	3.3	1.4	0.7	1.0	1.0	2.5	0.3	0.6	11.7	2.3	55.7
Total	1957	I	956.8	63.0	71.6	17.6	33.9	25.1	14.7	52.7	10.2	14.1	268.5	28.7	1 317.0
	1957	II	978.2	50.7	80.5	15.0	16.7	29.4	18.2	49.7	14.9	17.3	278.3	30.2	1 337.4
	1958	I	954.7	40.5	70.2	18.9	13.9	32.0	19.2	46.8	11.2	15.8	247.9	41.8	1 284.8
Grand total	1957	I	2 161.1	118.3	312.0	80.6	115.7	102.8	54.6	220.9	72.6	59.5	1 144.7	66.8	3 490.9
	1957	II	2 304.6	119.0	387.5	98.3	100.0	128.3	68.0	243.3	84.3	71.6	1 327.0	84.3	3 834.9
	1958	I	2 057.9	96.0	335.2	94.2	98.0	121.5	65.5	215.7	64.0	61.3	1 154.2	96.2	3 404.2

SOURCES: See table 16.
^a Including other countries of Western Europe.
^b Total for the countries specified.

Table 18
WORLD MARKET PRICES FOR PRINCIPAL LATIN AMERICAN EXPORTS
(Indices: 1955 = 100)

Commodity	Quarter	Weight- ing 1955	1956				1957				1958		
			I	II	III	IV	I	II	III	IV	I	II	III
A. Tropical commodities													
Bananas		184	105	105	105	104	105	104	104	103	...	...	...
Sugar (a)		405	99	100	102	106	104	107	107	106	105	108	109
Sugar (b)		437	100	103	103	123	183	191	144	119	110	107	107
Coffee (c)		1 821	97	100	105	106	105	102	95	96	95	88	80
Coffee (d)		1 052	109	111	124	115	109	103	96	89	85	84	80
Cacao		231	72	68	73	69	61	75	95	105	117	125	128
Cotton (e)		337	99	93	83	87	91	89	89	94	94	90	83
Cotton (f)		238	94	87	85	83	86	86	86	84	...	78	76
Cotton (g)		123	101	120	121	132	136	122	115	108	103	84	77
Group total		4 828	99	100	105	105	107	106	100	97	96	93	88
B. Other agricultural commodities													
Meat		185	80	87	82	70	78	79	87	81	80	92	99
Wheat		356	97	108	111	111	105	96	97	96	93	93	94
Maize		122	105	113	111	113	119	100	99	95	82	81	80
Quebracho		53	100	100	100	100	92	84	84	84	85	85	85
Wool		320	99	102	102	103	105	105	105	101	91	79	76
Linseed oil		55	133	144	123	129	123	107	100	106	106	107	114
Group total		1 091	98	105	104	102	102	96	97	95	89	88	88
C. Non-ferrous metals^h													
Copper		631	116	97	86	80	71	67	59	53	48	52	58
Lead		126	113	109	109	110	108	95	86	76	70	69	67
Zinc		60	110	104	106	111	110	95	81	74	69	69	70
Tin		93	109	102	104	111	105	104	101	99	99	99	98
Group total		910	114	100	92	89	82	76	64	62	57	60	64
D. Non-metallic minerals													
Nitrate		69	100	100	100	97	97	95	94	97	97	97	97
Crude petroleum		3 102	98	98	98	98	105	106	106	106	106	106	106
Total: 17 commodities		10 000	100	100	101	101	104	102	98	97	95	93	91

SOURCES AND METHODS: See Explanatory Notes.

a Exports to the United States.

b Excluding exports to the United States.

c Santos.

d Manizales.

e Mexican.

f Brazilian.

g Peruvian.

h The quotations refer to the London market. In the *Economic Bulletin for Latin America*, Vol. III, No. 2, table 33, reference was made to the New York market.

