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AND PRICES**

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## PREFACE.

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The present volume contains a general survey of world production and prices during the period 1925-1933 (1933-34).

It is similar in scope to last year's edition, dealing first with the production and consumption of primary products, secondly with industrial activity, and thirdly with prices. A brief synopsis of the more important results of the analysis of world trade contained in the recently published *Review of World Trade, 1933* is interpolated in order to permit of a comparison between trade and production. The observations in the text are mainly concerned with the year 1933 and the first quarter of 1934.

The detailed statistics on which the indices relating to primary production are based, as well as the national indices of industrial activity, have been published in the *Statistical Year-Book of the League of Nations, 1933-34*.

A summary of the main conclusions which may be drawn from the present study will be found in the introductory chapter.

*League of Nations,  
Geneva, July 1934.*

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## SUMMARY OF RECENT CHANGES IN WORLD PRIMARY PRODUCTION AND INDUSTRIAL ACTIVITY, INTERNATIONAL TRADE AND PRICE MOVEMENTS.

The most important world indices relating to the production of primary commodities, the changes in industrial activity and the quantum of international trade during the period 1925-1933 are shown in the summary table and diagram below. The exact nature and the methods of calculation of the various indices are described later.

SUMMARY OF WORLD INDICES.  
(Average 1925-1929 = 100.)

Nature of Indices	1925	1926	1927	1928	1929	1930	1931	1932	*1933
A. Primary production (total) . .	96	96	100	103	106	103	98	95	97
Thereof :									
{ Agricultural production . .	98	97	99	103	103	104	102	103	102
{ Non-agricultural production	90	92	100	105	114	101	86	73	82
{ Crude foodstuffs . . . . .	98	97	100	103	103	104	102	104	103
{ Industrial raw materials . .	92	94	99	104	111	102	91	81	88
B. Industrial activity : <sup>1</sup>									
World, excluding U.S.S.R. . .	93	94	99	104	110	94	81	69	79
World, including U.S.S.R. . .	91	94	99	105	112	98	87	77	87
C. Quantum of international trade	91	94	101	104	110	102	94	81/82	82/83

The following summary is confined to developments during the depression. The evidence afforded by the statistical material, which is analysed below, points to the following main conclusions, certain of which will require subsequent qualification :

(1) The world economic depression reached its lowest point in the middle of 1932. In 1933, the decline in commodity prices stopped in many parts of the world, the shrinkage in world trade was arrested, if not reversed, productive activity increased noticeably, and visible stocks of primary commodities tended to diminish.

(2) Agricultural production and particularly the production of crude foodstuffs has remained practically stable since 1928 with minor year-to-year fluctuations ; it dropped slightly in 1933. On the other hand, in response to the marked recovery in general industrial activity, the production of industrial raw materials rose by almost 9% in that year, the increase being considerably greater for non-agricultural raw materials (12%) than for those of agricultural origin (4%). However, raw-material production as a whole was still 12% and that of non-agricultural raw materials 18% below the average for 1925-1929.

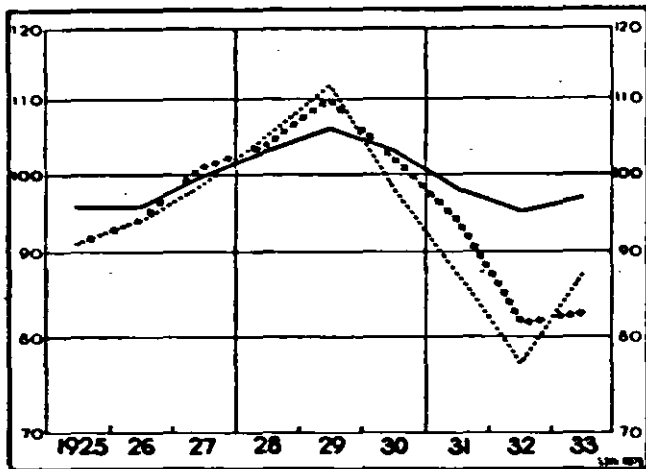
(3) Industrial activity in the world, apart from the U.S.S.R., which had contracted by 37% between 1929 and 1932, increased by 14% in 1933 or very considerably more than

<sup>1</sup> According to the international index of the "Institut für Konjunkturforschung", Berlin.  
\* Provisional indices, subject to revision.

DEVELOPMENT OF WORLD PRIMARY PRODUCTION,  
INDUSTRIAL ACTIVITY AND TRADE.

(Average 1925-1929 = 100).

— World primary production.  
..... World industrial activity.  
..... World trade.



the production of industrial raw materials, which previously had fallen less. Thus, part of the surplus stocks of raw materials which had accumulated during the depression was consumed in 1933 and stocks continued to diminish in 1934.

(4) The quantum of international trade in foodstuffs shrunk by some 16% between 1929 and 1933. If world production of foodstuffs was roughly equal in those years, this was largely due to increased production in the areas which normally import foodstuffs, while output in the exporting areas declined.

(5) The quantum of international trade in industrial raw materials and semi-manufactured goods shrank less than the world production of these commodities up to 1932, but rose in roughly the same proportion as production in 1933.

(6) The quantum of international trade in manufactured articles diminished considerably more than activity in manufacturing industries up to 1932. Export industries therefore suffered more from the depression than industries producing for home markets. Trade in manufactured articles only increased but slightly in 1933. Export industries therefore shared less than home market industries in the marked revival of manufacturing industry in that year.

(7) Industrial unemployment in the world reached its maximum in the third quarter of 1932 and has diminished persistently since — during 1933 at an accelerated rate — as a result of the increase in activity, more especially of industries producing investment goods.

(8) Activity diminished everywhere much more in industries producing investment goods than in those producing goods for more immediate consumption. It may be estimated that, in Europe and North America taken together, the output of the former category of goods fell between 1929 and the lowest point of depression at the middle of 1932 by over 60% as compared with nearly 25% in the case of the latter. But the contraction in the former was in North America two-thirds greater than in Europe. During the subsequent revival up to the first quarter of 1934, the output of investment goods has recovered at a considerably more rapid rate than that of consumption goods in the United States, Germany, the United Kingdom and the countries in Northern Europe which, like the United Kingdom, suspended the gold standard in the autumn of 1931. In the European gold-standard countries, on the other hand, the revival of real investment activity has lagged behind that of current consumption, and industrial activity as a whole has risen but little since the middle of 1933, if it has not been actually declining.

(9) In the U.S.S.R., the expansion particularly of the heavy industries was pushed rapidly forward throughout the years of world economic depression in conformity with the first Five-year Plan, which was concluded in 1932. The expansion continued, though at a somewhat slower rate, during the first year of the second Five-year Plan.

(10) Outside Europe and North America, industrial activity and, indeed, production as a whole declined less during the period of depression and recovered earlier and more

rapidly in recent years than was the case in the two chief industrial continents. Industrial expansion has been particularly rapid in Japan since the middle of 1932.

(11) While world stocks of industrial raw materials have tended to fall since the middle of 1932 as a result of the more rapid recovery in manufacturing than in raw material production, the stocks of cereals, the demand for which is more inelastic, remained stationary or increased in 1933.

(12) The rapid decline in commodity prices which began in 1929 was stopped in many parts of the world in 1933 and, in some countries and for some commodities, the downward movement was reversed. Divergences in the movements of the various national price-levels increased during 1933, partly as a result of movements in the exchange rates of currencies ; but internal prices in the United States and other countries experiencing marked currency depreciation failed to rise in proportion to the depreciation. Prices tended to fall in most countries remaining on the gold standard.

(13) Some of the major discrepancies in the price structure which had developed in the course of the depression were mitigated during 1933 : the terms of exchange between raw materials and manufactured goods improved in favour of the former ; agricultural products rose on the whole more than industrial products, except in the agricultural exporting countries of South-Eastern Europe ; consumption goods improved in value in terms of investment goods ; retail prices rose considerably less than wholesale prices ; rents in many countries declined more than they had done in previous years.

\* \* \*

Such are the broad general results to which the analysis of available data on production, trade and prices has led. They are based on statistics which are in some cases of doubtful comparability and seldom so comprehensive or so exact as to render it possible to draw conclusions of mathematical accuracy or incontrovertible finality from any single series of figures. For this reason, importance should be attached not so much to the absolute magnitude of this or that figure as to the direction towards which the whole mass of accumulated data tends to point.

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## I. PRIMARY PRODUCTION.

### SCOPE AND METHOD OF COMPUTATION OF THE WORLD PRODUCTION INDEX.

For the purpose of measuring changes in world production, resort must be had, in the first instance, to the output of primary products of farm, forest or mineral origin, used either as crude foodstuffs or as industrial raw materials, the physical volume of which can be measured directly. The physical volume of "secondary production" — *i.e.*, manufacturing and construction — owing to the nature and diversity of its products, can be measured only indirectly (see Chapter II).

The index of world primary production given below covers sixty-six commodities, the list of which is given in Appendix I, Table 2, and is the same as that used previously. Owing to the absence of comprehensive or sufficiently representative data, certain classes of commodities have had to be omitted, the most important of which are vegetables, fruit, dairy produce, hides and skins, and timber. No comprehensive periodical statistics exist for the production of foodstuffs in China. Gold has been omitted as so large a proportion of the production is used for monetary purposes. In certain cases where satisfactory information regarding the output of a given raw material is lacking, the first "partly manufactured" product derived directly from that raw material has been taken into account. As the basic statistics relate to gross output, some measure of overlapping between different commodity groups is involved.

The index has been calculated according to the aggregative method explained in Appendix I. It is weighted according to the relative importance of the various commodities as measured by the aggregate value at unchanged prices of the quantities produced. The variations in the index therefore represent changes in quantity, and not in value. The average annual production in the period 1925-1929 — called hereafter "average pre-depression level" — has been taken as base, and the prices ruling in 1930 have been used in the calculation of the value aggregates, as in the last two issues of the volume.<sup>1</sup>

Owing to the absence of official statistics of agricultural production in the U.S.S.R. for 1931, the agricultural indices for this year are — in so far as they include the U.S.S.R. — partly based on estimates. All indices for 1933 (in the southern hemisphere 1933-34) should be regarded as provisional and are subject to revision.

For the purpose of analysis of the general changes in world primary production, the different commodities considered may be broadly classified according to two main criteria, (*a*) their natural origin and (*b*) the use for which they are intended. According to the former criterion, the principal division is between agricultural and non-agricultural production; according to the latter, between foodstuffs and industrial raw materials.<sup>2</sup>

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<sup>1</sup> In view of the great changes that have taken place in relative values during recent years, the index has been also calculated on the basis of prices ruling in 1925 and 1932. The differences between the results are, however, very small (see footnote on page 16 of the preceding edition). Much greater changes have been caused by repeated modifications in the basic data — particularly in those relating to agricultural production — and these have made revisions of the indices for back years necessary.

<sup>2</sup> Any classification of the sixty-six commodities considered is necessarily somewhat arbitrary. An examination of the list given in Appendix I, Table 2, will show that, in arranging the sixty-six commodities in thirteen groups, both the origin and the purpose have been considered. Some of the commodities classed as industrial raw materials, such as salt and part of the vegetable oils, are used mainly for food. A further difficulty is likely to arise from the fact that some of the crude foodstuffs are used as raw materials of "food industries" as defined in the industrial statistics — *e. g.*, flour and grist mills and sugar refining. On the other hand, the classification is not affected by such overlapping as is due to the fact that barley, oats and maize are largely used as "raw materials" for meat.



These two classifications may be combined and subdivided as follows :

- |                                |                         |   |                                 |
|--------------------------------|-------------------------|---|---------------------------------|
| I. Foodstuffs :                | (1) of vegetable origin | } | A. Agricultural production.     |
|                                | (2) of animal origin    |   |                                 |
| II. Industrial raw materials : | (1) of farm origin      | } | B. Non-agricultural production. |
|                                | (2) of forest origin    |   |                                 |
|                                | (3) of mineral origin   |   |                                 |

**TOTAL PRIMARY PRODUCTION.**

The general index of total primary production of the sixty-six commodities considered is given below for the world and its main continental groups.<sup>1</sup>

*Table I.*  
GENERAL INDICES OF PRIMARY PRODUCTION, WEIGHTED BY 1930 VALUES.  
(Average 1925-1929 = 100.)

Continental groups	1925	1926	1927	1928	1929	1930	1931	1932	* 1933
Europe, excluding U.S.S.R. . . . .	95	89	101	103	112	103	100	100	101
U.S.S.R. . . . .	91	100	100	103	105	121	*103	103	117
Europe, including U.S.S.R. . . . .	94	92	101	103	110	108	*101	101	105
North America . . . . .	97	100	98	103	102	94	90	83	79
Latin America . . . . .	95	96	101	104	104	104	100	93	98
Africa . . . . .	95	95	99	102	109	107	104	105	109
Asia, excluding Asiatic Russia <sup>2</sup> . . . . .	96	97	99	103	105	109	103	103	107
Oceania . . . . .	93	101	98	105	102	111	111	116	109
<i>World</i> { Total Primary Production . . . . .	96	96	100	103	106	103	98	95	97
<i>Thereof: Agricultural Production</i> . . . . .	98	97	99	103	103	104	*102	103	102
<i>Non-agricultural Production</i> . . . . .	90	92	100	105	114	101	86	73	82

The first general conclusion which emerges from the table is that the average annual production of foodstuffs and raw materials during the four years of depression (1930-1933) was only about 2% less than the average annual production during the period of expansion (1925-1929). It fell, however, from a maximum of 106 in 1929 to a minimum of 95 in 1932. In 1933, it slightly increased.

The different continental indices show considerable deviations from the general course of the world index. During the last four years under review, production remained at about the average pre-depression level in Europe (excluding the U.S.S.R.) and exceeded it in the U.S.S.R., Africa, Asia and Oceania, but fell somewhat short of that level in Latin America in 1932 and 1933, and has been very considerably lower in North America since 1930.

The contribution of the various continental groups to the total of the production considered may be roughly summarised as follows (percentages) :

	Average 1925-1929	Average 1930-1933
Europe (excluding U.S.S.R.) . . . . .	29.7	30.6
U.S.S.R. . . . .	9.4	10.5
North America . . . . .	31.1	27.3
All other groups . . . . .	29.8	31.6
<b>World . . . . .</b>	<b>100</b>	<b>100</b>

<sup>1</sup> In the continental grouping of countries, Latin America includes Mexico, together with the whole of Central and South America as well as all the islands in the Caribbean Sea; Asia excludes Asiatic Russia.

<sup>2</sup> Provisional indices, subject to revision.

<sup>3</sup> Excluding also production of foodstuffs in China (except Manchuria).

The substantial contraction in North America's share in the world total indicates the exceptional gravity of the depression in Canada and more especially the United States. The shares of all other continents increased, but that of Europe less than the others.

The continental group indices are naturally affected by the relative importance of the various commodities which enter into them. The production of certain commodities has shrunk more than that of others.<sup>1</sup> As shown in Table I above, non-agricultural primary production has contracted very much more during the depression than agricultural production, which has, indeed, been maintained above its average pre-depression level. The resulting changes in the percentage composition of the total primary production considered are summarised below :

	Items of general classification	Average 1925-1929	Average 1930-1933
Agricultural products . . .	A	74.5	77.8
{ Foodstuffs . . .	I	(62.3)	(65.3)
{ <i>Thereof</i> } Raw materials of farm origin . .	II.1	(12.2)	(12.5)
Non-agricultural products .	B (II.2+3)	25.5	22.2
Total raw materials . . .	II : 1+2+3	(37.7)	(34.7)
<hr/>			
Total primary production.	A+B=I+ II.	100	100

Agricultural production accounts for roughly nine-tenths of the total primary production in Africa, Asia, Oceania and Latin America, and this largely explains why total production in these continents has been so much better maintained throughout the depression than in North America and Europe. During 1925-1929, non-agricultural production, which is subject to wide variations, accounted in North America for almost two-fifths and in Europe for somewhat less than a third of the primary production considered. As will be shown later, however, even agricultural production declined below its pre-depression average in North America, while it increased in Europe, and the contraction in non-agricultural production was considerably greater in the former than in the latter continent.

Diagram I illustrates the annual movement of (a) total primary production in different parts of the world and (b) world production of the chief classes of primary commodities distinguished above.

The left-hand diagram affords a striking illustration of the extreme gravity of the depression in North America. It will be noted that, even in 1933, when production of crude products in all other continents averaged higher than in 1932, there was a further decline in North America. Reference to Tables III, IV and V below will show that this decline was wholly due to a further drop in the production of foodstuffs due in part to deliberate measures for restricting the area cultivated in the United States ; there was a very substantial increase in the output of raw materials, especially minerals. Since 1930, the movement of total production in Europe (including the U.S.S.R.) and in Africa, Asia, Oceania and Latin America taken together has been roughly similar. The rate of recovery in total output between 1932 and 1933, however, was somewhat greater in Europe than in the last-mentioned continents considered as a group.

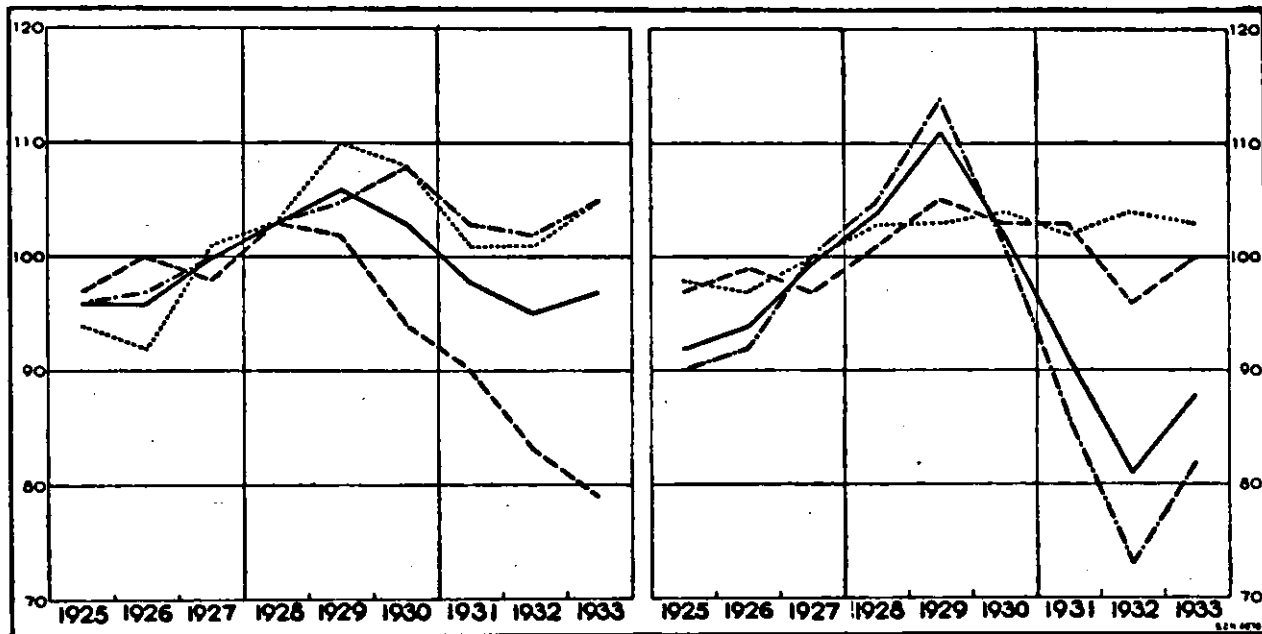
While world output of foodstuffs has been remarkably stable since 1928, the other branch of agricultural production, that of raw materials of farm origin, has to some extent reflected the trend of industrial activity, though far less exactly than has the output of non-agricultural raw materials.

<sup>1</sup> The continental distribution of the annual production of each of the thirteen main groups of commodities considered is shown in Appendix I, Table 4, and the composition by groups of commodities of the total annual production of each continent is shown in Table 5 of the same appendix.

Diagram I.

WORLD PRIMARY PRODUCTION, BY MAIN TERRITORIAL DIVISIONS AND BY CHIEF CLASSES OF COMMODITIES  
(Average 1925-1929 = 100 ; logarithmic scale ; yearly movement.)

- |                                     |   |
|-------------------------------------|---|
| ..... Europe (including U.S.S.R.).  | ..... Foodstuffs.                                 |
| ----- North America.                | ----- Raw materials of farm origin.               |
| ..... All other continental groups. | ..... Raw materials of forest and mineral origin. |
| ———— World.                         | ———— All raw materials.                           |



AGRICULTURAL PRODUCTION.

Table II gives the indices of agricultural production (foodstuffs and raw materials of farm origin) in a manner similar to that adopted in the preceding table.

Agriculture is not only the principal source of the world's basic products, but also the most stable element of the world's economic organisation. The long-term fluctuations in the supply of agricultural products of vegetable origin are mainly determined by the extension or reduction of the cultivated area and by the technique of cultivation, whereas the foremost cause of year-to-year changes is the variability of natural conditions — chiefly the weather, but also plant diseases, insect pests, etc. The natural conditions are, however, seldom equally favourable or unfavourable in any given year in all parts of the world and for all crops. Moreover, the sowings and plantings in the southern hemisphere are generally half a year later than those relating to the northern hemisphere, while, in the latter, considerable differences obtain with regard to the relative importance of autumn and spring sowings in the various countries.<sup>1</sup> These factors tend, as a rule, to eliminate wide fluctuations from the combined world index. The continental indices taken individually show wider and more irregular fluctuations.

<sup>1</sup> Thus, in the case of wheat, autumn sowings account for by far the greater part of the crops in Europe excluding the U.S.S.R., while spring sowings account for the whole crop in Canada, for about two-thirds of that in the U.S.S.R. and for from a third to a half of that in the United States.

Table II.

INDICES OF AGRICULTURAL PRODUCTION, WEIGHTED BY 1930 VALUES.

(Average 1925-1929 = 100.)

Continental groups	1925	1926	1927	1928	1929	1930	1931	1932	*1933
Europe, excluding U.S.S.R. . . . .	98	92	99	102	110	103	105	110	109
U.S.S.R. . . . .	94	102	100	102	103	117	*96	96	109
Europe, including U.S.S.R. . . . .	97	95	99	102	108	107	*103	106	109
North America . . . . .	100	100	99	104	97	95	100	100	88
Latin America . . . . .	97	97	103	102	101	103	101	96	101
Africa . . . . .	96	95	99	102	108	106	105	107	109
Asia, excluding Asiatic Russia <sup>1</sup> . . . . .	97	97	99	103	104	108	103	103	105
Oceania . . . . .	92	101	98	106	103	113	116	121	112
World . . . . .	98	97	99	103	103	104	*102	103	102
World, excluding U.S.S.R. . . . .	98	96	99	103	103	102	103	104	101

Comparing the averages for the two periods 1925-1929 and 1930-1933, it will be seen that agricultural production as a whole has (a) increased considerably in Europe, Africa, especially in Oceania and less in Asia; (b) remained fairly stationary in Latin America; (c) diminished to a marked degree in North America. In analysing the factors at play in different areas, distinction should be made between (1) countries which are mainly industrial and rely largely on imports of agricultural products; (2) countries which are largely independent of foreign markets for the sale or purchase of agricultural products; (3) countries which have an exportable surplus of agricultural products. Thus the index for Europe, even excluding the U.S.S.R., conceals considerable differences between industrial and agricultural countries. The industrial States of Western Europe, which constitute the world's principal importing market for agricultural produce, have in recent years endeavoured to increase their domestic production behind the shelter of protective tariffs, subsidies, milling regulations, etc., in order to safeguard the interests of their agricultural population generally unable to produce at the low prices ruling in recent years in free markets. This policy has adversely affected, not only overseas agricultural countries, but also two other groups of European countries, the Danubian States, which have normally a large exportable surplus of cereals and certain other agricultural products, and those countries, of which the principal are Denmark and the Netherlands, which import fodder and export animal products.<sup>2</sup> The increase in the domestic output of agricultural commodities in countries which are normally not importers of such commodities, however, has exceeded the decrease in the output of the net exporting countries, so that in Europe as a whole, excluding the U.S.S.R., the average agricultural production in 1930-1933 exceeded the average pre-depression level by about 7 %. It should be noted, however, that, while Europe has increased her self-sufficiency in foodstuffs, there has been little change in the degree of her dependence on other continents as regards industrial raw materials of agricultural origin.

\* Figures partly based on estimates or subject to revision.  
<sup>1</sup> Excluding also production of foodstuffs in China (except Manchuria).  
<sup>2</sup> For a more detailed analysis of this development, see *Review of World Trade, 1933* (Geneva 1934), sections headed "Trade of Individual Countries" and "Geographical Distribution of Trade".

Agricultural production in the U.S.S.R. in recent years has been revolutionised by the "collectivisation" of farm land, which proceeded very rapidly from 1930 onwards. By 1933, 15 million households representing some 65 % of all peasant households are stated to have been "merged" into 225,000 collective farms covering 74% of the entire area under grain. A previous extension of the cultivated area in combination with favourable natural conditions in 1930 had resulted in record crops in that year. The crops of 1931 and 1932, however, were light and a drastic reduction of live-stock began in 1930. The second Five-year Plan, starting with 1933, lays particular stress on increasing agricultural production and especially live-stock. The year 1933 is stated to have yielded much more favourable results than the two preceding years.

The decline in the North-American index is mainly due to the critical agricultural situation in the United States. While the greater part of the agricultural production of that country is absorbed at home, exports of some products — *e.g.*, wheat, and cotton — are important. Certain other agricultural products, such as sugar, wool, flax-seed and rubber, are, on the other hand, imported in considerable quantities. Measures designed to restrict the acreage under certain crops with a view to raising their prices were taken at a relatively early date during the depression but did not fulfil expectations. In 1933, the new Agricultural Adjustment Administration was given the task of effecting a restriction of production,<sup>1</sup> and total output of the agricultural products here considered declined by 12 % in that year in spite of exceptionally high unit yields of some crops. Restriction of certain crops has also been effected with varying results by several of the other principal exporting countries overseas, and more especially Canada, the Argentine, Brazil, Cuba and the Netherlands Indies.

The relative over-supply of certain agricultural products in the world as a whole resulting largely from the narrowing-down of the European import market has given rise to various international schemes designed to regularise production and exports — *e.g.*, of wheat, sugar, tea and rubber.<sup>2</sup> The agricultural position in the chief exporting countries has also been affected by changes in the currents of international trade consequent upon commercial or general economic agreements, both bilateral and multilateral (such as the Ottawa Agreement).

The decline in Latin-American agricultural production in 1931 and 1932 was largely due to reduction of the area under maize and sugar, but also to unfavourable weather conditions which affected cereal crops and (in 1932) to the lightness of the important Argentine linseed and Brazilian coffee crops. But a record crop of wheat was harvested in 1933, which, with coffee, mainly accounts for the rise by 5% in the continental index for that year. There has been an extension in recent years of the African production of colonial products, but other crops, including vegetable-oil materials and textiles, have varied rather widely from year to year. After a moderate decline during the first two years of depression, however, the continental general index rose markedly up to 1933.

The exceptionally rapid increase in the index for Oceania up to the crop year 1932-33 reflects deliberate expansion, not only of vegetable, but also of animal production. Export was facilitated by the preferential treatment granted the Dominions by the United Kingdom. This expansion has tended to diminish agricultural exports from certain Latin-American countries; it was checked, however, in 1933-34 largely by unfavourable weather conditions.

No distinct general trend in recent years can be discerned in the agricultural production of Asia, whose supply of foodstuffs is largely determined by the year-to-year variations in rice crops. If India and the Philippines have greatly increased their production of cane sugar since 1929, this increase has been very largely offset in the continental index by a

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<sup>1</sup> The Administration levies "processing taxes" on farm products and uses the proceeds for disbursement of bounties for curtailment of production.

<sup>2</sup> More detailed reference to these agreements is given below in the special sections devoted to each of these commodities.

drastic and deliberate reduction in the sugar crops of the Netherlands Indies. The movement of the index since 1930 has been influenced by the reduction, up to 1932, in the production of rubber, vegetable-oil materials and also textiles, and the rise in all these raw materials in 1933 in harmony with the fluctuations of world industrial activity.

PRODUCTION OF FOODSTUFFS.

Indices of the aggregate production of foodstuffs are given in the following table :

Table III.

FOODSTUFFS PRODUCTION INDICES, WEIGHTED BY 1930 VALUES.

(Average 1925-1929 = 100.)

Continental groups	1925	1926	1927	1928	1929	1930	1931	1932	*1933
Europe, excluding U.S.S.R. . . . .	98	92	98	103	109	104	106	112	110
U.S.S.R. . . . .	93	103	100	101	102	118	*93	93	107
Europe, including U.S.S.R. . . . .	97	95	99	102	107	108	*102	106	109
North America . . . . .	99	98	101	106	96	94	98	102	88
Latin America . . . . .	97	97	103	102	102	103	100	97	102
Africa . . . . .	95	94	102	102	107	105	109	111	109
Asia, excluding Asiatic Russia <sup>1</sup> . . . . .	98	98	99	101	103	108	106	104	105
Oceania . . . . .	93	102	98	106	102	119	118	124	118
World . . . . .	98	97	100	103	103	104	*102	104	103
World, excluding U.S.S.R. . . . .	98	96	100	103	103	102	103	106	102

The world production of crude foodstuffs has remained practically unchanged over the period 1928-1933.<sup>2</sup> World population, excluding China, has in recent years increased at an average rate of about 1.2 per cent per annum.<sup>3</sup> This would suggest that the world supply of basic foodstuffs per head of population has decreased to some extent during the period of depression.

But the index of crude foodstuffs does not comprise vegetables, fruit, dairy produce, relatively more of which are tending to be consumed. The index may therefore somewhat understate the development of total foodstuffs production during recent years.

There would appear also to have been a shift in consumption in recent years from cereals to meat. This shift may be illustrated by comparing the composite indices for the production of (a) "bread crops" (wheat and rye) plus rice, (b) "fodder crops" (barley, oats and maize), and (c) meat (beef, veal, pig-meat, mutton and lamb); these products cover on an average 88% of the aggregates on which the foodstuffs index is based. These indices are given below for the world, excluding the U.S.S.R. In order to neutralise the effects upon the indices of the year-to-year fluctuations in crops due to weather conditions, three-year averages are shown.

\* Provisional indices, subject to revision.

<sup>1</sup> Excluding also production in China (except Manchuria).

<sup>2</sup> The aggregates given in Appendix I, Table 1, show that, during the years 1928-1933, the deviation from the average level of this period in no year exceeded 1.05%.

<sup>3</sup> It may be added that the declining trend in birth rates seems to have been somewhat accentuated during this period, while there was no appreciable general change in mortality rates. The basic figures are given in the *Statistical Year-Book of the League of Nations, 1933-34*, Tables 2 and 8.

<i>World (excluding U.S.S.R.):</i>	(Average 1925-1929 = 100)		
	1925-1927	1928-1930	1931-1933
Bread crops and rice . . . . .	98	104	103
Fodder crops . . . . .	99	99	99
Meat . . . . .	98	103	106

The relatively high index for bread crops and rice in the second period is largely due to the fact that it includes the two largest wheat harvests ever garnered (1928 and 1930). The depressing effects upon prices of the second bumper harvest naturally tended to reduce the area under wheat, a fact which accounts to a considerable extent for the drop in the bread-crops index in the third period. While these crops diminished during the last three-year period, fodder crops remained stationary and the production of meat substantially increased over the whole period under review. The information available about dairy produce,<sup>1</sup> though incomplete, also points to an increase in output during recent years. The significance of the above figures is enhanced by the fact that a considerable part of the cereals produced has accumulated in stocks, and, further, that the use of wheat for feeding purposes has much increased during the last three years.

As shown in the appendix tables, 1932 (1932-33) was a year of unusually large food crops in most parts of the world; in 1933 (1933-34), crops varied widely from one region to another. In European importing countries and the U.S.S.R., the harvests were the largest on record, while cereal crops were very substantially reduced in North America and Oceania and also declined in Latin America and Africa. These changes were due partly to weather conditions, but more especially to a marked extension of the area under cereals in Europe, accompanied by a drastic reduction of that in the great exporting countries overseas.

The year-to-year variations in crops have been attenuated even in the continental food-production indices by the smoother evolution of meat production, which, however, has also presented appreciable differences as between the individual continents. The increased supplies of home produced foodstuffs in Europe (excluding the U.S.S.R.) in recent years are due as much to increased output of meat as to heavier crops; indeed, the increase was greater in meat than in crops until 1932. Animal husbandry has also been developed considerably in Africa, Asia and Oceania, while it has remained practically stationary in North and Latin America and was substantially reduced only in Russia. In 1933, however, Europe—chiefly the exporting countries—experienced a setback and North and Latin America a distinct advance.

The third main group of "foodstuffs"—wine, hops, coffee, tea and cocoa—is of minor importance in the total, but influences to some extent the continental indices, except those for North America and Oceania. The crops of these products generally reached their low point in 1930-31, but recovered in the following year. The light yield of vines contributed to the fall of the European index in 1933; a large drop in the crops of colonial products in 1932-33, and a still larger advance in 1933-34 influenced the Latin-American index; while a very rapid extension of the culture of both vines, coffee and cocoa in Africa has partly compensated for a decline in the cereal crops of this continent during the two last years under review.

As will be seen from Table III, the developments broadly outlined above have resulted in (a) a very rapid rise in total foodstuff production in Oceania up to 1930 and its maintenance on a high level in subsequent years, (b) a similar though less striking evolution in Europe and Africa, (c) a fairly marked retardation since 1930 in Asia, where previously the output of crude foodstuffs had developed more slowly than in Europe and Africa, (d) a very considerable decline in North America since 1928 and (e) a less marked decline in Latin America since 1930.

<sup>1</sup> See page 27.

PRODUCTION OF INDUSTRIAL RAW MATERIALS.

(a) *Raw Materials of Agricultural Origin.*

Indices of the production of the second class of agricultural products, industrial raw materials of agricultural origin, are given below :

Table IV.

INDICES OF PRODUCTION OF INDUSTRIAL RAW MATERIALS OF AGRICULTURAL ORIGIN,  
WEIGHTED BY 1930 VALUES.

(Average 1925-1929 = 100.)

Continental groups	1925	1926	1927	1928	1929	1930	1931	1932	*1933
Europe, excluding U.S.S.R. . . . .	94	88	109	88	121	84	92	88	86
U.S.S.R. . . . .	97	95	98	104	106	111	131	124	123
Europe, including U.S.S.R. . . . .	95	91	104	95	115	95	108	103	102
North America . . . . .	104	112	88	97	100	98	113	86	90
Latin America . . . . .	96	101	103	104	96	103	104	88	93
Africa . . . . .	98	97	93	102	110	108	95	98	110
Asia, excluding Asiatic Russia . . . . .	95	95	99	106	105	109	95	98	105
Oceania . . . . .	91	100	98	106	104	102	110	112	100
World . . . . .	97	99	97	101	105	103	103	96	100

World production has varied since 1928 somewhat more than in the case of foodstuffs, though in no year except 1932 did the world index fall short of the average pre-depression level; there was a marked decline, however, between 1929 and 1932. The recovery in 1933 brought the world index back almost to the level of 1928. The exceptional drop of the index in 1932 was mainly due to the partial failure of the cotton, cotton-seed and tobacco crops in the United States, and of the linseed crop in the Argentine. Areas — except that under tobacco — were reduced in the United States in 1933, but crops increased. Reductions of the areas under industrial raw-material crops have been effected during the period of depression by several countries exporting such materials, but higher yields have frequently offset the effects of these reductions. The year-to-year fluctuations, particularly in the continental indices, are, indeed, chiefly determined by the changes in natural conditions. If, therefore, the movement of the world index during the depression has been much less accentuated than the changes in world industrial activity in general — and even activity in the industries manufacturing consumption goods for which these raw materials are mainly used (see Chapter II) — this has had its counterpart in an opposite movement of world stocks of vegetable raw materials. The index of world production of these materials is not fully representative of their consumption.

The share of these raw materials in total agricultural production — as well as in total raw-material production — varies widely from one part of the world to the other. The course of the continental indices is in certain cases determined by a few important commodities<sup>1</sup> and the special factors affecting their production are dealt with in subsequent sections of this chapter.

\* Provisional indices, subject to revision.

<sup>1</sup> Thus, the index for Europe (excluding U.S.S.R.) reflects mainly the variations in the olive-oil output, but the inclusion of Russia, an important producer of flax and hemp, changes the index completely.



(b) *Raw Materials of Non-agricultural Origin.*

The indices of production of industrial raw materials, of non-agricultural — *i.e.*, forest and mineral — origin, are given in Table V below :

*Table V.*

INDICES OF PRODUCTION OF INDUSTRIAL RAW MATERIALS OF NON-AGRICULTURAL ORIGIN,  
WEIGHTED BY 1930 VALUES.

(Average 1925-1929 = 100.)

Continental groups	1925	1926	1927	1928	1929	1930	1931	1932	*1933
Europe, excluding U.S.S.R. . . . .	90	84	105	107	115	104	90	80	86
U.S.S.R. . . . .	60	83	103	116	137	165	176	192	211
Europe, including U.S.S.R. . . . .	88	84	105	107	117	109	96	88	95
North America . . . . .	92	99	97	102	110	92	73	55	65
Latin America . . . . .	88	86	88	114	124	111	91	75	78
Africa . . . . .	89	93	98	106	114	117	99	91	107
Asia, excluding Asiatic Russia. . . . .	88	92	100	106	114	115	108	110	120
Oceania . . . . .	98	98	103	101	100	93	77	81	88
World . . . . .	90	92	100	105	114	101	86	73	82

In striking contrast to agricultural production, the world output of non-agricultural raw materials shows a very drastic contraction between 1929 and 1932, and a sharp recovery in 1933, when something between a fifth and a quarter of the ground lost since 1929 was regained.

The course of the index considered is mainly determined by the changes in the output of fuels and metals. It should be noted that a very considerable part of the fuels is not consumed by industry, but is employed in transport and for household use. Moreover, the chemicals (mainly fertilisers) included in the index are largely used in agriculture. Of wood products, only wood pulp is included in the index, as sufficiently comprehensive production data are lacking for timber, an important building material.

Over three-quarters of the world's mineral raw materials are supplied by North America and Europe (excluding the U.S.S.R.). It will be observed that the North-American index fell much more rapidly between 1929 and 1932 and rose again more rapidly in 1933 than the European index. This difference reflects the different degree of contraction and subsequent recovery of industrial activity in these two continents, an analysis of which will be found in Chapter II.

In the U.S.S.R. on the other hand, the policy of forced industrialisation pursued since 1928 resulted in an exceptionally rapid growth of its heavy industries during the period of general world depression.

Activity in the mining industry of Latin America and Africa is very largely dependent upon the demand for raw materials on the part of manufacturing industry in North America and Europe. The production of nitrates, however, weighs considerably in the Latin-American index, and the continued fall in nitrate production in 1933 largely accounts for the modesty of the rise in the index for that year. The indices for Africa, Asia and Oceania are dominated by a few important commodities, such as coal (in all three cases), copper (Africa), petroleum, steel, tin and cement (Asia), the production of which is discussed in special

\* Provisional indices, subject to revision.

sections below. It is noteworthy, however, that the turn of the tide in non-agricultural raw-material production seems to have occurred about a year earlier in Asia and Oceania than in the other continental groups.

*(c) Total Production of Industrial Raw Materials.*

The indices for the two raw-material classes combined are given in Table VI below.

*Table VI.*

INDICES OF TOTAL RAW-MATERIAL PRODUCTION, WEIGHTED BY 1930 VALUES.  
(Average 1925-1929 = 100.)

Continental groups	1925	1926	1927	1928	1929	1930	1931	1932	*1933
Europe, excluding U.S.S.R. . . . .	90	84	105	105	116	102	90	81	86
U.S.S.R. . . . .	81	90	100	109	120	135	151	154	162
Europe, including U.S.S.R. . . . .	89	85	105	105	117	106	98	90	96
North America . . . . .	94	102	95	101	108	93	82	82	70
Latin America . . . . .	91	93	95	109	111	107	97	81	85
Africa . . . . .	96	96	94	103	111	110	96	96	109
Asia, excluding Asiatic Russia . . . . .	93	94	100	106	107	111	98	101	109
Oceania . . . . .	93	100	100	105	103	99	100	103	96
World . . . . .	92	94	99	104	111	102	91	81	88
World, excluding U.S.S.R. . . . .	93	94	99	103	110	100	89	77	84

The world index illustrates broadly the fluctuations in the total supply of raw materials to industry and thus affords an indirect measure of general industrial activity — subject, however, to certain qualifications. First, as already stated, the scope of the index is limited. Secondly, a varying part of the total annual production of raw materials may be added to stocks, or conversely, industry may in a given year draw from stocks carried over from previous years. Thirdly, owing to the continuous progress of industrial technique, equal services are rendered with smaller quantities of raw materials in the course of time. Lastly, scrap or regenerated raw materials may be employed to a greater relative extent in certain years than in others.

The changes in the contribution yielded, before and during the depression, by each continental group to the world supply of the raw materials considered are shown below (percentage shares in the world aggregates):

	Average 1925-1929	Average 1930-1933
North America . . . . .	39.8	33.6
Europe, excluding U.S.S.R. . . . .	29.5	29.4
U.S.S.R. . . . .	4.3	7.2
Asia . . . . .	16.2	18.8
Latin America . . . . .	5.1	5.2
Africa . . . . .	2.9	3.4
Oceania . . . . .	2.2	2.4
World . . . . .	100	100

While North America's share has shrunk very considerably and Europe, excluding the U.S.S.R., has just been able to maintain her relative share in the reduced world total,

\* Provisional indices, subject to revision.

those of all the other continental groups have increased and that of the U.S.S.R. the most. The yearly figures given in Appendix I, Table 4, naturally show considerably greater variations.

#### STOCKS OF PRIMARY COMMODITIES.

Statistics relating to stocks are restricted. Data referring to visible stocks — *i.e.*, stocks in the hands of producers or in public warehouses — are available for a number of commodities, but they vary considerably in scope; information concerning raw-material stocks in the hands of manufacturers or wholesale traders is even more scarce.

The changes in visible stocks of primary commodities may be roughly gauged on the basis of a world index compiled by the United States Department of Commerce.<sup>1</sup> Though that index is not directly comparable with the world index of primary production given in Table I, as its scope is much more limited, it constitutes a useful corrective to any inference that may be drawn from the latter as regards the changes in industrial activity. The quarterly movement of the world index of stocks is shown below (average 1925-1929 = 100) :

Month	1925	1929	1930	1931	1932	1933	1934
January . . . . .	76	117	140	172	192	189	179
April . . . . .	75	116	148	177	196	191	184
July . . . . .	70	121	163	189	196	191	...
October . . . . .	80	134	164	186	184	178	...
Yearly average . . . . .	76	124	158	183	194	186	...

It will be seen that the aggregate stocks of primary commodities covered by the above index rose rapidly and almost continuously from the spring of 1929 up to the middle of 1932. The evidence concerning general industrial activity discussed in Chapter II suggests that the lowest point of the depression in the United States and the principal European countries was reached in the summer of 1932, since when a distinct, if uneven, industrial recovery has been noticeable in most countries. This recovery is reflected in the movement of the international index of stocks, which reached its highest point at this time and has since declined. Consumption of raw materials has thus recently tended to outstrip production.

There are, however, considerable differences in the movement of the stocks of the individual commodities, as will be seen from Appendix I, Table 6. The detrimental effects exercised by "surplus" stocks of any commodity upon the market for that commodity are dependent not simply on the amount of those surplus stocks, or the proportion they bear to production, but also on the elasticity of the demand for and the supply of the commodity in question. Thus, although the stocks of most vegetable foodstuffs have swelled less during the depression than have those of industrial raw materials, and, although the former are generally smaller in relation to annual consumption than are the latter, they reflect a more serious maladjustment owing to the inelasticity of the demand for foodstuffs. In the case of coffee (the stocks of which are proportionately high) attempts have been made to bring about an adjustment by deliberate destruction of stocks — which accounts entirely for the decline in those stocks since the middle of 1932. World stocks of most other vegetable foodstuffs have either diminished very little or have risen since

<sup>1</sup> The index is based on the following nine commodities, the weights being indicated in parentheses: cotton (9), sugar (6), wheat (6), rubber (3), coffee (2), copper (2), silk (2), tea (1), tin (1). The weights have been allocated in accordance with the value of the stocks on hand in the original base period, 1923-1925. All series except those for copper and tin are adjusted for seasonal variations. Copper has been omitted since 1931.

The rather marked correlation between this index and a corresponding index of prices of primary commodities is shown in Chapter IV, Diagram VI, page 99.

that date. The changes in actual consumption, so far as measurable, are analysed below in the special sections concerning the more important commodities.

While a decline in the stocks of raw materials in the hands of producers or in public warehouses is an indication of industrial revival, stocks in the hands of manufacturers or wholesale merchants tend to increase when business improves. A certain number of statistical series illustrative of the changes in the latter type of stocks (raw cotton held by mills, wool tops held by combers, etc.) are given in Appendix I, Table 6.

### PRODUCTION OF PRINCIPAL COMMODITIES.

In Table VII below are given the world indices for each commodity group for the years 1925-1932, together with provisional indices for 1933 for most of these groups. The figures in brackets given in the text column show the share of each group in total world production of primary commodities (average 1925-1929).

*Table VII.*

GROUP INDICES OF PRODUCTION IN THE WORLD AS A WHOLE, WEIGHTED BY 1930 VALUES.

(Average 1925-1929 = 100.)

Groups of products	1925	1926	1927	1928	1929	1930	1931	1932	*1933
Cereals and other food crops <sup>1</sup> (36.9) . . . . .	99	98	99	103	101	104	100	104	101
Of which Cereals <sup>1</sup> (25.1) . . . . .	100	99	99	103	100	102	98	104	100
Meat <sup>2</sup> (22.7) . . . . .	*95	*97	*101	*104	*105	*106	*105	*105	...
Wine and hops (1.5) . . . . .	109	79	96	109	107	92	101	104	96
Coffee, tea, cocoa (1.2) . . . . .	89	89	111	90	120	95	110	102	116
Tobacco (1.7) . . . . .	99	87	96	100	107	111	111	101	...
Vegetable-oil materials (3.3) . . . . .	95	94	104	101	106	102	103	98	100
Textiles (7.3) . . . . .	97	101	94	103	105	103	*105	98	104
Rubber (0.3) . . . . .	79	95	93	100	132	125	122	108	130
Wood-pulp (1.1) . . . . .	85	94	99	104	117	114	104	98	...
Fuels (11.4) . . . . .	93	93	102	102	110	102	92	84	89
Metals (9.5) . . . . .	88	91	99	106	116	95	71	52	65
Non-metallic minerals (1.6) . . . . .	87	93	101	107	112	107	93	77	76
Chemicals (fertilisers) (1.5) . . . . .	87	87	95	111	119	114	84	75	...
<b>General index (100)</b>	<b>96</b>	<b>96</b>	<b>100</b>	<b>103</b>	<b>106</b>	<b>103</b>	<b>98</b>	<b>95</b>	<b>97</b>

Individual indices of the world production of each of the commodities comprised in the above groups and the continental production indices for each commodity group are given in Appendix I, Tables 2 and 3.

The diagrams given below show in the case of each of the more important commodities for which comprehensive information regarding stocks is available: (a) the year-to-year variations in the amount of total supplies and their composition — i.e., stocks at the beginning of the year<sup>2</sup> plus annual production; (b) the year-to-year variations in the stocks (shaded part of the diagrams), which can be compared in most cases with the year-to-year variations in production as shown by the individual indices referred to above. A rough idea of the variations in consumption of these commodities may be obtained

\* Figures partly based on estimates or subject to revision.

<sup>1</sup> Excluding production in China, with the exception of Manchuria.

<sup>2</sup> In the case of agricultural products, the crop year beginning on August 1st or October 1st.

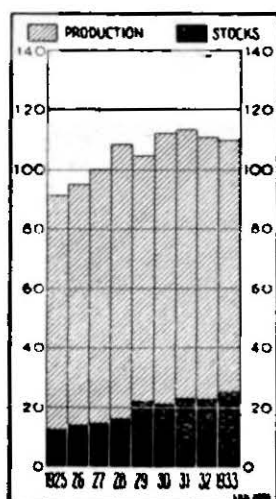
by subtracting from the production in any given year the increase in stocks, or by adding to production the decrease in stocks, in the course of that year. The results are shown in parallel diagrams for certain commodities. The average supplies (production + stocks) and the average consumption, respectively, in the years 1925-1929 (1925-26-1929-30) are taken as base (=100) in each case. In connection with the changes in production, stocks and consumption of important primary commodities discussed below, reference should be made to the analysis of the international trade in these commodities contained in a companion volume entitled *Review of World Trade, 1933*.<sup>1</sup>

*Cereals.*

The cereal markets have suffered, not only from the effects of the economic depression upon purchasing power, but also from the occurrence of bumper harvests (*e.g.*, in 1928-29) at a time when general conditions precluded the absorption of excess supplies. The protective measures taken in a number of countries which normally import cereals enhanced the difficulties of the exporting countries in marketing their export surpluses, with the result that stocks increased rapidly and reached, in the case of most cereals, a higher level in 1933 than in any preceding year. Owing to the inelasticity of demand for cereals, these stocks — although not representing a very large percentage of total supplies — have been sufficient seriously to depress prices. During the season 1933-34, however, an appreciable reduction in crops was anticipated, while consumption showed signs of revival ; as a result, certain cereal stocks have tended to shrink slightly. The price movements are dealt with in Chapter IV.

Diagram II : A.

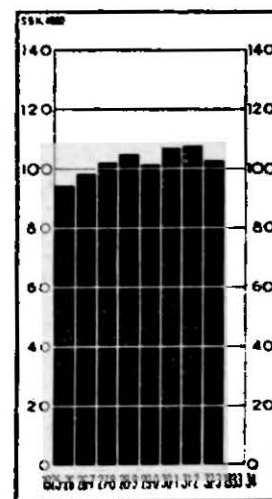
WORLD SUPPLY OF WHEAT.<sup>2</sup>



*Wheat.* — The changes in the available supplies of wheat are shown in Diagram II : A. The figures on which this diagram is based relate to the world, excluding the U.S.S.R., China, Turkey, Persia and Iraq, whose consumption is normally covered by domestic production ; net exports from these are, however, included in the figures of world supplies. It will be seen that the world supplies reached their peak on August 1st, 1931. Current supplies available from the year's crop decreased to some extent in the following two seasons, while stocks, after a slight drop during 1932-33, were highest on August 1st, 1933. During the last season under review, supplies have diminished ; but season-end stocks are expected to show practically no decline. These developments have resulted, not only from changes in acreage and average yields, which may be judged from the following annual figures for area harvested (in 1933-34, area sown) and crops reaped in the main

Diagram II : B.

WORLD CONSUMPTION OF WHEAT.<sup>2</sup>



wheat-growing countries of the world (excluding the U.S.S.R.), but also from the fluctuations in Russian wheat exports in recent years.

World (excluding U.S.S.R., etc.) :	1928-29	1929-30	1930-31	1931-32	1932-33	1933-34
Area (million hectares) <sup>3</sup> . . . .	99	98	101	98	99	*98
Crops (million metric tons) . . . .	107	94	102	101	102	*96

<sup>1</sup> *Review of World Trade, 1933*, League of Nations (Geneva, 1934), pages 38-49 : "Trade in Certain Staple Products".

<sup>2</sup> Excluding the U.S.S.R., China, Turkey, Persia and Iraq.

<sup>3</sup> Up to 1932-33, area harvested ; in 1933-34, area sown. Compared with the area sown in 1932-33, the acreage under wheat was reduced in 1933-34 by about 5 per cent.

\* Provisional figures.

In 1930-31, when a very large crop was reaped on a record acreage, though average yields per hectare were not particularly good, supplies were further swelled by the sudden reappearance of Russia as a large exporter, her net exports in that season exceeding the total of her net exports during all the preceding post-war years combined. The decrease in acreage in the two following years was largely offset by higher average yields; but, as Russian exports again declined, current supplies were reduced. The 1933-34 crop was not exceptionally heavy, except in Russia.

The changes in acreage and crops have been far from equal in the different groups of countries. The figures for the "four major exporters" (Canada, the United States, Argentine and Australia), for the "Danubian exporters" (Hungary, Roumania, Yugoslavia and Bulgaria) and for "importing Europe"<sup>1</sup> are given below:

	1928-29	1929-30	1930-31	1931-32	1932-33	*1933-34
	(000,000's)					
<b>"Four major exporters":</b>						
Area (ha.) . . . . .	48.9	48.1	50.1	45.5	46.9	43.6
Crops (m. tons) . . . . .	54.5	38.3	46.9	44.4	43.3	33.0
<b>"Danubian exporters":</b>						
Area (ha.) . . . . .	7.9	7.4	8.1	8.5	7.6	8.0
Crops (m. tons) . . . . .	10.0	8.2	9.6	10.1	6.1	9.9
<b>"Importing Europe":</b>						
Area (ha.) . . . . .	19.5	19.3	19.9	20.2	20.9	21.5
Crops (m. tons) . . . . .	26.6	29.2	24.9	26.5	32.8	35.0

The "four major exporters" accounted for the greater part of the increase in the 1930-31 crop while, in the two subsequent seasons, the reduction in their crops as well as in that of the Danubian basin in 1932 was almost wholly offset by the large increase in the crops of "importing Europe". Protection in a number of the European importing countries has led to a constant and substantial increase in the area they have put under wheat and a consequent contraction in the area sown in the United States, Argentine and Australia; Canada, who had extended her area between 1928 and 1932, also reduced it in 1933. The very heavy fall in the aggregate crop of the first group given in the table in 1933-34 was chiefly due, however, to unfavourable weather conditions in North America and Oceania: the Argentine reaped a bumper crop in that season. In 1933-34, the aggregate wheat crop of "importing Europe" exceeded that of the four large exporting countries overseas.

Some of the principal importing countries outside Europe — *e.g.*, Japan, Egypt and South Africa, have also extended their acreage and thus increased their self-sufficiency in wheat during recent years. As a net result of these developments, apparent import requirements of wheat in the world at large have contracted considerably.

According to the estimates of the International Institute of Agriculture, the world consumption of wheat in relation to current supplies (*i.e.*, production of the world, excluding the U.S.S.R. and certain other countries, plus net exports from the U.S.S.R. and those other countries) has been as follows:

	1928-29	1929-30	1930-31	1931-32	1932-33	*1933-34
	Metric tons (000,000's)					
<b>- World, excluding U.S.S.R., etc.:</b>						
Current consumption . . . . .	100	96	103	104	100	98
Current supplies . . . . .	107	95	105	103	102	97
Surplus (+) or deficit (—)	+7	—1	+2	—1	+2	—1

<sup>1</sup> Including the following countries: France, Italy, Spain, Germany, Czechoslovakia, the United Kingdom, Greece, Portugal, Sweden, Norway, Austria, Belgium-Luxemburg, Denmark, Finland, Estonia, Latvia, the Netherlands and Switzerland.

\* Provisional figures.

Except in 1928-29, the difference shown in the last line above has been small in relation to supplies. The apparent consumption has been rather irregular, but seems to have been definitely lower in 1932 and 1933 than in the first two years of the depression. It is difficult to judge to what extent this decline may have been due to a reduction in purchasing power. It may rather reflect increased substitution of other kinds of food for wheat, particularly in a number of importing countries, which have endeavoured for various reasons to reduce their imports of this commodity.

The decline in wheat consumption which thus has taken place in certain countries has been partially offset by the increase which has occurred in others, which have taken advantage of the low wheat prices in free markets. Thus increasing amounts have been diverted to China, which became the second largest importer of wheat in 1932-33, and certain other regions in the Far East. Moreover, increased use has been made of wheat for feeding purposes in North America and, to a less extent, in certain European countries with a highly developed meat and dairy production.<sup>1</sup>

The relative changes in the stocks held by each of the three main groups of countries and in the world as a whole (excluding the U.S.S.R., etc.) on August 1st of each year since 1928 will be seen from the following indices based on the average for 1925-29 = 100.<sup>2</sup>

	1928	1929	1930	1931	1932	1933
<i>Wheat stocks on August 1st in :</i>						
“ Four major exporters ” . . .	106	166	168	189	199	228
“ Danubian exporters ” . . . .	61	182	107	138	119	70
“ Importing Europe ” . . . . .	104	117	106	90	90	118
World (excluding U.S.S.R., etc.) . . . . .	102	140	133	145	144	159

The great increase in world stocks in 1929 was a direct result of the bumper crops harvested in the preceding season. The second large increase, which occurred in 1933, would appear to have been due to the substantial reduction in consumption in the 1932-33 season. World stocks on August 1st, 1933, equalled over 30% of “ world consumption ” in the 1933-34 season as estimated by the International Institute of Agriculture, whereas those on August 1st, 1928, represented less than 20% of the estimated consumption in the 1928-29 season. In 1925, the ratio of stocks to consumption was even lower. The greater part of the world stocks has accumulated in North America. Owing to the smaller 1933-34 crops in that continent, however, most American stocks have recently tended to decline.

The Conference of the Wheat Exporting and Importing Countries, held in London in connection with the Monetary and Economic Conference, arrived at an international agreement (August 25th, 1933) which laid down the export quotas for the exporting countries. It was assumed that the world's import demand for wheat in 1933-34 would amount to some 15 million metric tons. This estimate proved somewhat high and, owing to unequal climatic conditions, the relative position of the major exporters underwent certain changes which have been referred to above. The adjustment of the original plan to the changed conditions has been discussed by the International Wheat Council during 1934.

*Maize.* — As maize is chiefly used for feeding purposes, the increase in production and exports of animal foodstuffs during the first years of depression stimulated the demand for it. The area under maize was therefore extended in Europe, the United States and particularly in the Argentine. This tendency was reversed, however, in Europe (excluding the U.S.S.R.) and the United States in 1933 owing mainly to stagnation in the production of pig and poultry products and to the

<sup>1</sup> For the three years ending with the 1932-33 season, Mr. J. S. Davis, Director of the Food Research Institute, Stanford University, has estimated the total increase in the amount of wheat used for feeding purposes as follows: United States, 8.2 million metric tons; Canada, 2.7 millions; Europe (chiefly the United Kingdom, Netherlands and Denmark), 1.4 millions.

<sup>2</sup> For more detailed absolute figures, see Appendix I, Table 6.

substitution of other cereals for maize as animal food ; in the Argentine, the U.S.S.R. and South Africa, the area under maize was further extended in that year. Changing weather conditions brought about wide year-to-year fluctuations in world crops which in 1930 (1930-31) were 10 % below and in 1932 (1932-33) 10 % above the average pre-depression level, crop failures in the Argentine and South Africa in the latter year being more than offset by record yields in Europe and the United States. The drastic decline in world crops in 1933-34 was due to a shrinkage by some 20 % in those of Europe and the United States and a further considerable reduction in that of the Argentine in that year. Visible stocks of maize reached their highest level early in 1934, but would appear to have diminished subsequently.

**Other Food Crops.**

**Rice.** — The world supply of rice has increased less than that of wheat in recent years, but increased trade restrictions with a view to securing larger self-sufficiency in the importing countries in the East in combination with increasing substitution of wheat for rice have created considerable difficulties for the principal exporting countries — *e.g.*, Burma, Indo-China and Siam. Exports from Indo-China have, moreover, been adversely affected since 1931 by the depreciation of the currencies of some of its principal customers. The difficulties experienced by Indo-China and Siam were further aggravated in 1933-34, when China and Japan reaped abundant crops ; the Japanese dependencies were even able to compete on the export markets in that year. A crop failure in certain parts of India was offset by record yields in Burma and thus the exportable surplus in the Far East as a whole continued to increase.

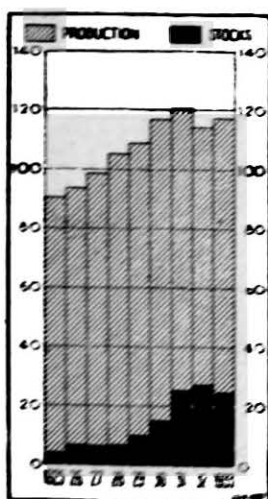
**Sugar.** — As will be seen from the indices shown in Appendix I, Table 2, the production of beet sugar increased much more rapidly than that of cane sugar throughout the pre-depression

quinquennium, a movement which in the main resulted from endeavours on the part of the importing countries to increase their self-sufficiency in sugar. The gradual restriction of the free markets made it increasingly difficult for the exporting countries to place their surplus production and in consequence, as shown in Diagram III : A, sugar stocks have increased rapidly, particularly since 1927. In spite of a considerable reduction of the production of cane sugar in 1930-31, total supplies were very much swollen in that year by an abnormally high production of beet sugar, which resulted in the addition of a third to the world stocks at the end of the crop year (September 30th) and further additions up to April 1932, when they reached their highest level.

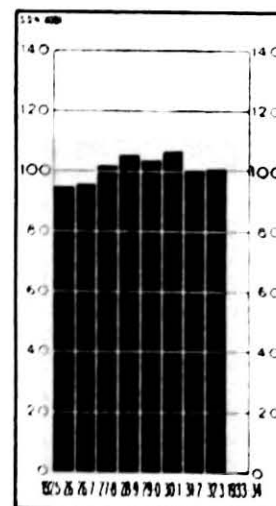
The difficulties experienced by the sugar-exporting countries led the more important among them to conclude an international agreement (known as the "Chadbourne Plan") in May 1931 with a view to regulating the supplies to the free market through restriction of output and gradual liquidation of surplus stocks. The main result achieved

through this agreement was a very large reduction of output from the controlled area — Germany, Belgium, Hungary, Poland, Czechoslovakia, Cuba, Java and Peru, which two minor producers, Yugoslavia and Mexico, joined at a later date. Output continued to increase, however, in several countries outside the agreement.

**Diagram III : A.**  
WORLD SUPPLY OF SUGAR.



**Diagram III : B.**  
WORLD CONSUMPTION OF SUGAR.





The changes in the area under sugar beet in the countries inside and those outside the "Chadbourne Plan" will be seen from the following statement. In view of the very great extent of the Russian sugar-beet area, the U.S.S.R. is shown separately.

	1930	1931	1932	1933	*1934
	Ha. (000's).				
Controlled area <sup>1</sup> . . . . .	1,023	826	628	646	687
Uncontrolled area (excluding U.S.S.R.). . . . .	1,251	1,064	1,072	1,247	1,270
U.S.S.R. area . . . . .	1,025	1,390	1,264	1,200	1,176
<b>World<sup>1</sup> . . . . .</b>	<b>3,299</b>	<b>3,280</b>	<b>2,964</b>	<b>3,093</b>	<b>3,133</b>

Thus, in the "Chadbourne Plan countries", the area under beet was reduced by almost 40% between 1930 and 1932, but has again been somewhat increased since; in the U.S.S.R., after a large increase between 1930 and 1931, it has been steadily reduced; in the remaining "uncontrolled area", it was reduced almost as much as the "controlled area" in 1931, and has since been increased each year. Corresponding figures for area under cane are not available. The changes in the world sugar situation, however, will be seen from the following summary of raw-sugar production (according to the statistics of the International Institute of Agriculture):

	1929-30	1930-31	1931-32	1932-33	*1933-34
	Quintals (000,000's).				
<i>Output from:</i>					
Controlled area . . . . .	129	113	88	62	58
Uncontrolled area:					
British Empire . . . . .	47	54	60	70	76
U.S.A. and Dependencies . . . . .	37	38	42	43	51
U.S.S.R. . . . .	10	15	15	8	11
Other countries. . . . .	57	74	64	61	64
<b>World, Total output . . . . .</b>	<b>279</b>	<b>286</b>	<b>268</b>	<b>245</b>	<b>260</b>
Thereof: Cane sugar. . . . .	186	174	181	167	172
Beet sugar . . . . .	93	113	87	78	88

The extent to which production has exceeded consumption in recent years may be judged from the following comparison, based on the sugar statistics compiled by Dr. Mikusch.<sup>2</sup>

	1929-30	1930-31	1931-32	1932-33	1933-34
	Raw-Sugar Equivalents: Quintals (000,000's).				
World consumption . . . . .	269	277	261	263	...
World production. . . . .	286	300	272	263	261
Surplus (+) or deficit (-) . . . . .	+17	+23	+11	±0	...

\* Provisional figures.  
<sup>1</sup> Excluding Yugoslavia, for which reliable figures are not available.  
<sup>2</sup> Dr. Mikusch estimated world production throughout the period under review somewhat higher than does the International Institute of Agriculture.

The international distribution of sugar stocks according to the principal markets in recent years has been estimated as follows :

	1930	1931	1932	1933	1934
Raw-Sugar Equivalents : Quintals (000,000's).					
<i>Stocks on October 1st :</i>					
Europe . . . . .	8.1	17.3	14.3	10.6	....
United States (Atlantic ports) . . . . .	4.0	4.7	4.5	3.5	....
Cuba (ports and interior) . . . . .	24.9	23.5	21.0	20.7	....
Java . . . . .	19.1	23.2	31.5	30.6	....
Total . . . . .	56.1	68.7	71.3	65.4	*60.0

The world sugar situation began to improve in the course of the 1932-33 season, when, judging from the stock movements both according to the above estimates and according to those shown in Appendix I, Table 6, which have been utilised in Diagram III : A, world production would appear to have fallen below world consumption. This trend is reported to have continued during 1933-34. Stocks in Europe and the United States have in fact been falling since the autumn of 1931 and in Cuba since 1930, while the huge stocks accumulated in Java only began to decline in 1933, presumably as a result of a drastic reduction of output in 1933-34 to one-fifth of the average in 1925-26-1929-30.

**Meat.<sup>1</sup>**

Meat production, except in the U.S.S.R., would appear to have been relatively well maintained throughout the depression.<sup>2</sup> There have, however, been considerable changes in the production of individual meat products within the aggregate. In the first years of the depression, the breeding of live-stock benefited from a shift in relative prices in favour of animal foodstuffs; but, later, the continuance of large supplies led to a drop in prices roughly proportional to that in the prices of feeding grain.

*Beef and Veal.* — Between 1925 and 1930, while the herds were being reconstructed in Europe, a considerable reduction took place in the number of cattle in the three great beef-exporting countries — the Argentine, Uruguay and Australia. Elsewhere, the expansion of dairy farming in most countries interfered with the raising of cattle for slaughter. As a result, world production of beef (excluding the U.S.S.R.) declined from 1927 to 1931. The marked decline in North-American beef production since 1926 was arrested in 1932 and the decline in Latin America appears to have been checked in 1933. In Europe, where the decline had set in only in 1930, beef production again increased in 1932 and was fairly well maintained in 1933. While world production of beef (excluding the U.S.S.R.) was, since 1927, a little below the average for the period 1925-1929, the production of veal was somewhat higher. On the other hand, since the onset of the depression, increased import restrictions and veterinary regulations have very considerably reduced international trade in beef.<sup>3</sup>

\* Anticipated stocks.

<sup>1</sup> The meat production index is largely conjectural in character, for comprehensive slaughter data are lacking for a number of countries. The index given for the world comprises beef, veal, pig-meat (pork, bacon, etc.) and mutton (including lamb) in roughly the following proportions (averages relating to the period 1925-1929) : beef 35%, veal 10%, pig-meat 44% and mutton 11%. Poultry is not taken into account.

<sup>2</sup> The relative inelasticity in demand for meat may be illustrated by an example from Germany. In spite of the considerable reduction in purchasing power in the course of the depression in that country, the meat consumption per head only declined by 7.5% between 1928 and 1932 and increased again slightly in 1933, according to estimates made by the Institut für Konjunkturforschung. (See *Vierteljahrshefte zur Konjunkturforschung*, 9 : 1 : B, page 11.)

<sup>3</sup> It fell by some 15% between 1930 and 1932 and was further reduced in 1933.

It is doubtful whether the increased home supplies in Europe in 1932 and 1933 have fully offset the reduction in imports; estimates of beef consumption <sup>1</sup> per head of population point to a decline since 1929 in the United Kingdom, Germany, Belgium and Italy, as well as in the United States. The general tendency during the depression years would seem to have been a shift in demand from beef and veal to cheaper products — pig-meat and mutton.

*Pig-Meat.* — Pig-meat production is concentrated chiefly in Europe and North America, which together account for nearly 90 % of the world output. European production reached its maximum in 1931 and fell off by some 10 % between that year and 1933, while North-American production, which declined between 1928 and 1930, again increased year by year up to 1933. In Latin America and Oceania, pig-meat production appears to have increased continuously during the whole period under review. Europe being the main producer, however, world production fell off slightly in 1932 and would appear to have declined somewhat further in 1933. The trade restrictions introduced during the depression in several of the importing countries in Europe seriously affected the position of the chief exporting countries. In 1932, the Netherlands took special measures to control the production and marketing of pig-meat, and similar measures were taken at the beginning of 1933 by Denmark, the world's principal exporter of pig-products, which has been particularly affected by the bacon import regulations in the United Kingdom.

*Mutton and Lamb.* — The mutton and lamb production in the world (excluding the U.S.S.R.) increased continuously from 1925 to 1933, <sup>2</sup> European output fell off between 1928 (its peak) and 1931, but again gained ground in the two following years. Production in Oceania developed very rapidly until 1932 and appears to have been maintained in 1933, while in the other continents the trend would appear on balance to have been slightly downwards during the most recent years of depression.

*Dairy Produce.*

While the statistics available are not adequate enough to permit of dairy products being included in the production indices, information of value is furnished in certain countries.

Table VIII below shows the percentage which dairy produce represents of the total value of agricultural production (including straw, vegetables, fruit, etc.) in nine countries. The figures are not strictly comparable from country to country owing to differences in the methods of calculation:

Table VIII.

VALUE OF DAIRY PRODUCTION AS PERCENTAGE OF VALUE OF TOTAL AGRICULTURAL PRODUCTION.

Country	1925 1925-26	1929 1929-30	1930 1930-31	1931 1931-32	1932 1932-33	1933 1933-34
Germany: milk . . . . .	22.7	19.9	20.5	21.1	...	...
Irish Free State: dairy produce . . . . .	(a)14.2	14.9	...	....	...	...
Spain: milk . . . . .		6.6		6.9	...	...
Switzerland: dairy produce . . . . .	39.6	36.8	35.8	34.4	35.5	36.1
United Kingdom: dairy produce . . . . .	26.7	27.3	28.1	27.1	29.4	...
Canada: dairy produce . . . . .	16.7	17.9	19.2	22.6	21.5	...
United States: milk . . . . .	16.3	13.6	17.1	18.7	19.2	...
Australia: dairy produce . . . . .	12.9	15.6	16.3	16.3	...	...
New Zealand . . . . .	27.2	27.7	29.1	32.1	30.9	...

(a) 1926.

<sup>1</sup> Imperial Economic Committee (London), *Cattle and Beef Survey*, June 1934.

<sup>2</sup> This development is masked in the world index by a large drop in the Russian production since 1931, which weighs heavily in that index. In 1930, the U.S.S.R. accounted for over a quarter of total world production of mutton and lamb.

A competent authority has stated that, in the world as a whole, milk takes precedence of any other single product as a source of the farmers' income, exceeding even wheat or rice.<sup>1</sup> It will be observed that, in all the countries considered, with the exception of Switzerland, where this industry was highly developed before the economic depression set in, the importance of dairy production increased from 1929 up to 1932. Prices for dairy products fell relatively less than most other agricultural prices during the first depression years, but in 1932 and 1933 prices declined sharply (see Chapter IV, Table III).

Rough indices of the quantum of dairy production in seven countries are given in Table IX below. Except in the case of Canada, where the indices are based on the milk equivalent of total dairy production, the United States and Australia, for which official indices of quantum are available, these indices have been calculated by dividing aggregate values by appropriate price indices.

*Table IX.*

INDICES SHOWING QUANTUM OF DAIRY PRODUCTION.

(Average 1925-1929 = 100).

Country	1925 1925-26	1926 1926-27	1927 1927-28	1928 1928-29	1929 1929-30	1930 1930-31	1931 1931-32	1932 1932-33	1933 1933-34
Germany <sup>2</sup> . . .	90	93	101	107	110	95	98	...	...
Denmark <sup>2</sup> . . .	101	92	98	102	108	115	119	112	115
Switzerland . . .	101	100	98	102	99	92	94	93	97
United Kingdom <sup>2</sup>	98	101	101	101	100	99	99	103	106
Canada . . . . .	99	100	102	100	99	102	106	107	108
United States . .	95	98	100	102	105	106	106	108	...
Australia <sup>2</sup> . . .	96	96	102	102	104	114	122	...	...
New Zealand . .	90	93	100	104	112	109	121	132	...

From the above table, it would appear that the greatest increase in production took place in Australia and New Zealand, two of the most important exporting countries. On the other hand, the world's greatest exporter of butter, Denmark, experienced a continuous decline in her exports from the high point of 171,652 metric tons in 1931 to 151,085 tons in 1933.

*Beverages.*

*Wine.* — The total area under vines has remained fairly stationary during the period under review. In certain "new" areas, however, there has been a rapid extension. Thus, in Algeria, the area under vines in 1933 was 74% larger than the average for the years 1925-1929. Owing to climatic conditions, the vintage has shown great variations from year to year. The average vintages in 1925-1929 and 1930-1933 are nearly equal. On the other hand, consumption of wine has tended to shrink in recent years, but that of fresh grapes has probably increased. In all European wine countries, supplies have exceeded the requirements for internal consumption, while importing markets have become less and less accessible to foreign produce. The wine market has thus been depressed by heavy stocks. Commercial stocks have been particularly large in France, where they have remained,

<sup>1</sup> Empire Marketing Board (London), *Dairy Produce*, June 1932.

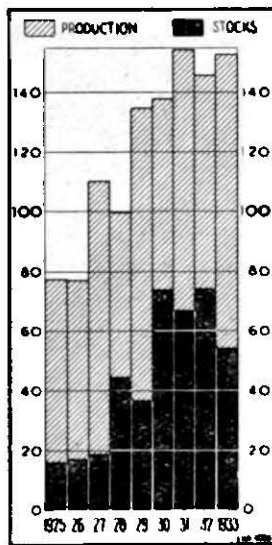
<sup>2</sup> Based on production of milk.

<sup>3</sup> Includes poultry and bee farming.

on the whole, relatively stable since 1930, and amounted in the beginning of 1934 to 12.3 million hectolitres, which corresponds to approximately 20 % of annual consumption. Certain countries have taken measures to restrict the area under vines, and this policy was recommended to all wine-producing countries at the Monetary and Economic Conference of London (1933).

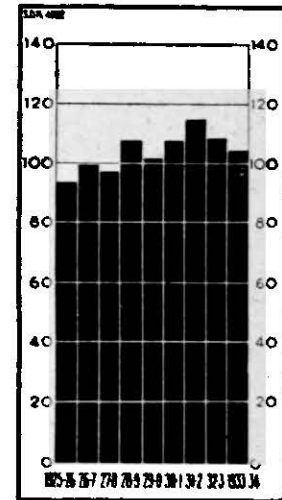
*Hops.* — The consumption of beer has continued to decrease during recent years. The demand for hops has accordingly contracted. Between 1929 and 1932, the crop acreage was drastically reduced and the output declined by about 50%. In 1933, however, world crops recovered considerably, chiefly on account of a 50% increase in the United States in anticipation of the abolition of prohibition in that country.

Diagram IV : A.  
WORLD SUPPLY  
OF COFFEE.



*Coffee.* — The year-to-year changes in world supplies of coffee are shown in Diagram IV. These changes reflect in the main those in the Brazilian crops, which, on an average, represent about two-thirds of total world production. Production outside Brazil has generally increased in recent years, but consumption of these so-called "mild" coffees has kept pace with production and no surplus stocks of such coffees exist. Brazilian plantations were considerably extended in 1925-26 and following years, and, in consequence, production rose sharply up to 1929-30 and even subsequently,<sup>1</sup> though seasonal conditions reduced crops in certain years. Actual consumption of coffee would appear to have increased on a much more moderate scale up to 1930-31, and seems to have declined by some 12% or more in the three subsequent years,<sup>2</sup> mainly as a result of increased trade restrictions and heavy taxation imposed upon coffee in many importing countries. Brazil has endeavoured for many years to control the coffee market by means of various valorisation schemes. In consequence

Diagram IV : B.  
WORLD CONSUMPTION  
OF COFFEE.



<sup>1</sup> The data relating to Brazilian production are not wholly satisfactory.

<sup>2</sup> According to estimates published in *Wileman's Brazilian Review* (Rio de Janeiro) and the *South American Journal* (London), actual world consumption of coffee compared with production in Brazil and the world as a whole was as follows in recent years :

		Bags of 60 kg. (000,000's).						
		Average	Average					
		1924-25-1929-30	1930-31-1933-34	1929-30	1930-31	1931-32	1932-33	*1933-34
Production :	Brazil	17.5	23.-	29.1	16.6	27.9	16.5	29.9
	Other	7.6	10.7	11.-	11.3	10.6	11.6	10.4
World		25.1	33.7	40.1	27.9	38.5	28.1	40.3
Consumption : World		22.1	23.7	23.6	25.1	23.7	22.8	23.-
Surplus of production		+ 3.-	+ 10.-	+ 16.5	+ 2.8	+ 14.8	+ 5.3	+ 17.3

\* Provisional figures.

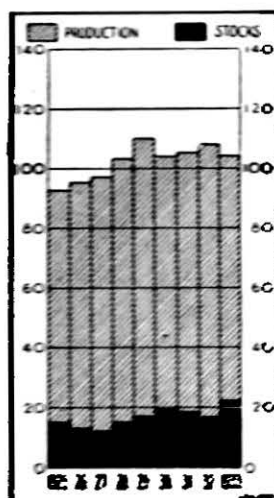
It should be noted that the figures for consumption do not include the amounts of coffee deliberately destroyed in Brazil since 1931 ; thus the surplus of production given in the last line is not representative of the changes in actual stocks.

of the bumper crop of the 1929-30 season, however, the market collapsed in 1930 and, as from 1931, a policy of gradually destroying the stocks of low-grade coffee has been applied. By this means, some 32 million bags are stated to have been eliminated by the middle of 1934. This operation has been financed by special emergency taxes upon exports.

The changes in visible world stocks are shown in Appendix I, Table 6. The figures there given are affected by amounts coming forward from invisible to visible stocks and *vice versa*. Compared with average visible stocks on January 1st and July 1st in 1925-1929 (= 100), the movement in visible stocks since 1930 has been as follows :

	1930	1931	1932	1933	1934
January 1st . . . . .	204	262	300	249	.
July 1st . . . . .	256	230	256	187	*208

**Diagram V.**  
**WORLD SUPPLY**  
**OF TEA.**



*Tea.* — World supplies of tea reached their peak in the 1929-30 season, as shown in Diagram V. The principal tea-planters reduced their production in the following season, but crops again increased in 1931-32 and particularly in 1932-33, with the result that tea stocks reached a record level at the beginning of 1933. A new restriction scheme embracing most tea companies in British India, Ceylon and the Netherlands Indies was therefore adopted in 1933, and both the world crops and the stocks in the United Kingdom were reduced by some 10% in the 1933-34 season. The last crop was in fact smaller than in any year since 1926 and, as the demand for tea is relatively inelastic in the British Empire, which absorbs about three-quarters of the annual exports, export quotas were increased in 1934.

*Cocoa.* — For lack of reliable production data, the index of world production of cocoa given in Appendix I, Table 2, is largely based on statistics of exports. After a decline in 1930 and 1931, world exports of cocoa rose again in 1932 and reached in 1933 a record level more than one-sixth higher than the 1925-1929 average. According to such rather conjectural estimates as are available, total world stocks at the end of 1932 would have represented over 80% of world consumption in that year and seem to have increased further

since. Prices have in consequence been heavily depressed and restriction of production has been recently contemplated, but its realisation is rendered difficult by the fact that a large proportion of the world crop is grown by natives.

**Tobacco.**

From the rather incomplete information available, it would appear that world tobacco crops reached their peak in 1930, and have tended to decrease in the subsequent years. This tendency has been marked in Europe (excluding the U.S.S.R.) — especially the Balkans — and in the United States. In 1932, the United States ceded its place as the largest tobacco producer in the world to India; the drop in the American crop in that year, due to exceptionally unfavourable natural conditions, amounted to 35%, but the major part of this loss was recovered in 1933. Russian tobacco-growing appears to have been considerably expanded during recent years. Consumption of tobacco in industrial countries has fluctuated, though between relatively narrow limits, in harmony with general economic conditions: it declined between 1929 and 1932, but increased again in 1933.<sup>1</sup>

<sup>0</sup> Provisional figures.

<sup>1</sup> See Chapter II, page 81, below.

*Vegetable-oil Materials.*

The total supplies of vegetable oils and oil materials have remained during 1930-1933 about the average level of the preceding quinquennium. Almost half of these supplies come from Asia, while North America, Europe (excluding the U.S.S.R.) and Africa contribute about 12-13% each. The shares of Asia and Africa have increased in recent years. Supplies coming chiefly from temperate zones accounted on an average during 1930-1933 for about 47%, those coming from tropical zones about 53% of the total aggregates on which the group index is based.

*"Temperate" Supplies.* — The olive crop is the only important source of domestic supply of vegetable oils in Europe (excluding the U.S.S.R.), Spain and Italy contributing together about two-thirds of the total. The output of olive oil, after a large increase in 1929-30 and a still more striking drop in the following season, has remained relatively stable in recent years at about the 1925-1929 average, the yield of 1933-34 being, however, somewhat below the average. The total cotton-seed crop — the largest source of seed-oils — has varied but little around the 1925-1929 average, except in 1932. The American crop, which previously constituted about half of the world total, was heavily reduced in that year; it remained low also in 1933, when, however, Russia, China and India registered large increases. The linseed crop, of which Argentina produced in 1925-1929 more than half, dropped by nearly a third between 1931-32 and 1933-34. This falling-off was mainly due to the Argentine and North America.

*"Tropical" Supplies.* — Total supplies of tropical vegetable-oil materials were largest in 1930-31, dropped considerably in the following year, but increased considerably during the two last seasons considered. The yield of ground nuts — the leading crop — partially failed in 1931-32 in India, which produces more than half of the total, and in French West Africa, the next largest producer. Total exports of raw palm and palm-kernel oil (or palm nuts, converted into terms of oil) increased more rapidly than any other product included in the group, while those of copra fell off continuously between 1929 and 1932. The advance in the Nigerian exports of oil materials has been particularly rapid.

*Textile Materials.*

The world index of production of textile raw materials and an international index of textile industries<sup>1</sup> are compared below (average 1925-1929 = 100):

<i>World production of :</i>	1925	1929	1930	1931	1932	*1933
Textile raw materials . . .	97	105	103	105	98	104
Textile manufactures . . .	91	106	92	93	93	103

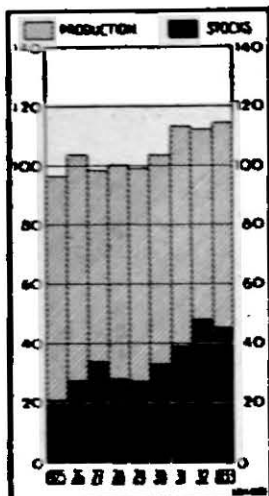
The supplies of textile raw materials would appear not to have exceeded requirements during the pre-depression quinquennium, but a considerable discrepancy developed during the depression. The average raw-material supply in 1930-1933 actually exceeded the average for 1925-1929, while industrial activity slackened considerably during the years 1930-1932. The excess of raw-material production was, however, less in 1932 than in the two preceding years, and in 1933, with the revival in industrial activity,<sup>2</sup> visible stocks of certain textiles were considerably reduced.

<sup>1</sup> The latter index, compiled by the Institut für Konjunkturforschung, Berlin, is a weighted average of composite indices of activity in the textile industry of seven important countries.

\* Provisional figures.

<sup>2</sup> The activity of the textile-manufacturing industries is dealt with in Chapter II and Appendix II, Tables 10-15.

**Diagram VI : A.**  
**WORLD SUPPLY**  
**OF COTTON.**

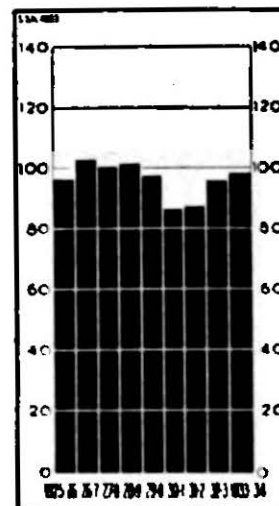


**Cotton.** — The world's total supplies of cotton, the leading textile, are shown in Diagram VI : A. Stocks increased steadily from 1929-30 to 1932-33 and then fell slightly owing to the small crop of that year. Total supplies available in 1933-34, however, were equal in amount to the previous maximum figure reached.

Largely owing to the boll weevil, but also to the varying use of fertilisers, etc., the American cotton crop has shown considerably wider fluctuations than cotton crops in other countries (so-called "outside growths"). The variations of the principal crops are shown below (years ending July 31st, bales of 500 lb. ,000's, excluding linters)<sup>1</sup>:

	Average 1925-26- 1929-30	1929-30	1930-31	1931-32	1932-33	*1933-34
American cotton . . . . .	15,268	14,825	13,932	17,096	13,002	13,177
" Outside growths " . . . . .	11,007	11,359	11,551	10,126	10,431	12,613
<i>Of which :</i>						
Indian <sup>2</sup> . . . . .	4,498	4,194	4,179	3,220	3,613	4,000
Egyptian <sup>3</sup> . . . . .	1,568	1,824	1,685	1,501	1,120	1,925
<b>Total . . . . .</b>	<b>26,275</b>	<b>26,184</b>	<b>25,483</b>	<b>27,222</b>	<b>23,433</b>	<b>25,790</b>

**Diagram VI : B.**  
**WORLD COTTON-**  
**MILL CONSUMPTION**  
**OF COTTON.**



Comparison between the averages for 1925-26 — 1929-30 and 1930-31 — 1933-34 shows that "outside growths" have increased while the American fell. The large increase in the world's current supplies during 1931-32, as well as the contraction in the following season, were entirely due to the American crop; "outside growths" were responsible for almost the whole increase in 1933-34. The area under cotton in the United States was slightly curtailed both in 1931 and in 1932; nevertheless, the ensuing crops represented the two extremes over a period of six years.<sup>4</sup> In 1933, the area was reduced by 16%, but the unit-yield was exceptionally high and the crop proved to be in excess of that of the previous year.<sup>5</sup> The fall in prices of cotton caused a considerable reduction in the cotton area and cotton crops in India, Egypt, China and Brazil, which touched their lowest points in 1931-32 or 1932-33. In Egypt, official measures for the restriction of the area were taken, but these measures were abandoned (except for the most valuable variety) in 1932-33. All "outside growths" registered an increase in 1933-34, Egypt again extending her area and reaping a record crop.

The total cotton-mill consumption of cotton is shown in Diagram VI : B. While total consumption has varied within narrow limits, the absorption of the different varieties shows considerable fluctuation.

<sup>1</sup> Estimates of Mr. J. A. Todd, in the *Empire Cotton-Growing Review* (London).  
<sup>2</sup> Provisional figures.  
<sup>3</sup> Government estimate, converted to 500-lb bales.  
<sup>4</sup> Including Sudan.  
<sup>5</sup> However, the "commercial crops" — i.e., crops actually marketed — were about equal in size. *Financial and Commercial Chronicle* (New York), September 30th, 1933.  
<sup>6</sup> The area harvested was 25,939,000 acres in 1932-33, 29,978,000 in 1933-34, and is to be reduced, according to the Government programme, to 25,000,000 in 1934-35, while the new crop to be marketed free of tax is fixed at 10 million bales (Bankhead Cotton Control Bill, enacted on April 21st, 1934).



The following figures of the International Federation of Master Cotton Spinners' and Manufacturers' Associations refer to years ending July 31st, and to actual bales (000's) (regardless of weight), excluding linters :<sup>1</sup>

	Average					
	1925-26-1929-30	1929-30	1930-31	1931-32	1932-33	1933-34
<i>Mill consumption of :</i>						
American cotton . . .	14,600	13,015	10,901	12,316	14,170	2
" Outside growths " . .	10,888	12,186	11,580	10,003	10,182	2
<i>Of which :</i> Indian . . .	5,311	6,087	5,863	4,788	4,220	2
Egyptian . . .	959	937	853	980	934	2
<b>Total . . .</b>	<b>25,488</b>	<b>25,201</b>	<b>22,481</b>	<b>22,319</b>	<b>24,352</b>	<b>2</b>

" Outside growths " other than Indian and Egyptian cotton chiefly consist of Russian, Chinese and Brazilian cotton, the bulk of which is consumed by home industries. Domestic consumption absorbs, on an average, 40% of the American crop and about half of the Indian crop.

Total world stocks of all kinds of cotton and of American cotton (held in the United States or elsewhere) are compared below with cotton-mill — i.e., consumers' — stocks (actual bales, 000's, including linters) :

<i>Stocks on August 1st :</i>	1929	1930	1931	1932	1933
Total stocks . . . . .	9,625	11,715	13,835	17,046	16,076
<i>Of which :</i> American cotton . .	4,919	6,889	9,264	13,229	11,814
Cotton-mill stocks . . .	4,863	4,498	4,313	4,462	5,050

It will be seen that the growth in total stocks was due wholly to American cotton. The stocks of non-American qualities were lower in 1932 than in 1929.

*Flax, Hemp and Jute.* — The world's flax crop exceeded the average pre-depression level by 22% in 1931 and 1933. The increase is entirely attributable to the U.S.S.R., which about doubled its flax area and crop between 1928 and 1933, when the U.S.S.R.'s share in the total was 83%. Increased Russian exports of flax contributed to the fall in prices and hence to the decrease in flax-growing in the rest of Europe, where the crops of 1931 and 1933 were less than half those reaped in 1929. Industrial demand for flax contracted in all countries, including the U.S.S.R., until 1932, but showed some signs of revival in 1933. The principal exporting countries had no carry-over at the end of that year.

The hemp crop dropped in 1930 to 11% below the 1925-1929 average, and has remained practically unchanged since that year. There has been an extension of hemp-growing in Russia, and a reduction in the rest of Europe, as well as in Asia (chiefly Japan and Korea); however, the increase in the U.S.S.R. did not lead, as in the case of flax, to a marked growth of exports. The Philippines' production of *Manila hemp*, for which cheaper "hard fibres" have been substituted during the depression years, contracted very rapidly until 1932, but there was a sharp increase in 1933.<sup>3</sup>

Production of *jute*, which is practically confined to India, has been restricted since 1931-32, when it was reduced by almost 50%, but it was gradually increased during the two following seasons,

<sup>1</sup> The average coefficients of conversion of 1 bale are as follows :

American, 500 lb. = 226.8 kg.  
 Indian, 400 lb. = 181.4 kg.  
 Egyptian, 760 lb. = 344.7 kg.  
 Sundries, 450 lb. = 204.1 kg.

<sup>2</sup> Half-year ending January 31st : American, 7,022 ; Outside, 5,512 ; of which : Indian, 2,369 ; Egyptian, 544 ; total, 12,534.

<sup>3</sup> Production of "hard fibres" other than Manila hemp (sisal, henequen, etc.) is not included in the index. The total production of these fibres appears to have exceeded the 1930 level in 1933.

though still remaining, in 1933-34, 24% below the 1925-1929 average. The reduced supplies of hemp and jute appear to have been generally adequate to meet the requirements of the manufacturing industries.

**Wool.** — The production of raw wool in the last few years has been largely influenced by increased reliance upon "mixed farming"; and the increased consumption of mutton has helped, not only to maintain supplies, but also to increase medium and coarse relatively to fine wools. In the table below, the estimated production of wool is shown for the five "major exporters" in the southern hemisphere in order of importance (Australia, Argentina, South Africa, New Zealand, Uruguay), for two large consuming areas, Europe and the United States, which supplement domestic production by imports, and for the world (excluding the U.S.S.R.). The U.S.S.R. is shown separately owing to the exceptional fall in its wool clip, due to the decline in live-stock, which has not, however, led to increased imports. The figures are given on a "greasy" basis in metric tons (000's):

	Average 1925-1929	1929 1929-30	1930 1930-31	1931 1931-32	1932 1932-33	*1933 *1933-34
Five major exporters . . . . .	875	912	908	928	960	877
Europe (excluding U.S.S.R.) . . . . .	229	223	220	222	223	221
United States . . . . .	163	182	196	209	197	204
World (excluding U.S.S.R.) . . . . .	1,497	1,554	1,539	1,573	1,600	1,514
U.S.S.R. . . . .	166	179	139	100	64	...

It will be seen that the world's wool clip, apart from the Russian, increased until 1932-33, but dropped appreciably in 1933-34. This fall, which was limited to the exporting group, was in part due to early shearing in Australia in 1932-33, but in part also to drought in South Africa. Aggregate shipments from the southern hemisphere in 1932-33 were 13% higher than in the preceding season, but decreased during 1933-34. However, as (sterling) prices of wool improved during 1933, the (sterling) value of these reduced supplies increased by nearly 43%.<sup>1</sup>

The changes in consumption may be estimated from the statistics of the aggregate supplies of raw wool retained in the nine principal consuming countries (apart from the U.S.S.R.).<sup>2</sup> They are compared below with changes in the estimated aggregate production of the world (excluding the U.S.S.R.) (average 1925-1929 = 100):

	1929	1930	1931	1932	1933
Production . . . . .	104	103	105	107	101
Consumption . . . . .	107	105	105	103	114

The margin between these two indices thus remained relatively small until 1932. While consumption of raw wool has been maintained at a high level through the depression, the use of rags has declined.

The movement of stocks of raw wool held in three of the major exporting countries (Australia, New Zealand and South Africa) may be contrasted with changes of stocks of wool tops, held at the principal combing establishments in the European continent, metric tons (000's):

<i>Stocks on July 1st:</i>	1929	1930	1931	1932	1933
Raw wool . . . . .	23.4	55.4	59.3	84.5	43.8
Wool tops . . . . .	27.8	19.5	22.0	30.0	31.0

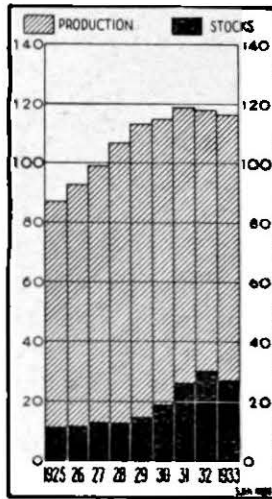
Stocks of raw wool are small compared with output; they increased as a result of record clips, but in 1933 were rapidly and very substantially reduced.

\* Provisional figures.

<sup>1</sup> Imperial Economic Committee, *Wool Intelligence Notes*, Vol. I, No. 11.

<sup>2</sup> The United Kingdom, France, the United States, Germany, Japan, Italy, Belgium, Poland, Czechoslovakia. *Wool Intelligence Notes*, Vol. I, No. 11.

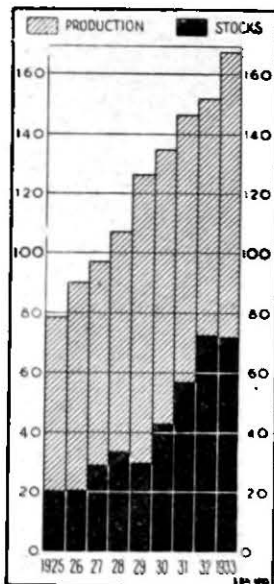
**Diagram VII.**  
WORLD SUPPLY  
OF RAW SILK.



*Silk and Artificial Silk.* — World supplies of raw silk are shown in Diagram VII. It will be seen that they reached their peak at the beginning of 1931, and have declined slightly in recent years. Japan produces about four-fifths of all raw silk consumed outside China, and her production, fostered by rationalisation and scientific research, has risen over the whole period under review, a slight relapse in 1932 being more than made good in 1933. However, Japan's raw-silk industry has been severely hit by the depression in her principal market, the United States, and by the continuous advance of the artificial-silk industry to which Japan herself has made an important contribution. The advantage Japanese raw silk gained by the devaluation of the yen was in part offset by the depreciation of the dollar in 1933, and, although the American demand for silk revived for a time, the total exports from Japan in that year fell off heavily. Exports from China and production in Europe have decreased since 1929, the latter by 38% up to 1933.

World production of artificial silk has made striking headway each year during the depression, and its competitive position in relation to natural silk, cotton and wool has been considerably strengthened.<sup>1</sup>

**Diagram VIII : A.**  
WORLD SUPPLY OF  
CRUDE RUBBER.

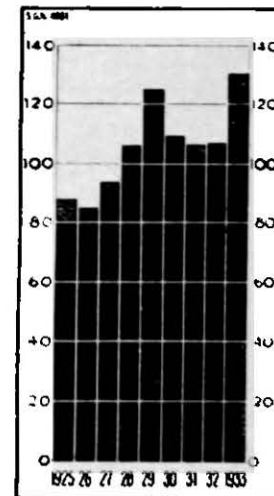


*Rubber.*

The world supplies of crude rubber are shown in Diagram VIII : A and world consumption in Diagram VIII : B. Total supplies increased with remarkable rapidity between 1925 and 1933 and stocks rose from 31% of the year's production in 1929 to 76% in 1933. During the depression, the price of rubber fell more than that of any other raw material, and both shipments and consumption contracted considerably up to 1932.

In the years 1922-1928, production was restricted in the British-controlled areas. The decrease in shipments between 1929 and 1932 (18%) was chiefly attributable to the Netherlands Indies, British Malaya

**Diagram VIII : B.**  
WORLD CONSUMPTION  
OF CRUDE RUBBER.



and Ceylon. The drop in consumption was much less and was due almost exclusively to the United States.<sup>2</sup> Other countries, especially Russia, Japan, the United Kingdom and certain minor consumers, chiefly manufacturers of rubber boots and shoes, absorbed increasing quantities during these years. Prices recovered in 1933, and shipments from all producing countries also rose in that year. Among the major producing countries, the Netherlands Indies increased their exports more than the British Malaya in that year. Shipments of native rubber contributed much more to the advance than those of the estate rubber. In British Malaya, output of estates was, indeed, slightly reduced in 1933.

<sup>1</sup> Artificial silk, being a manufactured product, is dealt with in somewhat greater detail in the "Textile" section of Chapter II.

<sup>2</sup> Consumption of reclaimed rubber at the same time decreased much more — viz., from 224,000 metric tons in 1929 to 72,000 tons in 1932.

World production considerably exceeded consumption in each year between 1929 to 1933, but the excess production diminished in the last two years. In the first quarter of 1934, there was a further sharp expansion of both shipments and consumption. World stocks, including both producers' and consumers' stocks, continued to increase and attained their peak by June 1934.

	Average 1925-1929	1929	1930	1931	1932	1933
World shipments <sup>1</sup> . . . .	664	876	833	810	718	863
Estimated world consumption <sup>1</sup> . . . . .	649	820	726	690	698	829
Of which : United States.	415	478	384	355	337	412
Other countries	234	342	342	335	361	417

After long negotiations, the plantation rubber producing countries (representing nearly 99% of world production) reached a Rubber Regulation Agreement (May 1934) with a view to regulating exports of rubber. The scheme will be administered by an International Rubber Regulation Committee, on which the main bodies of rubber manufacturers are represented in an advisory capacity.

**Wood.**

The available information concerning the production of wood is far from comprehensive, particularly as regards hard wood, though that relating to soft wood is also incomplete. Probably not more than about a quarter of soft-wood production is absorbed by the manufacture of wood pulp, the only wood product which has so far been included in the general index. Some reference should be made, therefore, to the other more important forestry products, sawn and planed soft wood.

*Sawn and Planed Soft Wood.* — The world market supply of these products is fairly closely reflected in the statistics of exports from the principal producing countries, shown in Table X.<sup>2</sup>

There has been a heavy falling-off in the production of sawn and planed wood in recent years owing to the slackness in most countries of the building industry. The European timber industry passed the peak of its prosperity as early as 1927;<sup>3</sup> in 1929, it was seriously affected by a sudden increase in Russian exports, which occurred just when inactivity in the building industry began. With the advent of the depression, timber consumption was reduced in most countries, and total European exports fell off by more than 44% between 1929 and 1932, while prices declined. All exporting countries except the U.S.S.R. restricted their supplies with a view to adapting them to the reduced demand; Russian exports increased in volume in 1930, remained roughly stationary up to 1932 and increased again in 1933, though less than those of the other timber countries, many of which profited from the temporary restrictions imposed upon Russian timber in the British market. The three Northern European exporters as a group suffered a much smaller relative decline in their exports up to 1932<sup>4</sup> than the Central European exporting countries, which had previously exploited their forests in excess of the natural growth. The acuteness of the depression in these latter countries led them in 1932 to constitute an International Timber Committee, the main object of which is to promote and regulate timber exports.

The industrial recovery in 1933 stimulated the demand for wood and, as stocks during previous years had been reduced to a minimum, production and exports increased very considerably — the

<sup>1</sup> Estimates of the Rubber Growers' Association, London.

<sup>2</sup> The table as well as the following discussion (which refers to statistical data not shown for reasons of space) are based on statistics compiled by the International Timber Committee, Vienna (C.I.B. No. A.621.1933, A.994.1933 and direct communications).

<sup>3</sup> See *World Production and Prices, 1925-1932*, Appendix II, Table 5 (b).

<sup>4</sup> If the exports of the northern group declined more in 1931 than that of the continental group, this was largely due to a prolonged industrial dispute in the former region in that year.

latter by almost 25% in Europe (excluding the U.S.S.R.) and by over a third in North America, whose exports had previously been much more drastically reduced than those of any of the European groups. All groups of European exporters shared in this revival, the Baltic and northern groups the most, and Russia the least.

Table X.

EXPORTS OF SAWN AND PLANED SOFT WOOD.

Groups of Countries	Standards (000's) <sup>1</sup>					1929 = 100			
	1929	1930	1931	1932	1933	1930	1931	1932	1933
Europe, excluding U.S.S.R. . . . .	4,426	3,687	2,873	2,463	3,069	83.3	64.9	55.6	69.3
<i>Of which:</i>									
Northern exports <sup>2</sup> . . . . .	2,503	1,999	1,576	1,540	1,909	79.9	63.0	61.5	76.3
Baltic exports <sup>3</sup> . . . . .	285	264	171	132	230	92.6	60.0	46.3	80.7
Central European exports <sup>4</sup> . . . . .	1,562	1,344	1,052	751	909	86.0	67.3	48.1	58.2
U.S.S.R. . . . .	829	966	961	969	983	116.5	115.9	116.9	118.6
North America . . . . .	1,534	1,206	804	542	732	78.6	52.4	35.3	47.7
<b>Total . . . . .</b>	<b>6,789</b>	<b>5,859</b>	<b>4,638</b>	<b>3,974</b>	<b>4,784</b>	<b>86.3</b>	<b>68.3</b>	<b>58.5</b>	<b>70.5</b>

The comparatively favourable position of the northern countries is chiefly attributable to the relative stability of their principal market, the countries on the North Sea and the Atlantic (*e.g.*, the United Kingdom, Denmark, the Netherlands, Belgium, France, Spain, Portugal), which constitutes the most important international market for timber. However, the competition of Russia, and to a less extent of Poland, as well as of Canada (since the Ottawa Agreement became operative), has lately somewhat reduced the share of the northern countries in this region. The Central European exporters were at the same time adversely affected, not only by the extremely heavy contraction of demand in their principal market, the Central European importing countries, but also by a sharp increase in the Russian exports to this reduced market, where consumption of sawn and planed wood continued to decline in 1933, in part as a result of increased trade restrictions.

Indices relating to the activity of the timber industry in a number of individual countries will be found in Appendix II, Table 6.

*Wood Pulp.*— The production of wood pulp has been affected by the depression much less than that of sawn and planed wood. The total drop in world production between 1929 and 1932 amounted to 17%. In 1933, output increased, to judge from the scattered data available.<sup>5</sup> The European pulp production only began to recede in 1931, and in no year fell below the average pre-depression level, although producers have organised cartels with a view to curtailing output and stabilising prices. In 1933, both Sweden

<sup>1</sup> One standard of sawn wood = 4,672 cubic metres (1 cubic metre = 35.22 cubic feet) = 2.5 metric tons.

<sup>2</sup> Norway, Sweden, Finland.

<sup>3</sup> Estonia, Latvia, Lithuania.

<sup>4</sup> Poland, Czechoslovakia, Austria, Yugoslavia, Roumania (countries members of the International Timber Committee). The figures in standards for this group are estimated to be about 10% too low. Exports from Germany and France, chiefly importing countries, are not shown separately.

<sup>5</sup> See *Statistical Year-Book of the League of Nations, 1933-34*, Table 53.

and Finland exceeded their previous records, in spite of increasing trade barriers. North-American production was, in 1932, 16%, but in 1933 only 4%, below the 1925-1929 average. The Japanese production in 1933 nearly equalled the record level of 1930. The chemical pulp industry developed more rapidly than the mechanical pulp production until 1929; but the recession during the depression years has been of roughly equal proportions in both branches of the industry.

**Fuels.**

World production of fuels rose less rapidly up to 1929 and has declined less sharply during the depression than that of other mineral products as a whole, a phenomenon largely due to the fact that only a part of the total fuel output is consumed by industry. The relatively inelastic demand for fuel for household use, for use in transport and communications and for public utilities has, indeed, absorbed an increasing proportion of the quantities produced.

In 1925-1929, coal accounted on an average for 72% of the aggregates from which the group index is calculated, crude petroleum for about 25% and lignite for the remaining 3%. The tendency for coal to lose ground to alternative sources of energy — *e.g.*, petroleum<sup>1</sup> and electricity — has been accentuated during the depression. At the same time, the use of alcohol (derived from wood, sugar- or starch-containing products), instead of or mixed with petroleum, has been encouraged in many countries.<sup>2</sup>

**Coal.** — The changes in the output of coal in the principal areas and in the world will be seen from the following indices (average 1925-1929 = 100):

	1929	1930	1931	1932	1933	*1934 6 months
Europe, excluding U.S.S.R. . . . .	112	104	94	85	86	92
U.S.S.R. . . . .	136	154	175	210	248	284
North America . . . . .	101	89	73	60	63	71
Other areas <sup>3</sup> . . . . .	103	100	92	89	94	100
World . . . . .	107	98	86	77	80	87

The striking increase in the coal production of the U.S.S.R. reflects the industrial expansion in that country. The marked recovery in the output of the areas outside Europe and North America between 1932 and the first six months of 1934 was mainly due to the recent industrial expansion in Japan, but in India coal production has in recent months again reached the average pre-depression level. If North-American output declined more than that of Europe up to 1932, it has, on the other hand, recovered more rapidly since, though the recovery has of late been considerable also in Europe — particularly in the United Kingdom and in Germany.<sup>4</sup> Polish production is still low, and output in France, Belgium and the Netherlands remains roughly stationary. Poland, whose exports had previously acquired a very large share in the coal imports of the Northern European countries, lost a substantial part of that share in 1933 in consequence of agreements between these countries and the United Kingdom, which led to increased exports of British coal.

<sup>1</sup> By 1933, the relative share of coal in the index aggregate had shrunk to less than 68% and that of petroleum risen to about 30%.

<sup>2</sup> According to the prescriptions in force in many European countries, alcohol must be added to petrol in proportions varying between 10 to 25%.

<sup>3</sup> Principally Japan, India, South Africa and Australia.

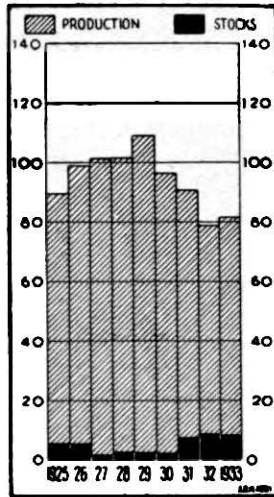
<sup>4</sup> Provisional figures.

<sup>5</sup> In spite of a recovery by some 15% since 1932, German coal output in January to May 1934, however, still amounted to only four-fifths of what it was on an average in 1925-1929, whereas the British production in the first half of 1934 was only 9% short of that average, excluding 1926, the year of the great coal conflict.

Pit-head stocks of coal are small in comparison with production. According to a rough estimate,<sup>1</sup> world stocks at pit-head would appear to have amounted to some 70 million tons at the end of 1931 and to have been unchanged two years later. As world coal production was 1,076 million tons in 1931

Diagram IX.

SUPPLY OF COAL IN CENTRAL EUROPE.



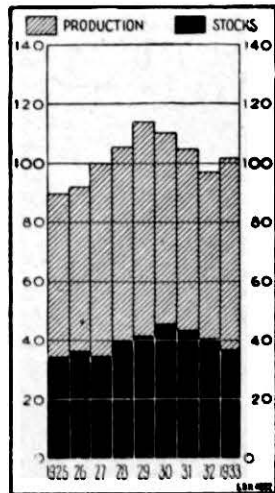
and about 1,000 millions in 1933, pit-head stocks would thus have represented respectively 6.5 and 7% of the considerably reduced output in those years. The changes in production and total stocks in "Central Europe" (Germany, Belgium, Poland (Upper Silesia only), and the Saar) during the whole period considered are shown in Diagram IX. Even in 1932, the year of the smallest production and the largest total stocks, the latter did not exceed 13% of the former in those countries. It will be noted that stocks tended to fall both in 1933 and in 1934. The figures for pit-head stocks in France given in Appendix I, Table 6, show the same trend since the end of 1932, when coal imports into that country were subjected to control.

*Petroleum.* — The production of crude petroleum has been maintained at a high level throughout the depression, the decline in the output of the United States up to 1932 to a point 9% below the pre-depression average being more than offset by the increase in the other production countries, as will be seen from the following figures :

		1925-29	1929	Metric tons (000,000's)			1933	1933 as % of 1925-1929
				1930	1931	1932		
<i>Petroleum production :</i>								
United States . . .		119	138	123	117	108	123	103
Other countries . . .		54	68	73	72	72	74	138
World	Total . . .	173	206	196	189	180	197	114
	Index . . .	100	119	113	109	104	114	—

Diagram X.

SUPPLY OF CRUDE PETROLEUM IN THE UNITED STATES.



The movement of total supplies in the United States is shown in Diagram X. Stocks have not been very much larger on an average during the years of depression than they were in 1925-1929.

On account mainly of an international restriction agreement, world production of crude petroleum seems to have been adapted fairly closely to the demand up to 1932. It is estimated<sup>2</sup> that consumption of refined products in that year exceeded the production of crude petroleum by about 1%. In May 1933, however, the international agreement was cancelled and, owing mainly to the rapid increase in the United States, the production of crude oil in that year rose nearly 4% above estimated consumption of refined products. The most recent monthly figures available for 1934 indicate in most countries a continued increase in output.

*Electricity.*

The group index of fuel production does not give a complete idea of the world's total supply of energy, chiefly because it excludes the electricity from water-power.

Owing to the flaws in existing statistics, it is not possible to estimate with accuracy either the total output of electricity in the world or the part generated by hydro-electric plants. The total

<sup>1</sup> *Annales des Mines* (Paris). Tome V, No. 3, 1934.

<sup>2</sup> *The Petroleum Times* (London), January 6th, 1934.

world output recorded in statistics <sup>1</sup> reached nearly 250,000 million kwh. in 1928, and has since varied as follows :

1928 . . . . .	100	1930 . . . . .	111	1932 . . . . .	106
1929 . . . . .	110	1931 . . . . .	108	1933 . . . . .	113 (approx.)

and thus probably reached a new maximum in 1933, in the neighbourhood of 285,500 million kwh. <sup>2</sup>

Available information would seem to suggest that probably round about 45% of known total output has been generated by hydro-electric plants in recent years. <sup>3</sup>

In North America, which accounts for about 45% of the known total production of electricity in the world, there was a fall of about 10% between 1929 and 1932, followed by a slight recovery in 1933. In Europe, which produces about 40% of the known total, record figures were reached in 1933 by the United Kingdom, Italy, Sweden, Switzerland and Russia, as well as by some of the smaller producers, while Germany, France and Poland recovered some of the ground lost during the depression.

### *Metals.*

The statistics on which the metal index is based relate to smelter production and not to mine production, except in the case of silver and nickel. Consequently, the continental distribution in the appendices must not be interpreted as indicating the primary sources of supply. The figures for North America and Europe are higher and those for the other continents appreciably lower than they would have been had it been possible to employ data relating to the output of mines.

In 1932, the metal index touched a point almost 50% below the average for the quinquennium 1925-1929. As in the case of other raw materials, there was a distinct recovery during 1933, the index rising by more than 25%, but, compared with the 1925-1929 average, it still remained at a lower level than any other group included in the general index.

*Pig-iron* (excluding that part of output which is used for making steel) and *steel* (ingots and castings) account for about 70% of the aggregates on which the metal index is based. The recent relative movements of world production of pig-iron and steel, on the one hand, and of the non-ferrous metals, on the other, have been as follows (average 1925-1929 = 100) :

	1929	1930	1931	1932	1933
Pig-iron and steel . . . . .	115.9	91.8	66.8	48.4	64.1
Non-ferrous metals . . . . .	114.5	103.0	84.8	61.6	66.9

Pig-iron and steel, being the chief materials used in investment (capital) industries, are discussed in Chapter II.

Production of *non-ferrous metals* as a group has been better maintained than that of pig-iron and steel. But production of non-ferrous metals outstripped consumption and large stocks accumulated. The revival in demand in 1933 tended, therefore, in certain cases, rather to reduce stocks than to increase production.

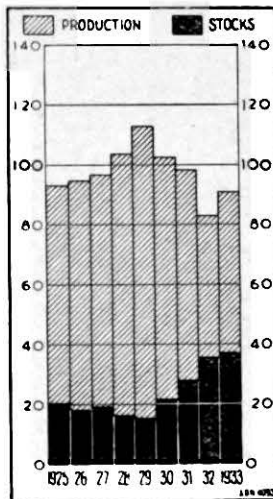
<sup>1</sup> Cf. *Statistical Year-Book of the League of Nations, 1933-34*, Table 61.

<sup>2</sup> It should be noted that the statistics frequently omit the generation of current by industrial establishments for their own use and therefore under-state total output.

<sup>3</sup> Assuming a rate of plant efficiency corresponding to the average of the American and British public utility power-plants, it would take about 95.5 million tons of coal to replace the water-power employed for generation of electricity in 1932. The aggregates which this amount of coal represents would amount to nearly 7% of the total fuel aggregates for that year.



Diagram XI : A.  
WORLD SUPPLY  
OF COPPER.

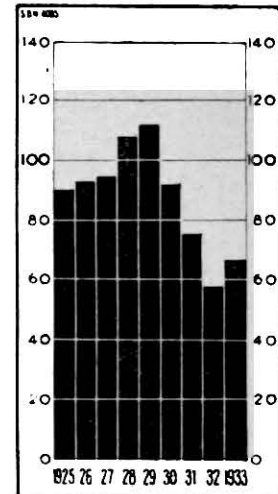


Copper. — Copper is the most important non-ferrous metal. The changes in supplies and consumption will be seen from Diagrams XI : A and XI : B.

The share of the United States in world smelter production in the period 1925 to 1929 was over a half, but by 1933 it had fallen to less than a quarter. Production and consumption of copper in the United States and the rest of the world is shown below (average 1925-1929 = 100) :<sup>1</sup>

	1925	1929	1930	1931	1932	*1933
<i>Production :</i>						
United States .	95	111	81	60	31	27
Rest of world .	80	128	121	119	92	114
<i>Consumption :</i>						
United States .	88	121	87	65	36	41
Rest of world .	93	105	98	88	81	93

Diagram XI : B.  
WORLD CONSUMPTION  
OF COPPER.



The policy of price-control adopted by the Copper Exporters Inc., which originally included American and foreign producers covering 90% of world output, resulted in the accumulation of huge stocks of refined copper after 1929, when demand was curtailed on account, not only of the economic depression, but also, to some extent, of the substitution of other metals for copper. During 1933, stocks were reduced and production increased, but, meanwhile, production in the United States did not share in the general upward trend. The most important recent event in the copper market has been the development of the low-cost producing area in Northern Rhodesia, whose smelter production increased from 9,070 metric tons in 1931 to 105,876 in 1933.

Lead. — World smelter production of lead fell off between 1929 and 1932 by 36%. It remained almost stationary in 1933, a continued decline in the United States just outweighing an increase in the rest of the world, due almost entirely to a record production in Australia and Germany. Production outran apparent consumption by 3.8% on an average for 1925-1929, 8.7% in 1930 and 1931, 9.2% in 1932, and 1.8% in 1933. This disequilibrium between supply and demand over a number of years has resulted in the accumulation of heavy stocks. End-of-year world stocks in the hands of producers were estimated to have increased roughly from 230,000 tons in 1929 to 495,000 in 1932 and 515,000 in 1933, the last figure representing 44% of production.<sup>2</sup> Stocks in the United States have continued to press heavily on the market, despite the curtailment of output; refined stocks of domestic lead were 185,000 tons at the end of 1933 — *i.e.*, four times greater than three years earlier. American stocks have increased further in the early months of 1934.