Table 19
WHOLESALE PRICES IN SELECTED LATIN AMERICAN COUNTRIES
 (Indices: 1950 = 100)

Country	1956				1957				1958		
	March	June	Sep-tem-ber	De.-cem-ber	March	June	Sep-tem-ber	De.-cem-ber	March	June	Sep-tem-ber
Brazil	244	266	282	292	302	297	297	302	309	323	348
Colombia	128	134	139	147	156	177	179	183	188	198	204
Costa Rica	96	95	95	96	97	97	95	94	94	98	98
Chile	767	894	1 008	1 032	1 155	1 313	1 401	1 387	1 536	1 595	1 728
Guatemala	104	107	106	103	105	107	105	105	104	109	107
Mexico	166	165	163	165	167	171	175	176	178	181	177
Paraguay	1 012	1 087	1 146	1 149	1 273	1 288	1 312	1 340	1 361	1 376	1 433
Peru	157	160	161	163	166	169	170	169	175	179	181
Dominican Republic	103	110	107	106	118	109	118	122	123	121	114
Venezuela	106	104	104	105	104	105	104	103	102	100	102

Sources: Official statistical publications of each country and United Nations *Monthly Bulletin of Statistics*.

Table 20
COST OF LIVING IN SELECTED LATIN AMERICAN COUNTRIES
 (Indices: 1950 = 100)

Country	1956				1957				1958		
	March	June	Sep-tem-ber	De.-cem-ber	March	June	Sep-tem-ber	De.-cem-ber	March	June	Sep-tem-ber
Argentina	240	268	267	286	296	324	347	360	360	416	461
Bolivia	2 129	2 577	3 197	8 054	7 589	6 503	6 303	6 949	6 964	6 809	6 957
Brazil	266	276	293	303	316	326	332	341	363	370	381
Colombia	131	134	131	134	142	152	158	165	169	179	175
Costa Rica	111	111	110	112	114	115	114	116	117	118	117
Chile	782	839	972	1 016	1 043	1 161	1 397	1 191	1 304	1 396	1 480
Ecuador a	110	110	110	110	112	112	113	114	115	113	113
El Salvador	138	137	135	135	135	137	140	142	145	143	149
Guatemala	111	117	106	111	108	115	111	109	107	113	110
Honduras	121	120	123	115	121	120	120	115	120	124	123
Mexico	165	159	161	159	161	170	177	182	189	189	191
Paraguay	943	966	989	1 012	1 098	1 115	1 086	1 163	1 218	1 169	1 187
Peru	147	149	152	153	158	160	164	164	170	173	177
Dominican Republic	104	106	109	105	112	111	116	113	106	111	108
Uruguay	176	180	179	189	193	213	216	224	232	239	250
Venezuela	107	107	108	108	104	105	104	108	107	110	111

Sources: See table 19.

Note: Indices generally refer to the capital of each country.

a August-December 1950 = 100.

EXPLANATORY NOTES

GENERAL

(Table 1)

This table brings up-to-date the series given in the *Economic Bulletin* Vol. III No. 2. All index numbers are however on the base 1955 = 100 which is the benchmark period chosen by ECLA for studies relating to recent years.

Attention is again drawn to the fact that for trade with the United States and Western Europe, data are based on the figures of countries in the two last areas. In the case of imports into

European countries (shown in Table 1 as "Exports to Western Europe"), c.i.f. data have been converted to an approximate f.o.b. basis on the assumption that freight and insurance costs represented 15 per cent of the f.o.b. values.

No index figures have this time been given for the quantum of imports as only provisional figures to the base 1955 = 100 are at present available.

FINANCE

(Tables 2 to 4)

The series are fully comparable with those in Vol. III No. 2.

MINING PRODUCTION

(Tables 5 to 7)

(1) VOLUME OF MINING PRODUCTION IN LATIN AMERICA (Table 5).

The gross value of production has been estimated by ECLA at 1955 international prices by aggregating the quantity data for the eleven products listed in Table 7. The "typical" 1955 prices listed at the right were used as weights:

These prices have a number of deficiencies. They include, for instance, the cost of transportation from the mine to the coast; they fail to take into account the varying quality of the ores exported from Latin American countries; they are furthermore based on only one main market instead of being an average of all markets. However, they have been accepted on two main grounds: first, no other figures truly representative of the prices in dollars received by the producer were available to ECLA; and secondly, any distortions introduced through using inadequate price weights would probably not be too important in the period covered by the index.