Zinc. — World smelter production of zinc had fallen by 1932 to 46% below the 1929 level; but it recovered rapidly in 1933. Practically all countries contributed to this recovery, and none more than the United States, which registered an increase of 48%. The relationship between supply and demand has been more favourable in the zinc market than in most other metal markets. The percentage by which annual production exceeded (+) or fell short of (—) apparent consumption has varied as follows: 1925-1929 (average) —0.5; 1929, +0.6; 1930, +15.1; 1931, —1.8; 1932, —5.3; 1933, —3.3. Approximate year-end world stocks<sup>2</sup> reached a peak with 330,000 tons in 1930, and gradually fell to 230,000 in 1933, the last figure representing about 23% of that year's smelter production.

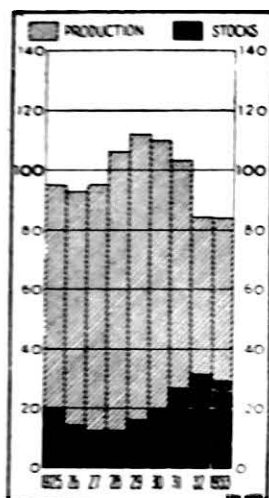
<sup>1</sup> These and similar figures for other metals are based on statistics published in the American Bureau of Metal Statistics *Year-Book*, 1933.

\* Provisional figures.

<sup>2</sup> Estimates of the British Metal Corporation, Ltd., *The Metal Bulletin* (London), January 30th, 1934.

The principal zinc producers outside the United States, Japan and the U.S.S.R. are grouped in an International Zinc Cartel, which in 1933 continued its activity by short-term agreements. Stocks in the hands of its members dropped from 206,400 tons in August 1931 to 128,700 at the end of 1933, and to 109,600 in May 1934.

*Diagram XII.*  
WORLD SUPPLY  
OF TIN.



*Tin.* — As shown in Diagram XII, supplies of tin decreased less rapidly than those of copper — by 25% between 1929 and 1932. The supply situation remained almost unchanged between 1932 and 1933; but, while smelter production showed a small increase in 1933, mine production dropped by some 13%. This was due to the control exercised by the International Tin Committee, comprising Bolivia, Malaya, Netherlands Indies, Siam and Nigeria, whose aggregate mine production was reduced between 1929 and 1933 by over 60%. Meanwhile, the non-restricting countries — principally China, Burma, the Belgian Congo, and the United Kingdom — raised their output over the same period by 15.5%, increasing their share in world mine production from 8 to 20.5%.<sup>1</sup>

The relationship of supply and demand in the tin market changed radically during the last three years under review, the percentage by which smelter production exceeded (+) or fell short of (—) apparent consumption varying as follows: 1925-1929 (average) +1.2; 1929, +5.5; 1930, -12.6; 1931, +12.4; 1932, -1.9; 1933, -25.4. This resulted in 1933 in a sharp advance in the price of tin far exceeding that for any other metal, and at the same time in a 50% decrease in world stocks. The end-of-year stocks amounted to 38,000 tons in 1929, reached a peak of 62,700 tons in 1931 and declined to 27,000 tons in 1933. In the last year, they represented 26% of production.

*Aluminium.* — Production of aluminium continued to dwindle in 1933, the total drop since 1929 being 50%. The United States were responsible for more than half of the decrease registered in 1933. The European producers, together with American-owned aluminium interests abroad, have been grouped in the Alliance Aluminium Company with a view to regulating output. This cartel, controlling about half the world's production, reduced its stocks from 218,000 tons at the end of 1931 to 135,000 at the end of 1933.

*Nickel.* — Nickel production has shown wider variations than any other metal during recent years and was alone in the group to exceed the average pre-depression level in 1933. This significant recovery was accompanied by a very considerable expansion in world consumption, which rose from 25,900 tons in 1932 to 43,500 in 1933.

*Silver.* — The production of silver fell from 1929 to 1933 by 39%. The corresponding drop in the United States, which produced 23% of world output in 1929, was 64%. Industrial demand does not appear to have been stimulated by the decrease in prices.

During recent years, the silver market has been adversely affected by the heavy fall in the world market prices of exports from China and India and the consequent reduction in the demand of these countries — the largest consumers of silver for monetary purposes. Both China and India, heavy importers of silver coin and bullion up to 1931, were net exporters in 1932 and 1933. In China, there was in the latter year a drain of silver from the provinces to Shanghai, where stocks increased considerably during the year. Indian currency stocks decreased during 1933 (see Appendix I, Table 6).

On the occasion of the Monetary and Economic Conference in London, an international agreement was reached between certain States with a view to stabilising prices of silver by means

<sup>1</sup> In the early months of 1934, Burma, Belgian Congo and French Indo-China joined the restricting countries.

of restricting sales by the Governments of India, China and Spain, and by the purchase of certain amounts of silver by the Governments of the chief producing countries during four years. The United States Treasury was authorised, toward the end of 1933, to buy silver from American mines at a fixed price and, in the early part of 1934, a bill was passed authorising the Treasury to purchase silver from national stocks and from abroad with a view to constituting a silver cover of part of the note issue.

*Non-metallic Minerals.*

This somewhat heterogeneous group includes cement, asbestos and salt. The group index is mainly determined by the changes in the production of cement.

*Cement.* — The decline in the production of cement by 35% between 1929 and 1932, and probably by another 3% in 1933, reflects the severe contraction of the building and construction activity in most countries during the depression.<sup>1</sup> North America was primarily responsible for this decline, its production being reduced by about two-thirds between 1928, the year of maximum output, and 1933; cement stocks in the United States, however, have been falling slowly since 1931. European output declined between 1929 and 1932 by 28%. The decrease in the Central European countries — Germany, Austria, Poland and Hungary — was much more drastic than in other parts of Europe — not less than 62% in the aggregate between 1928, the peak year, and 1932. During 1933, output recovered from the low levels of the preceding year in most European countries for which figures are available. Among the major producing countries in other continents, Australia experienced a drastic reduction in output between 1928 and 1932, while India and Japan reached record figures in 1933.

*Chemicals (Fertilisers).*

This index includes nitrates, phosphates and potash, together with sulphur and copper sulphate, which, while not strictly fertilisers, are employed largely in agriculture. Of these subdivisions, the nitrates are the most important in the index. The chemical industry was among the most prosperous until 1929, but the plight of agriculture heavily reduced the consumption of fertilisers during the depression and, in consequence, aggregate production declined by 37% up to 1932. In 1933, however, there appears to have been some improvement.

*Nitrates.* — With the exception of the Chilean production of nitrate of soda (Chile saltpetre), all the nitrates considered represent "manufactured nitrogen". The Chilean nitrate industry was reorganised in 1930 with a view to competing more effectively with synthetic nitrates and, in 1933, a Sales Corporation, on which the Government is represented, was established. Agreements concerning prices and selling policy were made with the European producers of nitrogenous fertilisers in 1929, 1930 and 1932. The following indices show the production and consumption of Chile nitrate and of manufactured nitrogen in terms of pure nitrogen (1925-26-1929-30 = 100):

	1925-26	1929-30	1930-31	1931-32	1932-33
<i>Chilian nitrates:</i>					
Production	103	119	64	44	18
Consumption	102	102	69	39	36
<i>Manufactured nitrogen:</i>					
Production	69	129	107	105	118
Consumption	74	126	109	112	129

Continuous over-production has resulted in the accumulation of heavy stocks in Chile, estimated (in terms of pure nitrogen) at 430,000 tons at the end of June 1932 and 365,000 tons at the end

<sup>1</sup> See Appendix II, Table 5.

of June 1933, or nearly three years' consumption at the present level of demand.<sup>1</sup> Production of manufactured nitrogen exceeded consumption on an average up to 1929-30, but subsequently it was brought more into line. This entailed, however, working on an average of only about 42% of capacity in 1931-32 and 46% in 1932-33.<sup>2</sup> Lower prices favoured "manufactured nitrogen", more particularly that derived from sulphate of ammonia, relatively to the natural product.

*Phosphates.* — This group comprises natural phosphates, superphosphates of lime, basic slag and natural guano. The output of natural phosphates reached its peak in 1930, but this increase was outweighed by a sharp fall in basic slag production (due to the reduced output of pig-iron in certain Continental countries), and the index for the group declined by about 37% between 1929 and 1932. Such information as is available points to a rise in the aggregate of some 10% in 1933, due principally to increased output of superphosphates.

*Potash.* — Germany and France (Alsace) together accounted for 95% of world output during the quinquennium 1925-1929. German production fell by 51% between 1929 and 1932 and the French by 44% from the peak in 1930 to 1932. In 1933, there would appear to have been a slight recovery in French output, and the United States, a small producer, more than doubled its 1932 figure. In 1926, the German and French interests concluded a ten-year agreement reserving the home markets and allocating the quotas for foreign markets, but there is no control of total production. Poland was later admitted to participation in this agreement.

*Sulphur.* — The world's mine output reached its maximum in 1930, fell by no less than 55% in 1932, but rose by nearly 42% in 1933. These fluctuations reflect mainly production in the United States, which accounted for 83% of world output during 1925-1929. Stocks in the United States declined from 3,302,000 metric tons at the end of 1931 to 2,825,000 metric tons at the end of 1933, when they still almost equalled world production in 1929. Italy, the only other large producer, has increased output steadily since 1928, but has accumulated stocks in Sicily estimated at about 200,000 metric tons. The marketing agreement between the American and Sicilian interests, dating from 1923, was terminated in 1932.<sup>3</sup>

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<sup>1</sup> *The Economist* (London), February 17th, 1934.

<sup>2</sup> *British Sulphate of Ammonia Federation, Annual Report.*

<sup>3</sup> U.S. Department of Commerce, *Minerals Year-Book, 1932-33.*

## II. INDUSTRIAL PRODUCTION.

### NATURE OF THE INDICES OF INDUSTRIAL ACTIVITY.

The index of raw-material production, which was considered in the preceding chapter, affords an indirect measure of the changes in the industrial activity of the world, though, for the reasons there indicated, it is far from satisfactory for this purpose, particularly as regards the period of depression under review. In the present chapter, an attempt is made to analyse these changes on the basis of national indices and of such other information as is available regarding the most important branches of industry (see Appendix II).

By "industrial production" is normally understood both mining and manufacturing and, in certain countries, also building. The line of demarcation normally applied in national statistics lies, not between primary and manufacturing production, but between agricultural and industrial. Consequently, the scope of the preceding and of the present chapter overlap in so far as the production of fuels, pig-iron and crude steel, non-ferrous metals (smelter production), wood pulp, artificial silk and certain synthetic chemicals is covered in both.

Owing to the great diversity of the products of manufacture and the frequent lack of comprehensive information, it is, as a rule, impossible to secure an exact measure of the fluctuations in the physical output of industry over short periods of time. The national indices vary widely in composition and scope; while some cover almost the entire range of national industry, others are limited to important industries or branches of industry which are considered to be representative. Some are based mainly on returns of actual quantities produced; others on production values, corrected for price changes. Some make extensive use — and almost all make some use — of indirect measures of activity such as data concerning consumption of raw materials, orders filed, goods despatched, labour employed, hours worked, plant utilised, etc.; and between the indirect data used in the different countries there is no uniformity. In some countries and for certain industries, figures for consumption of raw materials relate to quantities actually delivered at factories, while, in other cases, only import figures or estimates of the market supply of raw materials are available. Figures for orders filed relate to an early stage and those for finished goods despatched to the final stage of the process of production. Indices for a particular month or year may therefore reflect alike past, present and prospective activity in varying degrees. Again, information regarding stocks of finished goods is very scanty and it is therefore difficult to tell how far any given movement in an index faithfully reflects a change in effective demand. Thus, no close comparisons between the various national series can be attempted.<sup>1</sup>

Notwithstanding these limitations, which indeed are inherent in the nature of the production indices, attempts have been made to construct, on the basis of the national indices available, at least an approximate measure of the changes in industrial activity of the world as a whole and some of its main parts. For several years, the German Institut für Konjunkturforschung has calculated such international indices, which have been used in the last two editions of this publication in order to give a general review of the changes in world industrial activity. This is done also this year, as the Institut's international monthly index corrected for "normal" seasonal variations has been used.

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<sup>1</sup> For notes on the scope of and the methods employed in compiling the different national indices of production, see the *Statistical Year-Book of the League of Nations, 1932-1934*, Table 94, and for notes on certain special indices relating to individual industries, see Appendix II below.

**GENERAL INDUSTRIAL ACTIVITY.**

The general course of the world's industrial activity, during the nine years 1925-1933, may be judged from Table I below. In addition to the general index of the Institut für Konjunkturforschung, which comprises fifteen industrial countries,<sup>1</sup> sub-indices for Europe, excluding the U.S.S.R., but including some countries not covered by the Institut's index, and for North America are given. These sub-indices have been calculated for the purpose of the present analysis according to the methods employed by the Institut. For comparison with the index of world industrial activity, that of the world production of industrial raw materials considered in the preceding chapter is also given. Both world indices are shown including and excluding the U.S.S.R. This distinction is of interest as Russia, whose relative importance in any index of total world production is considerable, constitutes a self-contained economic system, which has, in fact, followed a course quite different from that of other countries.

*Table I.*

**INTERNATIONAL INDICES OF INDUSTRIAL ACTIVITY  
AND INDEX OF WORLD PRODUCTION OF INDUSTRIAL RAW MATERIALS.  
(Average 1925-1929 = 100.)**

Nature of Indices	1925	1926	1927	1928	1929	1930	1931	1932	1933
<i>Industrial Activity :</i>									
Europe, excluding U.S.S.R. . . . .	90	89	103	106	111	103	89	77	84
North America . . . . .	94	98	97	102	109	88	74	59	69
World, excluding U.S.S.R. . . . .	93	94	99	104	110	94	81	69	78
World, including U.S.S.R. . . . .	91	94	99	105	112	98	87	77	86
<i>Production of Industrial Raw Materials :</i>									
World, including U.S.S.R. . . . .	92	94	99	104	111	102	91	81	*88
World, excluding U.S.S.R. . . . .	93	94	99	103	110	100	89	77	*84

*Note.* — The countries included in the world index of industrial activity (Institut für Konjunkturforschung) and the weights allocated to them, are as follows: *Europe* : Austria (0.60), Belgium (1.10), United Kingdom (9.26), Czechoslovakia (1.60), France (7.00), Germany (11.55), Hungary (0.36), Italy (3.15), Poland (0.75), Sweden (0.85), U.S.S.R. (4.65); *North America* : Canada (2.22), United States (44.80); *Latin America* : Chile (0.30); *Asia* : Japan (2.35); total of weights : 90.54.

The index shown for Europe includes, in addition to the ten countries mentioned above, the following five : Denmark (0.35), Finland (0.15), Greece (0.25), Netherlands (1.00), Norway (0.25); total of weights for Europe, excluding the U.S.S.R. : 38.22.

The drastic contraction in world industrial activity which started towards the end of 1929, came to an end in the course of 1932, and a distinct improvement was recorded in 1933. Judging from the annual averages of the activity indices, roughly a quarter of the

<sup>1</sup> According to the estimates of the Institut, based on approximate data for the number of industrial workers, horse-power installed and, where available, "value of production" — data used for constructing the schedule of weights applied to the index — these fifteen countries would have represented, in 1928-29, about 90 % of the total estimated industrial capacity of the world. The index covering thirty-eight countries (annual figures only) which was reproduced in *World Production and Prices, 1925-1932*, Chapter II, Table I, has been discontinued. Compared with that index, which comprised a larger proportion of small industrial countries whose industries, working almost exclusively for domestic consumption markets, have maintained their output fairly well throughout the depression, the monthly index slightly overstates the decline in world industrial activity in 1930-1932.

\* Provisional figure, subject to revision.

ground lost between 1929 and 1932 in the world as a whole was regained in 1933. The world production of industrial raw materials, which had fallen less than industrial manufacturing activity during the first three years of depression — a fact which reflects the simultaneous increase in raw material stocks considered in Chapter I — recovered somewhat less in 1933.

In interpreting the "world" index of industrial activity, it should be borne in mind that it is very largely dominated by developments in the United States and also, though not to the same extent, in the U.S.S.R. The enormous drop in the industrial activity of North America (United States and Canada) until 1932 was, to a large extent, counter-balanced in the "world" index by the simultaneous advance in Russia. On the other hand, the rate of expansion in the U.S.S.R. fell off in 1933, when a dramatic — if erratic — revival took place in North America. In most European countries, industrial fluctuations, though considerable, have been less violent than in North America, and it will be noted that the index for Europe, excluding the U.S.S.R., during the three years 1931-1933, is fairly similar to the "world" index. Although the rate of recovery between 1932 and 1933 was more rapid in North America than in Europe and the world as a whole, the North American activity index for 1933 still fell short of the 1925-1929 average by 31%, compared with 16% in the case of the European and 14% in that of the "world" industrial activity index, and 12% as regards the world index of the production of industrial raw materials.

The annual averages given in Table I do not, however, afford a sufficiently realistic picture of the downward sweep and subsequent upward swing of industrial activity in the last four and a-half years. The turning-point lay in 1932 (not in 1933, as the figures suggest) and was substantially below any of the annual averages given here for purposes of comparison with the annual index of primary production. The course of events may best be shown diagrammatically.

Diagram I shows the monthly index of industrial activity in the world (excluding the U.S.S.R.) together with an international index of unemployment, inverted.<sup>1</sup> Both indices are adjusted for seasonal variations and are based on the average of the monthly figures for 1929. It should be noted that the scope and composition of these two indices are not identical; in particular, very different weights are allotted to the United States, and France is not covered by the unemployment index. With a few minor exceptions, the statistics on which the latter index is based relate only to wholly unemployed. In a period of depression, such as that under review, the index of unemployment probably understates the total amount of potential working time lost.

The curves representing the two indices have been superimposed in the manner indicated in the margin of the diagram which cannot, of course, afford comparison of more than the trends of the curves in the period considered.

It will be seen from the diagram that, when the tide turned in July 1932, the industrial activity index stood 42% below its average level for 1929. In August 1932, the inverted unemployment index, the movement of which had previously been largely similar to that of industrial activity also reached its lowest point (*i.e.*, unemployment reached its maximum). In July, the Lausanne Agreement regarding reparations was signed. Subsequently, the general trend of industrial activity has, on the whole, been upwards and

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<sup>1</sup> International index of industrial activity compiled by the German Institut für Konjunkturforschung and international index of unemployment compiled by the International Labour Office, Geneva.

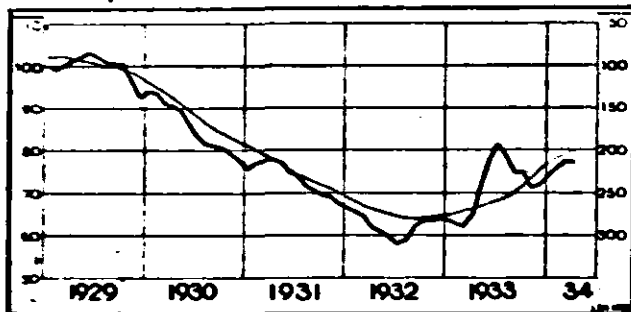
The international index of unemployment is an average of ratios of unemployment in sixteen countries and is weighted according to the population gainfully occupied in mining and industry according to 1920-21 censuses. The countries included and the weights allocated to them are as follows: *Europe*: Austria (1.0), Belgium (1.5), Czechoslovakia (2.2), Denmark (0.4), Germany (13.0), United Kingdom (9.0), Italy (4.4), Netherlands (1.0), Norway (0.3), Poland (1.3), Sweden (0.8), Switzerland (0.8); *North America*: Canada (0.9), United States (14.0); *Asia*: Japan (5.7); *Oceania*: Australia (0.8). (*International Labour Review*, Vol. XXIX, No. 4, April 1934, and direct communication.)

*Diagram I.*

**INDUSTRIAL ACTIVITY AND UNEMPLOYMENT (INVERTED)  
IN THE WORLD, EXCLUDING U.S.S.R.**

(1929 = 100; monthly movement, adjusted for seasonal variations.)

———— Industrial activity.  
———— Unemployment.



1932 to March 1933 and the second from July to November 1933. The four-month period falling between the end of the first and the beginning of the second set-back was characterised by a burst of industrial activity in North America — accompanied by less dramatic though considerable expansion in a number of European countries — which brought the international index from a point 38% below to a point less than 19% below its average 1929 level. The ground lost during the subsequent four months had not been fully recovered by March-April 1934 when, however, the international index stood almost 34% above its low point of July 1932. On the other hand, in spite of the simultaneous marked improvement of the unemployment situation, it may be roughly estimated that there were probably still some 23 million unemployed in the world in March 1934.<sup>2</sup>

**INDUSTRIAL ACTIVITY IN INDIVIDUAL COUNTRIES.**

The course of the international index of industrial activity considered above was, as has been observed, largely determined by developments in the United States. But the depression, although world wide, affected the industrial activity of the individual countries to very varying degrees and the degree of recovery since the summer of 1932 in different parts of the world has also been widely — indeed still more widely — different. Evidence with regard to twenty-two countries is afforded by the annual indices or annual averages of monthly or quarterly series given in Appendix II, Table 1.<sup>3</sup> But the recovery in recent months emerges more clearly from Table II below which gives, in addition to annual averages for 1930 and 1931, such quarterly averages since the beginning of 1932 as are available. For purposes of comparison, the international index is also given.

An inspection of Appendix II will show that, in 1933, the industrial activity of the U.S.S.R., Japan, Chile, Greece, the three Scandinavian countries and Finland exceeded the average for the five-year period 1925-1929 and that, during the whole

the inverted curve of unemployment also turned definitely upwards in the autumn of 1932, after having remained stationary for three months. The calculation of the international unemployment index with seasonal fluctuations eliminated,<sup>1</sup> has not been carried beyond December 1933. The unadjusted data available for the subsequent four months indicate, however, that the unemployment situation in the world has continued to improve. In the diagram, therefore, the unemployment curve has been continued up to April 1934 by a thin rer clotted line, indicating its conjectural trend.

The recovery in "world" industrial activity since the Lausanne (Reparation) Conference experienced two marked set-backs, the first extending from December

<sup>1</sup> The unemployment index is smoothed out by means of a thirteen-month moving average.

<sup>2</sup> The International Labour Office has estimated the total number of unemployed directly involved at roughly 30 millions in March 1933; according to the international index of unemployment quoted above, the decrease in the number unemployed between March 1933 and March 1934 was about 24%, which percentage, applied to the above figure, gives about 23 millions.

<sup>3</sup> The basic material is as a rule more comprehensive in the case of the annual than in the case of the monthly series. With reference to countries for which both kinds of series are available, preference should be given to the former in making comparisons over longer periods of years.



Table II.

GENERAL INDICES OF INDUSTRIAL PRODUCTIVE ACTIVITY.<sup>1</sup>  
Average 1925-1929 = 100 (unless otherwise stated).

Country	1930	1931	1932				1933				1934
	Average of quarters		I	II	III	IV	I	II	III	IV	I
<i>Europe :</i>											
Germany (A) . . . . .	97	80	67	66	64	67	69	73	77	79	89
Austria (A) . . . . .	96	84	80	73	67	70	67	70	74	84	77
Belgium . . . . .	95	85	76	71	61	77	75	77	72	76	77
France . . . . .	115	102	83	77	76	79	84	89	91	88	86
Finland . . . . .	102	91	89	93	98	102	97	110	119	115	116
Hungary (A) (Base 1927) . . . . .	(94)	(87)	(84)	(68)	(70)	(77)	(75)	(80)	(85)	(91)	(91)
Italy (Base 1928) . . . . .	(100)	(85)	(75)	(69)	(71)	(74)	(75)	(83)	(84)	(80)	(78)
Norway (Base I-VI, 1933) . . . . .	.	.	.	.	.	.	(97)	(103)	(90)	(106)	(103)
Netherlands . . . . .	105	91	80	69	62	76	82	77	80	77	85
Poland (A) . . . . .	95	80	60	63	63	63	56	64	67	70	70
<i>United Kingdom :</i>											
Board of Trade (Base 1924, 1927-1929) . . . . .	(97)	(88)	(90)	(89)	(82)	(90)	(89)	(91)	(91)	(99)	(103)
London and Cambridge . . . . .	100	85	92	84	79	88	89	90	89	99	103
Sweden (Industriförbund) (A) . . . . .	108	94	99	87	81	87	90	87	91	99	106
Czechoslovakia . . . . .	101	92	74	72	69	73	65	67	68	72	71
<i>America :</i>											
Canada (A) . . . . .	100	84	73	68	68	65	57	67	81	79	80
United States (A) . . . . .	88	74	63	55	56	60	57	72	84	68	75
Chile (A) (Base 1927-1929) . . . . .	(118)	(91)	(87)	(100)	(105)	(115)	(115)	(111)	(110)	(110)	(113)
<i>Asia :</i>											
Japan (8 Series) . . . . .	110	109	106	106	116	124	122	122	132	138	128
(26 Series) (Base 1930) . . . . .	(100)	(103)	(111)	(103)	(108)	(113)	(120)	(122)	(128)	(133)	(133)
<i>World (excluding U.S.S.R.) (A) . . . . .</i>	94	81	72	67	66	70	69	79	86	80	84
<i>World (including U.S.S.R.) (A) . . . . .</i>	98	87	80	75	74	78	78	87	94	90	96

(A) Adjusted for seasonal variations.

period of the depression, it did not fall below that average in any of those countries except in Chile and Norway in 1931. It should be mentioned that, in most of these countries, the trend of industrial growth up to 1929 was rapid. For five of these nine countries — namely, Chile, Finland, Japan, Norway and Sweden — monthly indices are compiled. In all these five countries and also in the United Kingdom (quarterly index), by the first quarter of 1934, the indices now under consideration had risen above — in most cases, indeed, considerably above — the average for 1925-1929.<sup>2</sup>

On the other hand, in the same quarter, the industrial indices for the United States, Canada, Belgium, Poland, Czechoslovakia and Austria, were still from 20 to 30 %

<sup>1</sup> The sources of the national indices are given in Appendix II, Table I. The world indices are those of the Institut für Konjunkturforschung.

<sup>2</sup> The U.S.S.R. is not shown separately in the text table, as the monthly figures calculated for that country (up to October 1933) by the German Konjunkturinstitut do not fully agree with the official annual figures. The position of Norway in the first quarter of 1934 compared with the average for 1925-1929 may be judged by linking up its monthly index (published only since January 1933) with its annual index for 1933. In the case of Sweden, a similar linking up of the less comprehensive monthly index (in the text table) with the complete annual index given in Appendix II, Table I, may also be made.

below their pre-depression average. There is, however, one feature common to all countries for which quarterly indices are available: production activity in the first quarter of 1934 was everywhere greater than in the summer of 1932. Further, the average for 1933 was in all countries, except Czechoslovakia, higher than the average for 1932.

The course of industrial activity in individual countries has been influenced by the economic and financial, monetary and credit policies applied in each. The direct effects of any particular policy upon industrial activity, which is, of course, dependent upon a number of more or less heterogeneous factors, are difficult to discern from the industrial indices. A grouping, particularly of the European countries, according to their currency position presents, however, considerable interest. Such a grouping is made in Diagram II, which also shows the industrial activity curves of the United States and Japan<sup>1</sup> separately. The first half of 1931, when the gold standard was still generally applied, has been taken as base period. Composite indices<sup>2</sup> are given for three groups of European countries: (1) countries which suspended the gold standard in the autumn of 1931 or subsequently and have in recent years largely relied on a policy of cheap money to remedy the depression — the United Kingdom, Sweden, Finland and Austria; (2) countries which have maintained the official exchange value of their currency at par by means of some system of exchange control while allowing (particularly since 1933) certain transactions to be effected at depreciated rates<sup>3</sup> — Germany, Czechoslovakia and Hungary; (3) countries which have remained on the gold standard without official exchange restrictions during the period under review — France, Italy,<sup>4</sup> Belgium, Netherlands, Poland. The United Kingdom, Germany and France largely dominate their respective groups.

The extent to which the international index considered in the preceding section is dominated by the United States will be clearly seen from a comparison of Diagrams I and II. In examining the latter, attention should first be directed to the movement of the different indices over the whole period considered. It will then be seen: (1) that the Japanese industrial activity has followed an independent course; (2) that this is true also to some, though much less marked, extent of that of the European paper-currency group; (3) that the curves of the European gold and exchange-control groups moved in strikingly close harmony with each other up to the end of the third quarter of 1933; (4) that, since September 1933, the curve of the European exchange-control group, which is not fully representative or homogeneous, had parted company with that of the gold group and followed a course similar to that of the paper-currency group.

Owing to the lack of a monthly index for the United Kingdom, the composite index for the European paper-currency group only shows the quarterly averages.

The curves in Diagram II will not be fully understood without reference to certain important events and certain measures of national policy which have undoubtedly influenced industrial activity.

The United Kingdom and the Scandinavian countries went off the gold standard towards the end of the third quarter of 1931.<sup>5</sup> As wholesale prices rose less in proportion than the simultaneous drop in the exchange value of the currency, a fillip was given to

<sup>1</sup> Index of the Mitsubishi Economic Research Bureau covering twenty-six industrial commodity branches.

<sup>2</sup> Weighted according to the schedule employed by the German Institut für Konjunkturforschung.

<sup>3</sup> Czechoslovakia forms an exception in this respect. Moreover, it devaluated its currency by 16.6% in February 1934. The group is accordingly not homogeneous.

<sup>4</sup> In May 1934, the Italian system of unofficial exchange control, which previously had been applied in respect of certain transactions, was reinforced.

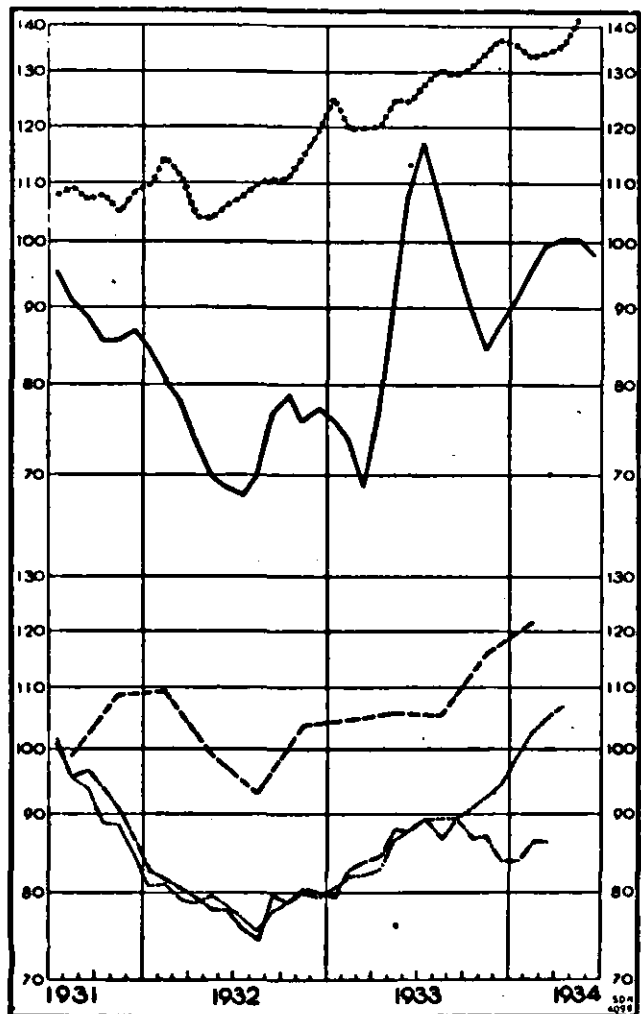
<sup>5</sup> Finland followed suit at the beginning of October 1931. Austria had somewhat earlier introduced a system of exchange control, which, however, as from 1932, was relaxed as regards commercial transactions *pari passu* with a gradual extension of private exchange clearing between Austrian exporters and importers at a depreciated schilling rate. During the greater part of the period considered, therefore, Austria has virtually been a "paper-currency" country, though the currency depreciation was formally "sanctioned" only in April 1934.

*Diagram II.*

GENERAL INDUSTRIAL ACTIVITY IN CERTAIN COUNTRIES.

(First half of 1931 = 100; logarithmic scale; monthly movement.)

- United States.
- ..... Japan.
- - - - Europe (paper group).
- ..... " (exchange-control group).
- - - - " (gold group).



industrial production, which however only proved to be temporary. From the early spring of 1932, both prices and industrial activity in particular again declined in sympathy with the downward trend in the other European countries and the United States up to the third quarter of that year. It was not until the influence of cheap money began to make itself effectively felt that a more solid recovery could be observed.

Before considering the subsequent developments in Europe and North America, those in Japan may be examined in some detail. The course of industrial activity in that country immediately after its suspension of the gold standard at the beginning of December 1931 was in some respects similar to that in the European paper-currency group. The decline which took place after the first short-lived rise of activity in Japan, however, was less deep, and the turn of the tide occurred as early as June 1932. Since that date, the industrial activity curve of Japan shows an almost continuous and rapid rise up to the end of 1933. It may be recalled in this connection that the exchange value of the yen fell rapidly to a discount of almost 59% up to the end of 1932, while the Japanese wholesale-price index — after a temporary downward swing in the middle of the year — rose by some 25%; during 1933 and the first quarter of 1934, the price-level remained fairly stable with a slightly downward tendency, while the yen depreciated another 5 points to a discount of 64%. While these developments undoubtedly favoured the export industries, it is difficult to judge what part they had in the expansion of

Japanese industry as a whole, which is no doubt largely due, *inter alia*, to the systematic reorganisation of industry on modern lines that has been actively pursued in Japan in recent years.

In considering, in the preceding section, the international index of industrial activity, attention was drawn to the close coincidence of the turn of that index in the summer of 1932 with the signing of the Lausanne Agreement concerning reparations. It will be seen from Diagram II that this turn in industrial activity was general in Europe and North America, the visible upward swing taking place in the United States about one month earlier than in Europe (August and September respectively). The enhanced expectations aroused by the Lausanne Agreement, which thus were almost immediately reflected in a general rise of industrial activity, proved, however, after some months not to be fully warranted. In November, industrial activity fell off again in the United States, while

a marked slackening in the rate of improvement was noticeable in the three groups of European countries considered.

During the first quarter of 1933, industrial activity in the United States was very seriously affected by the credit crisis culminating in the temporary closing of the banks. It is noteworthy that this crisis had no visible effects upon industrial activity in Europe. In March, when the new Administration came into power in the United States, the production index of the Federal Reserve Board was almost as low as in July 1932. The wave of optimism and renewed confidence in the future which was awakened by the various measures immediately taken by the State Administration with a view to overcoming the credit crisis and promoting business recovery resulted in a dramatic revival of industrial activity reflected in the rise of the production index between March and July by some 70%, or from a point 32% below to a point 17% above its average level for the first half of 1931. This exceptionally rapid recovery, which was accompanied by a rise in prices, particularly of raw materials, influenced but little, if at all — so far as can be judged from the diagram — the industrial activity of the European group of paper-currency countries. How far the simultaneous rise in the composite indices for the European gold- and exchange-control groups — a movement which, in fact, extended back to January 1933 or even earlier and which may be primarily attributable, particularly in the case of the latter group, to national factors — was influenced by the American developments, it is difficult to judge.

It would fall outside the scope of this brief review to enter into the details of the national recovery programme in the United States or to analyse its effects upon business activity in general. Attention may be drawn, however, to the coincidence in time of the introduction of the system of industrial codes and the rapid turn of the industrial activity curve in the summer of 1933. The "Codes of Fair Competition" were instituted under the "National Industrial Recovery Act", which entered into force on August 1st. It was feared by many industrial *entrepreneurs* that certain provisions of these codes would have the effect of unduly increasing the cost of production and thus react unfavourably on profits.<sup>1</sup> Reluctance on their part to maintain production under such conditions may account at least in part for the marked recession in industrial activity which set in August and continued until November. Prices continued to rise, however, though not in proportion to the rapid decline in the exchange value of the dollar since the suspension of the gold standard in April, and in December a new revival of industrial activity began. According to the production index, more than half the ground lost between July and November had been recovered by May 1934.

Although the continued external depreciation of the dollar up to March may have had some part, at least indirectly, in the increase of the industrial activity since December,<sup>2</sup> the improvement that took place would appear to have been mainly due to other factors, such as cheap money<sup>3</sup> and the placing of orders with certain industries in connection with

<sup>1</sup> The codes imposed, *inter alia*, a diminution of hours of work and an increase in wages which was not fully counterbalanced by the increase in prices. The profitability of enterprise seems to have declined in the latter part of 1933 (cf. quarterly statistics of profits of industrial corporations published in the *Federal Reserve Bulletin*). On the other hand, a tendency towards a rise was again discernible for the first quarter of 1934, when the efficiency of labour per hour of work appears to have risen and increased utilisation of plant at falling rates of interest tended to reduce the relative proportion of fixed costs.

<sup>2</sup> The relative increase of exports (in paper dollars) was considerable.

<sup>3</sup> The cheapening of credit may be judged from the following selection of currently published money rates :

Month	Federal Reserve Banks' discount rates		Average market rates (New York market)	
	New York	Average for 12 Fed. Res. Banks	Commercial paper 4-6 months	Bankers' acceptances 90 days
December 1931 . . . . .	3.5	3.58	3.88	3.—
December 1932 . . . . .	2.5	3.36	1.64	0.38
March 1933 . . . . .	3.5	3.49	3.—	2.88
December 1933 . . . . .	2.—	2.92	1.38	0.60
May 1934 . . . . .	1.5	2.50	1.—	0.19

the launching of large-scale public works financed directly or indirectly by Government credit appropriations.

Events in the United States naturally had an appreciable influence on the industrial situation in Canada. Canada was unaffected by the brief revival in the United States and Europe during the latter part of 1932. Her index of industrial production reached its lowest point as late as February 1933, when it fell to 44% below the 1925-1929 average. Canada was caught, however, by the movement, which started in the United States in March 1933. Her production index rose rapidly and continuously up to September and, after a moderate recession for a period of five months, it advanced further in the spring of 1934 to reach, in May, a point only 7 to 8% below its 1925-1929 level, compared with 21-22% in the case of the United States.<sup>1</sup> The improvement of the international timber, pulp and paper markets accounts largely for the recovery in Canada, as well as in Finland and Sweden. But, compared with the pre-depression level, the present level of industrial activity is, in fact, considerably higher in the Northern European countries than in Canada.

As will be seen from the diagram, the composite index for the European paper-currency group, which chiefly reflects industrial activity in the United Kingdom, rose very rapidly between the third quarter of 1933 and the first quarter of 1934. Judging from available data, the rise continued in the second quarter of this year, particularly in the Northern European countries; a halt in British recovery in May seems to have been followed by renewed expansion in June, according to the general business activity index of *The Economist*.<sup>2</sup> In Austria, a slackening of the industrial recovery was noticeable in the first quarter of this year. Industry in European paper-currency countries, in whose general economy international trade is of greater relative importance than it is in, for instance, the United States, has undoubtedly profited to some extent from the relative undervaluation abroad of their currencies, and this in two ways: while the domestic price-levels have on the whole been well maintained or even risen since the spring of 1933, the depreciation of the currency has afforded both an additional export advantage and an increased protection of the home market. In the United Kingdom, there has been a simultaneous increase of Customs protection. To what extent industrial recovery in that country should be attributed to any one of these factors or to any other factor cannot be statistically proved. It may be mentioned, however, that British exports (in sterling) have risen but little since the third quarter of 1933 or indeed since 1932.<sup>3</sup> On the other hand, it may be noted that, whereas Swedish Customs protection has not been changed to any appreciable extent, the recent industrial improvement in Sweden has been as great or even greater than in the United Kingdom.

In view of the obstacles to international trade, industry has had to rely for its recovery — in the United Kingdom almost exclusively and in Sweden very largely — upon the home market, whereas in Finland, as will be shown later, export industries have fared better than home-market industries. A marked cheapening of credit in combination with the maintenance or even increase of wholesale prices and a simultaneous decline in the cost of living since the suspension of the gold standard would appear to be the strongest

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<sup>1</sup> Compared with 1928, the position of the Canadian and the United States production indices for May 1934 was — 15.2 and — 22.5% respectively.

<sup>2</sup> Cf. *The Economist*, Trade Supplement, July 28th, 1934.

<sup>3</sup> Exports which have fluctuated from month to month during the period October 1933-May 1934 were, on an average, only 5½% greater in that period than in 1932, while the simultaneous increase in industrial production (according to the Board of Trade index) was about three times as great or even more.

single factor operative in the remarkable recovery of industrial activity of the paper-currency countries.<sup>1</sup>

It has already been observed that the movement of the composite indices for the European gold and exchange-control countries here considered was strikingly similar up to the summer of 1933. In view of the preponderance of Germany in the index for the latter group, its movement has for a year or more been very largely determined by the official measures taken to promote industrial recovery and to distribute work among the unemployed in that country. The German programme of "Arbeitsbeschaffung" by means of large budgetary credit appropriations, coupled with far-reaching alleviations in respect of tax payments by industry, was put into full operation in June 1933. Since then, German industry as a whole has been under strict Government control. The effects of these measures upon the quantity of German industrial output may be judged from the production index of the Institut für Konjunkturforschung, which rose rapidly by over 28% between June 1933 and May 1934 to reach a point 11% below its 1928 level, or 3 to 4% below its average for 1925-1929.<sup>2</sup>

In Hungary, where general economic conditions are mainly dependent upon the state of agriculture, there has also been a marked recovery of industrial activity since the second quarter of 1932, and particularly since the first quarter of 1933. In Czechoslovakia, on the other hand, industrial activity remained much depressed throughout 1932 and 1933. In order to promote recovery, the currency was devaluated by one-sixth of its par value in February 1934. It is as yet too early to judge the effects of this measure, but the index of its industrial activity has since tended to rise.

Judging from Diagram II above, the European group of gold-standard countries has not partaken in the most recent phase of world industrial recovery. The composite index for that group has, indeed, shown a downward trend since the late summer of 1933. In France and the Netherlands, whose indices of industrial activity are based largely — in the case of the latter, indeed, exclusively — on data for imports of industrial raw materials, the improvement in the middle of 1932 may have been in the main a reflection of the revival

<sup>1</sup> The programmes of public works launched in some of these countries (e.g., in Sweden) would appear — in so far as they have as yet reached the stage of at least partial realisation — to be too recent a factor to have played any considerable part in the industrial recovery.]

The cheapening of credit<sup>2</sup> may be judged from the following selection of money rates :

Averages	Central Bank discount rates :				Market rates of discount	
	Bank of England	Bank of Sweden	Bank of Finland	National Bank of Austria	London Bankers' drafts, 90 days	Stockholm commercial paper, 90 days
1931.....	3.93	4.09	6.52	7.04	3.61	4.09
1932.....	3.01	4.39	6.77	6.83	1.87	4.39
May 1933.....	2.—	2.5	6.—	5.—	0.5	3.5
Dec. 1933.....	2.—	2.5	4.5	5.—	1.16	2.5
May 1934.....	2.—	2.5	4.5	5.—	0.91	2.5

<sup>2</sup> Efforts have also been made in recent years to cheapen credit in Germany. The result may be judged from the following money rates :

Averages	Reichsbank discount rate	Private discount rate (Berlin) 56-90 days' bills :
1931 .....	6.86	6.14
1932 .....	5.21	4.95
Jan. 1933 .....	4.—	3.88
May 1934 .....	4.—	3.88

Between April 1933 and May 1934, wholesale prices rose by 6% and cost of living by somewhat over 3%.

in the raw-material markets, which gave an impulse to manufacturers to restore their stocks. The growing uncertainty with regard to future prospects, which was provoked, particularly in the gold countries, by the continued decline in the exchange value of the dollar may have played a considerable part in the marked recession of industrial activity in these countries since the summer of 1933. On the other hand, while wholesale prices slowly continued their downward course in most of these countries, the cost of living remained unchanged or rose.

Both the French and Italian Governments took special measures in April 1934 with a view to lowering prices and costs. In the other gold countries, the deflationary strain also persisted. The industrial activity indices of all countries in the European gold-standard group, except Poland, were lower in May 1934 than at the end of 1933. The Polish production index, which had previously fallen to a lower level (compared with 1928) than that of any other country considered in this chapter, rose by 3% between August 1933 and the end of that year and by a further 8 to 9% by May 1934, to reach a point 35.6% below its 1928 level. The French industrial index in May 1934 was 20.5% below its 1928 level.

Before concluding this review of recent changes in the general industrial activity of individual countries, a brief reference may be made to the industrial developments in the U.S.S.R. Information concerning the results of the first Five-year Plan has become available since the publication of the last edition of this volume. The plan was actually enforced for four and a-quarter years (October 1st, 1928, to December 31st, 1932), and the original plan for the fifth year was replaced by a revised transitional plan for the calendar year 1932. As the administration of the plan was modified, and its scope extended in the course of its application, it is difficult to give an accurate statement of its fulfilment. The following data are drawn from official Russian sources.<sup>1</sup>

Total value of production, at 1926-27 prices, of industries subject to the original plan was to amount, during the five years, to 103,761 million roubles in the aggregate; it actually reached, within 4¼ years, 82,656 millions — *i.e.*, roughly 80% of the plan. Capital investment in industry was to reach in five years 19,100 million roubles, and did amount, in 4¼ years, to 24,800 millions — *i.e.*, 130% of the plan. The actual increase in output was as follows (roubles, at 1926-27 prices, 000,000,000's):

	1928	1932	Percentage increase
" Group A " (capital industries) . . . .	7.0	20.6	194
" Group B " (consumption industries) . .	8.8	16.2	84
Total . . . .	15.8	36.8	133

These figures, taken from official sources, may overstate the actual increase since 1928 owing to the inclusion in subsequent years of industries not previously embraced by the plan.

The following table<sup>2</sup> shows the expansion of the number of the more important industries since 1927-28 and the extent to which they had fulfilled in 1932 the original and revised plan estimates.

<sup>1</sup> State Planning Commission of the U.S.S.R., *Summary of the Fulfilment of the First Five-year Plan*, Moscow 1933; *The U.S.S.R. in Figures*, Moscow 1934 (in Russian); together with other sources as summarised in International Labour Office *Industrial and Labour Information*, February 27th, 1933, February 12th, 1934, and April 2nd, 1934.

<sup>2</sup> International Labour Office, Geneva, *Report of the Director*, International Labour Conference, 1934, page 63.

**Table III.**  
U.S.S.R. : FULFILMENT OF THE FIVE-YEAR PLAN FOR 1932.

Products	Unit (000,000's)	1927-28	1932		
			Estimates for final year of five-year plan	Annual plan laid down in January 1932 for year 1932	Actual production
Coal . . . . .	Tons	35.4	75.0	90.0	64.2
Petroleum . . . . .	"	11.6	21.7	28.0	22.2
Cast iron . . . . .	"	3.3	10.0	9.0	6.2
Steel . . . . .	"	4.0	10.4	9.5	5.9
Rolled steel . . . . .	"	3.2	8.0	6.7	4.2
Machinery <sup>1</sup> . . . . .	Roubles <sup>1</sup>	1,822.0	4,688.0	6,800.0	7,361.0
Cotton fabrics . . . . .	Metres	2,695.0	4,670.0	3,061.0	2,550.0
Boots and shoes . . . . .	Pairs	23.0	80.0	91.5	79.5
Electrical energy . . . . .	Kwh.	5,050.0	17,120.0	17,000.0	13,100.0

The share of industry in the national production rose from 48% at the beginning of 1928 to 70% at the end of 1932.

In the second Five-year Plan, of wider scope than the first,<sup>2</sup> further large increases in production are anticipated, as may be seen from the following table :

**Table IV.**  
U.S.S.R. : SECOND FIVE-YEAR PLAN.  
*Production in Millions of Roubles at 1926-27 Prices.*

	1932 results	1933 provisional results	1934 programme	1937 programme
Industry as a whole . . . . .	43,300	46,900	55,800	92,700
" Group A " (Capital industries) . . . . .	23,100	25,400	30,900	45,500
" Group B " (Consumption industries) . . . . .	20,200	21,500	24,900	47,200
" Large-scale industry " . . . . .	38,500	41,900	50,700	.

The greatest expansion, 133.6% in all or an average of 21.9% per annum, is to take place in Group B, the object being to raise the standard of living. The production of "articles in general demand" is to be trebled by 1937.

Information about the results of the first year's (1933) working is scanty and changes in statistical methods render comparison difficult. It appears that industrial production increased 9%, capital industries (Group A) increased 10% and consumption industries (Group B) 6.5%; the percentage of the plan figures achieved by each of the three divisions being in the neighbourhood of 93%, 90% and 96% respectively.

To prevent the expansion in output being achieved at the expense of quality, two Orders of the Central Executive Committee and the Council of People's Commissaries were issued in December 1933, one increasing the responsibility of directors and staff and the other prescribing steps to be taken to improve quality in the cotton industry.

<sup>1</sup> Including agricultural machinery and plant for the production of electrical energy; value at 1926-27 prices.  
<sup>2</sup> For this reason, figures for 1932 given above and those given in Table IV below are not comparable.

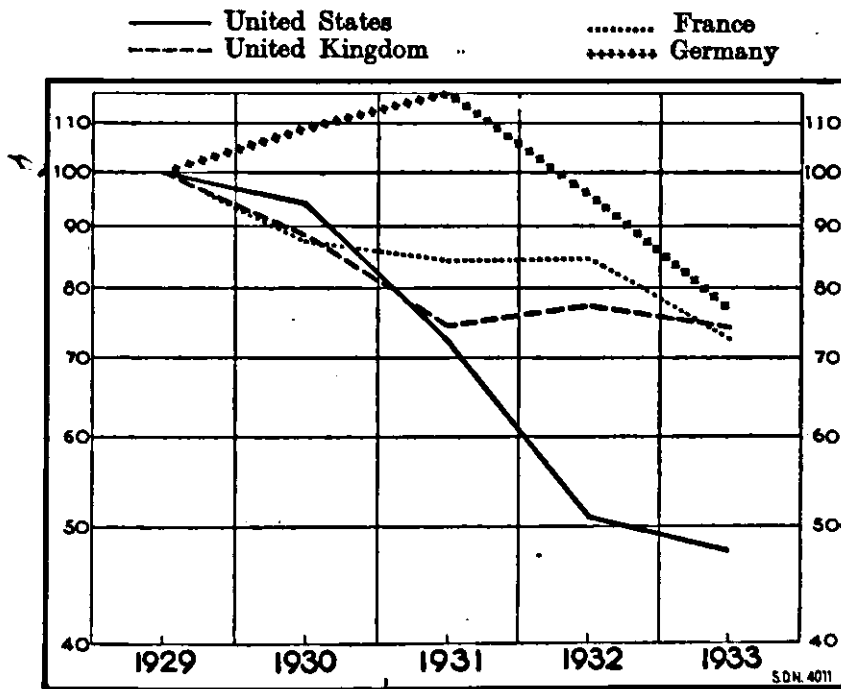


ACTIVITY IN EXPORT INDUSTRIES AND HOME MARKET INDUSTRIES.

In Diagram III below, an attempt is made to compare the relative changes in the manufacturing production of Germany, France, the United Kingdom and the United States with those in the quantum of their exports of manufactured articles<sup>1</sup> during recent years. For the purpose of this comparison, the sub-indices, not only for mining, but also for the production of crude and semi-manufactured iron and steel, have been eliminated from the industrial production indices of those countries with the following exception: the sub-index for iron and steel has not been eliminated in the case of the United Kingdom, as all iron and steel products are included under manufactures in the British trade statistics.<sup>2</sup> In spite of this adaptation, the scope of the indices of manufacturing production and exports respectively is, of course, not quite identical in the case of any of the countries considered. Thus the ratios shown in the diagram cannot be taken to represent more than approximations. Before calculating the ratios, the indices of all four countries have been converted onto the base of 1929 = 100 — *i.e.*, the 1929 ratio  $\frac{\text{Index of Exports}}{\text{Index of Production}}$  equals 1. A fall in any of the curves indicates that exports of manufactured articles have either shrunk more or (in 1933) increased less than manufacturing production and, *vice versa*, a rise indicates that the former have shrunk less than the latter.

Diagram III.

RATIO OF EXPORTS INDICES TO PRODUCTION INDICES.  
(1929 = 100.)



The diagram suggests that, in all the countries considered (except Germany) up to 1931, the export industries have suffered relatively more from the depression than the home-market industries. An analysis of the year-to-year movement of the individual curves, in the light of the changes in general industrial activity considered in the preceding section, offers considerable interest.

It may be recalled that the French industrial activity index was slightly higher in 1930 than in 1929. Judging from the diagram opposite, this movement of the general index reflected a continued expansion of home-market industries although the depression at once affected the export industries. These were still further affected in 1931; but, between 1931

and 1932, the full brunt of the depression seems to have fallen on both classes of industry

<sup>1</sup> For the quantum indices of the exports of manufactures from these countries, see League of Nations, *Review of World Trade, 1933* (Geneva 1934).

<sup>2</sup> For similar reasons, the production of rolled and hammered iron and steel, which products are classed as manufactures in the German trade statistics (while not being so classified in the trade statistics of France and the United States), has not been eliminated in the case of Germany; the production of pig-iron and steel ingots has, however, been eliminated also for that country.

with equal force. The relative position of the export industries deteriorated further in 1933 and the industrial recovery which took place in France in that year would appear to relate to the home market alone.

The course of events in Germany until 1933 was in complete contrast with that in France. In 1930 and 1931, the export industries fared better than those producing for the home market. In 1932, the quantum of exports of manufactured goods dropped by 31%, and they fell off by another 6% in 1933. The continuous drop in the German curve for 1932 and 1933, which almost forms a straight line, is thus the product of very different circumstances in the two years. A collapse of exports and a simultaneous, though slighter, decrease in production for the home market in the earlier year and a slight decline in exports accompanied by a substantial increase in sales at home in the later. Germany was the only country among those here considered whose exports of manufactured articles declined in quantum in 1933.<sup>1</sup>

In the United Kingdom, the brunt of the industrial depression until 1931 was borne by the export industries. Between 1931 — the year of the suspension of the gold standard — and 1932, however, the relative position of these industries seems to have improved. On the other hand, these industries have not shared in the recovery of 1933 to the same extent as the home market industries.

In all four countries, the export industries have suffered the most and in every case the domestic market recovered more last year than did the foreign. But the United States have suffered by far the greatest relative decline in manufacture for export, in spite of the extreme severity of the purely domestic depression. In 1933, however, after the depreciation of the dollar, the deterioration of the export industries relative to that of the home market industries, though it continued, slowed down very considerably. The quantum index of exports of manufactured articles actually rose in that year<sup>2</sup> compared with 1932, though not in proportion to the simultaneous rise in manufacturing production which thus related chiefly to the home market industries.

In Finland and Sweden, special production indices are compiled, distinguishing export from home market industries (base: 1929=100) :

	Sweden			Finland		
	Export industries	Home market industries	Total	Export industries	Home market industries	Total
1930 . . . . .	97	97	97	93	95	94
1931 . . . . .	78	89	84	86	83	83
1932 . . . . .	66	87	79	92	83	87
1933 . . . . .	72	88	81	104	97	101
1934 : 1st qr.	85	101	96	117	98	107
1934 : May . .	80	112	101	122	104	113

<sup>1</sup> The movement of the quantum of exports of manufactured articles in 1933 compared with 1932 was as follows :

	1932	1933	Difference
Germany . . . . .	100	92.6	- 7.4%
France . . . . .	100	100.3	+ 0.3%
United Kingdom . . . . .	100	103.1	+ 3.1%
United States . . . . .	100	104.0	+ 4.0%

<sup>2</sup> The rise was in the main confined to the second half of 1933 and was in fact larger for that period than the average rise for the whole year shown in footnote 1 above.

In Sweden, which has a more diversified system of export industries than Finland, the course of events has been not unlike that in the United Kingdom, though there is a time lag of about one year, as Sweden was only caught in the depression in 1931. On the other hand, between 1932 and 1933 — indeed up to January 1934 — the relative recovery was considerably greater in the export industries than in the home market industries. Since the beginning of this year, however, the marked expansion in Swedish industrial activity (+10% between December and May) has been entirely due to the home market industries (+15% in the same period).

Industrial production in Finland reached its pre-depression maximum in 1928. The export industries of that country are almost wholly based on forest products, the prices of which have been relatively well maintained or have even risen considerably in terms of sterling since 1931. Thus, the evidence afforded by Finland cannot be taken as typical. The very rapid rise since 1931 in the industrial production for export is, however, noteworthy.

#### INDUSTRIAL PRODUCTION BY CATEGORIES OF GOODS.

The present section is mainly concerned with the relative changes in the output of investment and of consumption goods. Statistical authorities have, for reasons which need not be gone into here and may or may not be entirely justified, frequently followed the principle of including in investment goods such durable or quasi-durable consumers' goods as private motor-cars. The changes that have taken place in the production of each of these two main categories of goods are roughly reflected in the annual indices of different classes of primary commodities considered in Chapter I, though the evidence afforded by these indices is obscured by the variations in stocks to which repeated reference has been made.

The index of non-agricultural primary production in Chapter I relates to raw materials and semi-manufactures intended mainly for investment goods. They are all, of course, to some extent employed for consumers' goods in a broad sense — fuel for household use, steel for private cars, wood pulp for printing paper, etc. The primary products covered by the index of agricultural production serve mainly as materials for consumers' goods. Certain of these products, however, such as rubber, are used to a large extent for that kind of durable consumers' goods, which, as stated above, is frequently grouped with investment goods. The important reservation made above with reference to variations in stocks, while applying to both indices, is particularly pertinent in the case of the latter index as, during the later stages of depression, the stocks of raw materials of agricultural origin have been larger in proportion to production than stocks of non-agricultural raw materials. Stocks of primary goods have, however, on the whole declined since 1932. They have declined relatively more in the case of non-agricultural than in that of agricultural products, the index of non-agricultural production therefore understates the recovery in the output of investment goods, both absolutely and in relation to that in consumption goods.<sup>1</sup>

Special sub-indices for the industrial production of investment and consumption goods are compiled in four countries — Germany, Norway, Poland and Sweden.<sup>2</sup> The industrial activity index for the Netherlands, which, however, is based on indirect evidence (excess of imports over exports of industrial raw materials), also makes this distinction. In the case of some other countries, the details supplied with reference to the individual industries covered by their production indices permit of a grouping of the individual series to be made on similar lines. In view of the particular interest attaching to the above distinction, such a grouping has been made in the case of France, the United Kingdom, the United States and the U.S.S.R. for the purpose of the present analysis. All these

<sup>1</sup> Whereas the output of industrial raw materials of agricultural origin rose in 1933, that of crude foodstuffs declined compared with 1932; see Chapter I.