In this connexion, it may be of interest to note the index series compiled by the United Nations Statistical Offices with the use of national (rather than international) weights. These have been placed on the same base year as the ECLA series¹ and are listed on the following page.

These series differ from those of ECLA in two main respects:

(a) While ECLA data refer to gross production these series are based on the "value added" component —i.e. the value of production less the cost of raw materials, fuels, power, containers, supplies consumed, etc.

(b) In the ECLA series, each mineral is given the same weighting for all countries. The above series have however been obtained by combining country index series in accordance with weights which reflect the census value added in the country concerned. For each country, the index series are those calculated by national offices with national price or added value weights. The same mineral may therefore be given a differing relative importance in the

<i>Product</i>	<i>Dollars per ton^a</i>	<i>Source</i>
Coal	20	Unit value c.i.f. of Latin American imports from outside the region
Crude petroleum	17	Unit value f.o.b. United States imports from Venezuela
Iron ore	11	Unit value f.o.b. of United States imports from Latin America
Copper ore	720	Unit value f.o.b. of United States imports from Chile (ores and concentrates)
Lead ore	210	Unit value f.o.b. of United States imports from Peru
Zinc ore	75	Unit value f.o.b. of United States imports from Mexico and Peru
Tin ore	1 700	Unit value f.o.b. of United States imports from Bolivia (concentrates)
Silver	28 646	New York quotation 89.1 cents per fine ounce
Gold	1 125 300	International price of \$35 per fine ounce
Sulphur	24	Unit value f.o.b. of Latin American exports
Nitrate	39	Unit value f.o.b. of United States imports from Chile

¹ Data were published originally to the base 1953 = 100. The figures have been converted by ECLA to a 1955 base by projecting 1953 value added weights with the aid of national indexes measuring changes in the volume of mining production between 1953 and 1955.

^a For ores, dollars per ton of metal content.

VOLUME OF MINING PRODUCTION IN LATIN AMERICA

Net production, weighted by national prices
(Index numbers: 1955 = 100)

Country	1950	1951	1952	1953	1954	1955	1956	1957
Total from Latin America	73	81	86	85	90	100	111	124
Of which:								
Argentina	70	75	94	84	93	100	108	123
Brazil	72	96	96	103	98	100	111	124
Colombia	83	94	95	97	98	100	111	113
Chile	86	91	94	84	87	100	107	110
Mexico	90	90	94	90	93	100	99	99
Peru	71	79	82	89	93	100	103	116
Venezuela	68	78	82	80	87	100	115	131

various countries depending on differences in their price structures. (Hence in the regional index, the various minerals are combined with weights which differ according to the country in which they were produced.) Note also that for the region as a whole, production data have been combined by applying selected exchange rates (generally the average "official" rate; or, if this was not appropriate, a free or so-called "parity" rate) in order to obtain constant value aggregates in terms of dollars. (For further information, see *Monthly Bulletin of Statistics*, United Nations, January and November 1958, and February 1959.)

In practice, both gross and net data have their uses and any disparities in the two series quoted should not be considered as a reason for rejecting one or the other. They should instead be treated as complementary series, each measuring a similar, but not necessarily identical, aspect of production. In the same way, differences resulting from the weighting methods used are a problem inherent in index number construction; and the particular type of weighting which should be preferred depends always on the use to which the index is put.

(2) REFINING OF NON-FERROUS METALLIC ORES (Table 6)

The table relates only to those countries which produce the me-

tallic ores mentioned. It does not cover refining in countries which use imported ores.

Production data were taken from the *Yearbook of the Bureau of Metal Statistics*.