<sup>2</sup> As the calculations for Norway only go back to the beginning of 1933, they are not considered here.

sub-indices are shown in Appendix II, Table 2, which gives annual figures for the whole period 1925-1933, and in Table V below, which gives quarterly figures since the beginning of 1933 and, in addition, annual averages for 1930 and 1931. For lack of official monthly data, the U.S.S.R. has not been included in the text table.

*Table V.*

COMPOSITE INDICES OF PRODUCTION OF INVESTMENT AND CONSUMPTION GOODS.<sup>1</sup>  
(Average 1925-1929=100.)

Country and group of products	1930	1931	1932				1933				1934
	Average of quarters		I	II	III	IV	I	II	III	IV	I
<i>Germany:</i>											
Investment goods (A) . . . . .	91	60	36	43	40	42	40	51	54	60	65
Consumption goods (A) . . . . .	101	94	86	84	83	86	86	92	97	96	101
With "elastic demand" (A) . . . . .	95	90	82	75	74	90	81	86	93	98	99
With "inelastic demand" (A) . . . . .	112	105	99	97	95	95	95	96	98	101	104
<i>France:</i>											
Investment goods . . . . .	118	102	78	70	70	70	76	84	85	81	76
Consumption goods . . . . .	100	91	73	71	74	81	88	93	97	94	95
<i>Netherlands:</i>											
Investment goods . . . . .	102	74	55	47	51	61	63	63	73	63	64
Consumption goods . . . . .	107	110	109	93	76	92	105	94	89	93	110
<i>Poland:</i>											
Investment goods (A) . . . . .	97	73	48	51	54	54	49	56	61	61	59
Consumption goods (A) . . . . .	92	82	68	73	71	69	56	74	76	75	80
<i>Sweden:</i>											
Investment goods (A) . . . . .	110	91	89	73	73	85	85	77	85	96	103
Consumption goods (A) . . . . .	105	100	113	107	93	91	97	100	98	106	117
<i>United Kingdom (Base 1924, 1927-1929):</i>											
Investment goods . . . . .	96	78	78	77	72	75	79	84	83	91	97
Consumption goods . . . . .	90	88	92	93	85	90	89	94	95	98	98
<i>United States:</i>											
Investment goods (A) . . . . .	80	52	34	29	24	28	27	43	62	44	49
Consumption goods (A) . . . . .	90	90	84	73	82	85	78	98	103	85	89

(A) Adjusted for seasonal variations.

The composition of the indices for investment goods and consumption goods respectively varies somewhat from country to country. Some of the more important differences need to be indicated. Thus, while iron and steel and engineering production is included in the index for investment goods in the case of all the countries considered, the production of motor vehicles is covered only in four cases: Germany, France, the United States and the U.S.S.R. and entered in each case in the investment index.<sup>2</sup> Building is included only in two cases: Germany and Poland. The index for consumption goods includes textiles in all cases, and leather, paper and products of various food industries in most cases. Leather is, however, missing in the case of Germany, paper in the case of the United Kingdom and food products in the case of France. The last-mentioned omission affects the French index for consumption goods in the sense that it probably tends to an over-statement of the changes in the output of consumption goods. This is true also of the special German index for "consumption goods with elastic demand" which likewise does not include food products. On the other hand, certain non-industrial foodstuffs, such as meat, dairy produce and sea fish, are included in the German

<sup>1</sup> For sources and the composition of these indices, see Appendix II, Table 2.

<sup>2</sup> Data relating to this important industry are lacking in the British (quarterly) production index.

index for "consumption goods with inelastic demand". It follows from this brief summary that direct international comparison of the different national sub-indices for investment or for consumption goods is subject to even stronger reserve than in the case of the general indices. Attention should rather be directed to the similarity or dissimilarity of movement of these indices or, in other words, to the changes in the ratio between these indices, in each country separately.

Whatever the difference in the indices, the general tendency to which they point is clear. In all countries, the depression has hit real investment harder than consumption. If account is taken of the relative importance of the countries here considered (excluding the U.S.S.R.) and of some other countries<sup>2</sup> for which similar though less detailed or clear-cut evidence is available, the following rough estimate may be made: in the western industrial area of the world, the drop from the pre-depression level to the lowest point of depression (middle of 1932) amounted to over 60% as regards investment goods and to about nearly 25% as regards goods for current consumption. But the contraction in the activity of industries producing investment goods was in North America<sup>3</sup> two-thirds greater than in Europe.

The extent of (a) the decline up to the low point of depression and (b) the subsequent rise in activity in the two categories of industries may be judged from Table VI summarising the quarterly movement of the indices here analysed. The countries are given in the order of the contraction in the production of investment goods during the former period.

Table VI.

MOVEMENT OF THE INDICES OF PRODUCTION OF INVESTMENT AND CONSUMPTION GOODS.

	Quarter during which both indices reached their minimum	Percentage decline from 1925-1929 level to minimum quarterly level		Percentage rise between quarter of minimum level (Col. 1) to first quarter 1934		Percentage ratio of "investment index" to "consumption index" (Ratio in 1925-1929=100)	
		Investment goods	Consumption goods	Investment goods	Consumption goods	Quarter of minimum (cf. Col. 1)	First quarter 1934
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Sweden . . . . .	III, <sup>1</sup> 1932	-27	- 7	+41	+26	78	88
United Kingdom . .	III, 1932	-28	-15	+35	+16	85	99
France . . . . .	II, 1932	-30	-29	+ 9	+34	99	80
Netherlands . . . .	III, <sup>1</sup> 1932	-49	-24	+25	+45	67	58
Poland . . . . .	I, 1933	-51	-44	+20	+43	88	74
Germany . . . . .	III, 1932	-60	-17	+63	+22	48	64
United States . . . .	June — Aug. 1932	-75	-24	+96	+17	33	55

<sup>1</sup> In the case of the Netherlands and Sweden, where the two indices reached their minimum in different quarters of 1932 (the second and the third respectively), the quarter of the minimum level of the general index has been taken.

<sup>2</sup> Belgium, Canada, Czechoslovakia and Italy.

<sup>3</sup> The very unequal incidence of depression upon the two categories of industries in the United States is further illustrated by the following figures relating to the distribution of unemployment in the summer of 1933. Number of unemployed: "producers of durable goods", 5,860,000; "producers of consumption goods", 538,000. In addition, there were 5,868,000 "producers of services" unemployed at the same date. This last figure points to the importance of another factor — viz., the structural changes in the American system of production and distribution of goods which cannot be discussed here (Estimates of Col. L. P. Ayres, *cit. National City Bank Monthly Letter*, January 1934, page 6).

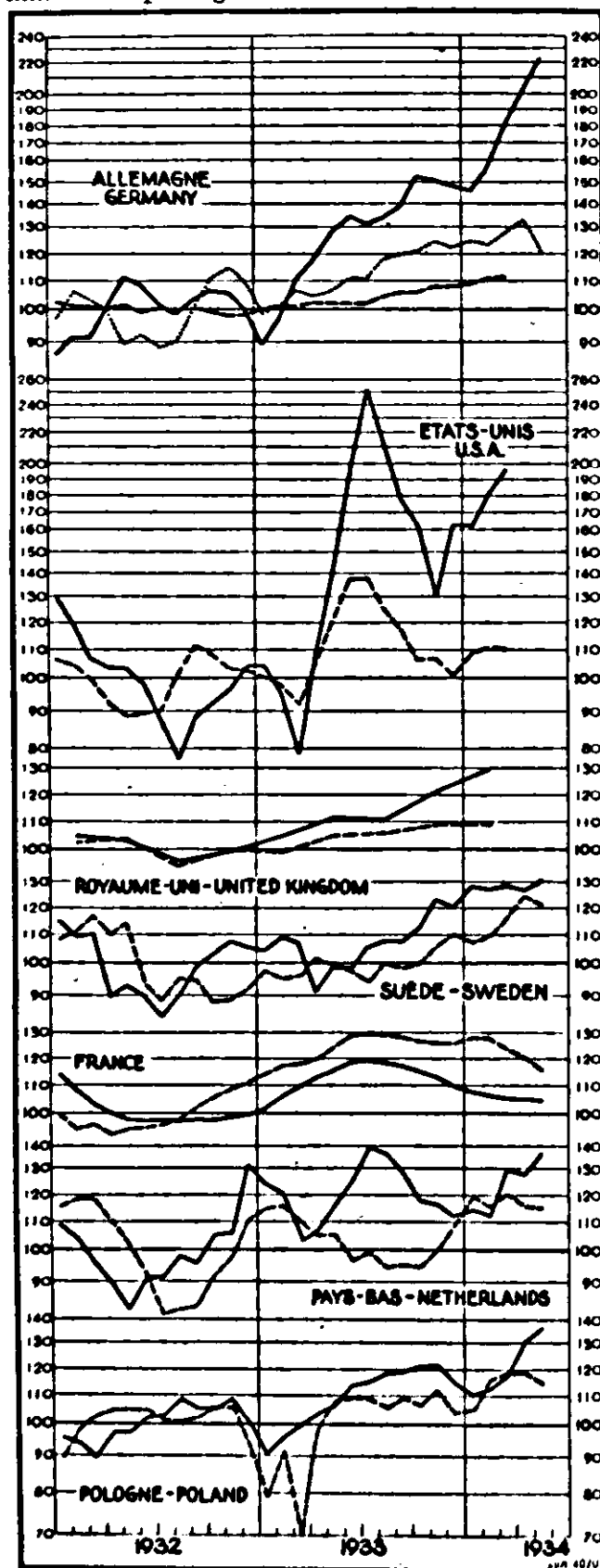
In all countries except France, it will be noted, the contraction in the output of investment goods was very considerably greater than that in consumption goods. But the French consumption index is not fully representative, for it omits foodstuffs and no doubt exaggerates the real drop in consumption.

On the other hand, since the turn in general industrial activity up to the first quarter of 1934, the output of investment goods recovered considerably more than that of consumption goods in the United States, Germany, the United Kingdom and Sweden, while, in the three European gold-standard countries — France, the Netherlands and Poland — the revival of real investment activity lagged considerably behind that of current consumption. This is also apparent from the trend of the ratios shown in columns (6) and (7) of the summary statement (Table VI) above. In all the first-mentioned countries, the percentage which the "investment index" constituted of the "consumption index" rose considerably. Indeed, in the United Kingdom, the pre-depression balance between the two categories of production was practically restored by the first quarter of 1934 — while in the three gold-standard countries, the spread between the two indices had widened further.

Judging from the most recent data available at the moment of writing, a reversal, or at any rate a modification, of the trend suggested by the summary statement above may have been taking place in Poland and also in the Netherlands since the middle or the end of the first quarter of 1934. This will be seen from Diagram IV, which shows for each country considered the monthly movement<sup>1</sup> of the indices since the beginning of 1932. For Germany, the special sub-index relating to consumption goods with "elastic demand" is given in addition to that including all the consumption goods covered by its general production index. It should be noted that the average for the whole year 1932 is taken as base (=100) for the diagram, while in the above discussion comparisons

Diagram IV.

MOVEMENT OF THE INDICES RELATING TO THE PRODUCTION OF INVESTMENT GOODS AND CONSUMPTION GOODS. (Monthly average 1932 = 100; logarithmic scale.)  
 — Investment goods — Consumption goods (total)  
 ..... Consumption goods with "elastic demand".



<sup>1</sup> Quarterly for the United Kingdom.

were made on the basis of the average for the quarter of greatest industrial depression in each case.

As the demand for goods for current consumption is by its nature less elastic than the demand for investment goods, the latter reflect more closely the changes in economic anticipations which are largely operative in general business fluctuations. If, therefore, after a period of protracted depression, the production of investment goods tends to rise more rapidly than that of current consumption goods, this may be taken as a hopeful sign of general recovery, the more so as unemployment in industry is thereby more rapidly reduced. A majority of the industrial workers who become unemployed during the depression are usually occupied in the "investment industries". By their reabsorption in productive work, thanks to a rapid recovery in the activity of those industries, the power of consumption of the community becomes considerably increased, and hence increased activity is secured also for the industries producing consumption goods.

As will be seen from Tables VII and VIII below, showing the changes in employment and unemployment in the countries covered by the diagram, employment has increased and unemployment decreased very considerably during the last twelve to eighteen months considered in the case of those four countries where the production of investment goods increased more rapidly than that of consumption goods in that period. In the other three countries, the employment, and hence the unemployment, situation either deteriorated or did not definitely improve.

For the United States, an index showing the changes in the total amount of pay-rolls is given in addition to the employment index. The former is of course a function, not only of the employment, but also of the level of wages.

The scope of the statistics on which the unemployment indices are based is as a rule wider than that of the basic statistics for Diagram IV (though not in the case of the United States, whose regular unemployment statistics only relate to a fraction of the industrial workers). On the other hand, short-time workers are not included in the unemployment statistics here used, whereas the first increase in industrial production after a depression is largely brought about by full-time occupation of previous short-time workers. Nevertheless, it will be observed that, in the case of most of the countries considered, the changes in unemployment follow more closely the movement of the inversed index relating to investment goods than that of the index for consumption goods.

No attempt will be made here to analyse in detail the factors that may have been chiefly responsible for the changes in the activity of the two categories of industries just considered. Both categories have been affected, though in different degree, by the factors referred to above in the discussion of the changes in general industrial activity. While the industries producing investment goods are more directly affected by public works and are on the whole more sensitive to a cheapening of money rates, those producing goods for current consumption profit more immediately from the distribution of funds in the form of unemployment relief. The former have recovered, since the beginning of 1933, most rapidly in those two countries — Germany and the United States — where they had previously been most depressed. In the case of Germany, the rapid and almost continuous rise throughout that period was the result of the policy of direct intervention (including large-scale public works) pursued by the Government. The marked recovery in investment industries, since November 1933, in the United States has also undoubtedly been supported to a large extent by the public work schemes which then began to be more effectively realised.

Individual industries within each of the two main categories here considered have, of course, been affected in very different ways both during the period of general decline and during the subsequent recovery in industrial activity, as will be seen from Table IX, showing the changes in the indices of activity of a number of industries in Germany and the United States.<sup>1</sup>

<sup>1</sup> The industries have been arranged in descending order of the increase or the ascending order of the decline in activity in March 1934 compared with the pre-depression base period (1928 in the case of Germany and 1929 in the case of the United States).

**Table VII.**

**EMPLOYMENT INDICES (QUARTERLY AVERAGES).<sup>1</sup>**  
Nature of basic statistics.

A. — Unemployment insurance statistics; B. — Sickness insurance statistics; C. — Returns of labour inspectors; D. — Employers' returns.

Quarters	Germany B.	United States		United Kingdom A.	Sweden <sup>2</sup> D.	France C.	Poland D.
		D.	Pay-rolls				
1932: III. . . . .	100.—	100.—	100.—	100.—	100.—	100.—	100.—
IV. . . . .	98.—	104.1	104.5	101.4	102.3	98.8	99.2
1933: I. . . . .	94.—	99.8	95.5	100.7	101.9	96.8	90.6
II. . . . .	101.9	103.8	104.2	103.9	100.8	97.6	98.1
III. . . . .	107.1	125.—	135.3	105.8	101.2	99.4	101.9
IV. . . . .	107.9	126.2	137.4	107.5	104.7	98.1	103.8
1934: I. . . . .	109.9	127.1	145.4	107.5	106.6	95.7	98.9
II. . . . .	121.0	134.7	161.5	109.7	108.9	95.2	106.4

**Table VIII.**

**UNEMPLOYMENT INDICES (QUARTERLY AVERAGES).**

Nature of basic statistics: A. — Compulsory unemployment insurance statistics; B. — Voluntary unemployment insurance statistics; C. — Trade union returns; D. — Employment exchange statistics.

"Nr" = Recorded number of unemployed. — "%" = Ratio of unemployed to number insured or number of trade union members respectively.

Quarters	Germany D.		United States C.	United Kingdom A.		Sweden C.	France D.		Netherlands	Poland		
	Nr.	%	% <sup>3</sup>	Nr. <sup>4</sup>	%	% <sup>5</sup>	Nr. <sup>6</sup>	Appl- cation for work	Nr. D.	% B.	Nr. D.	% <sup>7</sup>
1932: III. . . . .	100.—	28.4	(24.6=100.—)	100.—	17.4	19.7=100.—	100.—	100.—	100.—	30.—	100.—	(8.8)
IV. . . . .	103.3	29.4	(25.—=101.2)	103.9	18.1	20.0=101.5	99.2	98.8	119.3	31.4	98.1	(8.6)
1933: I. . . . .	112.—	32.2	(26.2=106.5)	106.6	18.5	21.6=109.6	122.3	119.6	142.—	36.6	147.8	(13.—)
II. . . . .	96.9	27.2	(24.8=100.8)	95.2	16.5	19.7=100.—	106.6	104.2	111.4	27.6	129.3	(11.4)
	( <sup>8</sup> )	( <sup>9</sup> )					( <sup>9</sup> )					
III. . . . .	79.1	22.5	(22.6= 91.9)	89.—	15.4	19.1= 97.—	89.8	87.6	106.4	28.4	111.5	(9.8)
IV. . . . .	73.2	21.1	(22.5= 91.5)	88.1	15.2	17.5= 88.8	102.2	99.6	129.5	32.9	147.3	(12.9)
1934: I. . . . .	63.—	17.9	(21.3= 86.6)	89.—	15.4	17.3= 87.8	130.8	126.1	136.—	33.5	214.1	(18.8)
II. . . . .	48.5	13.7	(20.1= 81.7)	78.4	13.6	14.2= 72.1	123.2	119.2	113.3	28.1	177.8	(15.6)

<sup>1</sup> No employment index available for the Netherlands.

<sup>2</sup> Seasonal movement eliminated.

<sup>3</sup> Number of members of reporting trade unions — i.e., number of persons on which unemployment percentages are based at no time exceeded 700,000 during the period considered.

<sup>4</sup> Wholly unemployed only.

<sup>5</sup> Unemployment percentage corrected for seasonal variations.

<sup>6</sup> Number of registered unemployed having an acknowledged right to receive unemployment benefit.

<sup>7</sup> Percentage of unemployed among persons covered by sickness insurance.

<sup>8</sup> Including unemployed in receipt of benefit from social-welfare offices.

<sup>9</sup> Not including persons employed in labour camps.



Table IX.

CHANGES IN ACTIVITY OF CERTAIN INDUSTRIES IN GERMANY AND THE UNITED STATES.

Industries	Decrease from pre-depression base to lowest point 1932-33 %	Increase from lowest point to March 1934 %	Decrease from pre-depression base to March 1934 %	Industries	Decrease from pre-depression base to lowest point 1932-33 %	Increase from lowest point to March 1934 %	Increase or decrease from pre-depression base to March 1934 %
<b>GERMANY (Pre-depression base : 1928 average).</b>							
<i>Producers' Goods :</i>				<i>Current Consumption Goods :</i>			
Cement . . . . .	-89	+659	-15	Cocoa (consumption)	-35	+100	+30
Lorries . . . . .	-88	+569	-20	Footwear . . . . .	-33	+ 65	+10
Steel . . . . .	-68	+137	-24	Cigarettes . . . . .	-17	+ 29	+ 7
Rolling-mill products	-71	+152	-26	Meat products (consumption) . . . . .	-16	+ 26 (b)	+ 5 (b)
Iron . . . . .	-73	+141	-35	Textiles . . . . .	-29	+ 45	+ 3
Machines . . . . .	-69	+ 90	-41	Wood pulp (chemical)	-23	+ 31 (c)	- 3 (c)
Ships under construction . . . . .	-95	+268 (b)	-80 (b)	Paper . . . . .	-28	+ 29	- 7
				Pipe tobacco . . . . .	-20	+ 10	-12
<i>Durable Consumers' Goods :</i>							
Passenger cars . . . . .	-86	+399	-30	Sugar products . . . . .	-44	+ 39	-22
Motor cycles . . . . .	-90	+240	-65	Beer (consumption) . . . . .	-52	+ 15	-45
Pianos . . . . .	-95	+ 61 (a)	-91 (a)	Porcelain . . . . .	-62	+ 39	-47
<b>UNITED STATES (Pre-depression base : 1929 average).</b>							
<i>Producers' Goods :</i>				<i>Current Consumption Goods :</i>			
Trucks . . . . .	-81	+381	-10	Shoes . . . . .	-33	+ 71 (g)	+14 (g)
Steel . . . . .	-83	+354	-38	Tobacco products . . . . .	-10	+ 45	+ 9
Portland cement . . . . .	-80	+ 89	-63	Cigarettes . . . . .	-31	+ 37	- 6
Electric motors . . . . .	-92	+303	-65	Wheat flour . . . . .	-30	+ 24	-13
Machine-tools . . . . .	-93	+385 (a)	-66 (a)	Books sold . . . . .	-40	+ 43	-13
Foundry equipment	-95	+514	-67	Food products . . . . .	-17	+ 4	-13
Electrical goods . . . . .	-83	+ 59 (b)	-73 (b)	Silk fabrics (consumption) . . . . .	-48	+ 64	-15
Woodworking machines . . . . .	-94	+216	-82	Textiles (group index) . . . . .	-48	+ 60	-17
Ships under construction . . . . .	-99 (b)	+810 (b)	-88 (b)	Sugar meltings . . . . .	-55	+ 62	-27
	(d)		(d)				
Locomotives . . . . .	-86 (e)	- 80 (f)	-97 (e)	Gloves and mittens	-62	+ 72 (g)	-35 (g)
<i>Durable Consumers' Goods :</i>							
Passenger cars . . . . .	-91	+692	-27				
Furniture (h) . . . . .	-80	+ 80	-68				

(a) February 1934.  
 (b) First quarter 1934.  
 (c) December 1933.  
 (d) Decrease from average 1930.  
 (e) Decrease from average 1927-1929 to 1932 and 1933 respectively (annual figures).  
 (f) Decrease from 1932 to 1933.  
 (g) January 1934.  
 (h) Shipments expressed in working-days' production.

There is a more marked difference between the movement of the production of non-durable consumers' goods — headed "current consumption goods" in the table — and durable consumers' goods than between the latter and producers' goods. This difference reflects a broad dissimilarity in the conditions of demand for goods which are generally bought out of current income, on the one hand, and for those requiring the investment of savings on the other. The replacement of the latter can be more easily postponed; the demand for them contracts more spasmodically when times are bad. There are, of course, further lines of demarcation between different kinds of "investment goods" as well as between different non-durable consumption goods. The conditions determining the output of textile machines and woodworking machinery, for example, are obviously not the same. Locomotive construction and shipbuilding — industries producing highly durable products — which suffered a heavier falling-off of activity than most other producers' industries up to the low point of the depression, have subsequently recovered less of the ground lost. Differences appear again between consumption goods supplying primary and secondary needs, the latter being more sensitive to changes in incomes. The production of gloves, silk fabrics and sugar meltings in the United States, and porcelain, sugar products and chocolates in Germany, fell more than that of other consumption goods during the downward course of depression, but has generally recovered at a more rapid rate. If a similar movement is also noticeable in the case of the rather heterogeneous footwear and textile groups, this movement has undoubtedly been largely due to the finer qualities of shoes and fabrics included in those groups; the demand for the simpler qualities is less elastic. Unfortunately, the available indices do not make the requisite distinction between different qualities of these products, and separate up-to-date indices for more typical luxury goods are generally lacking. The shrinkage in the consumption of beer in Germany up to 1932 by more than half and comparatively small subsequent recovery is mainly due to increased taxation.

The actual percentage decline in any given industry considered individually may be largely due to special circumstances. It is a noteworthy fact, however, that in no case did the decline in any "current-consumption" industry assume as large proportions as the decline in any of the "investment" industries. In spite of the fact that the rate of recovery from the low point of depression has been much more rapid in the latter,<sup>1</sup> the level of activity in March 1934 was still in most cases very much reduced in comparison with pre-depression conditions in both countries; the activity of "current-consumption" industries remained in almost every case higher even than that of those investment industries which had recovered most. Indeed, it passed the pre-depression standard in several cases.

#### REVIEW OF INDIVIDUAL INDUSTRIES.

Recent developments in the more important industries for which periodic data are available are briefly reviewed below.

The broad effects of the economic depression and of the revival of 1933 are illustrated by Diagram V, showing indices of world production for certain important industries. They are grouped in two categories: (a) durable goods — *i.e.*, pig-iron and steel, shipbuilding and motor vehicles; and (b) current consumption goods — *i.e.*, textile industries, rubber industry and paper industry.<sup>2</sup>

<sup>1</sup> Locomotive construction in the United States is the only industry of those shown in the table that appears not to have recovered; but only annual figures are available for that industry, and they may not be representative of recent developments.

<sup>2</sup> The index of pig-iron and steel covers sixteen countries (covering 97.5% of world production in 1933) included in Table 4 of the *Monthly Bulletin of Statistics*. The index of shipbuilding refers to tonnage under construction at the end of each quarter, according to *Lloyd's Register Shipbuilding Returns*. The index of motor vehicles includes the United States, Canada, Germany and France; for the United Kingdom, monthly or quarterly figures are unfortunately not available. The index of the rubber industry is based on consumption of crude rubber in the world, and of reclaimed rubber in the United States, according to the *Bulletin of the Rubber Growers Association* (London). The indices of textiles and paper are those compiled by the *Institut für Konjunkturforschung*, Berlin.

Diagram V.

WORLD PRODUCTION OF CERTAIN IMPORTANT INDUSTRIES.

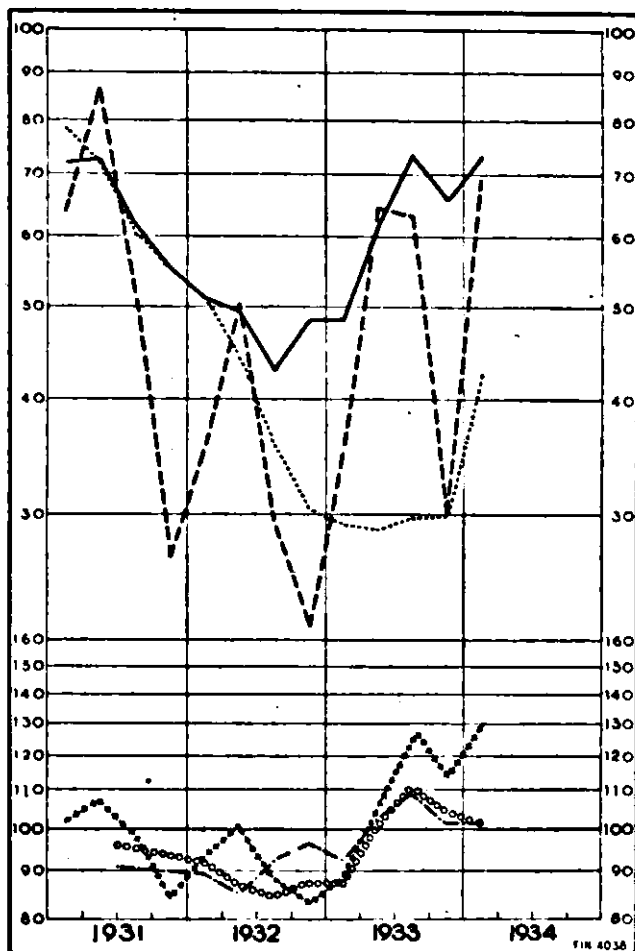
(Average 1925-29 = 100; logarithmic scale; quarterly movement.)

Upper Part : Investment Industries.

— Iron and steel. .... Shipbuilding. --- Motor vehicles.

Lower Part : Consumption Industries.

----- Textiles. ooooo Paper. +++++ Rubber.



The industries of group (a) have been much more seriously depressed during recent years than those of group (b). Although the revival which occurred in 1933 was greater in the former, activity remained far below the pre-depression level, while the indices for group (b) all rose above that level during the second quarter of 1933.

There is a marked seasonal movement in the output of both the automobile and the rubber industries, with its peak near the middle of the year and the low point at the end. In the rubber industry, however, the cyclical increase during the third quarter of 1933 more than compensated the normal seasonal decline.

Mechanical engineering and, to a less extent, electrical engineering, have generally shared the fate of the industries of group (a), while the leather and boot-and-shoe industries, as well as the tobacco and drink industries, have on the whole followed the movement of group (b).

Different industries in different countries have, of course, gained or suffered, not only under the influence of the general factors which have been dealt with above, but also as a result of special factors, both external and internal, such as changes in price relations, relative flexibility of costs, relative ability to adapt production to changing requirements, etc. These differences are illustrated by the national

indices of productive activity in various industries: annual indices for 1925-1933 are given in Appendix II, Tables 3 to 15, and quarterly (or quarterly averages of monthly) indices are shown in tables included in the following summary.<sup>1</sup> These indices cover the majority and, in some cases, all of the important producing countries, but they are not uniform in scope or method of construction and frequently afford only a rough indication of the changes that have occurred.

Iron and Steel.

The annual fluctuations in the world output of pig-iron (including ferro-alloys) and crude steel (ingots and castings) since the peak in 1929, have been as follows:<sup>2</sup>

	Metric tons (000's)					Average 1925-1929=100				
	1929	1930	1931	1932	1933	1929	1930	1931	1932	1933
Pig-iron . . . .	98,620	80,060	55,640	39,550	49,100	115	93	65	46	57
Steel . . . . .	120,560	94,900	69,250	50,620	67,600	117	92	67	49	65

Steel production fell less during the depression years and rose more in 1933 than that of pig-iron. This discrepancy is largely accounted for by the use of scrap for steel-making.

<sup>1</sup> The indices given for Italy in Tables XI, XIII, XVII, XVIII and XX below are those recently published by the Ministero delle Corporazioni.

<sup>2</sup> For detailed statistics, see the *Statistical Year-Book of the League of Nations*, 1933-34, Tables 65 and 66.

In North America, production of both pig-iron and steel declined much more between 1929 and 1932 than in Europe; the increase in 1933 was also more rapid. Production in the United States was stimulated in 1933 by the recovery programme and the increased activity in the motor-car industry, which was the largest single consumer of finished steel, taking in 1933 one out of every five tons rolled.

All the principal producing countries in Europe expanded output in 1933, except Belgium and Luxemburg. Germany, which was very adversely affected in 1932, increased production of pig-iron by 34% and steel by 35% and regained her place as Europe's largest steel producer. The United Kingdom's steel production, assisted since April 1932 by a 33½% tariff, increased by a third, and for the first time since 1929 was the second largest in Europe. The industries of Belgium and Luxemburg, which are largely dependent on exports, had to meet severe competition in 1933 on the restricted markets.<sup>1</sup> While the re-establishment of the European Steel Entente in 1933 resulted in closer co-operation between the producers and export prices were maintained at a higher level, exports expanded only slightly.

Table X.

QUARTERLY INDICES OF PIG-IRON AND STEEL PRODUCTION.  
(Average 1925-1929 = 100.)

Countries	1930	1931	1932				1933				1934	
	Average of quarters		I	II	III	IV	I	II	III	IV	I	II
<i>Pig Iron.</i>												
United States . . . . .	82.5	48.0	30.5	23.8	17.8	19.1	17.5	29.2	54.1	38.1	43.1	59.9
U.S.S.R. . . . .	174.2	169.2	194.8	221.0	218.4	243.3	195.1	250.0	273.4	282.7	315.0	367.1
Germany . . . . .	83.8	52.4	34.6	35.5	28.9	36.9	40.4	41.9	46.7	53.1	60.2	74.4
France . . . . .	105.4	86.1	59.6	57.6	57.0	58.9	61.6	68.1	70.3	65.9	64.1	64.7
United Kingdom . . . . .	99.5	62.1	65.5	62.4	53.8	54.8	58.9	66.8	70.6	76.6	90.0	101.9
Belgium . . . . .	95.9	92.1	84.5	83.0	69.6	80.7	82.2	81.3	75.0	74.9	78.3	84.8
Japan . . . . .	125.8	102.7	109.6	119.6	108.8	112.7	128.1	146.9	161.5	177.7	177.7	186.2
World . . . . .	93.1	64.7	49.5	48.0	41.6	45.7	44.6	53.9	68.0	62.1	67.3	81.0
<i>Steel.</i>												
United States . . . . .	83.0	53.3	36.4	27.3	21.9	24.7	25.6	50.4	71.2	46.3	59.2	78.4
U.S.S.R. . . . .	158.7	148.2	161.8	158.2	141.6	173.7	154.1	177.3	201.5	218.0	232.2	258.9
Germany . . . . .	80.7	58.0	35.9	46.2	34.6	44.0	44.5	51.5	55.4	60.7	71.8	83.0
France . . . . .	108.2	89.6	64.0	62.7	63.8	66.3	72.6	79.3	77.7	69.3	69.8	70.9
United Kingdom . . . . .	95.7	67.6	71.8	68.5	64.3	70.3	78.7	87.8	93.5	106.3	117.8	117.4
Belgium . . . . .	95.7	88.8	84.2	83.0	70.7	82.1	83.9	83.3	72.8	72.2	78.7	86.1
Japan . . . . .	132.0	108.5	121.7	139.4	127.4	155.5	164.3	175.3	173.5	200.5	204.4	214.3
World . . . . .	92.2	67.6	52.5	49.8	44.0	50.2	51.1	67.2	78.3	68.5	78.4	92.0

The iron and steel industries of the U.S.S.R. and Japan showed steady expansion during the depression (except for a slight setback in 1931 in Japan) and attained record figures in 1933. Output of both pig-iron and steel in Russia in 1932 was greater than in any other European country but in 1933 the production of steel was exceeded by Germany and the United Kingdom. In 1933, steel production in Japan was 22% above the level of 1929.

<sup>1</sup> It has been estimated, however, that these two countries led the world in *per capita* consumption of steel. Cf. *Steel* (Cleveland), January 1st, 1934.

Table X illustrates the recent changes in activity in the seven principal producing countries and in the world (sixteen countries representing 96.7% and 98.0% of the world's total pig-iron and raw-steel production in 1933.) They are arranged in the order of importance of their combined iron and steel production in 1933.

Exports of raw and semi-manufactured iron and steel from the five principal exporting countries fell less than production between 1929 and 1932 and expanded less in 1933, exports rose 5% in 1933, production of pig-iron 29% and of steel 42%. There was, however, a substantial increase in exports from the United States (130%) and a smaller one in those from France (10%) in 1933, while British exports were only fractionally (1.8%) higher. German and Belgian exports continued to decline in 1933.

*Mechanical Engineering.*<sup>1</sup>

Owing to the diversity of the products of the mechanical engineering industry, no uniform and comparable quantitative measure is possible. Some indication of the variations in the activity of this industry in certain countries may, however, be obtained from data which enter into the general production indices of these countries and from certain specially compiled series. Annual indices are set forth in Appendix II, Table 3, and quarterly indices are shown for several countries in Table XI below.

In all the countries mentioned in the Appendix and in Table XI, except the U.S.S.R., there was a marked decline during the depression years, especially in 1932; and in all for which information is available, except Greece, an upward movement in 1933.

Table XI.

QUARTERLY INDICES OF ACTIVITY IN MECHANICAL ENGINEERING.<sup>2</sup>  
(Average 1925-1929 = 100.)

Country	1930	1931	1932				1933				1934
	Average of quarters		I	II	III	IV	I	II	III	IV	I
Germany : Despatch of machines . . . . .	101	72	45	47	48	46	41	49	57	56	61
Orders received for machines.	87	62	33	39	38	37	35	40	50	53	66
France <sup>3</sup> . . . . .	120	104	80	72	71	72	77	84	87	83	77
Italy a) . . . . .	(95)	(83)	(72)	(72)	(70)	(69)	(69)	(71)	(73)	(73)	(72)
Poland : Metals and engineering . . . . .	92	68	54	55	52	54	51	55	54	59	60
United Kingdom (Board of Trade) <sup>3</sup> b) . . . . .	104	85	81	80	76	77	83	86	83	89	94
United States : Demand for machine tools . . . . .	66	38	22	20	14	17	10	14	29	48	49
Demand for foundry equipment	68	34	18	10	11	12	20	20	30	27	39

a) Base : 1928.

b) Base : 1924, 1927-1929.

<sup>1</sup> Activity in one important branch of the industry — motor-car manufacture — and in shipbuilding and electrical engineering which in part fall under the category of mechanical engineering, is reviewed in separate sections below.

<sup>2</sup> For sources and notes, see Appendix II, Table 3.

<sup>3</sup> Including shipbuilding.

The industry suffered more in the United States than in any other country and more than any other American industry up to 1932. The combined demand for machine tools and foundry equipment, a "significant indicator of the prospective activity contemplated by the machinery-manufacturing industry", reached its lowest point in the third quarter of 1932, while the demand for machine tools was at its lowest in the first quarter of 1933. Since then there has been a continuous improvement in both these branches and by the first quarter of 1934, demand had expanded between four and five times. In Germany, where domestic requirements for machines in 1932 were estimated to be only a quarter of what they were in the peak year 1928,<sup>1</sup> there has been a distinct upward trend since the second quarter of 1933. The index of orders received for machines stood at a higher level in the first quarter of 1934 than the index of machines despatched. The Board of Trade index for the United Kingdom includes shipbuilding, which was very adversely affected in 1931-32, and, in consequence, conditions in other branches of the industry during those years would appear to have been more favourable than the index might suggest. It rose in 1933 and in the first quarter of 1934 stood higher than for several years past. Since the end of 1931, the expansion in the textile industries caused a certain demand for textile machinery. The London and Cambridge Economic Service index, which is limited to locomotives and rolling-stock, also shows some improvement from the extremely low level of 1932; and unemployment in general engineering declined from 29% to 20% in the course of 1933. The revival in 1933 was chiefly internal, exports of machinery actually declining by over 8% both in weight and sterling value as compared with 1932. The decline in the French industry, which includes shipbuilding, was reversed in the fourth quarter of 1932, but, at the end of 1933 and the beginning of 1934, there was again a downward tendency. In the U.S.S.R., production expanded with remarkable rapidity and, in 1933, exceeded the average for 1925-1929 by no less than 437%. The output of agricultural machinery increased at an even greater rate.

### *Mercantile Shipbuilding.*<sup>2</sup>

Of all the great industries, shipbuilding has been the most directly hit by the disorganisation of international economic relations since 1929. The total tonnage launched, including sailing vessels in the United Kingdom, and in the world as a whole (excluding the U.S.S.R., for which recent figures are not available) will be seen from the following figures :

	Gross tonnage launched (000's)					Average 1925-1929 = 100				
	1929	1930	1931	1932	1933	1929	1930	1931	1932	1933
United Kingdom . . . . .	1,523	1,478	502	188	133	129	125	43	16	11
World . . . . .	2,759	2,889	1,617	727	489	120	125	70	32	21

As a result of the heavy decline in new orders, the total tonnage launched fell by 82.5% between 1930 and 1933. The figure for the latter year was the lowest recorded since *Lloyd's Register of Shipbuilding Returns* first appeared in 1888.

The contraction in tonnage launched in the United Kingdom was particularly severe and rapid, the total drop between 1930 and 1933 amounting to 91%, whereas in the rest of the world it did not exceed 75%. While in 1931 only France and Italy and in 1932 no country showed an increase in tonnage launched, in 1933 there was a increase in Japan, Denmark, the Netherlands, Sweden and the British Dominions.

Actual and prospective activity in the world's shipbuilding yards is brought out more clearly by the following figures, relating to all vessels over 100 tons, and showing tonnage under construction at the end of the months indicated and tonnage laid down during the quarter ending with the month indicated.

<sup>1</sup> *Vierteljahrshefte zur Konjunkturforschung* (Berlin), 6: 3: B, page 161.

<sup>2</sup> The source of the shipbuilding statistics is *Lloyd's Register of Shipbuilding Returns*. Tables showing tonnage launched, tonnage under construction (end-of-year figures), tonnage afloat and laid-up are given in the *Statistical Year-Book of the League of Nations* 1933-34, Tables 94-97.

End of:	Tonnage under construction (000's)					Tonnage laid down (000's)				
	1930	1931	1932	1933	1934	1930	1931	1932	1933	1934
March . . . . .	3,143	2,000	1,298	741	1,079	857	242	80	141	461
June . . . . .	2,901	1,826	1,110	733	1,216	581	234	71	121	273
September . . . . .	2,569	1,531	901	757	...	480	173	43	111	...
December . . . . .	2,326	1,404	766	757	...	421	226	84	145	...

The total decline in tonnage under construction between March 1930 and June 1933 was nearly 77%. Since then, there has been a steady revival, and by the end of June 1934, a rise of 66% had been recorded. Tonnage laid down declined by no less than 95% between the first quarter of 1930 and the third quarter of 1932: the first quarter of 1934 showed a noteworthy revival, although there was a distinct setback in the second quarter.

Quarterly indices of tonnage under construction in the principal shipbuilding countries are given in Table XII below.

Table XII.

QUARTERLY INDICES OF SHIPBUILDING (TONNAGE UNDER CONSTRUCTION AT END OF QUARTER).  
(Average 1925-1929 = 100.)

Countries	1930	1931	1932				1933				1934
	Average of quarters		I	II	III	IV	I	II	III	IV	I
United Kingdom . . . . .	105.3	43.3	31.2	23.5	20.0	18.9	21.1	24.1	25.4	27.8	40.3
Germany . . . . .	66.4	36.5	31.3	31.2	24.4	24.2	15.9	15.1	9.1	6.8	26.3
France . . . . .	128.7	133.0	107.1	87.6	74.7	69.5	66.6	63.2	65.5	62.0	70.5
Italy . . . . .	87.3	90.9	96.9	96.2	68.2	31.5	31.5	14.4	14.4	6.0	25.4
Netherlands . . . . .	111.4	61.4	31.9	30.5	25.3	24.8	20.4	19.9	25.6	25.4	32.2
Sweden . . . . .	170.2	153.6	129.0	117.1	96.5	76.8	108.0	102.6	93.7	84.8	62.1
Denmark . . . . .	144.9	109.9	32.7	27.5	25.6	28.0	27.2	36.6	43.1	33.3	68.8
United States :											
Coasts . . . . .	251.5	289.8	240.1	188.4	144.9	69.2	36.1	3.5	17.1	14.4	31.7
Great Lakes . . . . .	50.7	4.6	—	—	—	—	—	—	—	—	—
Japan . . . . .	146.4	57.9	56.0	53.4	56.7	77.4	68.0	100.6	104.7	130.6	149.9
Other countries . . . . .	119.7	52.2	31.8	29.7	22.9	32.3	32.4	29.9	31.1	29.5	33.8
World . . . . .	110.6	66.7	51.2	43.8	35.5	30.2	29.2	28.9	29.8	29.9	42.6

Unemployment in the British industry fell from 63.5% to 54.5% during 1933, but the shipbuilding capacity, which is estimated to have decreased by 23% in the past three years,<sup>1</sup> is considered still largely in excess of probable demand. In Japan, shipbuilding, like other branches of industry, showed a marked expansion in the latter part of 1933 and the beginning of 1934.

The proportion of motor ships to total tonnage launched, which had fallen from 57% in 1931 to 37% in 1932, rose in 1933 to 69%. Of the total steam tonnage launched in 1933, less than 15% was fitted for burning oil fuel as compared with 63% in 1932 and 79% in 1931. Oil tankers represented 17% of total tonnage launched in 1933; in 1931 and 1932, they accounted for about 40% and 19% respectively.

<sup>1</sup> *Iron and Coal Trades Review* (London), January 26th, 1934.

**Motor-vehicle Industry.**

The following figures show the production of motor vehicles since 1929.<sup>1</sup>

	Number of motor-vehicles (000's)					Average 1925-1929 = 100				
	1929	1930	1931	1932	1933	1929	1930	1931	1932	1933
Europe (excluding U.S.S.R.) . . . . .	692	627	551	521	*636	120	108	95	90	*110
North America . . . . .	5,620	3,510	2,472	1,432	2,026	124	77	54	31	45
World . . . . .	6,313	4,141	3,026	1,977	*2,712	123	81	59	39	*53

Fluctuations have been most violent in North America, where output fell between 1929 and 1932 by 74.5%, but rose by 41.5% in 1933. As a result, North America's share in world production declined from 89% in 1929 to 72% in 1932 and increased to nearly 75% in 1933. The output of commercial vehicles was somewhat better maintained than that of passenger cars; it fell less between 1929 and 1932 and increased more rapidly in 1933.

The movement in Europe has been more even, the drop from the peak in 1929 to 1932 not exceeding 25% and the increase in 1933 being 22%. The United Kingdom has taken the place of France as the leading producer since 1930; output after a slight setback in 1931 reached record figures in 1932 and again in 1933. Exports also attained a record in 1932 and again in 1933, while retained imports fell heavily. Production in Germany was doubled in 1933. In Italy, where output in 1932 was reduced to half that in 1929, there was also considerable recovery in 1933. The Russian motor industry continued to expand in 1933, output, mainly commercial vehicles, being more than double that in 1932.

Indices of motor-car production in six of the principal producing countries are given in Table XIII below.

*Table XIII.*

QUARTERLY INDICES OF MOTOR-CAR PRODUCTION.  
(Average 1925-1929 = 100.)

Country	1930	1931	1932				1933				1934
	Average of quarters		I	II	III	IV	I	II	III	IV	I
United States <sup>a</sup> . . . . .	77.8	54.9	33.0	38.7	24.5	32.7	33.0	49.2	57.1	38.5	64.4
Canada . . . . .	70.3	36.3	31.8	32.7	29.0	20.2	24.2	36.7	38.7	25.8	54.0
France <sup>a</sup> . . . . .	114.5	97.5	83.4	73.2	73.3	76.0	89.3	87.8	78.9	78.9	91.9
Germany <sup>a</sup> . . . . .	104.9	74.2	41.9	55.0	48.9	36.2	51.3	123.6	112.0	92.6	96.9
Italy <sup>a</sup> . . . . .	(88.3)	(69.6)	(68.0)	(77.5)	(78.4)	(77.9)	(78.5)	(80.9)	(87.3)	(81.5)	(79.2)
United Kingdom . . . . .	119.0	113.0	124.0				143.6				...
World <sup>a</sup> . . . . .	80.8	59.0	38.6				52.9				...

a) Base: 1928.

\* Provisional.

<sup>1</sup> For detailed statistics, see the *Statistical Year-Book of the League of Nations, 1933-34, Table 93.*

<sup>2</sup> Adjusted for seasonal variations.

<sup>3</sup> Passenger cars only.

<sup>4</sup> Annual index including sixteen countries.



Taking into account the seasonal movement, it would appear that, in the above countries, except France, the revival in the industry extends from the beginning of 1933 up to the first quarter of 1934.

Registrations of all vehicles in the United Kingdom and France have expanded steadily during each of the depression years, but in Germany and the United States they declined. In the United States, they fell from 24,300,000 at the end of 1932 to 23,800,000 at the end of 1933.<sup>1</sup> In Europe, there has been a movement away from heavy cars in favour of light ones.

### *Electrical Engineering.*

Statistics relating to the activity of this branch of engineering in a few countries are shown in Appendix II, Table 4. Unfortunately, no comprehensive series are available for three of the important producing countries — Germany, France and Switzerland. The indices shown for mechanical engineering in Table 3 for Germany and France also cover electrical engineering.

Although activity has in general been better maintained in electrical than mechanical and marine engineering, this industry did not escape the effects of the depression, the heavy section being severely hit. On the other hand, the demand for household electrical appliances and certain new forms of electrical apparatus was relatively well maintained. The year 1933 and the early part of 1934 saw some improvement.

In the United States, production fell to a very low level and the net value of new orders in the first quarter of 1933 was only 28% of the average for 1925-1929; but by the first quarter of 1934 a rise of 59% was recorded. It has been estimated<sup>2</sup> that, in the French industry as a whole, the decline between 1930 and 1933 was over 50% and in the heavy section 72%. In Germany, there was probably a fall of 20% in 1933; however, at the end of 1933 and the beginning of 1934, there was a sharp revival in the domestic market and sales of electrical goods rose by about 35%.<sup>3</sup> Activity in the British electrical manufacturing industry was at its lowest in the third quarter of 1932 — 58% of the average for 1925-1929 — but, by the middle of 1933, it had risen to 67% of that average: since then there has been a relapse. In Italy, the output of electrical machines expanded slightly in 1933 from the low point of 1932, when it was 32% below the 1929 level, and the production of electrical bulbs has continued at a high level since the last quarter of 1932.

The combined exports of the seven principal producing countries fell in value by 64% between 1929 and 1933 and by 14% from 1932 to 1933. This was largely due to a decline in prices. The Netherlands and Germany have been able to maintain a larger proportion of their former exports than other countries.

### *Building.*

The statistical measurement of building activity raises problems of great difficulty, and the national indices which are given in Appendix II, Table 5, should be used with caution.

It may be useful to supplement the indices of building activity by the figures of unemployment which are available for certain countries.

In so far as building is dependent on unaided private enterprise, it is highly sensitive to changes in domestic interest rates on the one hand and private income on the other. In recent years, however, public building and public subsidies for building have acquired increasing importance. The various recovery programmes launched in 1933, to which reference has been made in preceding sections, generally included important plans for public building.

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<sup>1</sup> In view of the agricultural recovery programme, it is of interest to note that sales of new passenger cars increased in 1933 by over 70% in States where the farm population is over 40%, but in other States only 30%.

<sup>2</sup> M. Davezac at the General Assembly of the Syndicat de la Construction électrique, June 15th, 1934. *Bulletin quotidien* (Paris), June 28th, 1934.

Table XIV.

UNEMPLOYMENT IN THE BUILDING INDUSTRY.  
(Percentage of Trade Unionists unemployed.)

Country	End of June					End of December				
	1929	1930	1931	1932	1933	1929	1930	1931	1932	1933
Germany <sup>1</sup> . . . . .	10.4	38.0	56.6	78.0	70.6	52.8	65.4	85.4	86.1	59.9
Belgium . . . . .	0.1	2.7	11.5	21.6	17.3	5.5	19.5	28.3	26.7	38.6
Denmark <sup>2</sup> . . . . .	0.2	0.5	0.3	40.0	11.4	33.0	42.2	52.7	59.9	48.3
Netherlands . . . . .	2.1	6.2	9.2	32.7	27.5	24.5	30.2	39.1	55.8	63.4
United Kingdom . . . . .	8.5	12.7	18.1	26.1	19.9	16.9	22.7	28.6	32.1	25.9
Switzerland <sup>3</sup> . . . . .	0.6	1.1	1.5	4.9	8.5	13.0	15.9	22.9	29.4	36.8
Canada . . . . .	7.5	26.2	38.6	60.8	62.5	25.6	44.5	58.1	69.2	69.1
Australia . . . . .	8.8	23.3	32.6	42.1	36.6	14.3	27.9	36.0	40.2	32.2

In countries favourably placed in respect of the price of long-term capital, or in which public building was extended, the building industry either expanded or showed only a moderate contraction during the depression — e.g., in France, Belgium, Switzerland, the Netherlands, Denmark, Norway, Sweden and the United Kingdom.

In several countries, separate indices are available for residential and for industrial and commercial building. As might be expected, the former was much less affected by the depression than the latter, which follows fairly closely the trend of activity in other investment industries.

In 1933, the decrease in the price of long-term capital and a reduction in building costs caused a revival in the building industry in many countries. This revival was considerable in the United Kingdom, Italy, Germany, Denmark, Poland (dwelling-houses) and Australia. The recovery in Germany was mainly due to the policy of "Arbeitsbeschaffung". A vast programme of reconstruction and repair of buildings was launched in 1933 with the help of Government appropriation of RM. 787 million, and of private credits amounting to about RM. 1,000 million.<sup>4</sup>

On the other hand, in France, Belgium, the Netherlands and Switzerland, which had maintained building at a relatively high level during the depression, this industry, like other investment industries, receded during 1933. Building activity decreased also in Norway, Sweden and Finland, the last-mentioned country showing the lowest index for the whole of Europe.

The situation in the United States is exceptional. In no other country was the contraction of building so precipitate. The index of residential building (1925-29=100) dropped from 112 in 1928, the peak year, to 15 in 1932, and further to 14 in 1933. Factory and commercial building decreased about as much between 1929 and 1932, but rose somewhat in 1933. "Public works and utilities" reached their peak in 1930, fell off more rapidly than other construction activity in the two following years, but rose by 30% in 1933. The increase in public works and utilities was mainly due to government expenditure.

*Paper Industry.*

The paper industry suffered less during the depression than most other industries producing consumption goods other than food. Compared with the average pre-depression level, world production

<sup>1</sup> Wholly unemployed only.

<sup>2</sup> Masons only.

<sup>3</sup> Including wood-working industry.

<sup>4</sup> *Wochenberichte des Instituts für Konjunkturforschung*, 7: 3 (January 17th, 1934).

of paper and paper-board was only 9% less in 1932; the drop between 1929, the peak year, and 1932 was 20%. According to the incomplete information, available production increased in 1933.<sup>1</sup>

Quarterly indices of activity of the paper industry in various countries are given — together with a world index — in the following table.

Table XV.

QUARTERLY INDICES OF ACTIVITY IN THE PAPER INDUSTRY.<sup>2</sup>  
(Average 1925-1929 = 100.)

Country	1930	1931	1932				1933				1934
	Average of quarters		I	II	III	IV	I	II	III	IV	I
Germany: Paper . . . . .	104	97	84	87	82	93	89	89	89	100	103
Austria: Paper . . . . .	99	99	94	98	95	91	86	94	93	106	97
France: Paper . . . . .	145	120	119	119	109	107	126	151	150	140	154
Hungary: Paper . . . . .	(266)	(283)	(219)	(220)	(262)	(249)	(220)	(253)	(242)	(248)	(254)
Italy: Paper and board . . . . .	100	96	93	98	94	102	103	106	106	111	118
Norway: Paper and board . . . . .	106	63	106	103	100	103	105	84	96	...	...
Poland: Paper . . . . .	110	97	91	95	90	92	84	92	90	94	100
United Kingdom: Paper . . . . .	109	102	127	90	121	138	113	123	129	131	128
Czechoslovakia: Paper . . . . .	99	100	77	79	80	80	72	75	79	82	...
Canada: Newsprint . . . . .	118	103	96	95	83	86	78	91	104	106	110
United States: Newsprint . . . . .	98	92	86	77	75	76	72	80	93	84	83
India: Paper . . . . .	115	117	115	115	115	116	118	125	126	126	106
Japan: Paper . . . . .	117	114	108	112	113	115	117	120	125	132	126
World <sup>3</sup> . . . . .	105	97	92	87	85	87	87	101	111	105	101

The world index has been illustrated in Diagram V given at the beginning of the present section. It shows that, on the basis of the information available, activity in the paper industry experienced a sharp revival between the first and third quarters of 1933, but dropped somewhat during the winter 1933-34. This movement is mainly due to the United States, whose production of paper and board was, until 1931, larger than that of Europe as a whole. In Canada, production has increased steadily since the beginning of 1933. The largest European producer, Germany, suffered during the depression more than the northern European countries,<sup>4</sup> but increased her output during the winter 1933-34. Many European countries — Sweden, Finland, the United Kingdom, the Netherlands, France, Hungary and Greece — as well as Japan and Chile, expanded their paper industries during the depression, although there was a setback in some of these countries in 1932. In 1933, production of paper increased in all countries for which data are available, except Norway, Belgium, Poland, and Czechoslovakia. The production of the U.S.S.R. attained a new record in 1933, without, however, reaching the planned figure. Production of paper-board has in general decreased more, or increased less, than that of paper.

<sup>1</sup> Detailed statistics of output of paper and board are given in the *Statistical Year-Book of the League of Nations*, 1933-34, Table 54.

<sup>2</sup> For sources and notes, see Appendix II, Table 7.

<sup>3</sup> Index of the Institut für Konjunkturforschung.

<sup>4</sup> The exceptionally low figure for Norway in 1931 is attributable to an industrial dispute.

The paper industry of some of the exporting countries has been adversely affected by a decrease in consumption and an increase in trade restrictions. Part of the decrease in consumption of newsprint in the United States, and probably in some other countries, may be attributed to the development of broadcasting. Trade restrictions have fostered the rapid growth of national industries in many importing countries. The Asiatic market (China, Straits Settlements, India) has been largely captured by Japan.

*Leather and Boot-and-Shoe Industries.*

Indices of activity in the leather and in the boot-and-shoe industries are given in Table 8 of Appendix II. For a few countries, among which the United States and Germany, the greatest producers of leather, separate indices are available for production of leather and for that of footwear; these indices show that, in general, the latter was much better maintained during the depression than the leather industry in general. Quarterly indices for a few countries will be found below :

*Table XVI.*

QUARTERLY INDICES OF ACTIVITY IN THE LEATHER AND BOOT-AND-SHOE INDUSTRIES.<sup>1</sup>  
(Average 1925-1929 = 100.)

Country	1930	1931	1932				1933				1934
	Average of quarters		I	II	III	IV	I	II	III	IV	I
Germany : boots and shoes .	110	102	89	98	84	101	92	106	97	107	112
France : leather . . . . .	94	91	80	80	80	84	97	97	90	90	90
Poland : leather . . . . .	97	84	74	86	87	95	87	90	92	96	90
United Kingdom (Board of Trade) : leather and boots and shoes a) . . . . .	99	97	98	95	91	94	101	112	103	100	108
Czechoslovakia : leather .	109	112	82	66	58	92	86	69	72	77	...
Canada : boots and shoes .	86	89	91	94	91	76	76	104	118	78	81
United States : leather and products, total . .	91	89	86	82	81	88	86	105	102	92	101
boots and shoes . .	89	93	92	89	89	97	93	119	110	94	107

a) Base : 1924, 1927-1929.

Leather and footwear production increased in 1933 in most countries for which figures are available. The Czechoslovak leather industry, which had been very hardly hit by the depression, only increased its activity slightly in 1933. The German and British, as well as the American boot-and-shoe industries, on the other hand, exceeded the average pre-depression level in that year. The demand for boots and shoes has been somewhat elastic ; as was shown in Table IX above, production of boots and shoes increased in Germany and the United States from the middle of 1932 to March 1934 more than that of any other important article of current consumption.<sup>2</sup>

In the U.S.S.R., the index for boot-and-shoe production reached the very high figure of 353 (1925-29 = 100) in 1932, but fell off in 1933.

In recent years, rubber footwear has increasingly competed with leather boots and shoes. Certain indices of the production of rubber footwear will be found in Table 9 of Appendix II.

<sup>1</sup> For sources and notes, see Appendix II, Table 8.

<sup>2</sup> In Germany, however, the increase was largely due to the replenishment of stocks, the consumers' takings increased less than is shown by the indices. *Vierteljahshefte zur Konjunkturforschung*, 8 : 3 : B, page 184.

*Textile Industries.*

In Chapter I, it was shown that the supply of textile materials exceeded the requirements of the industry during the depression years, but that this discrepancy narrowed down in 1932 and particularly in 1933, when the world's textile industries experienced a substantial recovery.

Composite indices of textile industries are given in Table XVII below for nine countries for which monthly or quarterly data are available.<sup>1</sup> For several important manufacturing countries, such as Japan, China and India, no composite (monthly or annual) indices are available, but the development of business may be followed from the indices relating to individual industries given in subsequent tables.

*Table XVII.*

QUARTERLY COMPOSITE INDICES OF ACTIVITY IN THE TEXTILE INDUSTRIES.<sup>2</sup>  
(Average 1925-1929 = 100.)

Country	1930	1931	1932				1933				1934
	Average of quarters		I	II	III	IV	I	II	III	IV	I
Germany . . . . .	95	93	87	78	80	93	88	91	102	103	107
Belgium . . . . .	90	82	69	63	69	70	66	73	70	76	69
France . . . . .	91	76	57	59	64	74	75	76	83	81	80
Hungary . . . . .	110	111	94	92	92	102	105	112	119	121	128
Italy <sup>a)</sup> . . . . .	(91)	(82)	(73)	(58)	(62)	(77)	(72)	(80)	(79)	(74)	(66)
Poland . . . . .	83	79	65	70	70	66	51	75	80	77	84
United Kingdom: (Board of Trade) <sup>b)</sup>	80	77	91	87	76	86	88	87	89	96	96
(London and Cambridge)	79	78	97	94	74	88	95	90	94	104	105
Czechoslovakia . . . . .	98	83	79	74	62	62	69	64	62	70	...
United States . . . . .	84	87	79	57	81	87	76	100	105	79	80
World <sup>3</sup> . . . . .	92	93	92	87	94	99	94	104	112	104	104

<sup>a)</sup> Base : 1928.

<sup>b)</sup> Base : 1924, 1927-1929.

The world index — which is illustrated in Diagram V given above — is a weighted average of indices of seven important countries, including the U.S.S.R., Japan and India. It shows that the recent cyclical movement in industrial activity, to which attention has been drawn in the preceding sections, was particularly marked in the textile industries. There was a first upward swing in the latter half of 1932, followed by a relapse in the beginning of 1933, and a second sharp revival during the second and third quarters of 1933, again followed by a setback toward the end of the year, after which, however, the world index stood a little above the average pre-depression level.

These movements were much more marked in the United States than in Europe. Industrial activity in the former remained, during the winter 1933-1934, about 20% below the level of 1925-1929. European textile industries have shown very different trends of development recently. There is a striking contrast between the development of the British and German textile industries on the one hand and the French, Belgian, Polish and Czechoslovak on the other.

<sup>1</sup> Annual indices for seventeen countries are given in Appendix II, Table 10.

<sup>2</sup> For sources and notes, see Appendix II, Table 10.

<sup>3</sup> World index compiled by the Institut für Konjunkturforschung.

The Asiatic manufacturing countries have extended their textile production during the depression years, although the Indian industries stagnated during 1933. A number of countries whose industrial systems are comparatively young and almost exclusively confined to domestic markets, have registered remarkable advances during recent years. This process of "localisation" of textile industries is exemplified by the indices for Hungary, where the progress has been largely stimulated by restrictions of textile imports. Other instances will be found in the subsequent tables relating to individual industries.

*Cotton.* — The world's cotton-mill consumption of raw cotton increased continuously since the early months of 1932.<sup>1</sup> The consumption of cotton by the United States increased more than that of the other large consumers during 1932-33. The total consumption by the three great Asiatic countries — Japan, China and India — nearly equalled that of the whole of Europe in 1931-32 and 1932-33. Japan has been the second largest consumer of raw cotton since 1930-31, and China reached the third rank in 1932-33, thus outstripping the United Kingdom. During the half year ending January 31st, 1934, American consumption decreased, as compared with the preceding half-year, European consumption increased considerably, while Asiatic consumption remained almost stationary.

The indices of activity in cotton-spinning and weaving shown in Table XVIII cover most important manufacturing countries and bring to light the considerable differences in the development of the cotton textile industries in different countries.

The above indices and the annual indices given in Appendix II, Tables 11 and 12, show that the cotton textile industries were more active in most countries during 1933 than during the preceding year. But the spinning section stagnated in 1933 in Spain, Czechoslovakia and India, and the weaving branch in Austria, Belgium, India and China. The French indices show a remarkable contrast in 1933 between low spinning activity and a rapid increase in weaving.

While, in the world as a whole, the bulk of the production of cotton goods is intended for home consumption, exports are vital to certain national industries, in particular the British and Japanese. Total exports of cotton piece goods from the United Kingdom rose in 1932 by 28%, and those from Japan, her principal competitor in the Asiatic market, rose by 44%. British exports fell by nearly 8% in 1933, while those of Japan rose further by 3%. Compared with 1929, British exports were 45% lower, and the Japanese exports 17% higher in 1933.<sup>2</sup>

*Linen, Hemp and Jute.* — The production of most linen tissues and that of practically all hemp and jute products do not depend, like cotton, woollen and silk tissues, on current demand for clothing, but rather on general business conditions. Hence, these industries have, on the whole, been more seriously affected than other textile trades; this may be seen from the yearly indices given in Appendix II, Table 13. Linen, hemp and jute industries, like other textiles, maintained, however, a high level of output in Japan during the depression; and even in 1932 they were conspicuously active in the northern European countries.<sup>3</sup> Still more remarkable is the expansion of linen-spinning and weaving in Poland, which reached high records in 1933. Germany, Hungary, Italy, the United Kingdom and the United States also show increases in the activity. In the United States, on the other hand, the manufacture of "hard fibres" contracted further so that the group index declined. The Russian linen industry fell heavily between 1929 and 1932, and the Belgian between 1932 and 1933. The Indian jute industry merely maintained in 1933 the level of the preceding year.

*Wool.* — The consumption of raw wool in the nine principal manufacturing countries taken together declined but little during 1929-1932, and showed a 10% increase in 1933 (see the international index given in Chapter I, page 24). In 1929, the peak year, the United States was the largest consumer

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<sup>1</sup> Cotton-mill consumption of the various qualities of raw cotton is dealt with in Chapter I, section on "Textile Materials".

<sup>2</sup> See also *Review of World Trade, 1933* (Geneva, 1934).

<sup>3</sup> Except the Finnish linen industry; 1933 figures for these countries were not available for inclusion in the table.

*Table XVIII.*

QUARTERLY INDICES OF ACTIVITY IN THE COTTON INDUSTRY.<sup>1</sup>

(Average 1925-1929 = 100.)

Country	1930	1931	1932				1933				1934
	Average of quarters		I	II	III	IV	I	II	III	IV	I
Germany : Spinning .	95	91	98	87	85	110	107	112	...	...	...
Austria : Spinning .	94	88	100	94	79	76	65	78	100	118	109
Weaving .	106	117	126	124	110	96	81	101	106	132	145
Belgium : Spinning .	95	80	62	62	76	76	71	71	73	73	...
Spain : Spinning .	104	97	96	89	83	142	94	79	97	114	91
France : Spinning .	94	64	44	41	43	57	62	64	66	73	70
Weaving .	104	77	50	53	57	79	80	94	95	106	104
Hungary : Spinning .	193	194	363	94	159	307	278	324	299	330	312
Weaving .	116	114	203	71	87	167	157	177	166	192	175
Italy a) : Spinning .	(89)	(80)	(83)	(86)	(76)	(89)	(94)	(96)	(90)	(99)	(95)
Weaving .	(86)	(75)	(77)	(78)	(70)	(80)	(84)	(85)	(80)	(86)	(84)
United Kingdom : Spinning (Board of Trade) b) . . . (London and Cambridge)	72 74	75 72	93 89	86 83	66 65	84 78	90 84	84 79	84 81	93 88	95 87
Canada : Spinning .	77	73	62	84	62	93	54	72	119	134	89
United States : Spinning .	79	79	76	59	73	85	79	103	108	79	85
Weaving .	66	62	68	52	48	59	57	75	75	...	...
Chile c) : Weaving .	(122)	(100)	(129)	(144)	(165)	(176)	(189)	(213)	(245)	(246)	(276)
India : Spinning .	115	128	132	128	137	141	131	118	124	124	121
Weaving .	114	130	134	127	137	145	129	115	126	134	125
Japan : Spinning .	98	100	108	111	108	111	116	120	119	129	127
Weaving .	105	106	111	115	115	122	123	129	125	129	129

a) Base : 1928.

b) Base : 1924, 1927-1929.

c) Base : 1927-1929

of wool, France the second and the United Kingdom the third ; in 1931-1933, the United Kingdom took the first place. Germany has remained fourth in order of importance, while Japan outstripped Italy as the fifth after 1930. In 1933, wool consumption increased in the United States, France, Germany, Japan, Italy and Poland, but diminished in the United Kingdom, Belgium and Czechoslovakia.<sup>2</sup>

The available statistics of consumption of raw wool do not afford in all cases an accurate index of activity in the wool textile industry. Indices of activity in the wool industry, based on various other criteria, are given in Table XIX below.

The revised annual index for the United Kingdom shows that her wool industry declined between 1926 and 1931 by nearly 25%, but recovered during 1932 and 1933 by some 8.5% in the aggregate. In the United States and France, the decline during the depression was deeper than in the United Kingdom, but the recovery in 1933 was also more rapid. During recent years there has been a

<sup>1</sup> For sources and notes, see Appendix II, Tables 11 and 12.

<sup>2</sup> Cf. Imperial Economic Committee, *Wool Intelligence Notes* (London), Vol. I, No. 11.

Table XIX.

QUARTERLY INDICES OF ACTIVITY IN THE WOOL INDUSTRY.<sup>1</sup>  
(Average 1925-1929 = 100.)

Country	1930	1931	1932				1933				1934
	Average of quarters		I	II	III	IV	I	II	III	IV	I
Belgium . . . . .	85	80	65	58	78	65	65	88	76	97	...
Spain . . . . .	116	132	131	152	143	134	123	115	119	110	122
France . . . . .	94	83	67	64	74	84	88	84	94	93	89
Hungary (Spinning) <sup>a)</sup> . . . . .	(80)	(77)	(108)	(79)	(97)	(149)	(106)	(143)	(142)	(141)	(85)
Italy <sup>b)</sup> . . . . .	(90)	(83)	(75)	(75)	(74)	(79)	(78)	(82)	(85)	(86)	(84)
Chile <sup>a)</sup> . . . . .	(154)	(228)	(324)	(432)	(379)	(287)	(299)	(393)	(295)	(273)	(249)
United States . . . . .	75	85	66	42	76	77	91	95	118	85	78
Japan : Spinning . . . . .	139	189	189	201	199	230	213	238	253	246	228
Weaving . . . . .	99	99	114	93	99	115	94	80	82	74	62

<sup>a)</sup> Base : 1927-1929.

<sup>b)</sup> Base : 1928-1929.

remarkable expansion of wool spinning in Hungary, Norway, Chile, Japan, Australia and New Zealand, and of weaving in Greece, Norway, the U.S.S.R. and Australia. All countries for which 1933 figures are available, except Spain, Chile and Japan (weaving section), experienced a substantial recovery in that year.

*Natural Silk.* — Indices of activity in the natural-silk industry are given in Table XX.

It will be seen that, in the United States, the world's greatest producer of silk tissues, silk manufacture was better maintained than that of most other textiles, but it contracted considerably in 1933, the lowest point being reached at the end of that year. The British industry has expanded continuously since 1932, when protection was increased and reached a record in the first quarter of 1934. Minor producers — Hungary, Portugal and Greece (annual index), have enlarged their silk industries still more rapidly. Meanwhile, the industries in France, Switzerland and Germany (annual index) have been seriously affected by the depression and by Japanese competition in foreign markets.

*Artificial Silk.* — This is one of the very few commodities the production of which grew steadily throughout the depression years. World production of artificial-silk yarn is shown below (metric tons) :

1925	1929	1930	1931	1932	1933
84,620	190,130	192,860	224,620	240,200	302,500

The output in 1933 exceeded the average for 1925-1929 by 123%. While the United States has remained the world's greatest producer, Japan, has developed her artificial-silk industry more rapidly than any other country and rose to the second rank in 1933 ;<sup>2</sup> the rapidly growing Asiatic market has been almost entirely captured by the Japanese industry. The major European producers — the United Kingdom, Italy, Germany and France, united in a cartel together with other producers — also reached record figures in 1933. Until recent years, artificial silk tended to react favourably,

<sup>1</sup> For sources and notes, see Appendix II, Table 14.

<sup>2</sup> See the *Statistical Year-Book of the League of Nations*, 1933-34, Table 51.



Table XX.

QUARTERLY INDICES OF ACTIVITY IN THE NATURAL-SILK INDUSTRY.<sup>1</sup>  
(Average 1925-1929 = 100.)

Country	1930	1931	1932				1933				1934
	Average of quarters		I	II	III	IV	I	II	III	IV	I
France . . . . .	75	61	28	34	38	41	35	42	50	42	47
Hungary (spinning) <i>a</i> ) . . . . .	(128)	(154)	(191)	(138)	(156)	(146)	(165)	(141)	(126)	(154)	(160)
Italy <i>b</i> ) . . . . .	(94)	(89)	(76)	(71)	(58)	(67)	(75)	(78)	(79)	(83)	(84)
Portugal <i>c</i> ) . . . . .	(100)	(181)	(60)	(133)	(201)	(198)	(238)	(182)	(461)	(180)	(427)
United Kingdom (Board of Trade) <i>d</i> ) . . . . .	114	119	114	133	132	128	132	134	130	148	157
Switzerland . . . . .	52	41	28	26	33	26	20	26	25	25	33
United States (deliveries) . . . . .	106	108	104	81	112	104	81	109	86	69	86
Japan (weaving) . . . . .	95	94	84	109	115	115	126	159	131	144	...

*a*) Base : 1927-1929.

*b*) Base : 1928.

*c*) Base : 1930.

*d*) Base : 1924, 1927-1929.

rather than the reverse, upon the demand for silk, cotton and wool, with which it was frequently mixed. During recent years, however, artificial silk, benefiting by constant technical progress and reduced prices, has tended to compete more and more with the other textiles in certain branches, especially knitting.

*Tobacco and Drink Industries.*

The tobacco and drink industries, taken together, constitute in the majority of countries the most important group of consumption industries, next to textiles.

Quantitative data relating to the tobacco industry are somewhat scanty. Table XXI shows indices of tobacco manufactures for five important countries. In interpreting these indices, it should be noted that consumption of tobacco is affected, not only by changes in purchasing power, but also by changes in taxation.

Consumption of tobacco products has shown a steady upward trend since the war. The tobacco industry was among the last to be affected by the depression and reacted quickly to the improvement in general economic conditions in 1933, generally exceeding the average pre-depression level at the beginning of 1934. The considerable drop in the German indices for 1931 is attributable, not only to reduced purchasing power, but also to increased taxation. But, while total consumption has remained at a high level during the depression, there have been distinct shifts within the group. The spread between the manufacture of cigars and cigarettes in all countries for which relevant figures are available, is indeed remarkable.<sup>2</sup> Special studies for Germany and Belgium show further that there has been a decided shift within the cigarette group in favour of cheaper cigarettes.<sup>3</sup>

<sup>1</sup> For sources and notes, see Appendix II, Table 15.

<sup>2</sup> In the United Kingdom, the production of cigarettes increased between 1924 and 1930 by 52% in weight while that of cigars, cavendish and pipe tobacco declined by 16%.

<sup>3</sup> *Vierteljahrshefte zur Konjunkturforschung*, 9 : 2 : B, page 142. — *Bulletin de l'Institut des Sciences économiques*, Louvain (V : 1, page 15).

Table XXI.

QUARTERLY INDICES OF TOBACCO MANUFACTURES.  
(Average 1925-1929 = 100.)

	1930	1931	1932				1933				1934
	Average of quarters		I	II	III	IV	I	II	III	IV	I
Germany <sup>1</sup> : Cigarettes a) . . . .	100.0	81.5	86.6	105.4	102.6	92.7	90.9	108.6	107.3	98.7	100.7
Cigars a) . . . . .	115.8	86.0	66.0	79.7	80.5	95.3	74.6	90.2	95.6	106.5	89.6
Pipe tobacco a) . . . . .	107.4	77.6	85.0	94.2	93.1	86.5	89.2	90.9	90.1	86.1	86.4
Belgium <sup>2</sup> : Tobacco products . . . .	120.5	119.6	93.8	108.9	112.5	104.5	107.1	91.1	.....	.....	.....
Cigarettes . . . . .	135.7	135.7	95.2	126.2	131.0	104.8	108.7	102.4	.....	.....	.....
Cigars . . . . .	104.6	102.4	85.0	71.9	75.2	103.5	100.2	63.2	.....	.....	.....
United Kingdom <sup>3</sup> : Tobacco manufacture . . . . .	118.4	111.7	102.9	113.5	106.0	113.6	106.2	116.3	113.5	115.5	121.9 <sup>b</sup>
Canada <sup>4</sup> : Tobacco manufacture . . . .	122.8	110.3	104.0	91.1	85.2	87.8	98.3	94.9	103.1	102.9	100.2
Cigarettes . . . . .	130.6	118.9	111.1	95.3	90.0	95.5	113.1	105.6	115.4	116.7	116.4
Cigars . . . . .	99.3	82.5	83.0	77.4	69.3	64.6	48.7	63.2	66.6	63.4	52.7
United States <sup>5</sup> : Tobacco products . . . .	110.5	103.7	97.6	94.7	93.6	90.0	91.9	110.7	99.7	91.7	109.4
Cigarettes . . . . .	121.9	115.3	107.1	107.1	106.1	100.7	105.4	132.1	113.1	103.9	128.2
Cigars . . . . .	90.2	80.9	76.4	66.7	66.0	64.3	62.9	65.0	70.9	64.3	71.2

a) Base: 1928.

b) December 1933 to February 1934.

The following table shows the production per head of population of spirits, reduced to 50% of alcohol content, and of beer, for a number of European countries.<sup>6</sup> Information for 1933 is not available. It should be noted that, wine being excluded, the table does not afford any indication of the consumption of alcoholic beverages in general,<sup>7</sup> nor does it represent the total production of distilleries as industrial alcohol is excluded. The production of industrial alcohol has made rapid headway in recent years.

Consumption of alcoholic beverages has shown a definite decline over a long period. This tendency has been accentuated during the depression in most countries. However, the drink industry, like the tobacco industry, was affected by the depression later than most others, and in many countries the decline did not begin until in 1931. In some countries there would appear to have been a shift in favour of lighter beer during the depression.

<sup>1</sup> *Wochenberichte des Instituts für Konjunkturforschung.*

<sup>2</sup> *Bulletin de l'Institut des Sciences économiques.* Louvain (V: 1, November 1933).

<sup>3</sup> London and Cambridge Economic Service.

<sup>4</sup> *Monthly Review of Business Statistics.*

<sup>5</sup> *Federal Reserve Bulletin.*

<sup>6</sup> The figures relating to beer refer to production, which may be taken as practically equivalent to consumption, the foreign trade in beer being negligible. The figures relating to spirits refer in most cases to supplies ready and available for consumption. They are generally more representative of production than of consumption, although often used as an index of the latter. The data are based on official records of the different national administrations; the table has been supplied by the courtesy of the International Bureau against Alcoholism, Lausanne.

<sup>7</sup> Production of wine is dealt with in Chapter II.

Table XXII.

PRODUCTION OF SPIRITS AND BEER.  
(Litres per head of population.)

Country	Spirits (50%)					Beer				
	1928	1929	1930	1931	1932	1928	1929	1930	1931	1932
Germany . . . . .	2.9	2.0	1.5	1.1	...	85.6	90.0	74.7	56.8	51.4
Austria . . . . .	3.7	4.0	3.5	3.5	2.7	80.0	77.9	75.6	59.0	45.8
Belgium . . . . .	2.6	3.0	3.2	2.7	2.2	182.0	186.0	201.0	218.0	204.0
Bulgaria . . . . .	2.9	2.5	3.3	2.8	...	1.9	2.0	1.2	1.1	2.1
Denmark <sup>1</sup> . . . . .	1.1	1.2	1.1	1.1	0.9	54.6	56.4	60.3	57.9	52.7
Estonia . . . . .	8.4	7.5	6.5	6.2	5.1	11.3	10.8	8.6	7.1	6.5
France . . . . .	5.3	5.5	5.7	...	...	31.2	33.6	35.1	35.1	...
Hungary . . . . .	2.7	2.2	2.3	1.0	0.5	7.9	7.0	5.2	3.6	2.1
Irish Free State . . . . .	1.8	1.8	1.8	1.7	1.5	57.7	57.2	57.2	54.5	44.0
Norway . . . . .	2.0	2.3	2.3	2.1	1.9	18.5	18.2	18.7	14.8	15.0
Netherlands . . . . .	1.9	2.4	2.5	2.3	2.0	27.8	28.0	27.5	25.3	21.7
Sweden <sup>2</sup> . . . . .	4.6	4.7	4.8	4.9	4.5	24.6	25.0	27.4	26.7	25.6
Switzerland . . . . .	4.7	7.1	...	...	...	58.7	63.5	...	...	...
Czechoslovakia . . . . .	4.5	4.7	4.4	4.0	3.4	100.5	105.5	103.2	94.2	87.2
United Kingdom . . . . .	1.3	1.3	1.1	1.0	1.0	91.4	92.6	91.4	80.7	68.3

The sharp decline in the production of beer in the United Kingdom in 1932 was largely due to an increase in its duty ; in 1933, when the duty was reduced and general purchasing power rose, production increased by 5%. The amount of spirits retained for consumption increased slightly. In Germany, brewing showed a small further drop in 1933.

<sup>1</sup> Including light beer.

<sup>2</sup> Excluding light beer, consumption of which has varied between 18 and 22 litres per head.

### III. INTERNATIONAL TRADE AND SHIPPING.

#### " QUANTUM " CHANGES IN INTERNATIONAL TRADE.

It would fall outside the purpose of the present volume to enter upon any detailed analysis of international trade such as is made in the annual *Review of World Trade*.<sup>1</sup> It is of particular interest, however, to examine to what extent the changes in the production of primary goods and in industrial activity, as discussed in the preceding chapters, are reflected in changes in the quantum of international trade. For this purpose, a few data concerning the movement of the value and quantum of international trade are given below.

The recorded aggregate import value of goods in international trade rose from \$33,150 million in 1925 to \$35,601 million in 1929, but fell to \$12,485 million gold in 1933.<sup>2</sup> The corresponding export figure, which differs from the import figure partly because it excludes freight and insurance, rose from \$31,434 million in 1925 to \$33,040 million in 1929, and fell to \$11,694 million gold in 1933. The percentage movement of the value of the total trade (imports plus exports) of each continental group, and of the world as a whole, during the period under review was as follows :

Table I.

#### PERCENTAGE MOVEMENT OF THE GOLD VALUE OF TRADE.

Average 1925-1929 = 100.

Continental groups	1925	1929	1930	1931	1932	1933
Europe, excluding U.S.S.R.	97.9	106.1	90.5	66.5	43.7	39.6
Europe, including U.S.S.R.	97.7	106.3	91.4	67.8	44.6	39.9
North America . . . . .	97.8	104.1	76.6	49.7	33.1	27.1
Latin America . . . . .	97.4	106.9	79.1	53.3	35.5	33.3
Africa . . . . .	93.3	109.9	93.1	70.2	57.1	54.9
Asia, excluding Asiatic Russia . . . . .	103.7	98.6	75.1	53.8	37.8	35.1
Oceania . . . . .	104.3	95.5	69.3	39.7	34.7	34.5
World . . . . .	98.6	104.6	84.7	60.6	41.0	36.9

The above figures show the changes in the value of trade and cannot therefore be compared with the world indices of the volume of production given earlier. For a number of countries, representing about three-quarters of world trade, calculations are made with a view to showing the variations in the quantum of imports and exports. On the basis of these data, it is possible to calculate rough world indices of the movement of prices and the quantum of goods entering into international trade as shown in Table II.<sup>3</sup>

<sup>1</sup> Last issue, *Review of World Trade, 1933*. League of Nations, Geneva, 1934.

<sup>2</sup> United States gold dollars according to the old parity (1.50463 gramme gold).

<sup>3</sup> The calculations are subject to certain qualifications (cf. *Review of World Trade, 1933*).

Table II.

INDICES OF THE VALUE AND QUANTUM OF WORLD TRADE.

Average 1925-1929 = 100.

	1925	1929	1930	1931	1932	*1933
World imports:						
Prices (gold) . . . . .	107.5	95	82.5	65	50.5	45
Value (gold) . . . . .	98	105	86	61.5	41.5	37
Quantum . . . . .	91	110.5	104	95	81.5	82
World exports:						
Prices (gold) . . . . .	108	95	83	63.5	50	44.5
Value (gold) . . . . .	99.5	104	83.5	59.5	40.5	37
Quantum . . . . .	92	109.5	100.5	94	81	82.5
Total world trade:						
Prices (gold) . . . . .	108	95	83	64	50.5	44.5
Value (gold) . . . . .	98.5	104.5	84.5	60.5	41	37
Quantum . . . . .	91.5	110	102.5	94.5	81.5	82.5

According to these figures, the fall in the quantum of international trade, which set in with the economic depression nearly five years ago, was arrested in 1933, when a slight increase in that quantum occurred. Attention should be paid, however, to the fact that the figures for 1933 are provisional.

The information concerning the fluctuations in price and volume of trade is not sufficient to allow indices of the kind given above to be calculated for imports and exports of each continental group of countries. Such information can be given only for Europe and North America, as shown in Table III.

Table III.

INDICES OF THE PRICES AND QUANTUM OF GOODS ENTERING INTO THE TRADE OF EUROPE AND NORTH AMERICA.

Average 1925-1929 = 100.

Continental groups	Imports						Exports					
	1925	1929	1930	1931	1932	*1933	1925	1929	1930	1931	1932	*1933
Europe:												
Prices (gold) . . . . .	107	97	84.5	66	50.5	46	105.5	96.5	89	73	58	53
Quantum . . . . .	92.5	108.5	107	102.5	89	87.5	91.5	111.5	104.5	92.5	75.5	75
North America:												
Prices (gold) . . . . .	108.5	91.5	76	58.5	46.5	36	110	96	84.5	64.5	54.5	44
Quantum . . . . .	88	115	102	86.5	69.5	73	90.5	107.5	90	76	62	62.7

\* Provisional indices.

In 1929, foodstuffs (including live animals) represented about one-quarter, raw materials and semi-manufactures somewhat more than one-third, and manufactured articles thus nearly two-fifths of the value of all goods entering into trade. Estimates of the changes since 1929 in the quantum of the world trade in goods belonging to the three groups in question are reproduced below, together with the indices of world production by groups given in the preceding chapters (in order to facilitate the comparison, the latter indices have been converted to a 1929 basis):

<i>Indices of the Quantum of World Trade</i>				<i>Indices of World Production</i>			
	1929	1932	*1933		1929	1932	*1933
Foodstuffs . . . . .	100	91	83.5	Crude foodstuffs. . . . .	100	101	100
Materials, raw or partly manu- factured . . . . .	100	80	86.5	Raw materials. . . . .	100	73	79
Manufactured articles . . . . .	100	58	59	Manufacturing and mining <sup>1</sup> .	100	68.5	77

The two groups of indices are not strictly comparable, mainly because, in the case of the trade indices, manufactured food products are included with "Foodstuffs" and semi-manufactured articles (other than foodstuffs) with "Materials, raw or partly manufactured", while both these categories are considered in the production index for the manufacturing industry; in addition, the latter index includes mining and, to some extent, also building activities. In spite of this lack of correspondence, however, the figures may serve as basis for a rough comparison between the trend of production and trade.

While the production of crude foodstuffs in 1932 and 1933 remained approximately on the level of 1929, the trade in foodstuffs was lower than in that year by 9 per cent in 1932 and — according to the provisional estimate available — by as much as 16.5 per cent in 1933. The difference between the movement of production and trade is largely to be attributed to increased self-sufficiency in numerous food-importing countries. Thus, with the increase in the cereal production in several European industrial countries, the cereal exports of certain other countries, particularly the United States, have declined, and the growing sugar production in the main consuming countries in Europe, North America and Asia has entailed a reduction in the total quantity of sugar exported by Cuba and Java by approximately one-half since 1929. The decline in the international trade in foodstuffs has not been without exception, however — thus, the quantities of butter and coffee entering into trade were greater in 1933 than in 1929, and the food exports of Australia and New Zealand have increased in quantum during the depression.

The index of industrial production (including mining) in 1933 stood at 77, while that for the quantum of world trade in manufactured articles was as low as 59. As was mentioned above, the indices are not closely comparable, but there can hardly be any doubt that at least some part of the discrepancy is due to an increase in the industrial self-sufficiency of numerous countries. Not only have several undeveloped countries pursued a policy of industrialisation, the results of which are particularly clear in the textile industry, but the exchange of manufactured articles between industrial countries has recently fallen considerably. The share of manufactured articles produced which enters into international trade fell markedly from 1932 to 1933, when industrial activity rose by over 12 per cent, while the rise in the quantum of manufactured articles in foreign trade is estimated at less than 2 per cent.

\* Provisional figures.

<sup>1</sup> The figures for raw materials given on the preceding line also include mined products.

Judging from the figures given on the preceding page, the trade in raw materials and semi-manufactures fell less between 1929 and 1933 than the production of raw materials. In view of the lack of comparability between the two series of figures, too much importance should not be attributed to the discrepancy between them, which is not very considerable. Both the indices rose by 8 per cent from 1932 to 1933. It may be, however, that the increase in industrial self-sufficiency has implied that the share of raw materials produced which enters into international trade was greater in both these years than in 1929. Thus, a growing share of the United States exports of mineral oils consists of unrefined oils which are being refined in the consuming countries. On the other hand, the expansion of, for example, the cotton industry in India and China has entailed a reduction, not only in their import of cotton manufactures, but also in their export of raw cotton.

It does not fall within the scope of this chapter to analyse the causes of the increase in industrial and agricultural self-sufficiency and the ensuing decline in the importance of international trade in foodstuffs and manufactured articles during the last few years. But there is reason to stress the fact that this development is not the result of increased trade restrictions alone, but is determined by a variety of factors, among which may be mentioned the change in price relations, and accordingly in the terms at which goods are exchanged between countries of a different economic structure, the disorganisation of the international capital markets and the depreciation of the gold value of the currencies of numerous countries.

#### MERCHANT SHIPPING.

It is interesting to compare the movement of the quantum of world trade with the fluctuations in shipping activities as reflected in the tonnage of ships entering or clearing in oversea traffic. Owing to the defectiveness of the information available for numerous countries, it is not possible to compile as complete world statistics for shipping as for trade ; but the indices of shipping activity given in the following table, calculated on the basis of the gross tonnage of the ships cleared in the ports of forty-two countries representing together 83 per cent of world trade, may be taken as representative of the changes which have taken place. In the case of countries for which figures covering the whole period under review were available for all ships (with cargo and in ballast) as well as for ships with cargo only, those for all ships were employed. In the case of a few countries, figures for 1933 had to be estimated on the basis of partial information available for that year. At the foot of the table two other series have been added for purposes of comparison, the one showing the changes of the *active* tonnage of the world's merchant marine (that is, the tonnage of existing merchant vessels less the tonnage of ships laid up),<sup>1</sup> and the other the movement of the quantum of world trade, as given above.

Between 1925 and 1929, the tonnage of ships cleared in the ports of the forty-two countries rose by 25 per cent and the quantum of world trade by 20 per cent. The active tonnage of the world's merchant marine rose, however, by only 11 per cent. The average speed of the ships rose, their loading capacity (in relation to the tonnage) increased, and probably this capacity was, on an average, more utilised at the end of this period of expanding trade than at the beginning.

Between 1929 and 1932, the tonnage of ships cleared fell by 16 per cent, the active tonnage of the world's merchant marine by 14 per cent, but the quantum of world trade by as much as 26 per cent. As was shown on a previous page, however, the trade in

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<sup>1</sup> The gross tonnage of existing merchant vessels rose from 64.6 million tons in 1925 to 70.1 million tons in 1931 and fell to 67.9 million tons in 1933 ; that of ships laid up fell from 6.6 million tons in 1925 to 3.4 million tons in 1929, rose to 14 million tons in 1932 and fell again to 11.4 million tons in 1933. The figures refer to the tonnage on June 30th of each year.

Table IV.

NET TONNAGE OF SHIPS CLEARED IN FORTY-TWO COUNTRIES, COMPARED WITH THE ACTIVE GROSS TONNAGE OF THE WORLD'S MERCHANT MARINE, AND THE QUANTUM OF WORLD TRADE.

Average 1925-1929 = 100.

	1925	1929	1930	1931	1932	1933
<i>Tonnage of ships cleared in the ports of:</i>						
Europe . . . . .	89	112.5	113	103.5	94.5	98.5
North America . . . . .	91	106	105.5	97	87.5	86
Latin America . . . . .	87	112.5	105.5	98	89	89.5
Africa . . . . .	92.5	112.5	114	108	107	113
Asia . . . . .	87.5	113	113.5	102.5	98.5	103
Oceania . . . . .	100	101.5	101	101	104	109
Total . . . . .	89	111.5	110.5	101.5	94	97
Active tonnage of the world's merchant marine, June 30th . . . . .	95.5	106	105	98	91.5	92.5
Quantum of world trade . . . . .	91.5	110	102.5	94.5	81.5	82.5

manufactured articles fell most in quantum; the reduction in the quantum of primary products entering into trade was approximately the same as the fall in the tonnage of ships cleared or in the total tonnage of merchant vessels in use. It is naturally the quantum of these products, whose volume is great in relation to their value, which determines the shipping activity, particularly as the greater fall in the quantum of manufactured articles affects shipping from industrial countries alone and is thus largely reflected, not in the tonnage of ships employed, but in the extent to which these ships are loaded. That the average utilisation of the loading capacity has fallen during the depression is proved by available figures concerning the tonnage of ships passing through the Suez and Panama Canals and the weight of the goods forwarded by these ships. The following figures show the average weight of the goods forwarded per register ton of these ships in the years 1930-1933, as percentage of the corresponding figures for 1929:

	1930	1931	1932	1933
Ships passing through the Suez Canal . . . . .	87	82	81	85
Ships passing through the Panama Canal . . . . .	92	83	77	81

According to these figures, each register ton carried on an average about 20 per cent less goods in 1932 than in 1929. As tramp ships, which are as a rule loaded to capacity, generally avoid passing through the canals, the figures undoubtedly overstate the reduction in the utilisation of the capacity of the ships employed in all shipping.<sup>1</sup>

The tonnage of ships cleared as well as the tonnage of all ships in use and the quantum of world trade was slightly greater in 1933 than in 1932.

<sup>1</sup> A more detailed study of certain economic problems involved in shipping during the depression years is contained in *World Economic Survey, Third Year, 1933-34.*



#### IV. PRICE MOVEMENTS.

The rapid decline in commodity prices which began late in 1929 and persisted, almost without interruption, for three years or more was stopped in many parts of the world in the course of 1933; in some countries and for some commodities, the downward movement was reversed. In the present chapter, the nature of this recent upward or horizontal movement of prices is analysed; and, in particular, an attempt is made to determine whether any progress has been made towards the restoration of more normal relationships among the various constituent elements of the price structure.<sup>1</sup> The discernment of international trends of major significance in the world price evolution is more difficult than hitherto; to a much greater extent than in previous years, the various national price systems have pursued an independent course. The most important of the discrepancies are due to differences in currency and monetary policy, but in part they are also due to specific economic conditions and economic (recovery) programmes in the various countries. Within the limits of the space available, it is not possible to discuss in detail all the factors affecting the price evolution in all countries during 1933. The plan is therefore followed of pointing out first some of the significant divergences among the movements of the general level of wholesale prices in different countries and relating them to currency policy; then of analysing the recent changes in the prices of important individual commodities; and finally, of discussing the movements of "relative prices" — *i.e.*, of the relationships among certain economic classes of commodities.

##### MOVEMENTS OF THE GENERAL LEVEL OF WHOLESALE PRICES.

The growing spread between the general level of wholesale prices in different countries during 1933 is illustrated in Table I below, which shows the percentage changes in the different official indices between February 1933 and February 1934. The table also shows, for countries where prices were higher in the latter month than in some previous month since the beginning of 1930, the percentage change between the month when prices touched their lowest level and February 1934; and finally, the net percentage change, in terms of both national currency and gold (in brackets and italics) between February 1929 and February 1934. With the exception just mentioned, all the measurements in the table are in terms of national currency.

Between February 1933 and February 1934 the movement, in terms of national currencies, of the wholesale price indices of the countries included in Table I ranged from an increase of 23 per cent in the United States of America to a decline of more than 10 per cent in Hungary. Differences in the methods of constructing the various indices and in their composition result, of course, in differences in their behaviour, and great importance should therefore not be attached to small discrepancies, but, insofar as the indices may be taken to reflect the economic structure of the countries concerned, substantial differences are of importance.

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<sup>1</sup> The previous disruption of the price relationships in the course of the depression has been analysed in the price chapter of the last two or three editions of this publication.

Table I.

MOVEMENT OF WHOLESALE PRICE INDICES.

Country	Percentage changes between		
	February 1933 and February 1934	Low point of depression and February 1934	February 1929 and February 1934
United States . . . . .	+ 23	+ 23 (Feb. 33)	- 23 (- 53)
South Africa . . . . .	+ 21	+ 22 (Oct. 32)	- 11 (- 43)
Canada . . . . .	+ 13	+ 13 (Feb. 33)	- 24 (- 54)
Egypt . . . . .	+ 10	+ 32 (May 33)	- 35 (- 59)
Peru . . . . .	+ 10	+ 16 (Apl. 32)	+ 2 (- 49)
Australia . . . . .	+ 9	+ 9 (Feb. 33)	- 19 (- 59)
Estonia . . . . .	+ 9	+ 11 (Mar. 33)	- 26 (- 54)
Netherlands . . . . .	+ 7	+ 11 (Apl. 33)	- 46 (- 46)
United Kingdom . . . . .	+ 6	+ 8 (Apl. 33)	- 24 (- 52)
Sweden . . . . .	+ 6	+ 7 (Apl. 33)	- 23 (- 55)
Denmark . . . . .	+ 6	+ 20 (Sept. 31)	- 18 (- 58)
Germany . . . . .	+ 5	+ 5 (Jan. 33)	- 31 (- 31)
Austria . . . . .	+ 4	+ 5 (Jan. 31)	- 15 (- 32)
India . . . . .	+ 3	+ 9 (Mar. 33)	- 38 (- 61)
New Zealand . . . . .	+ 2	+ 6 (Jan. 33)	- 10 (- 55)
Czechoslovakia . . . . .	+ 2	+ 3 (Jan. 34)	- 31 (- 42)
Switzerland . . . . .	+ 1	+ 2 (Mar. 33)	- 36 (- 36)
Norway . . . . .	+ 1	+ 4 (Sept. 31)	- 19 (- 54)
Latvia . . . . .	+ 1	+ 4 (Dec. 31)	- 33 (- 33)
Bulgaria . . . . .	+ 0	+ 6 (Jan. 34)	- 46 (- 46)
Finland . . . . .	+ 0	+ 14 (Sept. 31)	- 10 (- 52)
France . . . . .	- 1	+ 4 (May 33)	- 39 (- 39)
Japan . . . . .	- 1	+ 21 (June 32)	- 22 (- 72)
Greece . . . . .	- 3	+ 39 (Aug. 31)	+ 7 (- 54)
Poland . . . . .	- 5	+ 0 (Feb. 34)	- 41 (- 41)
Italy . . . . .	- 6	+ 0 (Feb. 34)	- 45 (- 45)
Belgium . . . . .	- 6	+ 0 (Feb. 34)	- 44 (- 44)
Yugoslavia . . . . .	- 7	+ 5 (Sept. 33)	- 40 (- 40)
China . . . . .	- 9	+ 1 (Jan. 34)	- 5 (- 52)
Hungary . . . . .	- 11	+ 6 (Nov. 33)	- 46 (- 46)

Factors of a special nature influenced the prices of commodities in the United States during 1933, and it will be necessary to revert to the movement of prices in that country below. Apart from the United States, the most substantial upward movement in the wholesale level of commodity prices took place in South Africa, where the index is heavily weighted with wool, which rose sharply in price, and in Canada, whose currency remained linked to the American dollar during the greater part of the year and where the price development has been much influenced by that taking place in the United States. The wholesale price level in the United Kingdom and in several other countries whose currencies are more or less closely associated with sterling rose by 5 to 10 per cent. Prices appear to have risen more in the Netherlands than in any other country operating an unrestricted gold standard, but this is evidently due, in part at least, to the composition of the Dutch index, which is heavily weighted with certain raw materials which rose considerably in price. In Germany, the general level of wholesale prices rose by 5 per cent. The policy of deflation, which reached its culmination in the Fourth Emergency Decree of 1931, was partially arrested with the adoption of the tax-remission scheme during the latter half of 1932. In 1933, a policy of monetary ease was pursued in Germany; the Reichsbank engaged in open-market operations, and certain forms of Government paper (in particular, *Arbeitsbeschaffungswechsel*, *Steuergutscheine* and *Zinsvergütungscheine* were put into

circulation in connection with the public works programme and other measures of economic policy of the Government and made eligible for collateral borrowing. The index of Switzerland rose by only 1 per cent, while that of France fell by 1 per cent and the indices of Poland, Italy and Belgium declined by 5 per cent or more. On the basis of these figures, it is, of course, impossible to state to what extent the depreciation of the American dollar and the failure of the general level of commodity prices in the United States to rise in proportion intensified the pressure of deflation in the gold-standard countries during 1933. In the course of 1932, wholesale prices fell by 10 per cent or more in all these countries: in each case, the fall was greater than in 1933. It is, however, worthy of note that, in France and Italy, special measures of price deflation were taken in April 1934; in both countries, reductions in State salaries were accompanied by legal or administrative provisions designed to bring about a further reduction in retail prices. Indeed, after the devaluation of the dollar at the end of January, 1934, prices declined again in the majority of gold standard countries, including the Netherlands. The price indices of most agricultural States of Central and South-Eastern Europe fell during 1933. The fall in Hungary, indeed, was greater than in any other country included in the table. The increased difficulties of export — resulting in part from the further depreciation in the currencies of non-European agricultural States — put a heavy pressure on agricultural prices in these countries, and the discrepancies between agricultural and industrial prices exercised a general deflationary influence.

An examination of the second column of Table I will show that, in all countries except Belgium, Italy and Poland (in all of which, it may be observed, the gold standard was maintained), prices reached their lowest point in some month prior to February 1934. In Czechoslovakia<sup>1</sup> and Bulgaria, the low point was not reached until January 1934, while in most other cases it was reached during the first half of 1933.

The third column shows that, in terms of national currency, the general level of wholesale prices was higher in Greece and Peru in February 1934 than in the corresponding month of 1929. In all other countries, prices were lower than in 1929: the range was from 5 per cent in China to over 45 per cent in Bulgaria, Hungary and the Netherlands. Apart from China, whose currency is based on silver, the decline was least in South Africa, New Zealand and Finland — about 10 per cent. In Austria the decline was 15 per cent. The price indices of most countries which had officially abandoned the gold standard (including Japan, the United Kingdom and the United States) were, in terms of national currency, about 20-25 per cent lower; the most significant exceptions are Egypt and India, where prices were still at least 35 per cent lower in February 1934 than in February 1929. The price levels in all countries which still remained on the gold standard, with or without exchange-control, at the beginning of 1934 were more than 30 per cent lower than at the beginning of 1929; and in the great majority of cases (Germany and Czechoslovakia are significant exceptions) the decline ranged from 35 to 45 per cent (in the Netherlands, 46 per cent).

In terms of gold, the price levels of most of the countries which abandoned the gold standard were between 50 and 60 per cent lower in February 1934 than in February 1929, while, as just observed, the price levels of most countries remaining on the gold standard were 35-45 per cent lower. The greatest decline in gold prices occurred in Japan, where they were as much as 72 per cent lower in 1934 than in 1929 — the combined result of a 22 per cent fall in commodity prices in terms of yen and a 64 per cent depreciation in the gold value of the yen.

The inter-relationship between currency and price movements in certain countries must now be examined in greater detail. The connection between these two factors was most obvious in the United States, where, since April 1933, currency depreciation has been officially adopted as a technique of raising prices.

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<sup>1</sup> The gold content of the Czech crown was reduced by one-sixth on February 17th, 1934; the wholesale price index in March was 3 per cent higher than in January.

Diagram I.

PRICE AND EXCHANGE MOVEMENTS IN U.S.A.  
(March 4th, 1933 = 100.)

- Cost of gold franc.
- Basic commodities.
- ..... General wholesale price index.
- ..... Farm products.

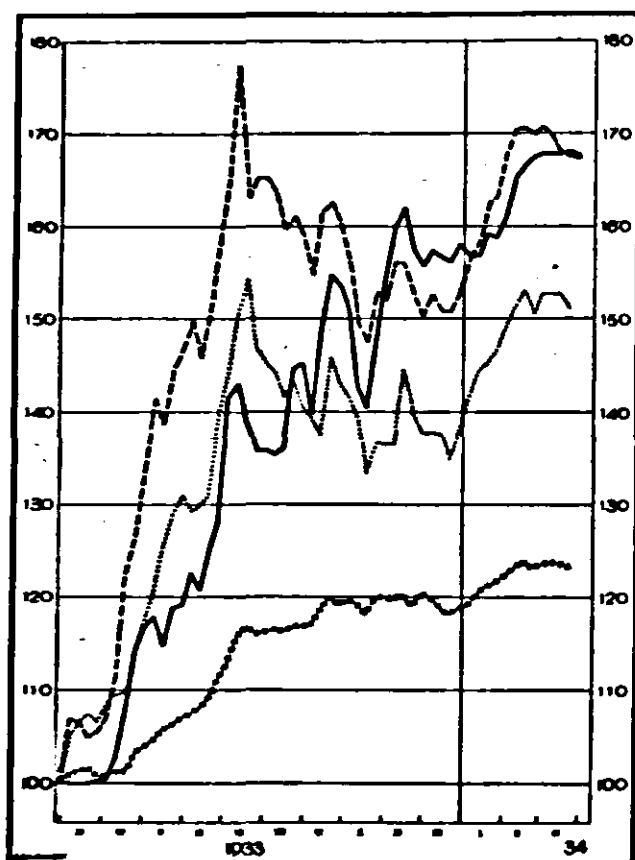


Diagram I compares the changes in the dollar cost of the French franc since March 4th, 1933, with the changes in the dollar wholesale prices of basic commodities,<sup>1</sup> farm products<sup>2</sup> and all commodities.<sup>3</sup> March 4th is a convenient date on which to base the different curves shown in the diagram, as the dollar was still at par and the various prices indices were at or near their minimum.

Prices in the United States began to rise before the dollar was depreciated: at the middle of April, both the prices of staple commodities and the official index of farm products were some 10 per cent higher than at the beginning of March, although the dollar exchange was still at par. After the imposition of a complete embargo on gold exports on April 20th, speculative purchases of raw products immediately brought about a very sharp rise in their price. By the middle of July, the Moody index was 75 per cent higher than in March, farm products were almost 55 per cent higher, while the price of foreign exchange was less than 45 per cent higher. A reaction against these rapid price increases — which outstripped the depreciation of the dollar — set in during the next three months; by the middle of October, the price index for basic commodities had fallen to less than 50 per cent and the index for farm products to less than 35 per cent above their March level. During August

and the first half of September, while commodity prices were falling, the dollar continued to depreciate, but in the latter part of September and in October the dollar appreciated, while, at the same time, commodity prices fell. At the end of October, the Administration inaugurated the programme of buying gold at prices higher than its dollar value as determined by foreign exchange rates. Originally, purchases were confined to newly-mined American gold, but they were subsequently extended to gold offered in foreign markets. The price offered for gold was continuously raised from the inauguration of the gold-buying policy until the end of November; at first, the exchange rate tended, though only imperfectly, to adapt itself to the buying price of gold, and prices of staple commodities and of farm products also moved upwards, but not to the same extent. But, in the latter part of November, the American exchange appreciated in spite of increases in the buying price of gold, and commodity prices fell. Towards the end of December 1933, when the American Government had ceased to raise its buying price for gold, the prices of both basic commodities and farm products in general began to rise sharply. At the beginning of April 1934, after the dollar had been devalued to about 60 per cent of its former gold

<sup>1</sup> Moody's Index; this is based on a small number of products traded on organised exchanges.  
<sup>2</sup> Bureau of Labor Statistics index.

content, the prices of basic commodities were, like the dollar price of gold, about 65 per cent higher than in March 1933, while farm products were almost 55 per cent higher.

The relationship between exchange and price fluctuations is by no means exact, though it is, on the whole, much closer for basic commodities trade on organised exchanges than for farm products or wholesale prices in general. There is, indeed, no apparent reason to expect that a change in the external value of a currency will automatically and mechanically bring about a corresponding change in the general level of wholesale prices in the country concerned, though it will probably raise the domestic prices of goods purchased abroad. It need not, however, raise them to a proportionate degree. The change in the external value of the currency may affect the course of prices elsewhere; if this effect is a depressing one, then clearly the "requisite" rise in the national price level is less than would be expected on the basis of the exchange rate. Furthermore, the price of goods in general can rise only in so far as the amount of means of payment (including bank deposits) or the efficiency of their use (velocity of circulation) increases, and there is nothing in currency depreciation itself which necessarily increases either.

Diagram I shows that, although the value of gold (as measured by the cost of the franc) was two-thirds higher in April 1934 than in March 1933, the general level of commodity prices in the United States was only a quarter higher.<sup>1</sup> Moreover it is impossible to say that even this increase in wholesale prices in the United States was the consequence, direct or indirect, of currency depreciation. Open-market operations by the Federal Reserve Banks, large public works undertakings by the Administration, agricultural relief measures, and various other policies have tended to increase the volume of means of payment. It is, however, worthy of note that a large part of this increase was employed for the repayment of indebtedness, and that the rise in prices and increase in production in the United States was financed less through an expansion of bank credit or increase in the amount of money in circulation than by a more active use of existing bank credit.<sup>2</sup>

As has just been observed, in considering the relationship between exchange and price movements in any country, account must be taken of the movement of prices elsewhere. Reference to Table I shows that in France, one of the principal gold standard countries, the general index of wholesale prices fell by 1 per cent in 1933. The month-to-month movements were not violent, never exceeding 1 per cent. If the wholesale price indices of the United States and of France respectively may be taken as fairly representative of the aggregate wholesale price movements within the two countries, then it is clear that the ratio between prices in the United States and France failed to adapt itself to the changes in the dollar value of the franc. It may be observed, however, that in the six months following the official devaluation of the American dollar, *i.e.*, from February to July 1934, the general index of wholesale prices fell by 7.8 per cent in France and rose by 1.6 per cent in the United States.

Diagram II below illustrates the relationships between prices and exchange rates in the United Kingdom and the United States. The diagram is divided into two parts: (a) shows the fortnightly movements in British and American prices of primary products and in British and American indices of wholesale prices in general; and (b) compares the changes in the ratio of American to British prices of primary products and commodities in general, at wholesale, with the changes in the value of the pound in terms of American dollars. All the series are based on September 18th, 1931, and cover the period from that date until April 1934.

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<sup>1</sup> Between the beginning of April and the end of August 1934, the official wholesale price index rose by a further 10 per cent and reached its highest level since the end of 1930; the index of farm prices rose by more than 12 per cent and was 70 per cent higher than in March 1933.

<sup>2</sup> Cf. chapter on the United States in "Commercial Banks, 1925-1933", Geneva, 1934.

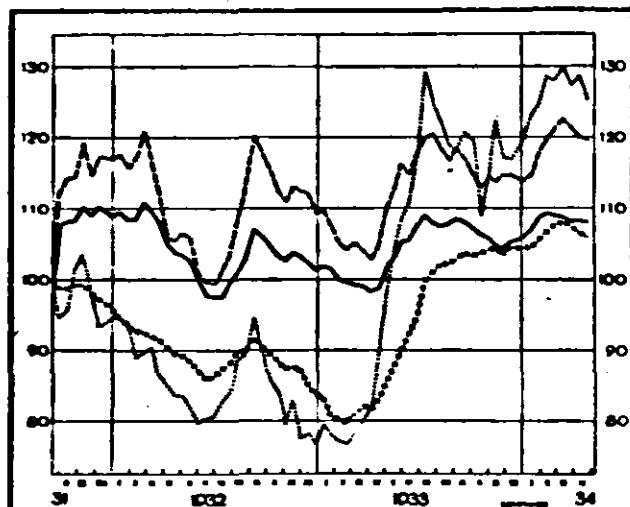
### Diagram II.

#### BRITISH AND AMERICAN PRICE AND EXCHANGE MOVEMENTS.

(September 18th, 1931 = 100.)

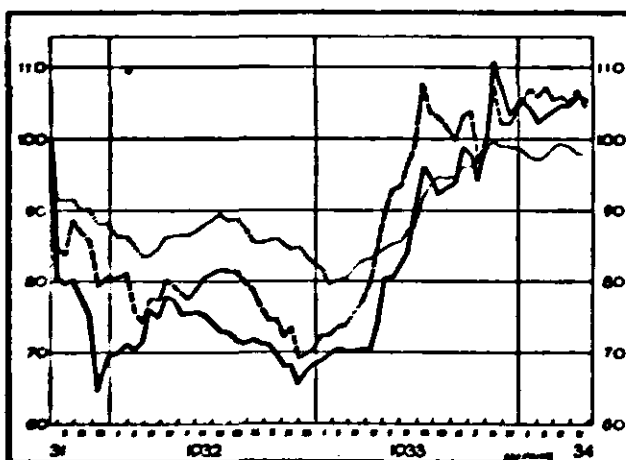
*Part (a).*

- Complete *Economist* index.
- Sterling prices of primary products.
- ..... Complete Irving Fisher index.
- ..... Dollar prices of primary products.



*Part (b).*

- Sterling-dollar exchange.
- Ratio of complete American to complete British wholesale price index.
- Ratio of dollar to sterling prices of primary products.



The main facts illustrated in the diagrams may be briefly summarised. Considering first the period September 1931-February 1933 as a whole, Diagram II (a) shows no net change in the complete sterling-price index, a rise of about 5 per cent in sterling prices of raw materials, a fall of about 20 per cent in the complete dollar-price index and of 23 per cent in the dollar prices of raw materials. Diagram II (b) shows that, over this period, American prices did not fall in relation to British prices by as great a percentage as sterling depreciated in relation to the dollar; the correlation between relative prices and the exchange rate was naturally greater for primary products than for the full indices.

Considering next the period February 1933 to April 1934 as a whole: dollar prices of primary products rose by 63 per cent and sterling prices of primary products by 15 per cent; the complete Irving Fisher index of wholesale prices in the United States rose by 33 per cent and the complete *Economist* index of wholesale prices in the United Kingdom by 9 per cent. Diagram II (b) shows that the changes in the ratio of dollar to sterling prices of primary products over this period just about kept pace with the changes in the exchange rate; indeed, these two curves were closer together from October 1933 to April 1934 than they had been at any time since the initial depreciation of sterling in September 1931. Although the full American index rose more than the full British index during this period, the relative rise in American prices was not as great as the appreciation of sterling in terms of dollars. But, as already observed, American prices had failed to fall proportionately during the earlier period and from June to the end

of October 1933, the exchange curve fluctuated very closely around the curve showing the ratio of dollar to sterling wholesale prices. After October, the price ratio remained fairly steady while sterling further appreciated in terms of dollars.

At the end of April 1934, dollar prices of primary products were more than 25 per cent higher than they had been in September 1931, sterling prices of primary products were

about 20 per cent higher, and both the complete *Economist* index and the complete Irving Fisher index were slightly more than 5 per cent higher. Sterling was 5 per cent higher in terms of dollars than its parity rate. Between the end of April and the end of August 1934, dollar and sterling prices of primary products rose by 20 and 8 per cent respectively, while the complete American and British wholesale price indices rose by 7 and 3 per cent, respectively; sterling fell slightly in terms of dollars.

Diagram II and the exposition of facts based on it in the preceding paragraphs require to be interpreted with considerable care. In particular (for reasons of both a statistical and an economic nature), the comparison of price curves and exchange rates does not provide an adequate basis for determining whether the dollar or the pound are "under-valued" or "over-valued" in relation to each other at any particular time. In the first place, though the price curves selected to represent the general level of wholesale prices are the most comparable available, neither can give a fully accurate picture of the price complex of either country. Secondly, all the curves used are based on September 18th, 1931, and show only fluctuations since that date. There is no reason for supposing that the relative price and exchange position at that date were in equilibrium; on the contrary, the British abandonment of the gold standard very strongly suggests the contrary. The choice of any other base period would, however, involve the same difficulty.

The other — economic — reasons for guarding against conclusions based upon a simple comparison of price movements and exchange rates are, perhaps, even more important. Even if it be assumed that the measure of the "under-valuation" or "over-valuation" of a currency reached by a comparison of wholesale price indices gives a fairly accurate reflection of the change in that country's competitive power in world trade, it is still possible that a given change in a country's exchange rate represents a movement towards a new equilibrium rather than the disturbance of an old one. For commodity trade is only one of the factors entering into any country's international accounts: in particular, a change in the direction and magnitude of the flow of capital (which is not necessarily reflected at once or adequately in changes in the relationship between various wholesale price indices) may counteract the influence on a country's balance of payments exerted by an "over-valuation" or "under-valuation" of the currency in the sense in which those terms have been hitherto defined.

Moreover, the assumption made in the previous paragraph (that a discrepancy between the relative movements of prices and exchange rates of any country vis-à-vis the rest of the world gives a fairly accurate reflection of a change in that country's competitive power in world trade and therefore of the probable trend of its balance of international payments, in so far as influenced by commodity trade) is open to serious question on several grounds. Trade movements are not only affected by cost and price relationships (though these are, no doubt, the most important element), but also by tariffs, quotas, contingents, etc. A simple comparison of price levels may therefore be misleading from the point of view of determining an equilibrium rate. Moreover, account must be taken of shifts in foreign demand for each country's products; these shifts, which may be in divergent directions, need not lead to immediate shifts in relative prices, but they do affect the "equilibrium" rate. Finally, a change in the price relationships of different commodity groups must affect the balance of international payments of different countries in different ways. For an industrial country holding large investments in States producing primary goods, for example, a rise in raw material prices would tend, not only to raise costs, but also to bring an increased return on foreign investment; for an industrial country holding no such investments, or selling chiefly to other industrial countries, there would be less counterbalancing effect to the increase in raw material costs, and its "equilibrium" rate would therefore tend to be lower.