(3) PRODUCTION OF SELECTED MINERALS (Table 7)

Output in most of the producing countries of the region is covered for the following products: coal, crude petroleum, iron ore, copper ore, lead ore, zinc ore, tin ore, silver, gold, sulphur and sodium nitrate. Because of a lack of information some of the minor producing countries have not been included. Hence while totals relate, so far as was possible, to the whole region, for some products minor quantities may have been omitted.

Sources: Data have been taken from the following:

United Nations: *Statistical Yearbook 1957*;
Monthly Bulletin of Statistics.

National Sources:

- Argentina: *Boletín Mensual de Estadística*.
- Bolivia: *Exportaciones de minerales. Suplemento estadístico*, published by Banco Central de Bolivia.
- Brazil: *Produção mineral 1956*, published by Ministry of Agriculture; *Desenvolvimento e localização de indústria extrativa de produtos minerais no Brasil*, published by Conselho Nacional de Estatística.
- Colombia: *Anuario General de Estadística: B) Minería*.
- Chile: *Estadística Chilena: Minería* published by Servicio Nacional de Estadística.
- Mexico: *Revista de Estadística, producción minero-metalúrgica*. For metallic ores, 1957 data were supplied by the Banco Nacional de México; for sulphur, data were taken from *Examen de la Situación Económica de México N° 390*.
- Peru: *Boletín de Estadística Peruana. IX Sección: Producción minera*.
- Venezuela: *Memoria del Banco Central de Venezuela: Producción*. For metallic ores and metals, most of 1957 data were taken from the *Yearbook of the American Bureau of Metal Statistics 1957*.

MANUFACTURING PRODUCTION

(Tables 8 to 10)

(1) VOLUME OF MANUFACTURING PRODUCTION IN LATIN AMERICA (Table 8).

Basic data were compiled by the United Nations Statistical Office and are described in the *Monthly Bulletin of Statistics*, February 1959. They are similar in nature to the index series compiled by that office for mining production (see above). Regional totals were computed as weighted averages of country series, each of the latter being weighted by the "census value added" of the industry group for the country concerned. While the original United Nations series were published to the base 1953 = 100, these have been converted for the purpose of comparability to a 1955 base by projecting the 1953 added value weights (national production indexes for the two years involved being used for this purpose).

(2) MANUFACTURING PRODUCTION IN SELECTED LATIN AMERICAN COUNTRIES (Table 9)

Data relate to the index series which appear regularly in the official publications of the countries concerned. In order to provide a means of comparison, however, all series have been placed on the base 1955 = 100. Original base years were: Argentina, 1943 (recently published to a 1952 base year but using 1943 weights); Brazil, 1948; Chile, average of 1936-38; Peru, 1954; and Vene-

zuela, 1948. It is to be emphasized that indexes for the countries concerned have been compiled in differing circumstances and with varying degrees of statistical accuracy. Some indexes are in fact extremely unreliable because of changes in the structure of industry, and at best reflect only production trends for the sample of industries upon which the original series was based. As in practice industries not covered adequately in the base year calculations for some countries have increased to a greater extent than the older-established industries, there is thus a downward bias in the index figure for the total and for some of the groups. No adjustments have however been made by ECLA on this account as in most cases the national statistical offices are now engaged in the planning of more reliable series.

For purposes of presentation only, national group data have been rearranged to conform as far as possible to the component groups of the United Nations *International Standard Industrial Classification of all Economic Activities (I.S.I.C.)*, the weights of the original index, being used in all cases where sub-indexes were combined with other groups. For Argentina, "Basic metal industries" was separated from "Metal products excluding machinery"; Shipbuilding and repairing" from "Vehicles and non-electrical machinery"; while "Foods and Beverages" were divided into two separate groups. For Brazil, only those groups relating to manufacturing production were used—these being combined in accordance with the original weights so as to give an over-all

manufacturing index. For *Chile*, a rearrangement of certain groups was also made. Notwithstanding these changes, however, certain important groups are not comparable in coverage with those of the I.S.I.C. Thus "Food industries" excludes the slaughtering of animals and the refining of sugar; "Beverages" includes only the production of beer and mineral water; "Textiles" excludes yarn and thread; "Chemicals" excludes pharmaceutical products; while the refining of petroleum is excluded completely from the index. For *Peru* and *Venezuela*, data are reproduced without any basic change.