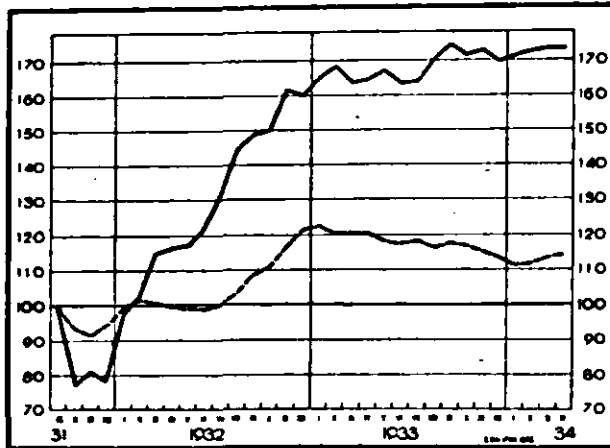
Mention has already been made of the fact that gold prices in Japan fell more between 1929 and 1934 than in any other country. The relationship between price and exchange movements in Japan and the United Kingdom since September 1931 is illustrated in

*Diagram III.*

PRICE AND EXCHANGE MOVEMENTS IN JAPAN AND THE UNITED KINGDOM.

(First part of September 1931 = 100.)

— Pound-yen exchange.  
 - - - - - Ratio of wholesale prices in Japan to wholesale prices in the United Kingdom.



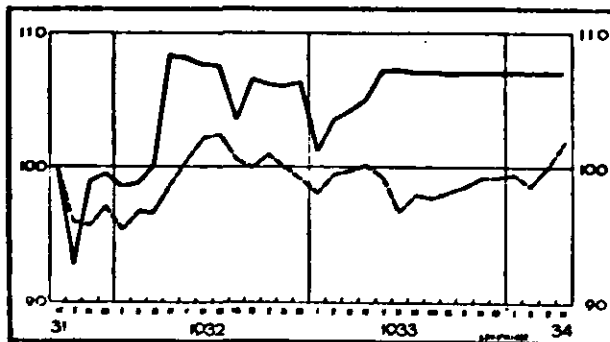
prices in Japan rose quite perceptibly (while in the United Kingdom they remained fairly stable) they did not do so nearly in proportion to the fall in the exchange. During 1933, the yen depreciated still further in terms of the pound and, while prices in the United Kingdom rose gently, they fell in Japan, and the discrepancy between relative prices and exchange rates was again increased.

*Diagram IV.*

PRICE AND EXCHANGE MOVEMENTS IN SWEDEN AND THE UNITED KINGDOM.

(First part of September 1931 = 100.)

— Pound-crown exchange.  
 - - - - - Ratio of wholesale prices in Sweden to wholesale prices in the United Kingdom.



Before leaving this question of the relationship between price and currency movements, brief reference may be made to the experience of China. Table I shows that wholesale prices fell more (9 per cent) in China in the course of 1933 than in any other country except Hungary. On the other hand, the net fall (5 per cent) between the beginning of 1929 and the beginning of 1934 was among the smallest recorded. The Chinese currency is based

Diagram III, which is constructed in the same way (though on a different scale) as the Diagram II (a). It shows the changes, since September 1931, in the ratio of Japanese to British wholesale prices and the simultaneous changes in the value of the pound in terms of yen. Official price indices are used in both cases.

In the last months of 1931, Japanese prices were reduced quite sharply, but not enough to bring the ratio between them and sterling prices down to the reduced value of the pound. Within a few months after Japan abandoned the gold standard in December 1931, the value of the yen had depreciated below its parity with the pound; this is shown in the diagram as a rise in pound-yen exchange. The depreciation of the yen was accelerated during the latter half of 1932, and though

The relationship between price and exchange movements has been closer among countries whose currencies have fluctuated less in relation to each other than those already examined. In Diagram IV, the changes in the ratio of Swedish to British prices are compared with changes in the sterling-crown exchange. Although (as compared with exchange rates) Swedish prices have been relatively low since the end of 1931, the two curves have generally moved in the same direction from month to month. The principal exception is in the middle of 1933. It should be observed that Diagram IV is, for clarity, drawn on a much larger scale than Diagram III, and the two must therefore not be compared without reference to the scales.



on silver and there is little doubt that the fall in the gold value of this metal from 1929 to 1932 enabled China to cut itself off from the disastrous decline in prices which paralysed the economic activity of most other countries.

*Diagram V.*

PRICE AND EXCHANGE MOVEMENTS IN THE UNITED STATES AND CHINA.

(January 1929 = 100.)

— American-Chinese exchange.  
 - - - - Ratio of wholesale prices in China to wholesale prices in the United States.

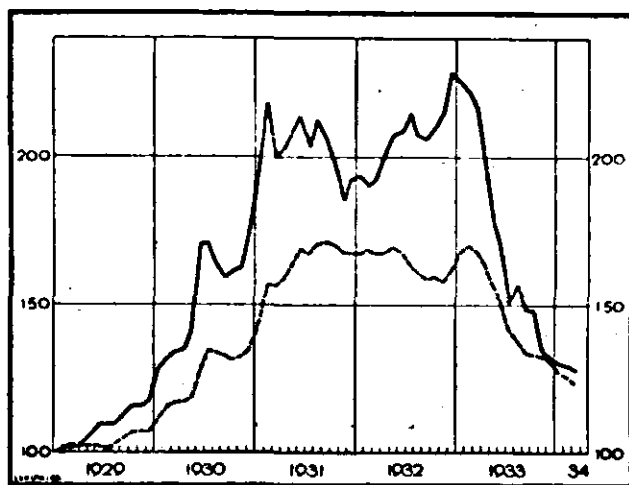


Diagram V compares the changes in the ratio of wholesale prices in China to wholesale prices in the United States with the changes in the dollar-Shanghai tael exchange (*i.e.*, the inverse of the dollar price of silver) since January 1929, on the basis of that month = 100. It will be seen that the general movements of the two curves are the same, though prices in China increased in relation to prices in the United States less than in proportion to the increase in the silver value of the dollar. The rise in silver prices during 1933 (fall in the exchange curve) was accompanied by a fall in commodity prices in China. The curve showing the price ratio dropped even more sharply than prices in China, as prices in the United States rose. At the beginning of 1934, relative wholesale price levels and the exchange rate between the United States and China stood in about the same relationship as at the beginning of 1929.

It may be observed that the coincidence of falling prices in China with the rise in the price of silver has led to proposals for a reduction of the silver content of the currency.

PRICE MOVEMENTS OF INDIVIDUAL COMMODITIES.

The measurement of the price movements of individual commodities on world markets in 1933 presents very serious difficulties. These are connected in part with the growing segregation of different national markets — due to tariffs, contingents and quotas, exchange restrictions, the decline in international lending, etc. — and in part with the fluctuation in the exchange-value of the currencies of some, at least, of the world's principal markets. The appropriate unit in which to measure individual commodity price movements depends, of course, on the purpose in view: from the point of view of illustrating the changes in the return per unit to the producer, the appropriate currency is that of the producer; from the point of view of showing variations in the cost per unit to consuming countries on the gold standard, the proper currency is gold. For practical reasons, it is impossible to show the changes in the price of the principal primary products in the currencies of all producing countries. Accordingly, their price quotations are taken mainly on two principal markets — the United Kingdom and the United States — and changes are shown both in terms of the currencies of these countries (with which, it may be observed, the currencies of many of the States producing the commodities in question are linked) and in terms of gold.

The growing divergences among price movements in different countries and the reduction of the significance which may now be attached to the price quotations on any single market as representative of "world market prices" are illustrated in Table II. This table is based on indices of the prices of foodstuffs and raw materials in ten different countries compiled by the London and Cambridge Economic Service. The indices are

identical in composition and weighting for each country ; they are therefore well adapted to illustrate the potency of the various special factors influencing the price development in each country.

Table II.

PERCENTAGE CHANGE IN PRICES OF FOODSTUFFS AND RAW MATERIALS IN CERTAIN COUNTRIES, DECEMBER 1932-DECEMBER 1933.

	Foodstuffs		Raw materials	
	National currency	Gold	National currency	Gold
United States . . . . .	+ 31.7	(- 17.2)	+ 28.0	(- 18.5)
Canada . . . . .	+ 22.7	(- 8.8)	+ 12.5	(- 16.4)
New Zealand . . . . .	+ 4.8	(- 8.4)	+ 9.5	(- 4.4)
Sweden . . . . .	+ 1.8	(- 7.0)	+ 1.8	(- 7.0)
United Kingdom . . . . .	- 5.4	(- 5.9)	+ 4.8	(+ 4.2)
Germany . . . . .	+ 1.5	(+ 1.5)	+ 3.3	(+ 3.3)
Holland . . . . .	+ 0	(+ 0)	+ 2.4	(+ 2.4)
France . . . . .	- 3.5	(- 3.5)	+ 2.7	(+ 2.7)
Belgium . . . . .	- 8.8	(- 8.8)	- 1.1	(- 1.1)
Italy . . . . .	- 15.1	(- 15.1)	- 2.3	(- 2.3)

The most important of the factors causing the price movements of different countries to diverge during 1933 were connected with currency movements. Thus, in terms of national currency, the prices of foodstuffs and raw materials rose by about 30 per cent in the United States, where the depreciation was greatest. But even if currency fluctuations be ignored, very serious discrepancies remain. The figures given in brackets show the changes in the *gold prices* of identical "bundles" of foodstuffs and raw materials in the various countries. It will be seen that, for foodstuffs, the variation in gold price ranges from a fall of 17 per cent in the United States to an increase of 1½ per cent in Germany. The price fall was, on the whole, less in countries importing foodstuffs than in exporting countries ; limitations of imports and special trade agreements maintained (relatively) the prices of certain products in these countries.

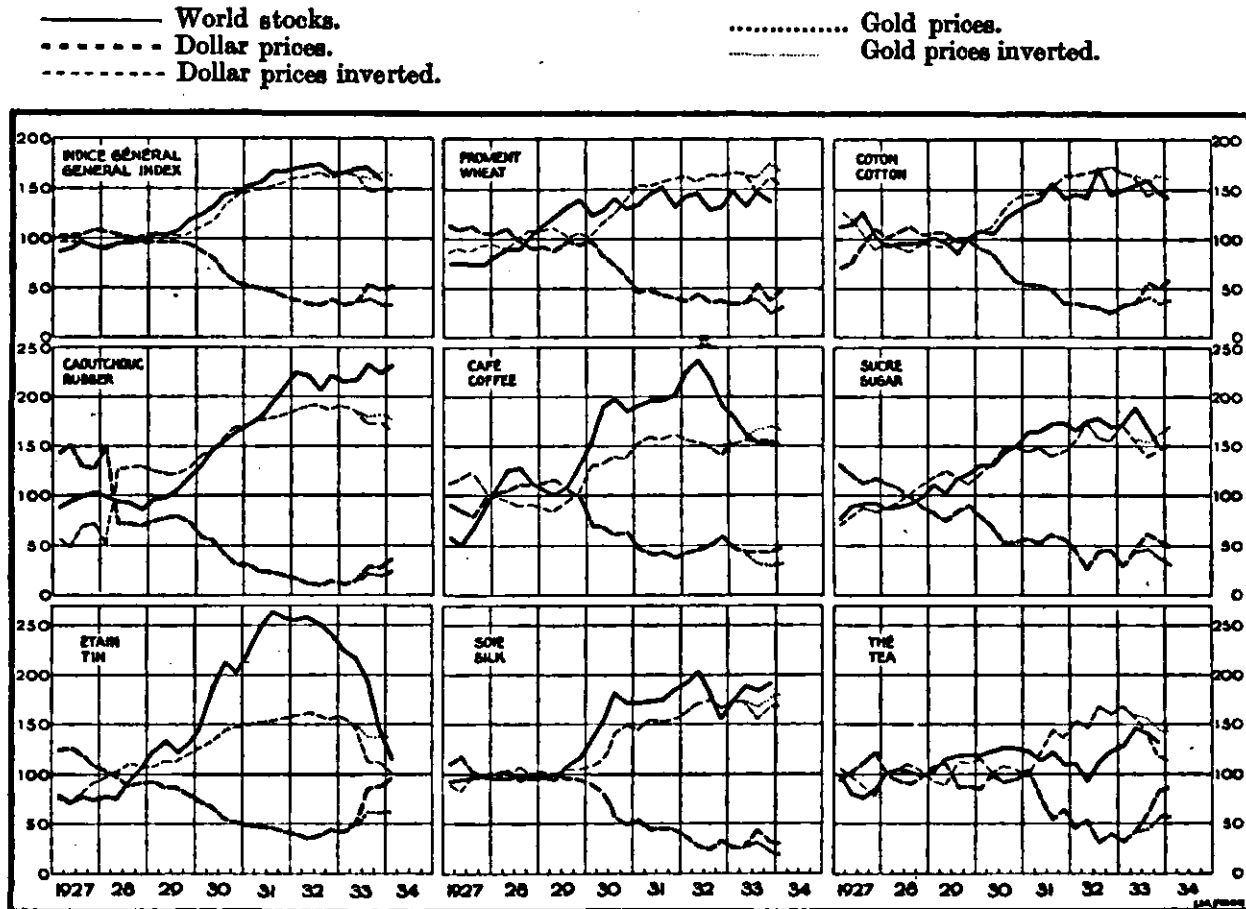
In terms of national currency, the prices of industrial raw materials rose in all countries included in Table II except Belgium and Italy, and in both cases the decline was considerably less than for foodstuffs. In terms of gold, the prices of these goods rose in the United Kingdom, Germany, France and Holland and, in addition to the countries previously mentioned, fell in New Zealand, Sweden, Canada and the United States. With the exception of the last two countries, where the prices of certain important foodstuffs were influenced by factors of a special nature, the prices of industrial materials rose more or fell less during 1933 than the prices of foodstuffs. This sequence is not surprising during a year of reviving business activity ; the demand for materials is much more sensitive to business conditions than is the demand for foodstuffs, and it is therefore to be expected that their prices should rise earlier.

The existence of large accumulated stocks of non-perishable commodities may prevent an increase in the demand from immediately bringing about a rise in price ; a factor of great significance in determining the price movements of such commodities would appear to be the relationship between *current* production and *current* consumption and consequently the accretions to, or reductions of, stocks. Throughout the whole of the post-war period, there was a very close inverse correlation between the movement of stocks and the movement of prices, prices tending to fall when stocks increased and *vice versa*. This correlation is illustrated in Diagram VI, which compares the fluctuations of a composite index of world

stocks and world prices, based on nine<sup>1</sup> commodities, and of each of the commodities separately. In order to bring out more clearly the degree of inverse correlation, a curve is given for the movement of prices *inverted*; on this curve a fall in price is shown as an upward movement, and *vice versa*.

Diagram VI.

MOVEMENT OF WORLD STOCKS AND WORLD PRICES OF PRIMARY PRODUCTS, 1927-1934.  
(1927-1929 = 100.)



The inverse correlation between the movement of stocks and prices is particularly striking for the composite indices shown in the upper left-hand corner of the diagram. For the individual commodities, the correlation is not so close, but for each product (except, possibly, tea) the quarter-to-quarter fluctuations of the stocks and the inverted price curves, as well, of course, as the general trend of their movement, are usually in the same directions.

As this publication is primarily concerned with the year 1933, the movement of stocks and prices during that year requires more detailed examination. In view, however, of the special nature of the factors affecting dollar prices in that year, it appears inadvisable to base the discussion exclusively on Diagram VI, even though *gold* as well as *dollar* prices are indicated since 1933. Before proceeding to an analysis of changes in sterling (and gold) prices of primary products, attention may be directed to Diagram VII, which shows, on a logarithmic scale, the weekly fluctuations in the dollar and gold prices of a wide variety of foodstuffs and industrial materials since the beginning of 1933.

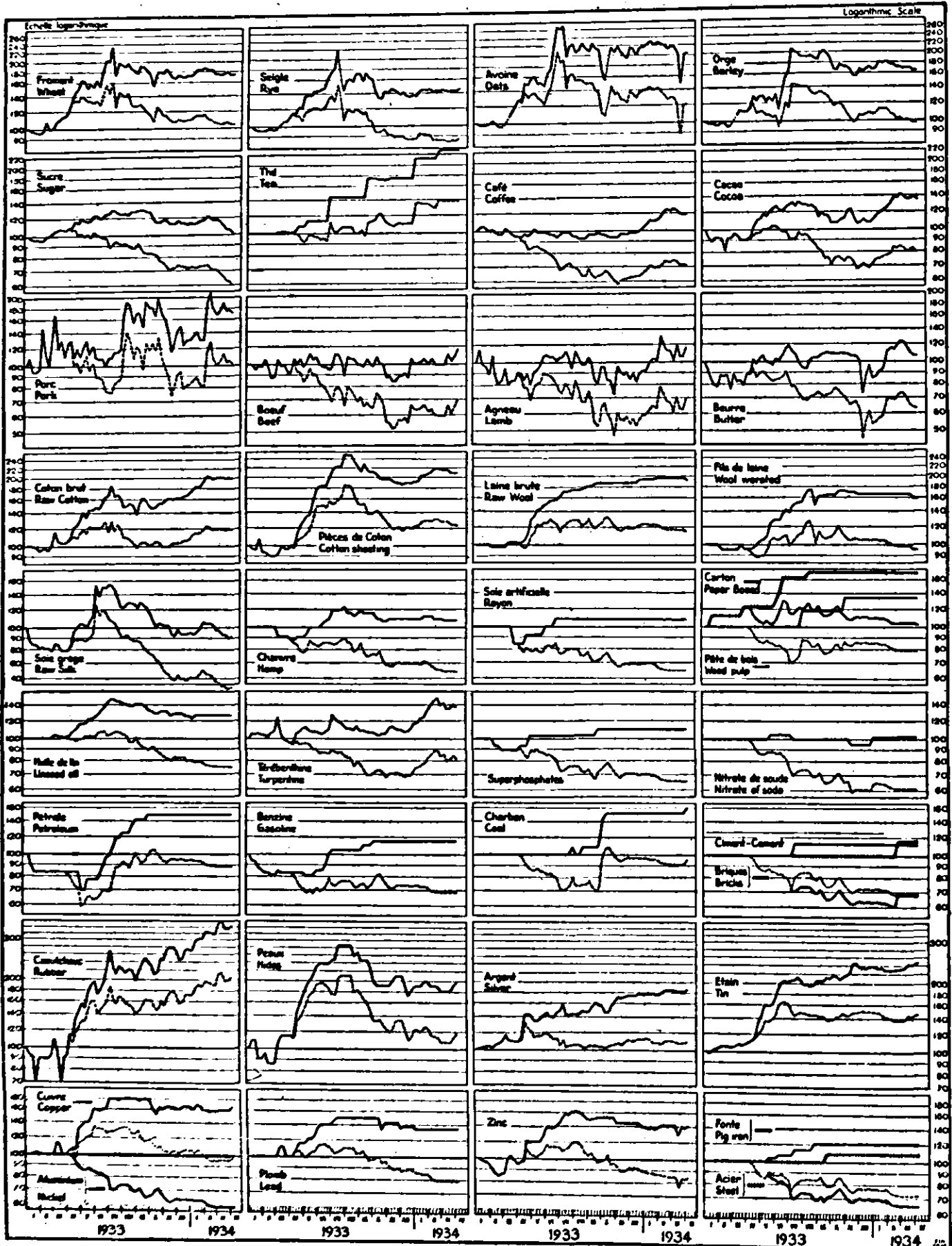
<sup>1</sup> Since 1931, copper has been excluded from the index.

Diagram VII.

FLUCTUATIONS IN PRICES OF CERTAIN COMMODITIES IN THE UNITED STATES, JANUARY 1933-APRIL 1934.  
(January 7th, 1934 = 100.)

———— Dollar prices.

..... Gold prices.



Space does not permit of a detailed examination of the factors affecting the price development of each individual commodity. Many products were already rising in price before the abandonment of the gold standard in April 1933, and in the months that followed, speculation drove the prices of the majority of products up very sharply. In addition to the increased demand for raw materials which characterised the economic recovery of these months, influences of a specific nature tended to raise the prices of certain commodities. Among these may be mentioned the Government action taken to control the production of crude petroleum, the purchase of cotton options by the Government at 10 cents per pound in return for an undertaking to reduce acreage, and the buying of hogs by the Agricultural Adjustment Administration. The tendency of most prices was downwards from the middle of July until the end of the year. In the first quarter of 1934, no clear general tendency can be discerned; substantial increases have taken place in the prices of cotton (partly due, it would appear, to impending legislation), coffee and animal foodstuffs, but wheat and sugar tended to decline and textiles other than cotton remained fairly steady.

At the beginning of April 1934, the gold price of wheat in the United States was only fractionally higher than its price in January 1933, and with the exception of tea, most important foodstuffs (and in particular coffee and sugar) were considerably lower. The gold prices of raw cotton and wool were 15-20 per cent higher; silk, which is almost entirely imported, was as much as 45 and artificial silk 35 per cent lower. The gold price of tin was nearly 50 per cent higher, but the prices of most of the other non-ferrous metals had, like nickel and aluminium, failed to rise at all in terms of dollars, or, like zinc and lead, failed to rise in proportion to the depreciation of the dollar. The dollar price of copper increased precipitately from April to July, but has shown little net movement since then; at the beginning of April 1934, its gold price was about the same as in January 1934. Silver was the subject of much speculation in anticipation of special legislation in favour of that metal and in April 1934 its dollar price was 85 and its gold price 10 per cent higher than in January 1933. Pig-iron and steel displayed the same inelasticity in price as they had shown during the general downward movement, and the gold prices of cement, bricks and glass were also some 30 per cent lower. Since April 1934, the outstanding price development is a very sharp rise in the price of wheat, resulting from the serious drought in the United States and short crops elsewhere. The American crop is the lowest for forty years. Prices of No. 2 Winter wheat in Chicago rose from less than 80 cents per bushel at the middle of April to over \$1.00 at the end of August and most other cereal crops went up in similar proportion.

Table III below shows the recent price movements of a group of forty important products. The table is divided into two parts, the first showing movements in terms of sterling and the second movements in terms of gold. In each part the percentage changes over four periods are given — from January 1933 to January 1934, from the lowest point of the depression (where this occurred before January 1934) to January 1934, from January 1929 to January 1934, and from January 1931 to January 1934.

The commodities are ranged in order of the change in their price between January 1931 and January 1934, those which have risen most coming at the top of the table, and those which have fallen most at the bottom.

Attention may first be directed to the price movement during 1933. An examination of column(1) will show that the sterling prices of coffee, wheat, rice, maize, flour, cocoa, butter, beef, hemp, silk and flax fell in the course of 1933. The predominance of foodstuffs in this group is striking and confirms the conclusions previously reached on the basis of price indices. Under the international wheat agreement concluded in August 1933, the leading exporting countries undertook to limit their foreign sales and to reduce area under cultivation. The 1932-33 crop was small in the United States and in the Danubian basin, but reached a record level in importing European countries, some of which added to the heavy import restrictions already in force. The pressure on world markets was therefore intensified; stocks, as is shown in Diagram VI, were not reduced and gold prices of wheat

Table III.

PRICE MOVEMENTS OF CERTAIN FOODSTUFFS AND RAW MATERIALS, 1929-1934.

Percentage Changes.

Commodity	Sterling prices				Gold prices			
	Jan. 1933 to Jan. 1934	Lowest point 1930-1933 to Jan. 1934	Jan. 1929 to Jan. 1934	Jan. 1931 to Jan. 1934	Jan. 1933 to Jan. 1934	Lowest point 1930-1933 to Jan. 1934	Jan. 1929 to Jan. 1934	Jan. 1931 to Jan. 1934
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Tin . . . . .	+ 54	+125	+ 3	+ 99	+ 42	+ 72	- 34	+ 27
Wool . . . . .	+ 76	+131	- 56	+ 68	+ 61	+100	- 72	+ 7
Flax . . . . .	- 4	+ 71	- 41	+ 66	- 12	+ 32	- 62	+ 6
Maize . . . . .	- 9	+ 26	- 58	+ 22	- 16	+ 9	- 73	- 22
Spelter . . . . .	+ 10	+ 49	- 43	+ 21	+ 1	+ 14	- 64	- 22
Rubber . . . . .	+128	+164	- 56	+ 21	+110	+128	- 72	- 22
Fuel-oil . . . . .	+ 13	+ 33	+ 18	+ 18	+ 3	+ 0	- 24	- 24
Linseed oil . . . . .	+ 11	+ 36	- 29	+ 17	+ 1	+ 17	- 54	- 25
Tea . . . . .	+ 85	+121	- 14	+ 16	+ 52	+ 95	- 45	- 26
Mutton . . . . .	+ 15	+ 55	- 25	+ 12	+ 7	+ 45	- 52	- 27
Barley . . . . .	+ 34	+ 52	- 7	+ 12	+ 24	+ 38	- 41	- 28
Petrol . . . . .	- 8	+ 26	+ 11	+ 11	- 16	+ 6	- 28	- 29
Beef . . . . .	- 2	+ 23	- 6	+ 9	- 9	+ 15	- 39	- 29
Jute . . . . .	+ 10	+ 14	- 52	+ 9	+ 1	+ 8	- 69	- 30
Cotton . . . . .	+ 21	+ 60	- 40	+ 8	+ 11	+ 20	- 62	- 31
Tin plates . . . . .	+ 5	+ 29	- 7	+ 7	- 4	- 1	- 41	- 31
Oats . . . . .	+ 3	+ 16	- 35	+ 6	- 6	+ 15	- 58	- 32
Creosote . . . . .	+ 7	+ 25	- 40	+ 0	- 2	+ 18	- 62	- 36
Soda crystals . . . . .	+ 0	+ 0	+ 0	+ 0	- 8	+ 0	- 36	- 36
Flour . . . . .	+ 2	+ 10	- 41	+ 0	- 10	- 1	- 62	- 36
Steel rails . . . . .	+ 0	+ 0	+ 0	+ 0	- 8	+ 0	- 37	- 36
Timber . . . . .	+ 20	+ 20	- 5	+ 0	+ 10	+ 19	- 39	- 36
Bacon . . . . .	+ 49	+ 73	- 2	- 2	+ 36	+ 58	- 37	- 37
Coal . . . . .	+ 0	+ 0	+ 1	- 2	- 8	+ 1	- 35	- 37
Cement . . . . .	+ 0	+ 7	- 3	- 3	- 8	+ 0	- 38	- 38
Pig-iron . . . . .	+ 6	+ 6	- 12	- 9	- 3	+ 5	- 44	- 42
Sugar . . . . .	+ 7	+ 7	- 23	- 10	- 1	+ 4	- 51	- 43
Lead . . . . .	+ 8	+ 11	- 45	- 10	- 1	- 1	- 65	- 43
Hides . . . . .	+ 4	+ 27	- 56	- 10	- 5	+ 10	- 72	- 43
Iron bars . . . . .	+ 0	+ 0	- 5	- 10	- 8	+ 0	- 39	- 44
Wheat . . . . .	- 17	+ 0	- 50	- 19	- 24	- 3	- 68	- 48
Copper . . . . .	+ 12	+ 25	- 54	- 21	+ 2	+ 28	- 71	- 50
Petroleum . . . . .	+ 0	+ 0	- 14	- 25	- 8	+ 0	- 15	- 52
Silk . . . . .	- 12	+ 4	- 65	- 27	- 17	- 3	- 77	- 53
Cocoa . . . . .	- 16	- 4	- 42	- 29	- 21	- 10	- 63	- 54
Coconut oil . . . . .	- 26	+ 0	- 54	- 35	- 32	- 5	- 72	- 57
Butter . . . . .	- 21	+ 5	- 53	- 35	- 28	- 3	- 70	- 58
Hemp . . . . .	- 23	+ 0	- 60	- 37	- 30	+ 0	- 74	- 59
Rice . . . . .	- 19	+ 0	- 52	- 38	- 25	- 2	- 69	- 60
Coffee . . . . .	- 23	+ 0	- 55	- 41	- 30	- 3	- 71	- 63

fell by 24 per cent. The heavy fall in the price of *butter* during 1933 may be partly explained by the fact that, in the earlier stages of the depression, it had been relatively well maintained and there was consequently a shift, particularly in the British Dominions, from cereal production to dairy farming. In the foodstuffs group, an important rise took place in the sterling price of *bacon*. Imports into Great Britain were, however, restricted during the greater part of 1933 by "voluntary" quotas and by the Anglo-Danish Trade Agreement. A restriction scheme was introduced for *tea* in April 1933, and the control of production proved so successful that it was possible to relax some of its provisions and extend export quotas towards the end of the year; stocks, as shown in Diagram VI, were not much reduced. With the increase in price, the demand for the cheaper varieties gained at the expense of the more expensive teas. *Coffee* prices fell continuously throughout 1933 and were 23 per cent lower in terms of sterling and 30 per cent lower in terms of gold at the beginning of 1934 than a year earlier. The fall was particularly sharp during the latter half of the year, when it became known that the Brazilian crop would be twice as large as in the preceding year. The Brazilian Government destroyed large quantities of coffee in 1933, financing this destruction by an export tax; stocks, as shown in Diagram VI, were considerably reduced. Colombian coffee and other finer grades grown outside Brazil fell considerably less in price; the production of these grades had been much less extended in the period preceding the depression. The heavy fall in *cocoa* prices in 1933 led to a proposal for export restriction on the part of Trinidad; this has, however, not been adopted. As a result chiefly of heavy reductions in the production of Cuba and Java, the statistical position of *sugar* improved during 1933 in spite of large increases in the production of certain importing countries, particularly the United States, South Africa and British India; stocks fell quite sharply in the latter half of the year.

Industrial raw materials experienced, on the whole, a more favourable development during 1933 than foodstuffs. The most remarkable recovery occurred in the case of *rubber*, the sterling price of which rose by 128 per cent while the gold price increased by 110 per cent. The Dutch Government succeeded in effecting a substantial curtailment of production, while at the same time rubber consumption (particularly in the United States) rose very sharply. In the latter part of the year, rubber shipments increased and accumulated stocks went up; a considerable part of the latter had, however, been purchased forward by speculators. A new restriction scheme went into effect at the beginning of June 1934, and a further sharp increase in price took place. The rise in *wool* prices is also very notable; it is estimated that the value of the Australian wool clip will have increased from £34 million during the season ended June 30th, 1933, to £50 million during the current season. As compared with many other raw materials, stocks of wool are low; no attempt was made to "valorize" this commodity during the depression. Production was reduced during 1933 and the heavy increase in demand brought about a sharp rise in price. A sharp reaction in wool prices set in during 1934, however, largely as a result of a reduction in German and French purchases; at the end of August most grades were about one-third below their January levels. The improvement in *cotton* during 1933 was slighter; although consumption rose and output was reduced, stocks continued to increase. One quarter of the acreage under cotton in the United States was left unharvested in the current crop year, but the yield per acre increased very sharply and the crop was first estimated to be somewhat larger than in 1932-33; this, combined with larger crops in India, China and Egypt, was responsible for an easier tendency of cotton prices in the first months of 1934. The American drought, however, did serious damage to the cotton crop and brought about a very sharp rise in the world price of the textile; the spot price of middling cotton rose from 11 cents per pound at the beginning of May to nearly 14 cents in August. The position of *silk* deteriorated still further in the course of 1933; supplies were but little reduced over the previous year and stocks, which had fallen in the latter half of 1932, rose steadily. As a result, however, of the depreciation of the yen, the return to Japanese producers was changed but little.

Partly under the influence of restriction schemes carried out by the International Tin Pool and the Tin Producers' Association, the gold price of tin rose by over 40 per cent during 1933. Copper rose less than tin; and lead showed little net change in terms of gold. This is also true of spelter; the zinc cartel was renewed at the beginning of 1934.

The main conclusions to be derived from a study of the other columns of Table III may now be briefly summarised. Column (6) shows that for the great majority of important foodstuffs and raw materials an appreciable rise in gold price took place between the low point of the depression and the beginning of 1934. In most cases the bottom was touched in 1932 or early in 1933. The most striking recovery occurred in the case of rubber, wool and tea, which were all about twice their lowest levels at the beginning of 1934. As measured from the January 1929 levels, however, all commodities were lower in terms of gold. In spite of its sharp rise during 1933, rubber was still about 70 per cent below 1929 gold prices; the decline was as great, or nearly so, in the case of wheat, maize and rice, cotton, hemp, jute, flax, silk and wool, copper, lead and spelter, beef, hides and butter. It was appreciably less for tin, coal, cement, pig-iron and petroleum, but for no commodity was the gold price at the beginning of 1934 more than two-thirds that prevailing at the beginning of 1929. The position naturally appears more favourable if 1934 prices are compared with 1931, as is done in columns (4) and (8). The gold price of tin was more than 25 per cent higher and that of wool and flax was also higher. For most other commodities, gold prices were 20-40 per cent lower and sterling prices up to 20 per cent higher.

#### INEQUALITIES IN RECENT PRICE MOVEMENTS.

##### *Raw Materials and Manufactured Goods.*

One of the principal discrepancies which developed in the price structure in the course of the economic depression was a serious divergence between the prices of raw materials and finished products. For reasons expounded in detail in the last edition of this publication, the former class of goods fell much more sharply in price than the latter; the purchasing power of raw materials as a whole over manufactured goods was a quarter to a third less at the beginning of 1933 than at the beginning of 1929.

During the year 1933, some progress was made towards the restoration of more normal relationships between the prices of raw materials and finished products. The percentage changes, between January 1933 and January 1934, in indices representative of these two groups of products in certain countries are shown below:

	Raw materials	Manufactured goods		Raw materials	Manufactured goods
Canada . . . . .	+ 19 <sup>1</sup>	+ 8	Belgium . . . . .	- 1	- 7
Norway . . . . .	+ 4 <sup>1</sup>	- 1	Germany . . . . .	+ 3 <sup>1</sup>	+ 1
Sweden . . . . .	+ 1	+ 7	Italy . . . . .	- 5	- 8
United States . . . . .	+ 28	+ 14	Poland . . . . .	+ 0	- 6

The countries included in the first column are all States with fluctuating currencies, while those included in the second column maintained the exchange value of their currencies at or near the gold parity in 1933. Of the latter group, Germany (an exchange-control country) is the only country in which prices of manufactured goods failed to decline considerably during 1933. The price of raw materials showed little net movement in terms of the gold currencies; in Germany, industrial raw materials and semi-manufactured goods rose 3 per cent, due chiefly to a rise in the price of imported materials.

<sup>1</sup> Includes some partly manufactured goods.



In all the countries included in the first column, except Sweden, raw materials rose more in price during 1933 than finished products. The rise in the price of Swedish manufactured goods reflects an improvement in both domestic and foreign demand for some of the most important products of Swedish industry. Swedish exports in general rose in price by over 10 per cent during 1933, while imported goods rose by only 2 per cent.

The improvement in the relationship between raw material and manufactured goods prices in the United States and Canada was particularly marked between February and July 1933. As has already been pointed out, the American abandonment of the gold standard in April was accompanied by large speculative purchases of certain raw materials, which brought about a very sharp rise in their price. In the latter part of the year, however, and more especially in the months following the enactment of the National Industrial Recovery Act, raw material prices remained steady or fell, while the prices of finished goods continued to rise. The measure mentioned provided, *inter alia*, for a reduction in working hours and an increase in basic rates of pay. It therefore tended to raise manufacturing costs and consequently the prices of manufactured goods.<sup>1</sup> According to calculations made by the National Industrial Conference Board, labour costs per man-hour increased by almost 30 per cent between July and December 1933; this increase was partly due to an increase in rates of pay and reduction in working hours and partly to a sharp fall in the total volume of industrial production. With the fall in the volume of industrial production the demand for raw materials declined, and the rapid increase in their price which characterised the early months of 1933 was arrested. The prices of many important products, however, were influenced by special governmental action (*e.g.*, the processing tax on cotton, the petroleum restriction scheme) and increases in their prices counteracted declines among other materials, so that on balance the price of raw products in the United States remained fairly stable between July and December. In the first two months of 1934 they again increased quite considerably and were, on an average, over 36 per cent higher in February 1934 than a year earlier.

#### *Agricultural and Non-agricultural Products.*

The deterioration in the terms of exchange of agricultural for non-agricultural products between 1929 and 1933 is strikingly illustrated in the figures for the United States, where the prices received by farmers fell by 64 per cent between February 1929 and February 1933, while the prices paid by them fell by only 34 per cent. The purchasing power of agricultural products over the things commonly bought by farmers declined by almost 45 per cent in these four years; and there can be no doubt that this was one of the basic factors in the general economic depression.

The reasons for this disparity in the price movements of agricultural and non-agricultural products are many and complex and, as they were treated in some detail in the last issue of this volume, it is not necessary to discuss them again here. In part, they relate to the ineffectiveness of price declines in bringing about a contraction in the volume of output of many agricultural products, particularly certain foodstuffs; and in part to the inflexibility of costs in manufacturing and distribution. The importance of rigid distribution costs is illustrated in cases quoted by the United States Department of Agriculture, where the selling prices in cities of certain bulky farm products fell below the costs of transportation and packing, so that the producer in distant areas received not only no return, but a bill for excess costs.

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<sup>1</sup> It may be observed that, in the circumstances under which American industry was operating at the time of the enactment of the National Industrial Recovery Act, the increase in the price of manufactured goods resulting from higher unit labour costs was probably greater than would normally be the case. Manufactured goods were being sold, at least in part, at prices which covered chiefly "prime" or "variable" costs and represented little or no contribution to overhead. As the proportion of labour costs to prime costs is greater than their proportion to total costs, an increase in labour costs must tend to be more fully reflected in prices than if selling prices already covered all costs.

The general movement of agricultural prices in different parts of the world in the course of 1933 is shown in the following table; for purposes of comparison, the net movement between January 1929 and January 1934 is also given. All measurements are made in terms of national currency:

	<i>January 1933 to January 1934</i>	<i>January 1929 to January 1934</i>		<i>January 1933 to January 1934</i>	<i>January 1929 to January 1934</i>
United States . . .	+ 38	— 45	United Kingdom	+ 7	— 21
Canada . . . . .	+ 27	— 42	Norway . . . . .	— 3	— 29
New Zealand . . .	+ 20	— 40	Italy . . . . .	— 8	— 46
Argentina . . . .	+ 23	— 39	Poland <sup>1</sup> . . . . .	— 10	— 49
Germany . . . . .	+ 15	— 29	Roumania . . . .	— 13	— 37
Greece . . . . .	+ 10	+ 0	Hungary . . . . .	— 22	— 58

In all the non-European agricultural exporting countries, the prices of farm products rose quite sharply during 1933. The rise was greatest in the United States, where agricultural prices in general were 38 per cent higher in January 1934 than in January 1933. The sharper rise in the United States than in the other exporting countries is only partly accounted for in the depreciation of the American currency. It was in part due to the Agricultural Adjustment programme.

In neither the United States nor Canada was the rise in agricultural prices between January 1933 and January 1934 equivalent to the rise in the dollar prices of gold currencies in that period, so that gold prices fell on balance. In the Argentine, where agricultural prices, in terms of national currency, rose by about 20 per cent, the gold value of the peso depreciated by about 40 per cent. The only great agricultural exporting State included in the above table where the rise in domestic currency prices of agricultural produce exceeded the simultaneous decline in the gold value of the currency is New Zealand; here prices rose by 20 per cent, and the currency depreciated, in terms of gold, by about 12 ½ per cent.

In Germany, where agricultural prices rose by 15 per cent, the increase was particularly marked for animal foodstuffs. Special measures taken to raise fodder prices were responsible for part of this increase; and the domestic cereal market received additional protection through the Law of September 1933 on cereal prices.

In certain exporting States of Central and South-Eastern Europe, agricultural prices continued to fall heavily in 1933. The fall was especially sharp in Hungary, where crops were particularly large, and it was also very considerable in Roumania, Poland and Italy. These countries had not only to face increased competition on the part of the non-European exporters — most of whose products declined in gold value in 1933 — but their exports continued to be hampered through exchange controls, quotas, etc.

It is of interest to compare the price movements of agricultural products during 1933 with those of non-agricultural goods. In the United States, the Bureau of Labor Statistics index number of farm products increased by 38 per cent during 1933, while non-agricultural products rose, on an average, by only 16 per cent. The Department of Agriculture index number of prices received for farm products also rose by 38 per cent, while the index number for prices paid for articles bought by farmers increased by 14 per cent. The changes in the purchasing power of agricultural over non-agricultural goods since January 1933 in the United States and certain other countries are illustrated in Diagram VIII, which shows percentage changes in the purchasing power of agricultural goods in terms of non-agricultural goods on the basis January 1933 = 100.

<sup>1</sup> February indices.

The improvement in the terms of exchange between agricultural and non-agricultural products in the United States was confined to the first half of the year: between January and July 1933, prices received by farmers rose by almost 50 per cent, while prices paid by them increased by only 5 per cent; from July 1933 to January 1934, prices received fell by almost 10 per cent, while prices paid rose by over 8 per cent. The indices at hand suggest, however, that, in the first months of 1934, there was a fresh reversal of the terms of exchange in favour of farmers.

In Germany, the rise in agricultural prices during 1933 was greater than the increase in the prices of goods bought by farmers either for personal use or for exploitation. Farm products, as shown in Table III above, increased in price by 15 per cent, while the wholesale price of finished consumers' goods rose by less than 3 per cent, and the prices of most goods used in agricultural production (agricultural implements, chemical fertilisers, etc.) fell slightly. Consequently, the "price scissors" between agricultural and other products narrowed in this country. In Poland, the price of goods sold by farmers fell by 4 per cent during 1933, while the price of goods bought by farmers fell by the same amount and the price of agricultural implements rather less. In the United Kingdom, the 7 per cent rise in the price of farm products was accompanied by an 11 per cent decline in the price of fodder and a very slight increase in the price of fertilisers.

Diagram VIII.

CHANGES IN RATIO OF AGRICULTURAL TO NON-  
AGRICULTURAL PRICES.  
(January 1933 = 100.)

———— United States.      - - - - - Germany.  
..... Poland.                      \* \* \* \* \* Hungary.



In Hungary, as is shown in Diagram VIII, the "price scissors" widened still further in 1933 to the disfavour of agriculture. Agricultural prices fell steadily throughout that year, while industrial prices were maintained and the purchasing power of farm products over industrial goods declined by almost 20 per cent. It was already very low at the beginning of 1933, and by January 1934 farm products bought only half as much industrial goods as before the war. The exchange control, acting as an additional form of protection, has enabled industries to maintain relatively high prices in Hungary, and cartels have also been of influence in this respect. Agriculture, on the other hand,

had to contend, *inter alia*, with the exchange controls of other countries and the difficulty of export exercised a very depressing influence on the domestic level of prices.

#### Import and Export Prices.

The two preceding sections have shown that, during 1933, there was, in most parts of the world, some tendency for the principal price disequilibria which had developed in the course of the depression to be corrected and for the margin between raw and manufactured products, and between agricultural and non-agricultural goods to be reduced. The terms of trade of various agricultural and industrial countries also reflect this change in price relationships: Table IV below summarises the price movements of the principal import and export products of various countries during 1933.

It is not necessary to consider in detail the factors affecting each country. New Zealand benefited from higher wool prices and, along with Latvia and Denmark, higher prices for certain dairy products, while Sweden and Finland benefited chiefly from the revival in the foreign demand for timber and wood pulp. In each of these countries, a larger quantity of imports was received in exchange for a given quantity of exports, while in Italy and China the reverse was true.

Table IV.

CHANGES IN IMPORT AND EXPORT PRICE INDICES AND TERMS OF TRADE OF VARIOUS COUNTRIES.  
(January 1933 - January 1934.)

	Import	Export	Barter terms of trade <sup>1</sup>
China . . . . .	- 9	- 15	- 7
Denmark . . . . .	+ 13	+ 25	+ 11
Finland . . . . .	- 2	+ 14	+ 16
Italy . . . . .	- 1	- 12	- 11
Latvia . . . . .	- 2	+ 6	+ 8
New Zealand . . . . .	+ 4	+ 26	+ 21
Sweden . . . . .	+ 2	+ 12	+ 10

Many of the indices, however, on which Table IV is based are compiled with fixed weights and therefore take no account of the shifting composition of trade. Certain other indices are available which show the changes in the prices of goods actually entering international trade from year to year and these also show an improvement of the terms of trade of raw-material producing countries.<sup>2</sup>

*Investment and Consumption Goods.*

In earlier sections, it has been shown that the prices of raw materials tended, on the whole, to rise relatively to the prices of manufactured products during 1933. In the present section, an examination is made of the relations between the prices of investment and of consumption goods in the course of that year. It is necessary to distinguish clearly between these two sets of indices: in the former, interest attaches to difference in price movements which may be attributed to differences in the stage of manufacture of the two commodity groups; in the present connection, attention must be concentrated on differences resulting from the variety of the purpose or use to which the goods are put.

Unfortunately, very few price indices are available which enable this latter comparison to be made. Appropriate indices are, however, available for the United States, Canada and Germany; and it is necessary to confine the discussion to those countries.

Before examining the evolution during 1933, it may be recalled that the relative price movements of investment and consumption goods from 1929 to the beginning of 1933 appears to have differed from that previously observed in periods of economic depression. In spite of a very sharp fall in investment activity, the prices of investment goods were, as a group, much better maintained than the prices of consumption goods. This phenomenon may be partly attributed to the influence of producers' associations, cartels, etc., in maintaining stable prices through an agreed policy of output restriction.

<sup>1</sup> The figures represent the increase (+) or decrease (-) in the export price expressed as percentage of the import price.

<sup>2</sup> See *Review of World Trade, 1933*, for a fuller discussion of this question.

The following indices, compiled by the National Bureau of Economic Research, show the price movements of capital and consumption goods in the United States during 1933.

	Goods destined for use in capital equipment			Goods destined for human consumption		
	Raw	Processed	Total	Raw	Processed	Total
	(1929 = 100.)					
December 1932 . . . . .	57.5	80.0	73.5	47.4	68.2	60.1
July 1933 . . . . .	74.5	79.5	78.3	62.1	75.3	70.2
December 1933 . . . . .	75.0	83.3	81.3	59.6	78.0	70.9
<i>Percentage Change</i>						
<i>December 1932-December 1933</i>	+ 30.4	+ 4.1	+ 10.6	+ 25.5	+ 14.4	+ 18.0

Taking the year as a whole, the prices of raw materials destined for capital equipment rose by over 30 per cent, while the prices of raw materials destined for human consumption rose by over 25 per cent; on the other hand, processed goods for use in capital equipment rose by only 4 per cent, while processed goods for human consumption increased by over 14 per cent. A possible explanation of this remarkable discrepancy between the price movements of processed goods in the two groups, both as compared with their respective raw materials and with each other, is the following: the economic policy of the Administration during 1933 was largely directed to increasing the purchasing power in the hands of final consumers, which naturally resulted in an increased demand for finished consumers' goods and tended to raise their prices. The prices of raw materials for capital equipment were subject to much the same influences from the side of monetary policy as the prices of other raw materials, and the increase in their prices was similar in degree. But it would appear that the same monetary influences which tended to raise prices of raw materials also tended to discourage private capital investment, which was further hampered by other legislation (Securities Act). Consequently, the demand for processed goods for use in capital equipment was restricted and their prices failed to rise to the same extent as processed goods for human consumption.

One particular capital industry experienced a marked revival during 1933 — namely, the building industry. This revival was partly associated with the Administration's public works policy. It is therefore not surprising to find that, unlike other processed goods for use in capital equipment, processed building materials rose very substantially in price (12 per cent). The rise, moreover, was continuous, the index for each month after February 1933 being higher than the preceding month.

In Canada, goods ready for consumption increased in price by almost 5 per cent during 1933 (due chiefly to higher food prices) while producers' equipment fell slightly. In this country, building materials rose by 7 per cent and manufacturers' materials by 15 per cent. These movements tended, on the whole, to restore the price relationships existing among these various groups of products prior to the depression. In Germany, the price of finished consumption goods rose by 2.5 per cent in 1933, while the price of finished investment goods fell by 1 per cent.

The relative rigidity in the prices of investment goods is partly explained by the fact that in certain countries the raw materials used for such goods are subject to monopolistic control on the part of cartels, producers' associations, etc. These associations frequently pursue a policy of stable prices in good times and bad, fluctuations being concentrated in output rather than prices. This policy of stability, which kept the prices of investment goods relatively high throughout the depression was also operative in 1933. Thus, in Germany, the prices of industrial raw materials and semi-manufactures subject to "cartellised" control did not change during 1933, while the prices of "free" industrial materials rose by about 10 per cent. Similar indices, calculated by the Austrian Institut für Konjunkturforschung, are now available for Austria; here free prices rose by 12 per

cent during 1933 and were still 25 per cent below their January 1929 level at the beginning of 1934, while "cartellised" prices showed no net movement in 1933, and were only 6 per cent below their 1929 level at the beginning of the present year.

*Wholesale and Retail Prices.*

The discussion up to this point has been confined to the discrepancies between the price movements of various groups of commodities at wholesale. It is now of interest to compare the movements of wholesale prices in general with retail prices. This discussion can be brief, as the discrepancies between these two groups result in large measure from factors which have already been described. Thus, the ordinary wholesale price indices are generally heavily weighted with raw materials and semi-finished goods, while the cost-of-living indices (taken to represent retail prices) as a rule include chiefly manufactured articles. They include in addition, however, payment for rent and other services, such as lighting and transport, which do not receive proportionate weight in the wholesale price indices. The two groups of indices are, consequently, not directly comparable and they are grouped together in the following table only to illustrate the differences in their movements. The table shows, for nine countries, the percentage changes in wholesale prices and the cost of living from January 1929 to January 1933 and from January 1933 to January 1934.

*Table V.*

PERCENTAGE CHANGE IN WHOLESALE PRICES AND COST OF LIVING IN CERTAIN COUNTRIES, JANUARY 1929 TO JANUARY 1934.

	January 1929- January 1933		January 1933- January 1934	
	Wholesale prices	Cost of living	Wholesale prices	Cost of living
Netherlands . . . . .	- 49	- 15	+ 5	+ 2
France . . . . .	- 38	- 4	- 1	+ 1
Switzerland . . . . .	- 36	- 17	+ 1	- 2
United States . . . . .	- 36	- 26	+ 18	+ 2
Germany . . . . .	- 35	- 23	+ 6	+ 3
Canada . . . . .	- 32	- 21	+ 11	+ 1
United Kingdom . . . . .	- 27	- 15	+ 4	+ 0
South Africa . . . . .	- 27	- 14	+ 21	+ 3
New Zealand . . . . .	- 15	- 20	+ 6	+ 1

Changes in the cost of living during 1933 were, on the whole, considerably less than changes in wholesale prices, though in most cases the indices moved in the same direction. Exceptions are France and Switzerland; in the former country the cost of living rose somewhat, though wholesale prices fell, and in the latter country the opposite movement took place.

The relatively slight rise in the cost of living in South Africa, the United States and Canada, where the indices of wholesale prices rose quite sharply, is partly to be explained by the fact that certain important elements of the cost of living — in particular, rents — fell heavily during 1933 and offset to some extent the increase in the retail prices of commodities. In the United States, for example, the rent index of the National Industrial Conference Board was 5½ per cent lower in January 1934 than in January 1933, while the retail prices of foodstuffs were 11 per cent higher (compared with a 14% increase in the wholesale prices of foodstuffs) and the retail prices of clothing 23 per cent higher. Fuel and light and sundries (including various services) rose only very slightly in price, if at all.

In Canada, the rent index included in the official cost-of-living calculations was more than 10 per cent lower at the beginning of 1934 than at the beginning of 1933 and the cost of light and heating also fell somewhat, while the retail prices of foodstuffs rose by 8 per

cent. In New Zealand,<sup>1</sup> rents appear to have fallen by almost 20 per cent in the course of 1933, and fuel and light also declined in price, while foodstuffs and clothing rose. In most other countries for which detailed information is available, rents fell during 1933 more than retail commodity prices and in many cases fell in the face of a considerable rise in the latter.

In addition to the lag in the movements of rents and the prices of certain other services (which was one of the most important factors in preventing a speedy adaptation of the cost of living to wholesale prices during the rapid downward movement of the latter), certain other influences have been operative in keeping the rise in wholesale prices, where it has taken place, from being immediately translated into an equivalent rise in retail prices. The latter include charges for certain services connected with selling which are relatively fixed and which it was possible to spread more thinly over a large volume of turnover in 1933 than in the previous year. Moreover, the existence of inventories and the special regional competitive character of much retail trade<sup>2</sup> provide a buffer between wholesale and retail prices, both when the movements are down and when they are up. In large retail establishments, where turnover is large in relation to inventory and where closer connection is maintained with basic commodity markets, it is likely that prices have responded more sensitively to wholesale movements. For the United States, for example, the Fairchild index number of department-store prices was 25 per cent higher in January 1934 than in January 1933, while the average rise in the National Industrial Conference Board retail-price indices of food and clothing was only 17 per cent, and the increase in the official cost-of-living index as little as 2 per cent.

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<sup>1</sup> The peculiar relationship between the movement of the wholesale and cost-of-living indices in New Zealand from 1929 to 1933 is evidently due to the fact that the latter index is heavily weighted with dairy and other export products, while the former includes many domestic and imported goods.

<sup>2</sup> The structure of most official cost-of-living indices, which are generally based on working-men's budgets, probably exaggerate the influence of this factor.

## APPENDICES.

### Appendix I.

#### METHOD OF CALCULATION OF THE COMPOSITE PRODUCTION INDEX.

The index is composed of 66 articles which are given in Table 2 of this Appendix. For the purposes of the calculation of the index, a "weight" has been attributed to each commodity equivalent to its relative importance as measured by its aggregate value at representative "world" prices (in 1930), expressed in terms of dollars according to the annual average rates of exchange. The indices are thus compiled by the aggregative method, the mathematical formula of which is :

$$I = \frac{q^1 p' + q^2 p'' + q^3 p''' + \dots + q^n p^n}{q^0 p' + q^0 p'' + q^0 p''' + \dots + q^0 p^n} = \frac{\Sigma(q^1 p)}{\Sigma(q^0 p)}$$

The quantity of each commodity produced each year ( $q'$ ,  $q''$ ,  $q'''$ , etc.) is multiplied by the price of that commodity ( $p'$ ,  $p''$ ,  $p'''$ , etc.) and the resulting totals for all commodities are summed up. The absolute figures thus obtained for each year are then converted into percentages of the absolute figure for the basic period. As the prices are constant, variations in the index represent changes in the quantities produced and not in the values.

Table 1 below shows the aggregates from which the general indices have been calculated.

#### Appendix I. Table 1.

PRODUCTION AGGREGATES IN TERMS OF DOLLARS ACCORDING TO 1930 PRICES (000,000's omitted).

GROUPS OF COMMODITIES	Average 1925/29	1925	1926	1927	1928	1929	1930	1931	1932	*1933
Cereals and other food crops . . . . .	18,043.8	17,927.3	17,599.2	17,849.0	18,566.9	18,276.3	18,764.0	*18,061.8	18,748.7	18,280.0
Meat . . . . .	11,081.6	10,486.1	10,700.2	11,143.0	11,471.4	11,607.7	11,718.0	11,627.4	11,673.4	...
Wine and hops . . . . .	722.5	785.1	570.8	695.0	786.1	775.4	664.8	728.4	754.8	695.0
Coffee, tea, cocoa . . . . .	607.1	537.9	541.9	676.4	548.4	730.8	574.3	666.0	621.8	705.0
Tobacco . . . . .	833.1	827.1	812.0	803.2	835.4	888.0	926.5	921.7	845.1	...
Vegetable-oil materials . . . . .	1,644.5	1,562.4	1,552.4	1,705.5	1,657.7	1,744.3	1,621.2	1,694.0	1,618.4	1,650.0
Textiles . . . . .	3,562.3	3,441.5	3,590.7	3,363.6	3,669.3	3,746.3	3,686.4	3,739.4	3,495.4	3,700.0
Rubber . . . . .	160.7	127.4	153.0	149.4	161.5	212.1	201.7	196.2	173.9	209.0
Wood-pulp . . . . .	524.7	447.6	493.7	521.0	545.8	615.6	598.7	544.5	511.8	...
Fuels . . . . .	5,580.3	5,185.1	5,192.6	5,697.0	5,688.2	6,138.7	5,680.6	5,137.7	4,686.1	4,950.0
Metals (smelter production) . . . . .	4,664.9	4,128.0	4,258.3	4,607.2	4,939.2	5,391.9	4,411.9	3,323.8	2,410.7	3,020.0
Non-metallic minerals . . . . .	768.5	671.6	716.3	773.8	818.5	862.5	822.3	712.1	592.6	585.0
Chemicals (fertilisers) . . . . .	723.9	632.3	631.5	691.1	803.2	861.2	822.7	610.7	543.9	...
Crude foodstuffs . . . . .	30,455.0	29,736.4	29,412.1	30,363.4	31,372.8	31,390.2	31,721.1	31,083.6	31,798.6	31,220.0
Raw materials . . . . .	18,462.9	17,023.0	17,400.5	18,311.8	19,118.8	20,460.6	18,822.0	16,880.1	14,892.8	16,180.0
<b>TOTAL . . . . .</b>	<b>48,917.9</b>	<b>46,759.4</b>	<b>46,812.6</b>	<b>48,675.2</b>	<b>50,491.6</b>	<b>51,850.8</b>	<b>50,543.1</b>	<b>47,963.7</b>	<b>46,676.4</b>	<b>47,400.0</b>
<b>TERRITORIAL DIVISIONS</b>										
Europe, excluding U.S.S.R. . . . .	14,546.3	13,852.0	12,946.9	14,646.0	15,032.2	16,254.4	15,049.0	14,555.5	14,561.2	14,720.0
Europe, including U.S.S.R. . . . .	19,130.4	18,032.5	17,553.1	19,237.1	19,740.8	21,088.4	20,578.9	*19,258.2	19,298.5	20,060.0
North America . . . . .	15,209.8	14,756.9	15,171.9	14,924.1	15,700.0	15,495.9	14,278.5	13,689.3	12,581.3	12,070.0
Latin America . . . . .	3,827.5	3,652.0	3,668.6	3,862.1	3,973.1	3,981.9	3,980.0	3,812.1	3,560.0	3,740.0
Africa . . . . .	1,460.1	1,393.9	1,384.5	1,441.9	1,492.1	1,588.3	1,563.4	1,520.5	1,537.7	1,590.0
Asia . . . . .	8,302.0	8,004.6	8,037.2	8,237.5	8,545.6	8,685.1	9,046.8	8,587.6	8,556.8	8,860.0
Oceania . . . . .	988.1	919.5	997.3	972.5	1,040.0	1,011.2	1,095.5	1,096.0	1,142.1	1,080.0
<b>WORLD . . . . .</b>	<b>48,917.9</b>	<b>46,759.4</b>	<b>46,812.6</b>	<b>48,675.2</b>	<b>50,491.6</b>	<b>51,850.8</b>	<b>50,543.1</b>	<b>47,963.7</b>	<b>46,676.4</b>	<b>47,400.0</b>

\*Partly based on estimates.



**Appendix I. Table 2.**

**INDICES OF WORLD PRODUCTION OF PRIMARY COMMODITIES.**

*Average Annual Production in 1925-1929 = 100.*

Groups of Products	1925	1926	1927	1928	1929	1930	1931	1932	*1933
<i>Cereals and other food crops</i> <sup>1</sup>									
Wheat . . . . .	95	99	101	109	96	109	*104	102	105
Rye . . . . .	106	97	102	96	100	107	*91	103	109
Barley . . . . .	95	91	91	107	115	111	*94	105	102
Oats . . . . .	98	99	94	107	102	102	87	96	90
Maize . . . . .	105	100	98	96	100	90	101	110	94
Rice . . . . .	99	99	99	102	101	107	104	103	104
Potatoes . . . . .	97	88	101	103	111	110	*106	*111	...
Sugar { Beet sugar . . . . .	90	92	100	109	109	132	101	91	103
Cane sugar . . . . .	95	95	100	105	106	99	103	95	98
<i>Meat</i> <sup>1</sup>									
Beef . . . . .	*98	*100	*100	*100	*102	*103	*97	*99	...
Veal . . . . .	*99	*98	*99	*100	*104	*108	*100	*102	...
Pork, bacon, etc. . . . .	*92	*93	*100	*107	*106	*104	*111	*110	...
Mutton and lamb . . . . .	*90	*97	*102	*103	*108	*120	*112	*111	...
<i>Wine and hops</i>									
Wine . . . . .	109	79	96	109	107	92	102	106	97
Hops . . . . .	89	89	99	99	124	95	74	62	77
<i>Coffee, tea, cocoa</i>									
Coffee . . . . .	84	82	125	75	134	87	119	97	134
Tea . . . . .	91	97	100	104	109	100	102	107	96
Cocoa . . . . .	97	93	101	100	109	104	101	106	118
Tobacco . . . . .	99	97	96	100	107	111	*111	*101	...
<i>Vegetable-oil materials</i>									
Cotton-seed . . . . .	104	105	90	101	99	98	102	90	99
Linseed . . . . .	106	103	108	100	82	108	*107	*83	*75
Rape-seed . . . . .	121	98	99	88	95	110	99	97	99
Hemp-seed . . . . .	104	103	104	106	83	79	*83	*75	...
Sesamum . . . . .	87	90	108	106	110	123	113	111	...
Soya beans . . . . .	92	100	104	102	102	114	115	97	...
Copra . . . . .	86	95	91	112	116	100	99	98	103
Palm and palm-kernel oil (crude) . . . . .	99	96	99	100	105	113	106	120	122
Olive oil (crude) . . . . .	78	69	125	80	148	54	101	101	97
Ground-nuts . . . . .	87	91	105	113	104	121	99	113	115
<i>Textiles</i>									
Cotton . . . . .	105	106	90	100	100	97	103	89	96
Flax . . . . .	109	98	88	96	109	113	122	107	122
Hemp . . . . .	106	99	100	99	96	89	*88	*89	...
Manila hemp . . . . .	97	98	93	96	115	105	87	70	...
Jute . . . . .	87	118	99	96	100	109	54	68	76
Wool . . . . .	93	99	100	105	104	101	100	100	95
Raw silk . . . . .	87	93	99	108	113	110	107	101	103
Artificial silk . . . . .	63	72	100	124	141	143	166	178	223

\* Partly based on estimates.

<sup>1</sup> Excluding China, but including certain crops and meat in Manchuria.

Appendix I. Table 2 (concluded).

INDICES OF WORLD PRODUCTION OF PRIMARY COMMODITIES.

Average Annual Production in 1925-1929 = 100.

Groups of Products	1925	1926	1927	1928	1929	1930	1931	1932	*1933
<i>Rubber (crude)</i> . . . . .	79	95	93	100	132	125	122	108	130
<i>Wood-pulp</i>									
Mechanical pulp . . . . .	88	96	98	104	114	111	102	94	...
Chemical pulp . . . . .	84	93	100	104	119	115	104	99	...
<i>Fuels</i>									
Coal . . . . .	95	95	103	100	107	98	86	77	80
Lignite . . . . .	91	91	98	106	113	96	88	82	83
Petroleum . . . . .	86	88	101	106	119	113	109	104	114
<i>Metals (smelter production)</i>									
Pig-iron : total production . . . . .	89	92	101	103	115	93	65	46	57
" other than for steel-making . . . . .	*95	*92	*107	*98	*107	*91	*64	*41	*50
Steel . . . . .	88	90	99	106	117	92	67	49	65
Copper . . . . .	88	93	94	106	119	98	86	58	66
Lead . . . . .	91	97	103	103	106	99	81	67	67
Zinc . . . . .	87	94	100	108	112	107	77	60	76
Tin . . . . .	89	92	97	110	112	106	90	62	63
Aluminium . . . . .	81	89	96	110	124	121	99	70	62
Nickel . . . . .	88	80	82	118	132	128	84	46	104
Silver . . . . .	96	99	100	101	104	97	75	65	63
<i>Non-metallic minerals</i>									
Cement . . . . .	87	93	101	107	112	107	91	73	70
Asbestos . . . . .	90	98	95	102	116	97	68	60	75
Salt . . . . .	90	94	100	104	112	108	102	96	...
<i>Chemicals (fertilisers)</i>									
Nitrate of soda . . . . .	96	77	67	128	132	103	51	36	28
Nitrate of lime . . . . .	97	95	97	105	106	177	134	133	...
Cyanamide of calcium . . . . .	80	93	95	108	124	122	69	70	...
Sulphate of ammonia . . . . .	76	77	103	114	129	121	*108	*107	...
Natural guano . . . . .	113	79	87	102	117	108	76	111	...
Natural phosphates . . . . .	89	98	104	103	106	119	79	70	...
Superphosphates of lime . . . . .	94	96	97	103	109	108	77	73	...
Basic slag . . . . .	82	90	102	108	118	96	74	54	...
Potash . . . . .	94	83	96	109	118	110	76	64	...
Sulphur . . . . .	75	96	107	102	119	129	110	58	82
Sulphate of copper . . . . .	86	95	105	120	94	92	103	106	...

\* Partly based on estimates.

**Appendix I. Table 3.**

INDICES OF PRODUCTION OF PRIMARY COMMODITIES, WEIGHTED BY 1930 VALUES.

*Average Annual Production in 1925-1929 = 100.*

Continents and Groups of Products	1925	1926	1927	1928	1929	1930	1931	1932	*1933
<b>WORLD : General Index</b> . . . . .	96	96	100	103	106	103	98	95	97
<i>Crude foodstuffs</i> . . . . .	98	97	100	103	103	104	102	104	103
Cereals . . . . .	100	99	99	103	100	102	*98	104	100
Cereals and other food crops . . . . .	99	98	99	103	101	104	*100	104	101
Meat . . . . .	*95	*97	*101	*104	*105	*108	*105	*105	...
Wine and hops . . . . .	109	79	96	109	107	92	101	104	96
Coffee, tea, cocoa . . . . .	89	89	111	90	120	95	110	102	116
<i>Raw materials</i> . . . . .	92	94	99	104	111	102	91	81	88
Tobacco . . . . .	99	97	96	100	107	111	111	101	...
Vegetable-oil materials . . . . .	95	94	104	101	106	102	103	98	100
Textiles . . . . .	97	101	94	103	105	103	*105	98	104
Rubber . . . . .	79	95	93	100	132	125	122	108	130
Wood-pulp . . . . .	85	94	99	104	117	114	104	98	...
Fuels . . . . .	93	93	102	102	110	102	92	84	89
Metals (smelter production) . . . . .	88	91	99	106	116	95	71	52	65
Non-metallic minerals . . . . .	87	93	101	107	112	107	93	77	76
Chemicals (fertilisers) . . . . .	87	87	95	111	119	114	84	75	...
<b>EUROPE (excluding U.S.S.R.):</b>									
<i>General Index</i> . . . . .	95	89	101	103	112	103	100	100	101
<i>Crude foodstuffs</i> . . . . .	98	92	98	103	109	104	106	112	110
Cereals . . . . .	103	95	93	99	111	102	99	111	115
Cereals and other food crops . . . . .	102	92	95	99	112	104	101	111	113
Meat . . . . .	*91	*94	*102	*106	*106	*106	*113	*114	...
Wine and hops . . . . .	112	78	97	107	107	90	100	100	91
<i>Raw materials</i> . . . . .	90	84	105	105	116	102	90	81	86
Tobacco . . . . .	99	97	96	90	118	120	104	101	97
Vegetable-oil materials . . . . .	81	70	127	77	145	55	99	95	89
Textiles . . . . .	89	90	100	108	113	110	105	107	114
Wood-pulp . . . . .	87	91	100	103	119	118	104	107	...
Fuels . . . . .	96	81	106	104	113	104	95	87	88
Metals (smelter production) . . . . .	87	84	106	107	116	97	77	61	72
Non-metallic minerals . . . . .	85	91	100	108	116	109	96	86	89
Chemicals (fertilisers) . . . . .	86	86	101	109	118	113	88	84	...
<b>EUROPE (including U.S.S.R.):</b>									
<i>General Index</i> . . . . .	94	92	101	103	110	108	*101	101	105
<i>Crude foodstuffs</i> . . . . .	97	95	99	102	107	108	*102	106	109
Cereals . . . . .	101	100	96	98	105	106	*96	104	116
Cereals and other food crops . . . . .	100	98	97	99	106	107	*97	104	114
Meat . . . . .	*90	*93	*102	*106	*109	*112	*110	*109	...
Wine and hops . . . . .	112	78	97	107	107	90	100	100	91
<i>Raw materials</i> . . . . .	89	85	105	105	117	106	98	90	96
Tobacco . . . . .	105	105	99	87	105	109	...	...	...
Vegetable-oil materials . . . . .	85	76	120	84	135	69	*106	*101	...
Textiles . . . . .	91	90	99	107	112	113	*115	*111	116
Wood-pulp . . . . .	86	91	100	103	120	120	107	110	...
Fuels . . . . .	93	82	106	105	115	109	103	97	100
Metals (smelter production) . . . . .	85	84	106	108	117	102	82	69	80
Non-metallic minerals . . . . .	82	90	100	109	119	115	103	95	95
Chemicals (fertilisers) . . . . .	86	86	101	109	118	114	89	86	...

\* Partly based on estimates.

**Appendix I. Table 3 (continued).**

INDICES OF PRODUCTION OF PRIMARY COMMODITIES, WEIGHTED BY 1930 VALUES.

*Average Annual Production in 1925-1929 = 100.*

Continents and Groups of Products	1925	1926	1927	1928	1929	1930	1931	1932	*1933
<b>NORTH AMERICA: General Index</b> . . . . .	97	100	98	103	102	94	90	83	79
<i>Crude foodstuffs</i> . . . . .	99	98	101	106	96	94	98	102	88
Cereals . . . . .	101	96	102	109	93	91	96	104	76
Cereals and other food crops . . . . .	100	96	102	109	93	92	96	104	77
Meat . . . . .	99	100	99	102	101	98	99	101	102
Wine and hops . . . . .	88	97	96	105	114	84	96	88	122
<i>Raw materials</i> . . . . .	94	102	95	101	108	93	82	62	70
Tobacco . . . . .	101	95	90	102	113	121	119	77	103
Vegetable-oil materials . . . . .	104	110	93	96	96	95	108	87	82
Textiles . . . . .	102	114	86	97	101	96	117	93	98
Wood-pulp . . . . .	86	97	98	105	115	107	100	84	96
Fuels . . . . .	93	102	101	98	106	94	82	70	77
Metals (smelter production) . . . . .	92	98	93	104	113	85	57	31	45
Non-metallic minerals . . . . .	95	97	101	104	103	97	78	51	45
Chemicals (fertilisers) . . . . .	84	94	97	108	118	118	81	50	68
<b>LATIN AMERICA: General Index</b> . . . . .	95	96	101	104	104	104	100	93	98
<i>Crude foodstuffs</i> . . . . .	97	97	103	102	102	103	100	97	102
Cereals . . . . .	95	98	104	112	90	112	103	101	98
Cereals and other food crops . . . . .	96	97	101	111	95	106	100	95	94
Meat . . . . .	*100	*99	*100	*100	*101	*104	*99	*99	...
Wine and hops . . . . .	81	81	114	123	101	88	60	100	...
Coffee, tea, cocoa . . . . .	85	83	123	75	133	87	117	94	132
<i>Raw materials</i> . . . . .	91	93	95	109	111	107	97	81	85
Tobacco . . . . .	86	85	107	112	110	106	103	103	...
Vegetable-oil materials . . . . .	101	108	109	105	77	108	120	80	79
Textiles . . . . .	95	102	97	102	104	100	96	90	101
Rubber . . . . .	112	101	122	84	80	52	42	21	35
Fuels . . . . .	88	87	90	110	125	123	108	107	109
Metals (smelter production) . . . . .	81	89	98	112	121	102	92	57	66
Non-metallic minerals . . . . .	63	80	98	116	142	136	157	157	...
Chemicals (fertilisers) . . . . .	101	80	65	125	128	98	46	31	22
<b>AFRICA: General Index</b> . . . . .	95	95	99	102	109	107	104	105	109
<i>Crude foodstuffs</i> . . . . .	95	94	102	102	107	105	109	111	109
Cereals . . . . .	92	94	99	101	114	98	107	100	98
Cereals and other food crops . . . . .	94	92	103	100	111	100	104	103	101
Meat . . . . .	*96	*99	*103	*101	*101	*108	*110	*110	...
Wine and hops . . . . .	103	79	76	124	119	125	142	170	156
Coffee, tea, cocoa . . . . .	93	91	106	98	112	111	112	116	129
<i>Raw materials</i> . . . . .	96	96	94	103	111	110	96	96	109
Tobacco . . . . .	95	101	120	93	91	98	101	101	...
Vegetable-oil materials . . . . .	96	96	92	104	112	109	92	106	112
Textiles . . . . .	100	98	90	101	111	108	97	91	110
Rubber . . . . .	125	125	107	71	71	54	36	18	36
Fuels . . . . .	94	101	99	102	104	99	87	78	83
Metals (smelter production) . . . . .	84	82	90	113	132	135	121	111	150
Non-metallic minerals . . . . .	85	94	102	103	117	123	113	110	...
Chemicals (fertilisers) . . . . .	86	94	113	104	103	124	81	74	77

\* Partly based on estimates.

Appendix I. Table 3 (concluded).

INDICES OF PRODUCTION OF PRIMARY COMMODITIES, WEIGHTED BY 1930 VALUES.

Average Annual Production in 1925-1929 = 100.

Continents and Groups of Products	1925	1926	1927	1928	1929	1930	1931	1932	*1933
<i>ASIA : General Index</i> . . . . .	96	97	99	103	105	109	103	103	107
<i>Crude foodstuffs</i> . . . . .	98	98	99	101	103	108	106	104	105
Cereals . . . . .	99	98	100	93	110	116	113	103	110
Cereals and other food crops . . . . .	99	99	99	101	103	109	107	104	106
Meat . . . . .	*96	*96	99	*105	*104	*106	*105	*108	...
Wine and hops . . . . .	73	109	106	107	106	94	55	87	...
Coffee, tea, cocoa . . . . .	91	96	100	104	109	99	101	107	96
<i>Raw materials</i> . . . . .	93	94	100	106	107	111	98	101	109
Tobacco . . . . .	99	98	96	104	103	107	101	108	...
Vegetable-oil materials . . . . .	95	93	103	108	102	114	99	103	110
Textiles . . . . .	96	95	99	106	104	105	88	94	103
Rubber . . . . .	77	95	92	102	135	129	126	113	135
Wood-pulp . . . . .	76	93	102	110	120	122	109	107	122
Fuels . . . . .	94	93	100	105	108	109	101	102	106
Metals (smelter production) . . . . .	85	91	99	106	118	117	101	91	106
Non-metallic minerals . . . . .	81	94	100	106	119	109	108	106	121
Chemicals (fertilisers) . . . . .	81	91	99	114	115	148	171	184	199
<i>OCEANIA : General Index</i> . . . . .	93	101	98	105	102	111	111	116	109
<i>Crude foodstuffs</i> . . . . .	93	102	98	106	102	119	118	124	118
Cereals . . . . .	84	115	91	115	94	148	132	150	115
Cereals and other food crops . . . . .	87	109	94	113	97	140	129	142	117
Meat . . . . .	*96	*98	*99	*102	*105	*108	*113	*115	...
Wine and hops . . . . .	91	113	99	105	92	75	80	86	...
Coffee, tea, cocoa . . . . .	80	99	103	103	115	121	119	119	...
<i>Raw materials</i> . . . . .	93	100	100	105	103	99	100	103	96
Tobacco . . . . .	94	94	104	104	104	94	491	472	...
Vegetable-oil materials . . . . .	87	92	94	111	115	111	98	98	...
Textiles . . . . .	91	101	98	106	104	101	110	112	99
Fuels . . . . .	105	104	107	96	87	81	71	72	...
Metals (smelter production) . . . . .	96	97	101	100	106	99	83	92	106
Non-metallic minerals . . . . .	85	91	101	114	109	105	69	52	...
Chemicals (fertilisers) . . . . .	89	88	99	109	114	107	82	86	...

\* Partly based on estimates.

**Appendix I. Table 4.**

**PERCENTAGE DISTRIBUTION OF AGGREGATE PRODUCTION OF PRIMARY COMMODITIES,  
WEIGHTED BY 1930 VALUES, BY CONTINENTAL GROUPS.**

*World Totals = 100.*

Groups of Products and Continents	Average 1925/29	1925	1926	1927	1928	1929	1930	1931	1932	*1933
<b>TOTAL PRODUCTION :</b>										
Europe (excluding U.S.S.R.) . . . . .	29.7	29.6	27.7	30.1	29.8	31.4	29.8	30.4	31.2	31.0
Europe (including U.S.S.R.) . . . . .	39.1	38.5	37.5	39.5	39.1	40.7	40.7	40.2	41.4	42.3
North America . . . . .	31.1	31.6	32.4	30.7	31.1	29.9	28.2	28.5	27.0	25.4
Latin America . . . . .	7.8	7.8	7.8	7.9	7.9	7.7	7.9	7.9	7.6	7.9
Africa . . . . .	3.0	3.0	3.0	3.0	2.9	3.1	3.1	3.2	3.3	3.4
Asia . . . . .	17.0	17.1	17.2	16.9	16.9	16.7	17.9	17.9	18.3	18.7
Oceania . . . . .	2.0	2.0	2.1	2.0	2.1	1.9	2.2	2.3	2.4	2.3
World . . . . .	100	100	100	100	100	100	100	100	100	100
<b>CRUDE FOODSTUFFS :</b>										
Europe (excluding U.S.S.R.) . . . . .	29.9	30.1	28.4	29.4	29.7	31.6	29.9	31.1	31.9	32.1
Europe (including U.S.S.R.) . . . . .	42.3	42.0	41.7	41.9	42.0	44.0	44.0	42.4	43.0	45.1
North America . . . . .	25.8	26.3	26.1	26.1	26.5	24.1	23.4	24.7	25.3	22.1
Latin America . . . . .	9.5	9.4	9.5	9.7	9.3	9.3	9.3	9.3	8.8	9.4
Africa . . . . .	3.0	2.9	2.9	3.1	3.0	3.2	3.0	3.2	3.2	3.2
Asia . . . . .	17.5	17.6	17.8	17.3	17.2	17.5	18.1	18.2	17.4	18.0
Oceania . . . . .	1.9	1.8	2.0	1.9	2.0	1.9	2.2	2.2	2.3	2.2
World . . . . .	100	100	100	100	100	100	100	100	100	100
<b>Cereals :</b>										
Europe (excluding U.S.S.R.) . . . . .	29.5	30.3	28.4	27.8	28.4	32.8	29.3	29.8	31.4	34.0
Europe (including U.S.S.R.) . . . . .	47.7	48.3	48.5	46.2	45.6	50.0	49.4	46.5	47.6	55.4
North America . . . . .	34.7	34.9	33.8	35.8	36.7	32.1	31.0	33.9	34.6	26.3
Latin America . . . . .	6.8	6.5	6.8	7.2	7.4	6.1	7.4	7.1	6.6	6.7
Africa . . . . .	2.8	2.6	2.7	2.8	2.8	3.2	2.7	3.1	2.7	2.7
Asia . . . . .	6.7	6.6	6.7	6.8	6.1	7.4	7.6	7.7	6.7	7.4
Oceania . . . . .	1.3	1.1	1.5	1.2	1.4	1.2	1.9	1.7	1.8	1.5
World . . . . .	100	100	100	100	100	100	100	100	100	100
<b>Cereals and other food crops :</b>										
Europe (excluding U.S.S.R.) . . . . .	26.5	27.2	25.1	25.4	25.6	29.2	26.7	26.8	28.4	29.6
Europe (including U.S.S.R.) . . . . .	41.0	41.4	41.0	40.0	39.5	42.8	42.3	39.8	41.2	46.1
North America . . . . .	24.4	24.6	24.1	25.2	25.9	22.4	21.6	23.5	24.4	18.5
Latin America . . . . .	6.4	6.2	6.4	6.5	6.9	6.0	6.5	6.3	5.8	5.9
Africa . . . . .	2.5	2.3	2.3	2.6	2.4	2.7	2.3	2.6	2.4	2.5
Asia . . . . .	24.6	24.5	24.9	24.6	24.1	25.0	25.8	26.3	24.6	25.7
Oceania . . . . .	1.1	1.0	1.3	1.1	1.2	1.1	1.5	1.5	1.6	1.3
World . . . . .	100	100	100	100	100	100	100	100	100	100

\* Partly based on estimates.

**Appendix I. Table 4 (continued).**

**PERCENTAGE DISTRIBUTION OF AGGREGATE PRODUCTION OF PRIMARY COMMODITIES,  
WEIGHTED BY 1930 VALUES, BY CONTINENTAL GROUPS.**

*World Totals = 100.*

Groups of Products and Continents	Average 1925/29	1925	1926	1927	1928	1929	1930	1931	1932	*1933
<i>Meat :</i>										
Europe (excluding U.S.S.R.) . . . . .	33.3	32.2	32.4	33.9	34.1	33.9	33.5	36.0	36.1	...
Europe (including U.S.S.R.) . . . . .	44.1	41.8	42.6	44.8	45.2	45.9	46.6	46.0	45.7	...
North America . . . . .	31.1	32.4	32.1	30.6	30.5	29.9	28.7	29.5	29.7	...
Latin America . . . . .	12.7	13.5	13.1	12.6	12.2	12.2	12.5	12.0	11.9	...
Africa . . . . .	3.2	3.3	3.3	3.3	3.2	3.1	3.3	3.4	3.4	...
Asia . . . . .	5.5	5.6	5.5	5.4	5.6	5.5	5.5	5.5	5.6	...
Oceania . . . . .	3.4	3.4	3.4	3.3	3.3	3.4	3.4	3.6	3.7	...
World . . . . .	100	100	100	100	100	100	100	100	100	100
<i>Wine and hops :</i>										
Europe (excluding U.S.S.R.) . . . . .	85.2	87.5	84.6	85.5	83.5	84.8	83.1	84.9	81.2	80.4
Europe (including U.S.S.R.) . . . . .	85.2	87.5	84.6	85.5	83.5	84.8	83.1	84.9	81.2	80.4
North America . . . . .	0.9	0.7	1.1	0.9	0.9	0.9	0.8	0.8	0.8	1.1
Latin America . . . . .	6.0	4.5	6.2	7.2	6.8	5.7	5.8	3.6	5.8	6.3
Africa . . . . .	7.2	6.8	7.1	5.7	8.1	7.9	9.7	10.2	11.7	11.6
Asia . . . . .	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
Oceania . . . . .	0.5	0.4	0.8	0.5	0.5	0.5	0.4	0.4	0.4	0.5
World . . . . .	100	100	100	100	100	100	100	100	100	100
<i>Coffee, tea, cocoa :</i>										
Latin America . . . . .	45.9	44.2	42.6	50.7	38.4	50.9	42.2	49.0	42.4	52.2
Africa . . . . .	10.9	11.4	11.0	10.3	11.7	10.1	12.7	11.1	12.3	12.0
Asia . . . . .	43.0	44.2	46.2	38.8	49.7	38.8	44.9	39.7	45.1	35.6
Oceania . . . . .	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
World . . . . .	100	100	100	100	100	100	100	100	100	100
<i>RAW MATERIALS :</i>										
Europe (excluding U.S.S.R.) . . . . .	29.5	28.8	26.3	31.3	29.8	30.9	29.6	29.1	29.7	29.0
Europe (including U.S.S.R.) . . . . .	33.8	32.5	30.4	35.6	34.3	35.5	35.3	36.1	37.9	36.9
North America . . . . .	39.8	40.8	43.0	38.3	38.7	38.7	36.5	35.6	30.4	31.9
Latin America . . . . .	5.1	5.1	5.1	4.9	5.4	5.2	5.4	5.4	5.2	5.0
Africa . . . . .	2.9	3.1	3.0	2.8	2.9	3.0	3.2	3.1	3.5	3.7
Asia . . . . .	16.2	16.3	16.2	16.2	16.5	15.6	17.5	17.4	20.2	20.1
Oceania . . . . .	2.2	2.2	2.3	2.2	2.2	2.0	2.1	2.4	2.8	2.4
World . . . . .	100	100	100	100	100	100	100	100	100	100
<i>Tobacco :</i>										
Europe (excluding U.S.S.R.) . . . . .	12.3	12.3	12.3	12.3	11.0	13.6	13.3	11.6	12.3	...
Europe (including U.S.S.R.) . . . . .	19.0	20.1	20.5	19.5	16.4	18.7	18.7	20.8	23.2	...
North America . . . . .	29.1	29.6	28.2	27.2	29.5	30.8	31.7	31.4	22.2	...
Latin America . . . . .	8.9	7.7	7.8	9.9	9.9	9.2	8.5	8.3	9.1	...
Africa . . . . .	2.8	2.6	2.9	3.4	2.6	2.4	2.4	2.5	2.8	...
Asia . . . . .	40.1	39.9	40.5	39.9	41.5	38.8	38.7	36.8	42.5	...
Oceania . . . . .	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.2	...
World . . . . .	100	100	100	100	100	100	100	100	100	100

\* Partly based on estimates.

**Appendix I. Table 4 (continued).**

**PERCENTAGE DISTRIBUTION OF AGGREGATE PRODUCTION OF PRIMARY COMMODITIES,  
WEIGHTED BY 1930 VALUES, BY CONTINENTAL GROUPS.**

*World Totals = 100.*

Groups of Products and Continents	Average 1925/29	1925	1926	1927	1928	1929	1930	1931	1932	*1933
<i>Vegetable-oil materials :</i>										
Europe (excluding U.S.S.R.) . . .	13.6	11.6	10.1	16.7	10.4	18.6	7.4	13.1	13.1	12.1
Europe (including U.S.S.R.) . . .	18.4	16.4	14.8	21.3	15.4	23.4	12.5	19.0	18.9	17.5
North America . . . . .	15.5	17.0	18.1	13.9	14.8	14.0	14.6	16.3	13.8	12.6
Latin America . . . . .	8.8	9.4	10.1	9.3	9.1	6.4	9.3	10.3	7.1	6.9
Africa . . . . .	11.9	12.1	12.1	10.6	12.3	12.5	12.8	10.7	12.8	13.3
Asia . . . . .	44.6	44.3	44.1	44.1	47.5	42.8	49.9	42.9	46.6	48.9
Oceania . . . . .	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.8
World . . . . .	100	100	100	100	100	100	100	100	100	100
<i>Textiles :</i>										
Europe (excluding U.S.S.R.) . . .	11.3	10.4	10.0	11.9	11.7	12.1	11.9	11.2	12.2	12.4
Europe (including U.S.S.R.) . . .	19.7	18.6	17.6	20.5	20.5	30.0	21.4	21.5	22.3	21.9
North America . . . . .	31.0	32.7	35.0	28.4	29.3	29.8	28.8	34.6	29.3	29.2
Latin America . . . . .	5.9	5.8	6.0	6.1	5.9	5.9	5.7	5.4	5.5	5.8
Africa . . . . .	5.8	6.1	5.7	5.5	5.7	6.2	6.1	5.4	5.4	6.2
Asia . . . . .	30.0	29.7	28.2	31.6	30.8	29.7	30.6	25.2	28.9	29.7
Oceania . . . . .	7.6	7.1	7.5	7.9	7.8	7.4	7.4	7.9	8.6	7.2
World . . . . .	100	100	100	100	100	100	100	100	100	100
<i>Rubber :</i>										
Latin America . . . . .	4.3	6.1	4.6	5.7	3.6	2.6	1.8	1.5	0.9	1.2
Africa . . . . .	0.8	1.3	1.1	1.0	0.6	0.5	0.4	0.2	0.1	0.2
Asia . . . . .	94.9	92.6	94.3	93.3	95.8	96.9	97.8	98.3	99.0	98.6
World . . . . .	100	100	100	100	100	100	100	100	100	100
<i>Wood-pulp :</i>										
Europe (excluding U.S.S.R.) . . .	47.9	48.7	46.6	48.4	47.3	48.6	49.7	48.0	52.5	...
Europe (including U.S.S.R.) . . .	49.0	49.2	47.5	49.5	48.4	50.0	51.7	50.5	55.3	...
North America . . . . .	47.2	47.4	48.7	46.6	47.6	46.1	44.2	45.5	40.5	...
Latin America . . . . .	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	...
Asia . . . . .	3.6	3.2	3.6	3.7	3.8	3.7	3.9	3.8	4.0	...
World . . . . .	100	100	100	100	100	100	100	100	100	100
<i>Fuels :</i>										
Europe (excluding U.S.S.R.) . . .	34.5	35.5	30.1	35.7	35.3	35.3	35.3	35.4	35.5	34.0
Europe (including U.S.S.R.) . . .	37.8	37.7	33.1	39.1	39.1	39.4	40.6	42.3	43.6	42.5
North America . . . . .	49.7	49.8	54.5	49.0	48.0	47.9	45.8	44.1	41.6	43.0
Latin America . . . . .	4.0	3.8	3.8	3.6	4.4	4.6	4.9	4.7	5.1	5.0
Africa . . . . .	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Asia . . . . .	6.7	6.8	6.7	6.6	6.9	6.6	7.2	7.4	8.2	8.0
Oceania . . . . .	0.9	1.0	1.0	0.9	0.8	0.7	0.7	0.7	0.7	0.7
World . . . . .	100	100	100	100	100	100	100	100	100	100

\* Partly based on estimates.



**Appendix I. Table 4 (concluded).**

**PERCENTAGE DISTRIBUTION OF AGGREGATE PRODUCTION OF PRIMARY COMMODITIES,  
WEIGHTED BY 1930 VALUES, BY CONTINENTAL GROUPS.**

*World Totals = 100.*

Groups of Products and Continents	Average 1925/29	1925	1926	1927	1928	1929	1930	1931	1932	*1933
<i>Metals (smelter production):</i>										
Europe (excluding U.S.S.R.) . .	38.5	37.8	35.4	41.3	39.0	38.6	39.6	41.7	45.7	42.6
Europe (including U.S.S.R.) . .	41.3	39.7	38.0	44.3	42.1	41.9	44.4	47.6	54.8	51.0
North America . . . . .	48.6	50.7	52.0	45.7	47.6	47.7	43.8	38.6	29.5	34.1
Latin America . . . . .	3.7	3.4	3.6	3.7	3.9	3.9	4.0	4.8	4.1	3.8
Africa . . . . .	0.8	0.7	0.7	0.7	0.9	0.9	1.1	1.4	1.7	1.9
Asia . . . . .	4.5	4.3	4.5	4.5	4.5	4.6	5.6	6.4	8.0	7.4
Oceania . . . . .	1.1	1.2	1.2	1.1	1.0	1.0	1.1	1.2	1.9	1.8
World . . . . .	100	100	100	100	100	100	100	100	100	100
<i>Non-metallic minerals:</i>										
Europe (excluding U.S.S.R.) . .	40.9	39.7	39.9	40.7	41.4	42.4	41.8	42.3	45.4	47.7
Europe (including U.S.S.R.) . .	44.8	42.2	43.2	44.6	45.7	47.4	48.2	49.6	55.0	55.8
North America . . . . .	43.3	46.8	44.9	43.5	42.3	39.9	39.2	36.3	28.7	25.6
Latin America . . . . .	0.9	0.7	0.8	0.9	1.0	1.2	1.2	1.6	1.9	2.0
Africa . . . . .	1.4	1.4	1.4	1.4	1.4	1.5	1.6	1.7	2.0	2.2
Asia . . . . .	8.5	7.9	8.6	8.5	8.4	9.0	8.7	10.0	11.7	13.6
Oceania . . . . .	1.1	1.0	1.1	1.1	1.2	1.0	1.1	0.8	0.7	0.8
World . . . . .	100	100	100	100	100	100	100	100	100	100
<i>Chemicals (fertilisers):</i>										
Europe (excluding U.S.S.R.) . .	60.4	59.4	59.9	64.0	59.3	60.0	60.2	63.1	67.6	...
Europe (including U.S.S.R.) . .	60.7	59.5	60.2	64.3	59.6	60.4	60.8	64.2	69.3	...
North America . . . . .	16.7	16.0	18.1	16.9	16.2	16.6	17.4	16.1	11.0	...
Latin America . . . . .	14.2	16.4	13.0	9.7	16.0	15.3	12.2	7.8	5.9	...
Africa . . . . .	2.7	2.6	2.9	3.2	2.5	2.3	3.0	2.6	2.7	...
Asia . . . . .	3.6	3.3	3.7	3.7	3.6	3.4	4.6	7.2	8.7	...
Oceania . . . . .	2.1	2.2	2.1	2.2	2.1	2.0	2.0	2.1	2.4	...
World . . . . .	100	100	100	100	100	100	100	100	100	100

\* Partly based on estimates.





Appendix I. Table 5 (concluded).

PERCENTAGE DISTRIBUTION OF AGGREGATE PRODUCTION OF PRIMARY COMMODITIES,  
WEIGHTED BY 1930 VALUES, BY GROUPS OF PRODUCTS.

Total Production of Each Continent = 100.

Continents and Groups of Products	Average 1925/29	1925	1926	1927	1928	1929	1930	1931	1932	*1933
<b>ASIA :</b>										
<i>Crude foodstuffs</i> . . . . .	64.1	65.2	65.0	63.9	63.1	63.2	63.5	65.9	64.9	63.3
Cereals . . . . .	9.9	10.2	10.1	10.0	9.0	10.4	10.6	10.8	10.0	...
Food crops other than cereals . . . . .	43.6	44.6	44.5	43.4	43.4	42.2	42.9	44.5	43.9	...
Meat . . . . .	7.4	7.4	7.3	7.3	7.5	7.3	7.1	7.5	7.7	...
Coffee, tea, cocoa . . . . .	3.2	3.0	3.1	3.2	3.2	3.3	2.9	3.1	3.3	...
<i>Raw materials</i> . . . . .	35.9	34.8	35.0	36.1	36.9	36.8	36.5	34.1	35.1	36.7
Tobacco . . . . .	4.0	4.1	4.1	3.9	4.1	4.0	4.0	4.0	4.2	...
Vegetable-oil materials . . . . .	8.8	8.6	8.5	9.1	9.2	8.6	9.2	8.5	8.8	...
Textiles . . . . .	12.9	12.8	12.6	12.9	13.2	12.8	12.4	11.0	11.8	...
Rubber . . . . .	1.8	1.5	1.7	1.7	1.8	2.4	2.2	2.2	2.0	...
Wood-pulp . . . . .	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	...
Fuels . . . . .	4.5	4.4	4.4	4.6	4.6	4.7	4.5	4.4	4.5	...
Metals (smelter production) . . . . .	2.6	2.2	2.4	2.6	2.6	2.9	2.7	2.5	2.2	...
Non-metallic minerals . . . . .	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	...
Chemicals (fertilisers) . . . . .	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.6	...
Total Production	100	100	100	100	100	100	100	100	100	100
<b>OCEANIA :</b>										
<i>Crude foodstuffs</i> . . . . .	59.1	59.0	59.6	58.6	59.4	59.0	63.5	63.1	63.7	63.9
Cereals . . . . .	15.8	14.3	18.1	14.7	17.4	14.6	21.2	18.9	20.6	...
Food crops other than cereals . . . . .	4.9	5.0	4.3	5.2	4.8	5.1	4.9	5.2	4.9	...
Meat . . . . .	37.9	39.2	36.6	38.2	36.7	38.8	37.0	38.6	37.8	...
Wine and hops . . . . .	0.4	0.4	0.5	0.4	0.4	0.4	0.3	0.3	0.3	...
Coffee, tea, cocoa . . . . .	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	...
<i>Raw materials</i> . . . . .	40.9	41.0	40.4	41.4	40.6	41.0	36.5	36.9	36.3	36.1
Tobacco . . . . .	—	—	—	—	—	—	—	0.2	0.2	...
Vegetable-oil materials . . . . .	1.4	1.3	1.3	1.3	1.5	1.5	1.4	1.2	1.2	...
Textiles . . . . .	27.2	26.7	27.2	27.2	27.4	27.5	24.8	27.0	28.4	...
Fuels . . . . .	4.8	5.4	4.9	5.2	4.4	4.1	3.5	3.0	3.0	...
Metals (smelter production) . . . . .	5.1	5.3	4.9	5.2	4.8	5.3	4.5	3.8	4.0	...
Non-metallic minerals . . . . .	0.8	0.8	0.8	0.9	0.9	0.9	0.8	0.5	0.4	...
Chemicals (fertilisers) . . . . .	1.6	1.5	1.3	1.6	1.6	1.7	1.5	1.2	1.1	...
Total Production	100	100	100	100	100	100	100	100	100	100

\* Partly based on estimates.

**Appendix I. Table G.**

**STOCKS OF PRIMARY COMMODITIES.**

	Product	Unit	1925	1926	1927	1928	1929	1930	1931
<b>FOODSTUFFS</b>									
1.	Wheat: Total stocks . . . . .	m.t. (000's)	a) 14,400	a) 16,630	a) 17,610	a) 19,190	a) 26,400	a) 25,100	a) 27,410
2.	Of which 4 chief exporters . . . . .	"	6,342	6,451	7,513	9,418	14,780	14,944	16,849
3.	Lower Danube . . . . .	"	544	1,089	1,252	681	2,042	1,198	1,552
4.	European importers . . . . .	"	4,491	5,607	5,498	5,798	6,560	5,907	5,008
5.	World exportable stocks . . . . .	"			a) 6,750	a) 8,590	a) 14,010	a) 13,630	a) 15,350
6.	Visible supply . . . . .	"	6,315	6,691	7,872	9,770	13,128	13,574	14,582
7.	Rye: Visible supply . . . . .	"	.	.	.	263	423	716	698
8.	Germany . . . . .	"	.	.	.	.	.	.	.
9.	Barley: Visible supply . . . . .	"	.	.	.	628	890	1,043	748
10.	Germany . . . . .	"	.	.	.	.	.	.	.
11.	Oats: Visible supply . . . . .	"	.	.	.	442	697	638	535
12.	Germany . . . . .	"	.	.	.	.	.	.	.
13.	Maize: Visible supply . . . . .	"	.	.	.	1,396	1,166	994	1,398
14.	Argentine . . . . .	"	.	.	.	.	204	268	407
15.	Sugar: Total visible supply . . . . .	"	2,533	3,756	3,222	3,977	4,689	5,690	7,611
16.	Wine: France . . . . .	hl. (000's)	.	.	.	10,541	11,466	12,381	12,162
17.	Coffee: World stocks . . . . .	m.t. (000's)	316	536	629	1,106	1,097	1,793	1,908
18.	Tea: United Kingdom . . . . .	"	89.4	82.2	82.0	97.0	106.7	115.6	112.0
19.	Amsterdam . . . . .	"	.	b) 1.4	b) 2.6	b) 2.9	b) 4.0	b) 3.1	b) 4.0
20.	Cocoa: Europe and New York . . . . .	"	64.1	59.1	52.0	69.9	90.0	91.0	74.5
<b>RAW MATERIALS</b>									
21.	Cotton: Total world stocks . . . . .	bales (000's)	a) 7,535	a) 9,801	a) 12,087	a) 10,135	a) 9,625	a) 11,715	a) 13,835
22.	World visible supply . . . . .	"	4,579	5,627	6,732	5,791	5,925	7,256	8,667
23.	Of which Am. cotton . . . . .	"	3,265	4,210	5,240	4,007	3,880	4,955	6,482
24.	Mill stocks . . . . .	"	a) 4,267	a) 4,498	a) 5,407	a) 4,787	a) 4,863	a) 4,498	a) 4,313
25.	Wool: raw: 3 exporting countries . . . . .	m.t. (000's)	.	.	.	d) 16.7	d) 23.4	d) 55.4	d) 59.3
26.	tops: Europe (continent) . . . . .	"	.	.	.	23.3	25.2	21.4	22.7
27.	Raw silk: Visible supply . . . . .	"	7.0	7.1	8.1	8.0	9.1	13.7	15.2
28.	Rubber: World stocks . . . . .	"	154	196	271	288	317	448	564
29.	U.S.A. stocks . . . . .	"	.	63.6	95.1	90.4	96.9	161.3	238.4
30.	U.K. stocks . . . . .	"	.	28.8	68.0	43.4	45.1	106.0	134.4
31.	Coal: 4 European countries . . . . .	"	13,173	9,078	5,278	6,047	3,919	13,765	19,390
32.	France, pithead stocks . . . . .	"	.	.	.	.	1,240	2,053	4,080
33.	U.S.A., consumers' stocks . . . . .	"	40,279	38,750	57,032	40,340	34,038	31,831	29,223
34.	Petroleum: U.S.A. total . . . . .	brls. (000's)	499,482	484,839	521,898	567,396	613,592	624,762	575,244
35.	Of which motor spirit . . . . .	"	38,461	40,169	41,871	34,382	41,658	47,340	41,472
36.	Iron Ore: U.S.A. . . . .	m.t. (000's)	30,910	30,339	32,762	30,277	30,085	32,199	34,615
37.	France . . . . .	"	1,914	2,007	2,155	2,483	2,705	3,090	3,974
38.	N. Africa . . . . .	"	654	849	899	594	544	779	1,249
39.	Copper: World stocks . . . . .	"	369.7	365.7	354.8	298.7	319.4	519.6	568.6
40.	Of which refined, N. + S. America . . . . .	"	75.0	66.6	87.8	60.0	80.5	283.6	393.2
41.	Lead: U.S.A. total . . . . .	"	f) 89.8	f) 103.7	f) 140.1	f) 145.2	f) 149.4	f) 106.1	f) 173.7
42.	refined . . . . .	"	b) 10.8	b) 10.3	b) 26.0	b) 27.9	b) 30.5	b) 49.8	b) 102.1
43.	United Kingdom . . . . .	"	b) 0.1	b) 0.0	b) 1.7	b) 2.0	b) 0.9	b) 2.0	b) 8.4
44.	Zinc: Cartel + European outsiders . . . . .	"	.	.	.	.	.	.	a) 204.0
45.	U.S.A. + U.K. visible supply . . . . .	"	17	17	34	41	44	109	143
46.	Tin: World stocks . . . . .	"	32.8	25.0	23.2	25.7	33.0	47.1	60.9
47.	Silver: North America . . . . .	m.t.	28	43	34	39	50	87	119
48.	Shanghai . . . . .	"	b) 2,637	3,779	3,969	3,766	5,635	6,923	6,461
49.	India . . . . .	"	b) 8,635	9,863	11,572	11,190	11,225	12,222	13,628
50.	Cement: U.S.A. . . . .	m.t. (000's)	2,945	4,757	5,047	5,673	5,982	6,386	6,150

For footnotes, see page 28.

**Appendix I. Table 6.**  
**STOCKS OF PRIMARY COMMODITIES.**

1932				1933				1934		
Jan.	April	July	Oct.	Jan.	April	July	Oct.	Jan.	April	
.	.	a) 27,110	.	.	.	a) 30,050	.	.	.	1
.	.	17,693	.	.	.	20,252	.	.	.	2
.	.	1,334	.	.	.	789	.	.	.	3
.	.	5,008	.	.	.	6,614	.	.	.	4
16,572	16,215	a) 16,010	13,540	16,130	15,720	a) 18,590	14,042	14,504	14,505	5
		12,106				12,482				6
682	742	473	397	347	370	437	466	474	486	7
.	456	298	703	706	720	485	909	1,027	1,080	8
519	519	268	505	454	503	557	822	841	780	9
.	129	43	136	192	110	51	186	259	170	10
545	586	300	616	597	653	634	1,030	1,074	903	11
.	101	48	59	102	99	52	65	98	84	12
1,679	1,365	1,518	1,363	1,630	1,462	1,985	2,528	2,629	2,328	13
360	190	420	480	330	110	380	470	400	125	14
8,715	9,237	8,198	7,131	8,871	9,045	8,040	6,544	8,467	8,175	15
11,894	11,834	11,184	10,842	11,697	12,233	11,625	11,185	12,346	12,675	16
2,214	2,214	1,890	.	1,836	1,614	1,380	1,398	...	...	17
129.7	106.3	90.8	109.3	142.7	137.7	122.2	117.3	134.7	125.2	18
4.0	3.4	3.2	3.6	2.9	4.3	5.2	4.3	3.4	3.1	19
59.9	90.1	105.7	93.5	95.0	129.9	132.0	129.1	119.6	132.3	20
10,193	9,623	a) 17,046	.	.	.	a) 16,076	.	.	.	21
8,403	7,687	8,205	8,251	10,552	9,796	8,341	7,901	10,060	8,868	22
c) 4,608	.	6,215	6,534	8,878	7,977	6,429	6,385	8,255	6,516	23
.	.	c) 4,462	.	c) 4,542	.	c) 5,050	.	c) 5,268	.	24
.	.	84.5	.	.	.	43.8	.	.	.	25
19.5	23.7	30.0	26.7	25.1	32.3	31.0	31.4	29.8	29.3	26
18.7	15.7	13.4	15.0	17.0	14.2	13.1	17.0	...	...	27
654	656	625	632	652	656	e) 625	636	675	684	28
318.2	340.2	350.5	371.5	395.1	396.4	339.3	332.7	359.5	356.7	29
129.1	127.0	111.3	104.7	94.1	96.1	104.1	96.5	87.8	95.8	30
20,721	20,985	21,490	20,015	19,545	20,357	20,973	20,948	18,874	18,572	31
4,461	4,672	4,574	4,636	4,334	4,323	4,401	4,432	3,987	4,135	32
32,277	27,261	23,859	24,951	26,913	21,630	20,840	30,930	29,792	25,786	33
556,226	548,889	537,511	529,664	508,610	510,256	514,111	529,622	517,211	507,378	34
40,847	43,601	35,212	29,032	31,778	37,634	31,455	29,408	35,752	43,600	35
38,620	35,044	32,675	32,843	31,995	30,031	27,920	33,986	35,229	29,507	36
4,141	4,296	4,465	4,553	4,458	4,234	4,065	4,044	4,031	3,899	37
1,321	1,324	1,355	1,358	1,298	1,195	1,179	1,105	1,095	979	38
692.7	.	.	.	724.5	.	.	.	648.8	...	39
493.8	483.2	502.8	511.4	519.6	525.2	489.0	439.5	426.9	...	40
197.8	217.1	222.9	235.0	238.9	258.8	254.3	242.8	268.3	270.5	41
160.4	.	.	.	187.4	.	.	.	176.8	.	42
13.3	14.9	16.0	16.8	20.5	25.7	26.4	27.3	29.6	30.5	43
189.3	177.5	167.8	154.6	148.9	151.3	131.8	129.2	134.2	123.8	44
140	140	142	129	127	139	122	96	102	107	45
62.7	62.5	61.9	59.5	57.7	53.0	47.1	35.1	27.0	22.1	46
233	285	232	215	236	277	257	168	219	399	47
5,937	6,312	8,440	9,654	10,013	10,869	10,732	11,274	13,665	13,751	48
13,150	11,888	11,962	12,327	11,832	11,960	11,060	11,202	10,823	10,477	49
5,310	6,408	5,615	4,193	4,468	4,807	4,567	4,728	4,308	4,726	50

For footnotes, see page 28.

NOTES to Appendix I. Table 6.

**General Note.** Unless otherwise stated, annual figures are yearly averages and those for the months of 1932-1934 refer to the beginning of the month indicated.

\* Estimate or provisional figure. — a) 1.VIII. — b) Beginning of year. — c) End of month. — d) 30.VI. — e) Of this reduction, 18,000 tons is due to revision of estimate of Malayan stocks. — f) Including stocks in Mexico.

**Sources:** 1-4, Stanford University (U.S.A.), *Wheat Studies*; 5, International Institute of Agriculture (Rome), *Monthly Crop Report and Agricultural Statistics*; 6, 33-36, 50, U.S. Dept. of Commerce, *Survey of Current Business*; 7-14, *Statistisches Jahrbuch für das Deutsche Reich* and International Institute of Agriculture (Rome), *Monthly Crop Report and Agricultural Statistics*; 15, 17-18, 28, 43, 45-46, London and Cambridge Economic Service; 16, *Bulletin de la Statistique générale de la France*; 19, *Economisch-Statistisch Kwartaalbericht* (Rotterdam); 20, 27, 31, *Statistisches Jahrbuch für das Deutsche Reich* and *Wirtschaft und Statistik*; 21-23 *Commercial and Financial Chronicle* (New York); 24, *International Cotton Bulletin* (Manchester); 25, *The Economist* (London); 26, *The Wool Record and Textile World* (Bradford); 29-30, *The World's Rubber Position* (W. H. Rickinson & Son); 32, 37-38, *Annales des Mines* (Paris); 39-42, 47-49, The American Bureau of Metal Statistics, *Year Book and Reports*; 44, *The Metal Bulletin* (London).

**Wheat:** 1. World wheat stocks ex-Russia covering U.S.A., Canada, Australia, Argentine (4 chief exporters), Lower Danube, India, North Africa, European importers, Afloat to Europe and Afloat to ex-Europe, Japan. — 5. Stocks of old crop wheat on August 1st (including flour in terms of wheat) in the 4 principal exporting countries and Afloat, less the minimum carry-over. — 6. Broomhall's world visible supply, which includes wheat in second hands and flour converted into terms of wheat; stocks in Australia were added as from September 1925.

**Rye:** 7. Stocks in North America and Afloat. — 8. Stocks in commercial elevators and mills.

**Barley:** 9. Stocks in North America, Afloat, and U.K. ports. — 10. Stocks in commercial elevators and mills.

**Oats:** 11. Stocks in North America, Afloat and U.K. ports. — 12. Stocks in commercial elevators and mills.

**Maize:** 13. Stocks in North America, Afloat and U.K. ports.

**Sugar:** 15. Stocks in Germany, Czechoslovakia, France, Netherlands, Belgium, Poland, United Kingdom, U.S. ports, Cuba ports and, since July 1926, Cuba Interior.

**Wine:** 16. Wholesalers' stocks.

**Coffee:** 17. Visible supply in Europe, U.S.A., Brazil (Rio, Santos, Bahia), plus, since January 1926, stocks in Interior of São Paulo, since July 1928, stocks in Interior of Rio de Janeiro and, since April 1930, the São Paulo Government stocks.

**Tea:** 18. Prior to April 1929, official statistics for tea in bond; since then, figures compiled by the "Tea Brokers' Association of London" (representing about 90 per cent of the trade), increased by 10 per cent to obtain a comparable series.

**Cocoa:** 20. Stocks in France, United Kingdom, Sweden, Lisbon and New York.

**Cotton:** 21. Series includes, for American cotton, stocks in consuming establishments, public storage, and elsewhere in the U.S.A., linters in U.S.A., stocks in Liverpool, Manchester and continental ports, in mills outside the U.S.A., Afloat to Europe, in Japan and China ports and Afloat; for other kinds of cotton, mill stocks, and visible supply at the principal ports of Europe, Asia and Africa. — 22. Visible supply covering all types at Liverpool, London, Manchester, Hamburg, Bremen, Havre, Barcelona, Rotterdam, Genoa, Ghent, Antwerp, Alexandria, Bombay, Afloat to Europe, U.S. ports, interior towns and exports on day of report. — 24. Estimated mill stocks (of American, East Indian, Egyptian and "Sundries") in eighteen countries in Europe, including an estimate for the U.S.S.R., in India, Japan, China, U.S.A., Canada, Mexico, Brazil and elsewhere.

**Wool:** 25. Raw wool stocks at end of season in Australia (in stores and selling centres), in New Zealand (all centres) and in the ports of the Union of S. Africa (sold and unsold). — 26. Stocks of wool tops in the combing establishments of Belgium, France, Germany and Italy.

**Raw Silk:** 27. Stocks in U.S.A., Japan, Canton, Shanghai, London and Milan.

**Rubber:** 28. Stocks in U.K., U.S.A., Malaya, Ceylon, India, Netherlands Indies, Para, Amsterdam, Antwerp, Afloat and, as from January 1928, stocks on estates in Malaya; since 1929, an estimate of world stocks supplied by the Rubber Growers' Association (England).

**Coal:** 31. Stocks in Germany and the Saar (including coke in terms of coal), Belgium and Poland (Upper Silesia only): these stocks are believed to have represented about 66 per cent of total European stocks at the end of 1931. — 32. Series includes coke and briquettes in terms of coal. — 33. Stocks of bituminous coal in the hands of commercial consumers (electric power utilities, by-product coke ovens, steel and rolling mills, cement mills, coal-gas retorts, other industrial plants and railroads), and retail dealers.

**Petroleum:** 34. Stocks of crude and refined oils (liquid products only) in the U.S.A., which is believed to hold about 80 per cent of the world's stocks.

**Iron Ore:** 36. Stocks at furnaces and on Lake Erie docks. — 37. Stocks at mines. — 38. Stocks at mines in Algeria and Tunis.

**Copper:** 39. Stocks in N. and S. America (blister copper at smelters, refineries, in process and in transit to U.S.A., and refined copper), in official warehouses in U.K. and Le Havre, and in Japan (bonded stock excluded).

**Lead:** 41. Stocks of lead in the U.S.A. (and Mexico up to 1929) in ore, matte, base bullion, in process at, and in transit to, smelters and refineries, together with refined pig and antimonial lead derived from domestic ore. — 42. Stocks of refined lead of domestic and foreign origin. — 43. Stocks in official warehouses only which have never represented anything like the total reserves in the country.

**Zinc:** 44. Series cover the principal producers with the notable exception of the U.S.A.; the European outsiders' stocks amount to only 2-3 per cent of the total. — 45. Stocks in public warehouses.

**Tin:** 46. Visible supply as reported by the London Metal Exchange, comprising stocks in U.K., U.S.A., and Netherlands, tin Afloat to U.K., and the U.S.A. and Europe from the Straits, Batavia and Australia and Afloat to U.K. and U.S.A. from China; together with the "tin" estimate of Straits stocks.

**Silver:** 47. Stocks at refineries in the U.S.A. and Canada. — 48. Stocks in sycee, Mexican dollars and bars expressed in terms of fine silver. — 49. Currency returns showing reserve in silver coin and bullion, here expressed in terms of fine silver.

**Cement:** 49. Stocks of finished cement and of "clinker" (unground cement).

Appendix II. Table 1.

GENERAL INDICES OF INDUSTRIAL PRODUCTIVE ACTIVITY.

Average 1925-1929 = 100.

Country	1925	1926	1927	1928	1929	1930	1931	1932	1933
<i>Africa :</i>									
Union of South Africa <sup>1</sup> (annual) . . .	84	94	98	108	116	124	...	...	...
<i>America :</i>									
Canada <sup>2</sup> (monthly) . . . . .	83	93	98	109	118	100	84	68	71
United States <sup>3</sup> (monthly) . . . . .	95	99	97	101	109	88	74	58	70
Chile <sup>4</sup> (a) (monthly) . . . . .	.	.	(86)	(94)	(117)	(118)	(91)	(102)	(112)
<i>Asia :</i>									
Japan <sup>5</sup> (8 monthly series) . . . . .	90	91	97	104	118	110	109	113	128
(26 monthly series) (a) . . . . .	.	.	.	.	.	(100)	(103)	(109)	(126)
U.S.S.R. <sup>6</sup> (annual) . . . . .	58	82	94	118	148	192	240	274	*299
<i>Europe :</i>									
<i>Germany<sup>7</sup> :</i>									
Annual index . . . . .	89	85	107	109	110	97	79	66	...
Monthly index . . . . .	87	87	109	108	109	97	80	66	75
Austria <sup>8</sup> (monthly) . . . . .	89	89	100	110	113	96	84	73	74
<i>Belgium<sup>9</sup> :</i>									
Annual index . . . . .	82	95	103	109	111	98	91	77	78
Monthly index . . . . .	80	96	99	112	112	95	85	71	75
Denmark <sup>10</sup> (a) (annual) . . . . .	.	.	(100)	(108)	(117)	(127)	(117)	(106)	(122)
Finland <sup>11</sup> (monthly) . . . . .	82	94	104	111	109	102	91	94	109
France <sup>12</sup> (monthly) . . . . .	88	103	90	104	114	115	102	79	88
Greece <sup>13</sup> (annual) . . . . .	95	90	100	106	108	112	116	109	(c)120
Hungary <sup>14</sup> (a) (quarterly) . . . . .	.	.	(100)	(101)	(102)	(94)	(87)	(75)	(83)
Italy <sup>15</sup> (a) (monthly) . . . . .	.	.	.	(100)	(109)	(100)	(85)	(73)	(80)
Norway <sup>16</sup> (a) (annual) . . . . .	101	90	92	102	114	115	89	105	105
Netherlands <sup>17</sup> (monthly) . . . . .	86	89	99	112	115	105	91	72	79
Poland <sup>18</sup> (monthly) . . . . .	84	82	102	116	115	95	80	62	64
<i>United Kingdom<sup>19</sup> :</i>									
Board of Trade (quarterly) . . . . .	(b)(94)	.	(101)	(100)	(105)	(97)	(88)	(88)	(93)
London and Cambridge (quarterly) . . . . .	99	76	109	104	112	100	85	86	92
<i>Sweden<sup>20</sup> :</i>									
Kommerskollegium (annual) . . . . .	87	95	98	104	117	116	111	105	...
Sveriges Industriförbund (monthly) . . . . .	91	94	97	105	112	108	94	88	91
Czechoslovakia <sup>21</sup> (monthly) . . . . .	90	87	101	109	114	101	92	72	68
<i>Oceania :</i>									
New Zealand <sup>22</sup> (annual) . . . . .	93	102	102	98	106	114	111	121	...