Sources used were as follows:

- Argentina: *Síntesis Estadística Mensual*, published by Dirección Nacional de Estadística.
- Brazil: Fundação Getulio Vargas; *Anuario Estatístico do Brasil 1958*, IBGE.
- Chile: *Estadística Chilena año 1956*, published by Servicio Nacional de Estadística; and information supplied directly by that office.
- Peru: *Boletín de Estadística Peruana 1958, Año I, No. 2*, published by Dirección Nacional de Estadística.
- Venezuela: *Memoria año 1957*, published by Banco Central de Venezuela.

(3) PRODUCTION OF SELECTED MANUFACTURES AND SEMI-MANUFACTURES (Table 10)

Manufacturing data does not generally lend itself to the presentation of series for individual products which are fully comparable as between countries. They are furthermore subject to the limitation that it is often impossible to cover all the production of a given product in any particular country. Nevertheless, certain series indicative of production in important industries in Latin America are given in Table 10, based on the following sources:

(a) *Cement*: Data were taken mainly from the United Nations *Statistical Yearbook 1957* and from the *Anuario 1957* of the *Asociación de Fabricantes de Cemento Portland*, Buenos Aires. In addition the following national sources were used:

- Brazil: *Anuario Estatístico do Brasil 1957 y 1958 Relatorio do Banco do Brasil, 1957*.
- Colombia: *Boletín Mensual de Estadística, March 1958*.
- Cuba: Data supplied by firms.
- Chile: Data supplied by the *Servicio Nacional de Estadística y Censos*.
- Ecuador: 1956: *Boletín del Banco Central del Ecuador* (September and October 1957 issues).
1957: Data supplied by the *Banco Central del Ecuador*.
- El Salvador: *Anuario Estadístico, 1956*.
- Mexico: *Cámara Nacional de Cemento*.
- Paraguay: 1956: *Boletín Estadístico del Paraguay* (January-March 1957).
- Peru: 1956: Direct information; 1957: ECLA estimates.
- Uruguay: 1957: *Banco de la República Oriental del Uruguay*.
- Venezuela: *Boletín Mensual de Estadística, December 1957*.

(b) *Pig iron, crude and finished steel*. Data were supplied by the following offices or taken from the sources mentioned:

- Argentina: *Memoria 1957*, published by *Centro de Industrias Siderúrgicas*.
- Brazil: *Anuario Estatístico 1957 y 1958; Relatorio do Banco de Brasil* (April 1958) and *Companhia Siderurgica Paulista, Memoria Técnica 1956*.
- Colombia: Production of Paz del Río as indicated by that company.
- Cuba: ECLA estimates.
- Chile: *Compañía de Acero del Pacífico*.
- Mexico: *Altos Hornos de México* and *Banco de México*.
- Peru: ECLA estimates.
- Uruguay: Data supplied by producers; and ECLA estimates.

(c) *Selected chemical products*. Data were taken from the *Statistical Yearbook* of the United Nations and from the following national sources:

- Argentina: *Boletín Mensual de Estadística*; also data supplied by the *Dirección Nacional de Industria*.
- Brazil: *Sulphuric Acid*: estimates of "Servicio Barros"; for other products, data supplied by the producers.
- Chile: *Sodium carbonate*: Krijgenen report; for other products, data supplied by the producers.
- Mexico: 1950-54: *Nacional Financiera*, Annual report, 1958.
1955-57: *Banco de México*.
- Colombia,
Cuba,
Peru,
Uruguay and
Venezuela: Data supplied directly from the countries concerned; or ECLA estimates based on partial information.

(d) *Woodpulp, newsprint and other paper*. Much of the data was supplied by the Pulp and Paper Advisory Group, established jointly by ECLA, FAO and TAB. In addition, the following national sources were used:

- Argentina: Official figures supplied directly by the Industries Department of the Finance Ministry.
- Brazil: *Relatorio do Grupo de Trabalho de Celulosa e Papel*, Annexes 2 and 4, August and December 1957; and *Programa de Metas*, 30 September 1958, both published by the *Presidencia de República, Conselho do Desenvolvimento*.
- Mexico: Estimates based on information obtained directly from industries.
- Peru: Figures supplied by Grace and Co. (Peru).
- Venezuela: Figures supplied by the Industries Department of the Ministry of Development.

INTERNATIONAL TRADE

(Tables 11 to 17)

(1) VALUE OF EXPORTS AND IMPORTS (Table 11)

Explanations regarding sources of data, the coverage and system of trade, methods of valuation and conversion factors used were given in the Explanatory Notes of the *Economic Bulletin*, Volume III No. 2. Modifications introduced in this issue are as follows:

Coverage: In the interests of comparability, data for the ten countries in South America have been adjusted in order to include trade in silver and platinum (thus conforming more close-

ly to the definitions of merchandise adopted generally by the United Nations and already used for the ten countries in the northern part of Latin America). While only quarterly figures are shown in this Bulletin, revised annual series will be published in the *Economic Survey, 1958* or a later issue of the *Economic Bulletin*.

Adjustment of f.o.b. imports in order to approximate c.i.f. The last *Economic Bulletin* gave figures indicating the percentages added to the imports of those countries where data were

received on an f.o.b. rather than a c.i.f. basis. Beginning in 1957, the percentages used for the countries in the Central American and Caribbean area are as follows :

Cuba:	10	Panama	18
Guatemala:	17	Dominican	
Honduras:	15	Republic	17

Imports for Nicaragua, it should be noted, are now reported on a c.i.f. basis.

(2) QUANTUM AND UNIT VALUE INDEX NUMBERS (Tables 12 and 13)

(a) *Adoption of new base year.* In addition to quarterly numbers calculated to the base year 1950, this issue of the *Economic Bulletin* shows export data to a 1955 base which has been adopted by ECLA for studies relating to recent periods. To those familiar with problems of index number construction, there is little need to point out that the use of a base year remote from the period under study may cause a series to be very misleading. The extent to which this is true depends—for quantum or unit value indices respectively—on the changes in the structure of prices or quantities entering into trade, since such changes mean that the original weighting system has become out-of-date and therefore not relevant for recent comparisons. In the absence of marked correlation between price and quantity changes, the change of base period for weighting would make little difference. As a rule, however, there is such correlation in Latin American countries. Hence, numbers for two periods can be misleading if they are calculated with weights applicable to a date remote from them both.

Particular difficulties arise in the case of unit value series of the Paasche type; for while the quantum series shown by ECLA are calculated with constant price weights, the weights for the unit value series are quantities which change in each period. The resulting indexes therefore reflect both price changes and structural changes and should be interpreted accordingly. This can be of great importance in the case of exports where climatic factors often change the composition from one year to another. It is even more important for quarterly series where seasonal factors may result in widely divergent patterns of trade in each period.

(b) *Calculation of quarterly series.* To simplify the calculation, ECLA's quarterly series are compiled on the basis of cumulative data for the year in question—January through March, January through June, etc. For each of these periods, data in current prices and at prices of the base year are calculated. Figures for individual quarters are then obtained by subtracting one period from another—a comparison of the constant value figures with one-fourth of the base year data yielding the quantum index; and a comparison of the constant value figures with the corresponding current value figures yielding the Paasche-type unit value index. This system may give rise to errors in those quarters where data include adjustments for earlier periods—notably in the fourth quarter of the year when figures are often rectified before closing the annual trade and customs accounts. Insofar as adjustments are often contained in figures for individual months (and certainly in annual totals), this problem can rarely be eliminated in any event.

(c) *Adjustment for incomplete coverage.* A new system of adjusting the index numbers to allow for incomplete coverage has been introduced in the 1955 based series. For the 1950 series, the assumption was made that items not included directly in the index calculations belonged to commodity groups in the same proportions as the items actually used in the calculations; also that the average price changes for all included items would apply equally to the non-included items.²

² Modifications of this general procedure were adopted in certain cases. For example, it was assumed that 100 per cent of the "fuels" group was already included in the calculation of both import and export indexes. Furthermore, the price of this group was not allowed to influence the price applied to non-included items.

This system led at times to sizeable errors, particularly when dealing with current value and quantum data for individual commodity groups. In the new system introduced for the 1955-based series, the total current value of non-included items in each period is distributed amongst the various groups according to the pattern of non-included items in the base year (or some other selected year). Thus, if in the base year, mineral products represented 15 per cent of the non-included items, it is assumed that in a subsequent period, they also accounted for 15 per cent and the value of the mineral group is adjusted accordingly. The unit value index for the group (determined on the basis of included items) is then applied to the estimate of the non-included part in order to give a total for the group in terms of base year prices. Quantum indexes for the group are then calculated in the usual way. So far as the unit value index is concerned it will be noted that at the group level no change is introduced. For total exports, the unit value index is however obtained as a quotient of aggregates which relate to adjusted current and constant values for all groups. As the aggregates are changed by the adjustments adopted, it follows that the index is also affected indirectly by the methodology which has been used. It should also be noted that, while the above methodology reduces the error attributable to incomplete coverage appreciably (since it gives a more reliable estimate of group totals and a better imputation of price changes), errors on this account are not eliminated entirely and some inaccuracies will still remain.

A similar system is being adopted in the case of imports, data for which will be published on a 1955 base as soon as the work of revision and verification is completed.

Further details regarding the methodology used by ECLA in the construction of index numbers may be found in the Explanatory Notes of the *Economic Bulletin*, Vol. III, No. 2.

(3) EXPORTS OF PRINCIPAL COMMODITIES (Tables 14 and 15)

Quarterly data shown in Table 14 are directly comparable with the annual series shown in Table 30 of Vol. III, No. 2. Accordingly, the Explanatory Notes to that issue apply equally to the data now presented.

Table 15 shows data for the exports of selected products, differentiating between principal countries or areas of destination. The items chosen are virtually the same as in Table 14. (Bananas were omitted because of difficulties in obtaining accurate value figures according to country of destination). As far as possible, the data relate to the exports of Latin America as a whole, though figures for some of the minor producing countries may have been omitted. The following list is therefore given in order to clarify which countries are included for each individual commodity:

<i>Sugar:</i>	Brazil, Colombia, Cuba, Peru, Dominican Republic
<i>Coffee:</i>	Brazil, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Peru, Dominican Republic, Venezuela
<i>Cacao:</i>	Brazil, Costa Rica, Ecuador, Dominican Republic, Venezuela
<i>Cotton:</i>	Argentina, Brazil, El Salvador, Mexico, Nicaragua, Peru
<i>Tobacco:</i>	Brazil, Cuba, Paraguay, Dominican Republic
<i>Meat (frozen and chilled):</i>	Argentina, Mexico, Uruguay
<i>Wheat:</i>	Argentina, Uruguay
<i>Maize:</i>	Argentina
<i>Hides:</i>	Argentina, Brazil, Paraguay, Uruguay
<i>Quebracho:</i>	Argentina, Paraguay
<i>Wool:</i>	Argentina, Brazil, Chile, Peru, Uruguay
<i>Wool Yarn:</i>	Argentina, Uruguay
<i>Nitrate:</i>	Chile
<i>Iron ore:</i>	Brazil, Chile, Peru, Venezuela
<i>Copper:</i>	Cuba, Chile, Mexico, Peru

Lead: Bolivia, Chile, Mexico, Peru
Zinc: Mexico, Peru
Tin: Bolivia
Petroleum and derivatives: Colombia, Ecuador, Mexico, Peru, Venezuela

Totals for the various commodities differ from those shown in Table 30 of Vol. III, No. 2 and Table 14 of the present *Economic Bulletin* for a number of reasons; e.g. variations in commodity specifications, the use of revised figures in one series which were not available for the other, differences in the countries covered, etc., etc. In particular the following variations may be noted:

Sugar: Table 15 includes the exports of Colombia (these were zero in 1954).
Coffee: Table 15 excludes Haiti in all years.
Cotton: Table 15 excludes Paraguay but includes Argentina.
Meat (frozen and chilled) The composition of the item differs in the two sets of tables.
Hides: The composition differs in the two sets of tables.
Quebracho: In Table 15, data published by the *Dirección Nacional de Estadística y Censos* in its *Boletín Estadístico del Paraguay* were used for that country. In Table 14 the source was the *Boletín Estadístico* of the *Banco Central del Paraguay*.
Wool: The composition differs in the two sets of tables. Figures for Brazil, Chile and Peru are also included in Table 15.
Iron ore: Marked differences after 1955 are due to the inclusion of figures for Venezuelan exports in Table 15 (no trade was reported in earlier years).
Copper: The composition differs in the two sets of tables; Table 15 covering exports of ore, blister and electrolytic copper as well as copper in ingots, bars and sheets. Table 15 also includes exports from Cuba.
Lead: The composition differs in the two sets of tables, Table 15 including refined lead. It also includes exports from Bolivia and Chile.

Zinc: The composition differs in the two sets of tables, Table 15 including the export of ores, concentrates, bars, ingots and refined zinc.

Tin: Differences exist in the basic sources used.

Petroleum and derivatives: Quantity differences are due to slight variation in the conversion factors applied in order to convert cubic metres or barrels of petroleum into tons. Other differences in both quantities and values are due to the inclusion of refined products for more countries in Table 15.

For four products—cacao, wheat, maize and nitrate—the figures are the same in both sets of tables.

With regard to sugar, it should be noted that while adjusted value figures are published for total of exports from Cuba, similar data are not given by country of destination. Adjustments have been made by the ECLA Statistical Section in the following way: (a) The value of exports to the United States as shown in *International Monetary Statistics* was accepted; (b) The difference between this figure and the adjusted total was apportioned among remaining destinations according to the unadjusted value of Cuba's exports to each of them.

Finally, it should be noted that for all commodities countries of destination have been tabulated according to the way they are shown in the statistics of the reporting country. Area totals may not therefore be complete (as occurs if any destinations are included in a residual item relating to "other countries"). "Western Europe", it should be noted, relates to the sixteen OEEC members plus Finland, Spain and Yugoslavia. "Eastern Europe" comprises Albania, Bulgaria, Czechoslovakia, Hungary, Poland, U.S.S.R. and the German Democratic Republic.

(4) IMPORTS FROM AND EXPORTS TO LATIN AMERICA (Tables 16 and 17)

The Explanatory Notes given in Vol. III, No. 2 apply. In particular, attention is drawn to the fact that data relating to imports of Western Europe and Japan have been adjusted from a c.i.f. to an approximate f.o.b. basis.

PRICES

(Tables 18 to 20)

(1) WORLD MARKET PRICES FOR PRINCIPAL LATIN AMERICAN EXPORTS (Table 18)

The commodity specifications given in the Explanatory Notes to Vol. III No. 2 still apply, except in the case of copper, lead, zinc and tin where, because of a recent shift in the volume of transactions from the New York market to the London market, the following quotations have been used:

Copper: United Kingdom, domestic/import price, standard electrolytic wire bars, spot price, ex-warehouse, London.
Lead: United Kingdom, domestic/import price ex-warehouse London, spot, purity 99.97 per cent Pb.

Zinc: United Kingdom, domestic/import price ex-warehouse London, spot, purity 98.75 per cent Zn.
Tin: United Kingdom, domestic/import price delivered to buyer, cash quotations London, standard tin.

The method used for calculating group and total indexes has been described in Vol. III No. 2.

(2) WHOLESALE PRICES IN SELECTED COUNTRIES (Table 19) and COST OF LIVING IN SELECTED COUNTRIES (Table 20)

The Monthly Bulletin of Statistics of the United Nations has again been used as the source except for most recent data which in certain cases was taken directly from national publications.