\* Provisional figures. — (a) Original basis has not been changed, as figures for all years are not available. (b) 1924. (c) Half year. — <sup>1</sup> Original basis 1920-21: Index of volume of output, all classes of industry (years ending 30. VI); Office of Census and Statistics. — <sup>2</sup> Original basis 1926: Dominion Bureau of Statistics. — <sup>3</sup> Original basis 1923-1925: Federal Reserve Board. — <sup>4</sup> Basis 1927-1929: Dirección General de Estadística. — <sup>5</sup> 8 series, original basis 1921-25. 26 series, basis 1930: Mitsubishi Economic Research Bureau. — <sup>6</sup> Original basis 1928: Index based on aggregate values of industrial production at 1926-27 prices: Gosplan. — <sup>7</sup> Original basis 1928: Institut für Konjunkturforschung. — <sup>8</sup> Original basis 1923-1931; Österreichisches Institut für Konjunkturforschung. — <sup>9</sup> Original basis 1923-1925: Institut des Sciences économiques, Louvain. — <sup>10</sup> Basis 1927: Statistiske Departement. — <sup>11</sup> Original basis 1926: Approximate index calculated by the Economic Intelligence Service by taking an average of the quantum index of export industries and the value index of home-market industries divided by an index of prices for domestic industrial products. Basic series published in the Bank of Finland Monthly Bulletin. — <sup>12</sup> Original basis 1913: Statistique générale. — <sup>13</sup> Original basis 1928: Conseil Supérieur économique. — <sup>14</sup> Basis 1927: Ungarisches Institut für Wirtschaftsforschung. — <sup>15</sup> Basis 1928: Direzione Generale dell'Industria, Ministero delle Corporazioni. — <sup>16</sup> Original basis 1927: Statistiske Centralbyrå. — <sup>17</sup> Original basis 1922-1925: Index based on net imports of raw materials: Centraal Bureau voor de Statistiek. — <sup>18</sup> Original basis 1928: Institute for Economic Research. — <sup>19</sup> Board of Trade. Original basis 1924, recalculated on the basis: average 1924, 1927-1929 = 100. London and Cambridge, original basis 1924. — <sup>20</sup> Kommerskollegium, all classes of industry, original basis 1913. Sveriges Industriförbund, sample of important industries original basis 1925-1930. — <sup>21</sup> Original basis 1929: Dr K. Maiwald. — <sup>22</sup> Index of values added by manufacture, at 1925-26 prices; years ending 31. III. of following year: Census and Statistics Office.



**Appendix II. Table 2.**  
**INDICES OF PRODUCTION OF PRODUCERS' AND CONSUMERS' GOODS.**  
 Average 1925-1929 = 100.

Country and grouping	1925	1926	1927	1928	1929	1930	1931	1932	1933
<b>GERMANY :<sup>1</sup></b>									
Producers' goods	88	85	108	107	112	95	70	54	63
Investment goods	88	81	111	108	112	91	60	40	51
Other producers' goods	88	91	102	106	113	103	90	81	86
Consumption goods	87	89	111	109	104	101	94	85	93
With elastic demand	86	89	117	108	100	95	90	80	90
With inelastic demand	83	93	102	111	112	112	105	94	97
<b>FRANCE :<sup>2</sup></b>									
Investment goods	88	100	88	106	118	118	102	72	81
Consumption goods	93	104	92	105	106	100	91	75	93
<b>NETHERLANDS :<sup>3</sup></b>									
Investment goods	81	86	97	119	118	102	74	54	65
Consumption goods	91	92	102	104	111	107	110	92	96
<b>POLAND :<sup>4</sup></b>									
Investment goods	80	75	100	124	122	97	73	52	57
Consumption goods	88	81	107	114	110	92	82	70	70
<b>SWEDEN :<sup>5</sup></b>									
Investment goods	90	91	95	107	117	110	91	80	85
Consumption goods	93	98	101	103	105	105	100	101	100
<b>UNITED KINGDOM<sup>6</sup></b> (1924, 1927-1929 = 100):									
Investment goods	(a)91	.	102	100	107	96	78	75	84
Consumption goods	(a)99	.	101	100	100	90	88	90	94
<b>U. S. S. R. :<sup>7</sup></b>									
Producers' goods	56	82	94	115	152	215	286	338	375
Consumption goods	58	83	94	120	145	173	202	220	268
<b>UNITED STATES :<sup>8</sup></b>									
Investment goods	97	100	91	101	111	80	52	29	43
Consumption goods	95	97	101	101	106	90	90	81	91

For sources see Appendix II, Table 1; indices for France, the United Kingdom, the U.S.S.R. and the United States compiled by the Economic Intelligence Service.

(a) 1924.

<sup>1</sup> *Germany* : Investment goods : iron and steel, non-ferrous ores and metals, building, machinery, motor vehicles, shipbuilding; other producers' goods : coal, petroleum, gas, electricity, paper, hemp yarn and potash. Consumption goods with elastic demand : textiles, footwear, glassware, porcelain, musical instruments; consumption goods with inelastic demand : meat, dairy products, sugar, tobacco products, beer, brandy, sea-fish.

<sup>2</sup> *France* : Investment goods : metallurgy and engineering. Consumption goods : textiles, leather and rubber.

<sup>3</sup> *Netherlands* : The figures represent the excess of imports over exports. Investment goods : iron and steel and wood. Consumption goods : textiles, oil seeds, whale oil, cocoa, hides and skins, wood for paper making and wood pulp.

<sup>4</sup> *Poland* : Investment goods : building, minerals, textiles, iron-ore mining, iron and steel, and chemical industry. Consumption goods : textiles, clothing, leather, food, paper and printing.

<sup>5</sup> *Sweden* : Investment goods : mining, iron and steel, metal working, engineering, saw-mills, pulp, earth and stone industries, chemicals. Consumption goods : paper, textiles, leather, household goods, food and drink.

<sup>6</sup> *United Kingdom* : Investment goods : iron and steel, non-ferrous metals, chemicals, engineering and shipbuilding. Consumption goods : textiles, leather, and food, drink and tobacco.

<sup>7</sup> *U.S.S.R.* : Producers' goods : electricity, fuel, mining, iron and steel, non-ferrous metals, engineering, electro technical machinery, building materials, glass and porcelain, etc., chemicals, hemp and jute, and wood. Consumption goods : textiles, ready-made clothing, leather and footwear, soap, matches and foodstuffs.

<sup>8</sup> *United States* : Investment goods : iron and steel, lumber, transport equipment (automobiles, locomotives and shipbuilding), cement, zinc, lead and silver. Consumption goods : food products, textiles, leather and products, tobacco products, newsprint, book paper, petroleum refining and rubber tyres and tubes.

Appendix II. Table 3.

ACTIVITY IN THE MECHANICAL ENGINEERING INDUSTRY.  
Average 1925-1929 = 100.

Country	1925	1926	1927	1928	1929	1930	1931	1932	1933	
<i>America :</i>										
United States <sup>1</sup>	Demand for machine tools	77	84	71	122	145	66	38	18	25
	Demand for foundry equipment . . . . .	86	92	81	113	128	68	34	13	24
<i>Europe :</i>										
Germany <sup>2</sup>	Despatch of machines . . .	86	74	97	121	122	101	72	46	51
	Orders received for machines	86	73	108	114	119	87	62	37	44
Denmark <sup>3</sup>		97	99	80	104	120	125	92	74	88
France <sup>4</sup>		88	101	87	105	120	120	104	74	82
Greece <sup>5</sup>		95	87	103	111	104	98	96	80	75
Hungary <sup>6</sup>				(84)	(101)	(116)	(99)	(68)	(51)	...
Netherlands <sup>7</sup>	Value of products . . .	78	85	93	112	131	125	89	48	...
	Workers employed . . .	88	87	92	109	124	118	88	62	...
Poland: Metals and engineering <sup>8</sup>		83	76	98	122	122	92	68	54	55
United Kingdom	Board of Trade <sup>9</sup> . . . . .	a)(89)		(103)	(101)	(108)	(104)	(85)	(79)	(85)
	London and Cambridge Economic Service <sup>10</sup> . . . . .	87	89	102	122	101	120	49	11	21
Sweden <sup>11</sup>		76	90	94	114	126	131	126	109	...
U.R.S.S. <sup>12</sup>	Machine production . . .	48	69	90	120	173	259	368	472	537
	Prod. of agricult. machinery	35	68	86	125	186	354	535	624	...
<i>Oceania :</i>										
New Zealand <sup>13</sup>		73	83	102	123	119	88	54	38	...

(a) 1924. — <sup>1</sup> U.S. Dept. of Commerce. — <sup>2</sup> Inst. für Konjunkturforschung. — <sup>3</sup> Index based on figures of value of machines produced : Statistiske Departement. — <sup>4</sup> Index based on iron and copper manufacture, shipbuilding and automobile production : Stat. gén. de la France. — <sup>5</sup> Conseil Supérieur Économique : 1933 half-year. — <sup>6</sup> Basis 1927-1929. Index based on value added by manufacture : Ungarisches Institut für Wirtschaftsforschung. — <sup>7</sup> Indices based on figures of the Centraal Bureau voor de Statistiek. Workers employed on 15. IX. — <sup>8</sup> Index based on hours worked in the metal and engineering trades : Inst. for Econ. Research. — <sup>9</sup> Basis 1924, 1927-1929. Index of production in engineering and shipbuilding. — <sup>10</sup> Production of railway locomotives, wheels and axles. — <sup>11</sup> Index based on figures of values of production of shipbuilding, vehicles, machines, instruments and watches at 1913 prices : Kommersekollegium. — <sup>12</sup> Indices based on values of production at 1926-27 prices : *Konjunktura mirovozo khoziaistva (Survey of World Economics)*. — <sup>13</sup> Consumption of iron and steel by engineering mills : index based on figures of the Census and Statistics Office. Economic years ending March 31<sup>st</sup> of following year.

Appendix II. Table 4.

ACTIVITY IN THE ELECTRICAL INDUSTRY.  
Average 1925-1929 = 100.

Country	1925	1926	1927	1928	1929	1930	1931	1932	1933	
<i>America :</i>										
United States <sup>1</sup>	88	97	90	98	127	97	69	34	39	
<i>Europe :</i>										
Germany <sup>2</sup>	Prod. of electr. bulbs	88	86	106	112	107	96	72	...	...
	Prod. of wireless equipment	25	28	68	186	193	256	241	221	...
Denmark <sup>3</sup> (Value of production)	83	87	91	106	133	154	120	102	124	
Italy <sup>4</sup>	Machines . . . . .					(100)	(92)	(81)	(68)	(69)
	Bulbs . . . . .	69	80	95	107	150	169	149	136	173
Netherlands <sup>5</sup>	Value of products	75	75	100	104	147	144	94	69	62
	Workers employed . . .	82	86	95	111	126	119	103	76	77
Poland <sup>6</sup>			(69)	(108)	(124)	(96)	(74)	(67)	(77)	
United Kingdom <sup>7</sup>	82	95	123	91	110	111	79	61	66	
Sweden <sup>8</sup>	75	91	100	117	118	126	113	93	...	
U.S.S.R. <sup>9</sup>	51	69	82	121	177	342	538	...	...	

For footnotes, see page 133.

### Appendix II. Table 5.

#### ACTIVITY IN THE BUILDING INDUSTRY.

Average 1925-1929 = 100.

Country		1925	1926	1927	1928	1929	1930	1931	1932	1933
<i>Africa :</i>										
Union of South Africa <sup>1</sup>	Total plans passed . . . . .	78	95	102	104	122	116	118	*123	*91
	New dwelling-houses completed . . . . .	79	96	101	108	116	108	105	*102	*69
<i>America :</i>										
Canada <sup>2</sup>	General index . . . . .	69	83	99	112	137	108	76	36	24
	Building permits . . . . .	68	84	101	120	128	93	64	25	14
	Total buildings . . . . .	106	100	96	109	89	58	41	18	17
United States <sup>3</sup>	Contracts awarded	111	103	98	112	77	45	38	15	14
	Residential buildings . . . . .	96	96	89	106	113	61	30	14	18
	Factory and commercial buildings . . . . .	130	93	102	81	94	129	67	23	32
	Public works and utilities . . . . .	94	96	100	105	105	88	60	.	.
	Index of volume of construction . . . . .	99	78	87	105	131	117	78	55	53
Argentina <sup>4</sup>		.	.	.	.	(100)	(79)	(35)	(44)	(58)
Chile <sup>5</sup>		.	.	.	.	.	.	.	.	.
Colombia <sup>6</sup>		40	64	92	148	156	93	57	52	164
<i>Asia :</i>										
China <sup>7</sup>		.	.	.	.	(100)	(107)	(128)	(99)	(130)
Japan <sup>8</sup>	Dwellings completed . . . . .	66	77	74	126	158	124	124	122	72
	Commercial and industrial buildings completed . . . . .	44	61	73	171	151	80	75	66	47
<i>Europe :</i>										
Germany <sup>9</sup> (a)	Permits	55	76	110	113	146	113	52	36	42
	Dwellings . . . . .	.	.	.	(101)	(99)	(75)	(37)	(21)	(23)
	Business buildings . . . . .	52	77	107	125	139	158	117	52	70
	Buildings completed	69	79	110	95	(105)	(101)	(58)	(30)	(19)
	Dwellings . . . . .	.	.	.	119	122	119	91	57	72
	Business buildings . . . . .	69	79	110	119	122	119	91	57	72
	(b) Dwellings completed : total Germany . . . . .	.	.	(80)	(116)	(104)	(77)	(89)	(108)	(92)
Belgium <sup>10</sup>		.	.	.	.	.	.	.	.	.
Denmark <sup>11</sup>	Apartments completed . . . . .	89	98	101	98	113	136	159	128	157
	Apartments under construction . . . . .	.	.	.	[77]	(100)	(130)	(130)	(86)	(151)
Spain <sup>12</sup>	Permits	131	80	77	98	113	161	162	68	56
	Dwellings . . . . .	120	89	90	104	97	74	84	45	67
	Commercial and industrial buildings . . . . .	67	83	110	135	106	28	27	37	16
Finland <sup>13</sup>		81	115	81	98	124	139	127	101	92
France <sup>14</sup>		84	93	93	113	118	121	122	123	(124)
Greece <sup>15</sup>		.	.	.	.	(100)	(80)	(49)	(40)	(52)
Italy <sup>16</sup>		106	82	76	101	134	141	146	208	142
Norway <sup>17</sup>		.	.	.	.	.	.	.	.	.
Netherlands <sup>18</sup>		.	(101)	(104)	(98)	(98)	(106)	(104)	(85)	(92)
	Index of building . . . . .	84	71	85	131	128	86	50	27	23
Poland <sup>19</sup>	Buildings completed	66	88	99	103	144	179	135	134	*187
	Dwelling-houses . . . . .	121	77	119	92	91	102	57	47	*42
	Industrial buildings . . . . .	(a)(93)	.	(99)	(99)	(109)	(116)	(100)	(116)	(154)
United Kingdom	Board of Trade <sup>20</sup>	(a)(81)	.	(97)	(108)	(114)	(110)	(89)	(77)	(85)
	Dwelling-houses . . . . .	83	104	128	84	101	86	101	101	121
	Other buildings . . . . .	.	.	(96)	(111)	(92)	(79)	(68)	(30)	(24)
Saar <sup>21</sup>		.	.	.	.	.	.	.	.	.
	Dwellings completed . . . . .	85	94	102	112	107	151	150	134	85
Sweden <sup>22</sup>	Rooms (incl. kitchens) completed . . . . .	92	98	100	106	104	138	137	122	84
	Non-speculative buildings . . . . .	111	96	109	109	76	108	123	152	73
	Dwellings permits . . . . .	.	.	(88)	(88)	(124)	(128)	(107)	(92)	(62)
Switzerland <sup>24</sup>	Dwellings permit . . . . .	.	(84)	(95)	(109)	(112)	(128)	(143)	(98)	(129)
	Dwellings built . . . . .	.	(85)	(93)	(107)	(115)	(129)	(154)	(155)	(119)
	Commercial and industrial bldgs. permits . . . . .	.	(83)	(104)	(104)	(109)	(94)	(87)	(74)	(66)
	Commercial and industrial bldgs. built . . . . .	.	(95)	(96)	(101)	(107)	(100)	(100)	(73)	(66)
<i>Oceania :</i>										
New Zealand <sup>25</sup>	Permits : Dwelling-houses . . . . .	112	117	93	85	94	56	25	24	*39
	Buildings completed	96	92	82	115	116	77	32	29	...
	Dwelling-houses . . . . .	63	89	92	124	132	77	46	36	...
	Business premises . . . . .	.	.	.	.	.	.	.	.	.

For footnotes, see page 133.

NOTES to Table 4 of Appendix II.

- <sup>1</sup> Index based on values of new orders of electrical goods. Figures relate to about 58 per cent of industry : U.S. Dept. of Commerce.
- <sup>2</sup> Institut für Konjunkturforschung.
- <sup>3</sup> Index based on figures of value of production of electrical goods : Statistiske Departement.
- <sup>4</sup> Index of production of machinery (basis 1929) : Associazione Nazionale Fascista fra Industriali Meccanichi ed Affini. Index based on figures of output of bulbs : Istituto Centrale di Statistica.
- <sup>5</sup> Indices based on figures of workers employed on September 15th : Centraal Bureau voor de Statistiek.
- <sup>6</sup> Basis 1927-1929. Index based on figures of monthly average of workers employed : Central Statistical Office.
- <sup>7</sup> Index of activity in the Electrical Manufacturing Industry : British Electrical and Allied Manufacturers' Association (BEAMA).
- <sup>8</sup> Index based on figures of value of production of electrical goods : Kommerskollegium.
- <sup>9</sup> Index based on value of output of electro-technical machinery at 1926/27 prices : *Konjunktura mirovozo khoziaistva (Survey of World Economics)*.

NOTES to Table 5 of Appendix II.

- \* Provisional figures. (a) 1924.
- <sup>1</sup> Urban areas. Absolute figures published by the Office of Census and Statistics. Years ending 30. VI. Indices for 1931 and 1932 based on less complete monthly series.
- <sup>2</sup> General index based on value of contracts adjusted for changes in costs and on building permits : Dom. Bureau of Statistics.
- <sup>3</sup> Indices based on figures of contracts awarded relating to area of new buildings in 37 States : F. W. Dodge Corp. Index of volume of construction based on consumption of materials : *Survey of Current Business*.
- <sup>4</sup> Ground area of new buildings in Buenos Aires : *Revista de Economia Argentina*.
- <sup>5</sup> Basis 1929. Index based on figures representing area of new buildings in 9 municipalities : Dir. Gen. de Estadística.
- <sup>6</sup> Ground area of new buildings in Bogotá : *Revista del Banco de la República*.
- <sup>7</sup> Basis : 1929. Index based on figures of building permits issued in Shanghai, Tientsin and Tsingtao : Directorate of Statistics, Nanking.
- <sup>8</sup> Indices based on figures of ground area of new buildings completed in Tokyo. About 95% of the dwellings and 73% of the business buildings are wooden : Municipal Bureau of Statistics.
- <sup>9</sup> (a) Indices of building permits and buildings completed in 96 towns, number of dwellings, cubic volume of business buildings (basis 1928-1929), based on figures of the Inst. für Konjunkturforschung. (b) Index based on statistics published in *Vierteljahrshefte zur Statistik*.
- <sup>10</sup> Basis 1927-1929. Index based on figures of building permits in 111 towns and localities : Bq. Nat. de Belgique.
- <sup>11</sup> Index of number of apartments completed in the capital and 85 provincial towns (since 1930, adjusted to include suburbs). 1925 to 1928, years ending Oct. Index of numbers of apartments under construction (basis 1929) in the same towns on Jan. 1 of following year. Indices based on figures of the Statistiske Departement.
- <sup>12</sup> Indices based on figures of building permits in Barcelona : Institut d'investigacions econòmiques, Barcelona.
- <sup>13</sup> Index based on figures of actual number of dwelling-rooms (including kitchen) completed in 38 localities : Central Statistical Bureau.
- <sup>14</sup> Index based on actual number of building permits (when possible, number of floors) issued in the principal towns : Stat. gén. de la France.
- <sup>15</sup> Index compiled by the Conseil Supérieur Economique, 1933 half-year.
- <sup>16</sup> Basis 1929. Index based on figures of building permits (numbers of apartments) issued in the 17 principal towns : Istituto Centrale di Statistica.
- <sup>17</sup> Index based on figures of net increase of number of dwellings in towns of over 2,000 inhabitants : Statistiske Centralbyrå.
- <sup>18</sup> Basis 1926-1929. Index based on figures of number of dwellings completed on new ground (i.e., excl. rebuilding) : Centraal Bureau voor de Statistiek.
- <sup>19</sup> Index of activity based on total number of hours worked : Institute for Economic Research, and indices based on figures of number of buildings completed in towns of over 25,000 inhabitants : Central Statistical Office.
- <sup>20</sup> Basis : 1924, 1927-1929. Indices of estimated cost of plans approved by 146 local authorities. "Other buildings" include additions and alterations to existing buildings.
- <sup>21</sup> Index based on estimated number of houses completed in England and Wales.
- <sup>22</sup> Basis : 1927-1929. Index based on figures of number of apartments completed (including rebuilding) : *Saarwirtschaftsarchiv*.
- <sup>23</sup> Indices based on absolute figures published by the K. Socialstyrelsen. Index of dwellings permits (basis 1927-1929) relates to towns of over 10,000 inhabitants.
- <sup>24</sup> Basis 1926-1929. Indices based on figures relating to 351 localities : Office fédéral de l'Industrie, des Arts et Métiers et du Travail.
- <sup>25</sup> Indices based on figures published by the Census and Statistics Office. Years ending 31. III of following year.

### Appendix II. Table 6.

#### ACTIVITY IN THE TIMBER INDUSTRY.

Average 1925-1929 = 100.

Country	1925	1926	1927	1928	1929	1930	1931	1932	1933			
<i>America :</i>												
Canada <sup>1</sup> . . . . .	111	108	104	88	89	77	48	35	49			
United States <sup>2</sup> . . . . .	107	104	97	96	96	68	43	26	34			
<i>Asia :</i>												
Turkey <sup>3</sup> . . . . .	128	115	83	83	92	94	95	89	...			
<i>Europe :</i>												
Austria <sup>4</sup> . . . . .	90	81	101	126	102	83	56	41	47			
Denmark <sup>5</sup> {	.	(82)	Activity . . . . .	(94)	(98)	(109)	(119)	(125)	(97)	...		
			Planks and timber . . . . .	(97)	(100)	(122)	(124)	(112)	(84)	(129)		
Finland <sup>6</sup> {	.	.	Sawn timber, total . . . . .	85	94	115	111	95	75	63	64	...
			Non-planed . . . . .	86	95	115	110	94	74	62	63	...
Norway <sup>7</sup> {	.	.	Planned . . . . .	61	77	115	133	113	104	101	94	...
			Activity . . . . .	111	89	89	105	106	105	80	87	...
Poland <sup>8</sup> {	.	(95)	Activity . . . . .	95	88	103	109	105	88	64	50	57
			Sawn timber . . . . .	(106)	(94)	(91)	(72)	(64)	(79)			
Roumania <sup>9</sup> . . . . .	110	119	94	91	86	73	63	49	...			
Sweden <sup>10</sup> . . . . .	88	94	101	108	110	104	97	87	...			
Czechoslovakia <sup>11</sup> . . . . .	94	83	92	119	112	95	74	51	51			
Yugoslavia <sup>12</sup> . . . . .	82	88	98	118	114	95	63	42	53			
<i>U.S.S.R.<sup>13</sup> . . . . .</i>												
	71	86	102	109	132	174	190	194	...			
<i>Oceania :</i>												
Australia <sup>14</sup> Sawn timber . . . . .	102	119	103	95	82	78	46	38	...			
New Zealand <sup>15</sup> {	(120)	(100)	Sawn timber . . . . .	119	103	91	91	95	77	52	56	...
			Planned flooring, etc. . . . .	(86)	(97)	(103)	(89)	(56)	(52)	...		

<sup>1</sup> Index of export of boards and planks : Dom. Bureau of Statistics.  
<sup>2</sup> Index of lumber cut : Federal Reserve Board.  
<sup>3</sup> Index based on figures of production of timber : Central Statistical Office.  
<sup>4</sup> Index based on figures of exports of sawn timber.  
<sup>5</sup> Index of activity in the wood industry (basis 1927-1929) and index based on production of planks and timber (basis 1926-1929) : Statistiske Departement.  
<sup>6</sup> Indices based on figures of production of sawn timber : Central Statistical Bureau.  
<sup>7</sup> Index of activity : Statistiske Centralbyrå.  
<sup>8</sup> Index of activity based on number of hours worked : Institute for Econ. Research. Index based on figures of production of sawn timber : Central Statistical Office (basis 1926-1929).  
<sup>9</sup> Index based on figures of production of planks : Institutul Românesc de Conjunctura.  
<sup>10</sup> Index covering total production : Kommerskollegium.  
<sup>11</sup> Provisional index of activity : Dr. K. Maiwald.  
<sup>12</sup> Index of exports of sawn timber.  
<sup>13</sup> Index based on figures of production of sawn timber : Gosplan.  
<sup>14</sup> Index based on the figures of sawmill output of native timber : Commonwealth Bureau of Census and Statistics. Years ending 30.VI.  
<sup>15</sup> Index based on surface-area of rough sawn timber and index of planned flooring, skirting, and, since 1928, also moulding, etc. (basis 1928-1929). Figures published by the Census and Statistics Office. Years ending 31.III of following year.

Appendix II. Table 7.

ACTIVITY IN THE PAPER AND PRINTING INDUSTRIES.

Average 1925-1929 = 100.

Country	1925	1926	1927	1928	1929	1930	1931	1932	1933	
<i>America :</i>										
Canada <sup>1</sup>	Paper . . . . .	74	90	98	113	125	115	102	88	...
	Paper-boards . . . . .	80	86	89	107	138	129	112	116	...
	Wood-pulp . . . . .	82	95	97	107	119	107	94	79	...
United States <sup>2</sup>	Newsprint . . . . .	72	89	98	113	129	118	103	90	95
	Paper and printing . . . . .	93	99	97	103	108	98	92	79	82
	Wood-pulp, paper and paper-boards . . . . .	95	99	96	103	107	95	87	74	79
Chile <sup>3</sup>	Printing . . . . .	87	98	100	104	111	104	100	85	81
	Paper . . . . .	.	.	(88)	(95)	(120)	(142)	(114)	(210)	(244)
	Paper-boards . . . . .	.	.	(36)	(137)	(142)	(173)	(67)	(109)	(141)
<i>Asia :</i>										
India <sup>4</sup>	Paper . . . . .	82	93	98	110	117	115	117	115	124
Japan <sup>5</sup>	Paper-boards . . . . .	87	90	89	106	128	118	115	110	...
	Paper . . . . .	80	89	98	112	121	117	114	112	123
<i>Europe :</i>										
Germany <sup>6</sup>	Paper . . . . .	88	86	105	110	111	104	97	86	92
	Paper-boards . . . . .	92	82	108	110	108	102	88	83	83
	Printing . . . . .	91	88	104	112	106	105	90	77	...
Austria <sup>7</sup>	Paper . . . . .	90	93	100	109	108	99	99	95	95
	Paper-boards . . . . .	92	99	104	103	101	109	55	42	53
Belgium <sup>8</sup>	Paper and paper-boards . . . . .	88	93	98	108	113	99	104	86	81
	Paper . . . . .	90	101	104	103	101	106	103	107	111
Denmark <sup>9</sup>	Paper-boards . . . . .	81	88	97	117	118	127	114	129	208
	Newsprint . . . . .	92	90	99	108	111	112	117	124	...
Finland <sup>10</sup>	Paper-boards . . . . .	100	101	86	96	117	112	121	129	...
	Paper . . . . .	92	100	92	97	118	145	120	114	141
France <sup>11</sup>	Paper and paper-boards . . . . .	50	45	83	145	176	183	190	186	209
	Paper . . . . .	.	.	(45)	(74)	(181)	(266)	(283)	(237)	(241)
Hungary <sup>12</sup>	Paper-boards . . . . .	.	.	(91)	(92)	(117)	(152)	(138)	(138)	(134)
	Paper and paper-boards . . . . .	117	100	88	95	101	100	96	97	107
Norway <sup>13</sup>	Paper and paper-boards . . . . .	95	85	101	105	114	106	63	103	95
	Printing . . . . .	102	95	98	101	105	109	90	109	...
Netherlands <sup>14</sup>	Paper . . . . .	83	89	97	110	120	123	124	118	...
	Paper . . . . .	88	86	98	114	113	110	97	92	90
Poland <sup>17</sup>	Printing . . . . .	93	84	98	111	115	112	98	82	82
	Paper . . . . .	.	.	.	.	(100)	(120)	(104)	(131)	(145)
Portugal <sup>18</sup>	Paper and paper-boards . . . . .	81	92	103	113	112	104	97	95	...
	Paper . . . . .	88	94	105	94	119	109	102	119	124
Sweden <sup>21</sup>	Paper . . . . .	91	97	99	96	116	105	117	115	...
	Paper-boards . . . . .	86	93	96	105	120	117	88	91	...
	Printing . . . . .	87	94	100	105	114	118	127	127	...
Czechoslovakia <sup>22</sup>	Paper . . . . .	88	90	105	112	104	99	100	79	77
	Printing . . . . .	90	97	99	103	111	108	103	81	74
U.S.S.R. <sup>23</sup>	Paper . . . . .	71	87	101	114	126	161	158	156	179
<i>Oceania :</i>										
New Zealand <sup>24</sup>	Printing . . . . .	87	95	103	102	112	109	94	87	...

<sup>1</sup> Indices based on figures of production of paper, paper-boards and wood-pulp and index of newsprint production : Dom. Bureau of Statistics. — <sup>2</sup> Indices of paper and printing (general), of production of wood-pulp, paper and paper-boards, and of printing (newsprint consumption) : Fed. Res. Board. — <sup>3</sup> Original basis 1927-1929. Indices of production of paper and paper-boards : Dir. Gen. de Estadística. — <sup>4</sup> Index based on figures of production of paper : Dept. of Commercial Intelligence and Statistics. — <sup>5</sup> Index based on figures of production of paper-boards : Dept. of Commerce and Industry ; index of paper production : Mitsubishi Economic Research Bureau. — <sup>6</sup> Indices of production of paper and paper-boards, and of activity in the printing industry : Inst. für Konjunkturforschung. — <sup>7</sup> Indices based on figures of production of paper and paper-boards : Bundesamt für Statistik. — <sup>8</sup> Index of production of paper and paper-boards : Inst. des Sciences économ., Louvain. — <sup>9</sup> Indices based on figures of production of paper and paper-boards : Statistike Departement. — <sup>10</sup> Indices based on figures of production of newsprint and paper-boards : Central Statistical Bureau. — <sup>11</sup> Index based on the apparent consumption of chemical and mechanical wood-pulp : Stat. gén. de la France. — <sup>12</sup> Index of production of paper and paper-boards ; 1933 half-year : Conseil Supérieur Economique. — <sup>13</sup> Basis 1927-1929. Indices of production of paper (newsprint, book and writing) and paper-boards : Ungarisches Institut für Wirtschaftsforschung. — <sup>14</sup> Index of production of paper and paper-boards : Istituto Centrale di Statistica. — <sup>15</sup> Index based on figures of production of paper and paper-boards (April to Sept. 1931, labour dispute ; 1933 average Jan.-Sept.) ; index of activity in the printing industry : Statistiska Centralbyrå. — <sup>16</sup> Index based on figures of production of paper : Centraal Bureau voor de Statistiek. —

(Continued at foot of page 136.)

Appendix II. Table 8.

ACTIVITY IN THE LEATHER AND BOOT AND SHOE INDUSTRIES.

Average 1925-1929 = 100.

Country	1925	1926	1927	1928	1929	1930	1931	1932	1933
<i>Africa:</i>									
Union of South Africa <sup>1</sup>									
Leather . . . . .	88	96	108	102	107	112	...	...	...
Boots, shoes and slippers	86	97	104	102	110	115	...	...	...
<i>America:</i>									
Canada <sup>2</sup> . . . . .	100	100	102	100	99	86	89	88	94
Chile <sup>3</sup> . . . . .			(91)	(94)	(111)	(105)	(57)	(63)	(58)
United States <sup>4</sup>									
Leather and products, total	96	98	102	101	103	91	89	84	96
Boots and shoes . . . . .	95	96	101	102	107	89	93	92	104
<i>Asia:</i>									
Japan <sup>5</sup> . . . . .	71	88	122	121	98	107	91	96	...
<i>Europe:</i>									
Germany <sup>6</sup>									
Leather production . . . . .	101	89	117	101	94	87	81	81	*84
Leather manufactures . . . . .	104	85	121	100	87	83	77	69	...
Leather and footwears . . . . .	100	94	111	99	96	92	86	77	...
Boots and shoes . . . . .	85	74	118	109	113	110	102	93	101
Belgium <sup>7</sup> . . . . .	83	97	102	120	99	96	97	87	...
Denmark <sup>8</sup>									
Index of the leather industry			(99)	(97)	(103)	(112)	(93)	(115)	...
Production of leather footwear	95	100	100	99	106	123	97	121	166
Finland <sup>9</sup> . . . . .	92	94	100	115	99	92	64	66	...
France <sup>10</sup> . . . . .	89	110	88	111	102	94	91	81	93
Greece <sup>11</sup> . . . . .	131	105	105	88	70	81	91	74	88
Hungary <sup>12</sup> . . . . .			(98)	(109)	(93)	(96)	(94)	...	...
Netherlands <sup>13</sup>									
Leather industry, workers employed . . . . .				(101)	(99)	(100)	(95)	(90)	...
Production of boots and shoes	84	94	100	111	111	115	111	126	...
Norway <sup>14</sup> . . . . .	130	90	83	97	99	121	87	111	...
Poland <sup>15</sup>									
Index of the leather industry . . . . .	97	80	102	117	103	97	84	85	91
Production of boots and shoes . . . . .			(84)	(108)	(108)	(88)	(70)	(97)	(141)
Portugal <sup>16</sup> . . . . .						(100)	(81)	(83)	(77)
Roumania <sup>17</sup> . . . . .	101	106	108	90	95	70	78	86	82
United Kingdom <sup>18</sup> : Board of Trade . . . . .	a) (98)		(106)	(100)	(97)	(99)	(97)	(94)	(104)
Sweden <sup>19</sup>									
Leather . . . . .	95	99	108	103	94	102	105	92	...
Boots and shoes . . . . .	102	99	104	102	94	113	102	92	...
Czechoslovakia <sup>20</sup> . . . . .	94	85	98	105	118	109	112	75	76
<i>U.S.S.R.:</i>									
U.S.S.R. <sup>21</sup>									
Tanning . . . . .			(77)	(99)	(124)	(145)	(159)	...	...
Boots and shoes . . . . .	44	58	91	118	190	295	327	353	324
<i>Oceania:</i>									
Australia <sup>22</sup>									
Tanning . . . . .	98	101	106	101	94	94	92	108	...
Boots, shoes and slippers . . . . .	91	97	106	101	104	101	93	102	...
New Zealand <sup>23</sup>									
Leather . . . . .	102	94	99	94	111	120	115	117	...
Boots, shoes and slippers . . . . .	98	97	100	94	111	115	114	135	...

For footnotes, see page 137.

NOTES to Table 7 of Appendix II (continued from page 135).

<sup>17</sup> Indices of activity in the paper and the printing industries, based on total numbers of hours worked: Polish Institute for Economic Research. — <sup>18</sup> Basis 1929. Index based on figures of production of paper: Direcção Geral de Estatística. — <sup>19</sup> Index based on figures of production of paper and paper-board: Inst. Românesc de Conjunctura. — <sup>20</sup> Index of estimated production of paper from esparto and pulp: the Lond. and Camb. Econ. Service. — <sup>21</sup> Indices based on figures of production of paper and paper-boards, and of value of output of the printing industry at 1913 prices: Kommerskollegium. — <sup>22</sup> Provisional indices of production in the paper and the printing industries: Dr. K. Maiwald. — <sup>23</sup> Index of production of paper: *Konjunktura mirovozo khoziaistva (Survey of World Economics)*. — <sup>24</sup> Index based on figures of consumption of paper for newspapers and for job-printing; years ending 31. III of following year: Census and Statistics Office.

**Appendix II. Table 9**  
**ACTIVITY IN THE RUBBER INDUSTRY.**  
 Average 1925-1929 = 100.

Country	1925	1926	1927	1928	1929	1930	1931	1932	1933		
<i>America :</i>											
Canada <sup>1</sup> . . . . .	84	82	103	116	116	87	65	43	51		
United States <sup>2</sup> . . . . .	92	92	95	114	107	79	76	62	71		
<i>Asia :</i>											
Japan <sup>3</sup> . . . . .	54	70	79	121	175	219	149	159	...		
<i>Europe :</i>											
Germany <sup>4</sup> . . . . .	106	57	111	105	121	109	53	45	...		
Denmark <sup>5</sup> {	Tubes and tyres . . . . .	122	109	90	77	102	112	90	82	115	
		Other rubber products . . . . .	100	89	77	102	132	127	91	95	178
			Total . . . . .	109	97	83	91	120	120	91	87
Finland <sup>6</sup> . . . . .	87	89	75	96	152	154	110	107	...		
France <sup>7</sup> . . . . .	81	97	88	95	139	145	145	107	145		
Italy <sup>8</sup> . . . . .	90	80	92	102	135	152	82	125	158		
Netherlands <sup>9</sup> . . . . .	92	83	97	104	125	142	141	134	163		
Poland <sup>10</sup> {	Rubber footwear . . . . .	.	(40)	(111)	(149)	(142)	(111)	(100)	(100)		
	Other rubber products . . . . .	.	.	.	(100)	(95)	(82)	(74)	...		
United Kingdom <sup>11</sup> {	Board of Trade . . . . .	(a)(49)	(95)	(103)	(152)	(158)	(165)	(180)	(169)		
	London and Cambridge Economic Service . . . . .	74	72	100	99	155	159	163	169	161	
Sweden <sup>12</sup> . . . . .	87	82	95	114	122	100	122	128	...		
Czechoslovakia <sup>13</sup> . . . . .	61	64	99	113	163	160	254	319	342		
U.S.S.R. <sup>14</sup> {	Rubber shoes . . . . .	.	(83)	(100)	(116)	(113)	(172)	(173)	(166)		
	Rubber goods . . . . .	.	.	(90)	(110)	(123)	(126)	(132)	...		

(a) 1924. <sup>1</sup> Index of pneumatic casings production : Dom. Bureau of Statistics. — <sup>2</sup> Index of production of rubber tyres and inner-tubes : Fed. Res. Board. — <sup>3</sup> Index based on figures of production of rubber footwear : Jap. Dept. of Com. and Ind. — <sup>4</sup> Annual index of the Inst. für Konjunkturforschung. — <sup>5</sup> Indices based on figures of values of production : Statistische Departement. — <sup>6</sup> Index based on figures of production of rubber footwear : Cent. Stat. Bureau. — <sup>7</sup> Index based on consumption of crude rubber : Stat. gén. de la France. — <sup>8</sup> Index based on figures of net imports of crude rubber. — <sup>9</sup> Index based on figures of production of bicycle tyres and inner-tubes : Centraal Bureau voor de Statistiek. — <sup>10</sup> Indices of production of rubber footwear, basis 1927-1929, and of other rubber goods, basis 1929, based on figures of the Cent. Stat. Office. — <sup>11</sup> Board of Trade : basis 1924, 1927-1929 ; index of crude rubber available for manufacture. Lond. and Camb. Econ. Service : Index based on quantities of rubber, gutta-percha and balata retained in the U. K. — <sup>12</sup> Index based on figures of values of production of rubber goods at 1913 prices : Kommerkollegium. — <sup>13</sup> Index based on figures of consumption of rubber and gutta-percha : Státnj Úrad Statistický. — <sup>14</sup> Basis : 1927-1929. Index based on figures of production of rubber shoes and index based on values of production of rubber goods at 1926-27 prices (Basis 1928-1929) : Gosplan.

NOTES to Table 8 of Appendix II.

\* Provisional. — (a) 1924. — <sup>1</sup> Indices based on figures of production of leather (sole and upper) and boots, shoes and slippers ; years ending 30. VI : Office of Census and Statistics. — <sup>2</sup> Index of production of boots and shoes : Dom. Bureau of Statistics. — <sup>3</sup> Basis : 1927-1929 ; index of production of footwear : Dir. Gen. de Estadística. — <sup>4</sup> Fed. Res. Board. — <sup>5</sup> Index based on figures of production of cow, calf and horse leather : Dept. of Commerce and Industry. — <sup>6</sup> Institut für Konjunkturforschung. — <sup>7</sup> Index of production of tanned leather : Institut des Sciences économiques, Louvain. — <sup>8</sup> Basis 1927-1929 ; index of activity in the leather industry and index based on figures of production of leather boots and shoes : Statistische Departement. — <sup>9</sup> Index based on figures of production of leather boots and shoes : Central Statistical Bureau. — <sup>10</sup> Index based on consumption of raw hides : Stat. gén. de la France. — <sup>11</sup> Index of production of leather (sole and fine leather), 1933 half-year : Conseil Supérieur Economique. — <sup>12</sup> Basis : 1927-1929. Index of production of boots and shoes : Ungarisches Institut für Wirtschaftsforschung. — <sup>13</sup> Index of number of workers employed on 15. IX in the leather industry (basis 1928-1929), and index based on figures of production of boots and shoes : Centraal Bureau voor de Statistiek. — <sup>14</sup> Index of production of boots and shoes : Statistische Centralbyrå. — <sup>15</sup> Index of activity in the leather industry based on numbers of hours worked : Polish Institute for Economic Research ; index based on figures of production of boots and shoes (excluding hand-made ; basis 1927-1929) : Central Statistical Office. — <sup>16</sup> Basis 1930. Index based on figures of production of boots and shoes : Direcção  
 (Continued at foot of page 138.)



Appendix II. Table 10.

COMPOSITE INDICES OF ACTIVITY IN THE TEXTILE INDUSTRIES.

Average 1925-1929 = 100.

Country	1925	1926	1927	1928	1929	1930	1931	1932	1933
<i>America :</i>									
Canada <sup>1</sup> . . . . .	84	95	103	110	108	101	99	94	...
United States <sup>2</sup> . . . . .	96	96	104	99	106	84	87	76	90
<i>Europe :</i>									
Germany <sup>3</sup> { Monthly . . . . .	95	87	115	106	98	95	93	84	96
{ Annual . . . . .	95	85	117	105	98	95	88	80	...
Belgium <sup>4</sup> . . . . .	82	93	107	112	107	88	81	69	63
Denmark <sup>5</sup> . . . . .	.	.	(92)	(96)	(112)	(114)	(116)	(126)	...
France <sup>6</sup> . . . . .	97	104	95	106	98	91	76	64	79
Greece <sup>7</sup> . . . . .	75	92	101	116	117	128	135	140	157
Hungary <sup>8</sup> . . . . .	95	89	100	108	108	110	111	95	114
Norway <sup>9</sup> . . . . .	102	89	96	99	114	125	106	132	...
Netherlands <sup>10</sup> . . . . .	91	95	102	105	107	102	93	81	...
Poland <sup>11</sup> . . . . .	82	78	115	118	108	83	79	68	71
United Kingdom <sup>12</sup> { Board of Trade . . . . .	a) 100)	.	(102)	(100)	(99)	(80)	(77)	(85)	(90)
{ London & Cambridge: Quarterly . . . . .	106	92	105	98	99	79	78	88	96
{ Annual . . . . .	103	96	104	98	98	79	82	87	94
Sweden <sup>13</sup> { (a) . . . . .	86	96	103	108	108	114	105	118	...
{ (b) . . . . .	89	98	102	107	105	107	94	114	...
Czechoslovakia <sup>14</sup> . . . . .	93	87	111	104	105	98	83	69	66
U.S.S.R. <sup>15</sup> . . . . .	61	83	101	119	136	124	126	137	...

(a) 1924. — <sup>1</sup> Annual index: Dominion Bureau of Statistics. — <sup>2</sup> Federal Reserve Board. — <sup>3</sup> Institut für Konjunkturforschung. — <sup>4</sup> Institut des Sciences économiques, Louvain. — <sup>5</sup> Basis 1927-1929; annual index: Statistiske Departement. — <sup>6</sup> Statistique générale de la France. — <sup>7</sup> 1933 half-year: Conseil Supérieur Economique. — <sup>8</sup> Index based on number of workers employed: Ungarisches Institut für Wirtschaftsforschung. — <sup>9</sup> Annual index: Statistiske Centralbyrå. — <sup>10</sup> Index based on number of workers employed: Centraal Bureau voor de Statistiek. — <sup>11</sup> Index based on total number of hours worked: Polish Institute for Economic Research. — <sup>12</sup> Board of Trade, basis 1924, 1927-1929. Quarterly and annual indices of the London and Cambridge Economic Service. — <sup>13</sup> (a) Annual index including hosiery and clothing; (b) Index based on figures of total production of yarn and tissues: Kommerskollegium. — <sup>14</sup> Provisional index: Dr. Karel Maiwald. — <sup>15</sup> *Konjuktura mirovozo khoziaistva (Survey of World Economics)*.

NOTES to Table 8 of Appendix II (continued from page 136).

Geral de Estatística. — <sup>17</sup> Index based on figures of production of hides and skins: Institutul Românesc de Conjunctura. — <sup>18</sup> Index of activity in the leather and boot and shoe industries (basis 1924, 1927-1929): Board of Trade. — <sup>19</sup> Indices based on figures of values of leather and boots and shoes produced at 1913 prices: Kommerskollegium. — <sup>20</sup> Provisional index of activity in the leather industry: Dr. K. Maiwald. — <sup>21</sup> Index based on figures of tanning (basis 1927-1929): *Sowjetwirtschaft und Aussenhandel*, and index based on figures of production of boots and shoes: *Konjuktura mirovozo khoziaistva (Survey of World Economics)*. — <sup>22</sup> Indices based on figures of tanning (numbers of hides, pelts and skins treated) and of production of boots and shoes (including slippers); years ending 30. VI: Commonwealth Bureau of Census and Statistics. — <sup>23</sup> Indices based on figures of production of leather and boots, shoes and slippers; years ending 31. III of following year: Census and Statistics Office.

**Appendix II. Table 11.**  
**ACTIVITY IN THE COTTON-SPINNING INDUSTRY.**  
 Average 1925-1929 = 100.

Country	1925	1926	1927	1928	1929	1930	1931	1932	1933
<i>America :</i>									
Canada <sup>1</sup> { (a) . . . . .	89	102	104	102	103	77	73	75	95
{ (b) . . . . .	90	99	108	100	103	86	79	82	...
United States <sup>2</sup> . . . . .	94	98	108	97	103	79	79	73	92
<i>Asia :</i>									
China <sup>3</sup> . . . . .	(88)	.	(103)	(108)	.	(121)	(113)	(112)	(115)
India <sup>4</sup> . . . . .	91	107	107	86	110	115	128	134	122
Japan <sup>5</sup> . . . . .	95	102	99	96	109	98	100	110	121
<i>Europe :</i>									
Germany <sup>6</sup> . . . . .	100	84	116	105	95	95	91	95	109
Austria <sup>7</sup> . . . . .	102	87	108	102	101	94	88	87	90
Belgium <sup>8</sup> . . . . .	86	92	101	115	107	95	80	69	72
Denmark <sup>9</sup> . . . . .	89	87	105	102	116	115	123	133	167
Spain <sup>10</sup> . . . . .	105	93	109	96	97	104	97	103	96
Finland <sup>11</sup> . . . . .	92	99	109	109	90	89	86	89	...
France <sup>12</sup> . . . . .	97	99	98	104	102	94	64	46	66
Greece <sup>13</sup> . . . . .	90	99	104	102	105	124	130	130	143
Hungary <sup>14</sup> . . . . .	59	69	92	113	167	193	194	231	308
Italy <sup>15</sup> { (a) . . . . .	102	103	90	100	105	88	73	82	95
{ (b) . . . . .	.	.	.	.	(100)	(84)	(77)	(80)	(90)
Norway <sup>16</sup> . . . . .	.	.	(87)	(100)	(113)	(127)	(100)	(148)	...
Poland <sup>17</sup> . . . . .	.	.	(108)	(104)	(88)	(80)	(72)	(71)	(80)
Portugal <sup>18</sup> . . . . .	.	.	.	.	.	(100)	(82)	(98)	(89)
Roumania <sup>19</sup> . . . . .	80	100	89	107	124	123	115	135	137
United Kingdom <sup>20</sup> { (a) . . . . .	a) (94)	.	(108)	(100)	(99)	(72)	(75)	(83)	(87)
{ (b) . . . . .	112	94	105	95	94	68	74	76	82
{ (c) . . . . .	109	94	106	95	96	74	72	79	83
Sweden <sup>21</sup> . . . . .	84	99	104	110	103	107	95	118	...
Czechoslovakia <sup>22</sup> . . . . .	108	79	117	99	97	89	73	64	56
U. S. S. R. <sup>23</sup> . . . . .	.	(81)	(94)	(108)	(116)	(100)	(111)	...	...

(a) 1924.

- <sup>1</sup> Indices based : (a) on raw cotton imports, (b) on cotton-thread production : Dom. Bureau of Statistics.  
<sup>2</sup> Index based on mill consumption of raw cotton : Federal Reserve Board.  
<sup>3</sup> Basis 1925, 1927, 1928. Index based on figures of cotton-yarn production : Nankai Institute of Economics, Tientsin.  
<sup>4</sup> Index based on yarn production ; years ending 31. III of following year.  
<sup>5</sup> Index based on figures of cotton-yarn production : Japanese Cotton Spinners' Association.  
<sup>6</sup> Index based on cotton-yarn production : 1933 half-year : Institut für Konjunkturforschung.  
<sup>7</sup> Index based on cotton-yarn production : Österreichisches Institut für Konjunkturforschung.  
<sup>8</sup> Index based on figures of cotton-yarn production ; years ending January 31st of following year : Banque Nationale de Belgique.  
<sup>9</sup> Index based on figures representing cotton-yarn production : Statistiske Departement.  
<sup>10</sup> Index based on figures of cotton-yarn sold at Barcelona : Institut d'investigacions econòmiques, Barcelona.  
<sup>11</sup> Index based on figures of cotton-yarn production : Central Statistical Bureau.  
<sup>12</sup> Index based on figures of cotton-yarn production : Statistique générale de la France from Syndicat général de l'Industrie cotonnière française.  
<sup>13</sup> Index of cotton-yarn production : 1933 half-year : Conseil Supérieur Economique.  
<sup>14</sup> Index of cotton-yarn production : Ungarisches Institut für Wirtschaftsforschung.  
<sup>15</sup> (a) Index based on raw-cotton imports, (b) basis 1929, index of cotton-yarn production : Associazione Nazionale degli Industriali Cotonieri.  
<sup>16</sup> Basis 1927-1929. Index based on figures of cotton-yarn production : Statistiske Centralbyrå.  
<sup>17</sup> Basis 1927-1929. Index based on figures of cotton-yarn production : Central Statistical Office.  
<sup>18</sup> Basis 1930. Index based on figures of cotton-yarn production : Direcção Geral de Estatística.  
<sup>19</sup> Index based on figures of cotton-yarn production : Institutul Românesc de Conjunctura.  
<sup>20</sup> (a) Based on quantities of raw cotton delivered to mills. Basis 1924, 1927-1929 : Board of Trade ; (b) annual and (c) quarterly indices based on yarn produced and yarn manufactured : London and Cambridge Economic Service.  
<sup>21</sup> Index based on figures of cotton-yarn production : Kommerskollegium.  
<sup>22</sup> Index based on figures of cotton consumption : Státnj Úrad Statistiký.  
<sup>23</sup> Basis 1925-26 to 1928-29. Index based on mill consumption of raw cotton ; years ending 30. IX (1931 : calendar year) : Sowjetwirtschaft und Aussenhandel.

Appendix II. Table 12.

ACTIVITY IN THE COTTON-WEAVING INDUSTRY.

Average 1925-1929 = 100.

Country	1925	1926	1927	1928	1929	1930	1931	1932	1933
<i>America :</i>									
Canada <sup>1</sup> . . . . .	82	103	106	109	101	89	87	84	...
Chile <sup>2</sup> . . . . .	.	.	(94)	(96)	(110)	(122)	(100)	(154)	(223)
United States <sup>3</sup> } (a)	.	.	[79]	(94)	(106)	(84)	(96)	(97)	(116)
(b)	99	102	106	94	100	66	62	57	68
<i>Asia :</i>									
China <sup>4</sup> . . . . .	(43)	.	(98)	(159)	.	(160)	(157)	(196)	(195)
India <sup>5</sup> . . . . .	90	104	110	86	109	114	130	135	125
Japan <sup>6</sup> . . . . .	89	93	98	104	116	105	106	116	126
<i>Europe :</i>									
Germany <sup>7</sup> . . . . .	100	78	117	110	94	102	88	74	...
Austria <sup>8</sup> . . . . .	99	89	110	100	101	106	117	114	105
Belgium <sup>9</sup> . . . . .	79	88	102	117	114	91	84	72	72
Denmark <sup>10</sup> . . . . .	106	94	95	92	112	110	111	118	142
Finland <sup>11</sup> . . . . .	92	96	111	111	90	87	86	84	...
France <sup>12</sup> . . . . .	96	99	100	101	103	104	77	59	93
Greece <sup>13</sup> . . . . .	73	84	98	111	133	156	164	164	181
Hungary <sup>14</sup> } (a)	73	86	117	105	119	116	114	132	173
(b)	77	92	120	105	106	105	90	99	129
Italy <sup>15</sup> . . . . .	.	.	.	[93]	(100)	(81)	(71)	(72)	(79)
Norway <sup>16</sup> . . . . .	.	.	(94)	(97)	(109)	(127)	(97)	(158)	...
Netherlands <sup>17</sup> . . . . .	91	96	102	105	106	98	89	70	...
Poland <sup>18</sup> . . . . .	.	.	(109)	(103)	(89)	(80)	(70)	(61)	...
Roumania <sup>19</sup> . . . . .	63	65	85	137	151	175	167	203	231
Sweden <sup>20</sup> . . . . .	83	99	105	106	107	112	101	129	...
U.S.S.R. <sup>21</sup> . . . . .	67	91	104	115	123	86	83	96	104

<sup>1</sup> Index of production of cotton-yarn and cotton-tissues : Dominion Bureau of Statistics.  
<sup>2</sup> Basis 1927-1929. Index of production of cotton-tissues : Dirección General de Estadística.  
<sup>3</sup> Indices based on figures of production of finished cotton cloth : U.S. Dept. of Commerce. (a) Base 1928-1929, printed only, 1927 average of 6 months, (b) white, dyed and printed.  
<sup>4</sup> Basis : 1925, 1927, 1928. Index based on figures of production of cotton cloth : Nankai Institute of Economics, Tientsin.  
<sup>5</sup> Index based on figures of production of cotton manufactures ; years ending 31. III of following year : Cotton (Manchester).  
<sup>6</sup> Index based on figures representing cotton-cloth produced : Japanese Cotton Spinners' Association.  
<sup>7</sup> Annual index : Institut für Konjunkturforschung.  
<sup>8</sup> Index based on the consumption of yarn by weavers : Österreichisches Institut für Konjunkturforschung.  
<sup>9</sup> Index based on the figures of production of cotton tissues : Institut des Sciences économiques, Louvain.  
<sup>10</sup> Index based on figures of cotton-cloth production : Statistiske Departement.  
<sup>11</sup> Index based on figures of cotton-cloth production : Central Statistical Bureau.  
<sup>12</sup> Index based on figures of cotton-tissues production : Statistique Générale de la France from Syndicat général de l'Industrie cotonnière française.  
<sup>13</sup> Index of production of cotton-tissues ; 1933 half-year : Conseil Supérieur Economique.  
<sup>14</sup> Indices of (a) output of weaving mills, and (b) output of finished cotton goods : Ungarisches Institut für Wirtschaftsforschung.  
<sup>15</sup> Basis : 1929. Index of average daily output : Associazione Nazionale degli Industriali Cotonieri.  
<sup>16</sup> Basis : 1927-1929. Index based on figures of production of cotton-cloth : Statistiske Centralbyrå.  
<sup>17</sup> Index based on the number of workers employed on 15. IX : Centraal Bureau voor de Statistiek.  
<sup>18</sup> Basis : 1927-1929. Index based on figures of production of cotton-cloth : Central Statistical Office.  
<sup>19</sup> Index based on figures of production of cotton-tissues : Institutul Românesc de Conjunctura.  
<sup>20</sup> Index based on figures of production of cotton-tissues : Kommerskollegium.  
<sup>21</sup> Index based on figures of production of cotton-cloth : Narodnoie khoziaistvo S.S.S.R. (National Economy of the U.S.S.R.).

**Appendix II. Table 13.**

**ACTIVITY IN THE LINEN, HEMP AND JUTE INDUSTRIES, ETC.**  
Average 1925-1929 = 100.

Country	1925	1926	1927	1928	1929	1930	1931	1932	1933	
<i>America :</i>										
Canada <sup>1</sup> : Linen, hemp and jute . . .	87	94	101	108	109	93	83	77	...	
Jute . . . . .	80	85	114	112	109	76	80	36	64	
Flax . . . . .	95	123	81	100	102	119	56	63	84	
United States <sup>2</sup> } Hemp . . . . .	156	112	83	82	68	71	50	25	31	
Sisal and henequen	106	92	92	105	105	67	69	131	98	
Manila . . . . .	103	114	85	78	119	106	51	42	54	
Kapok . . . . .	116	96	111	90	86	98	95	94	76	
Total . . . . .	99	96	97	100	108	79	69	82	78	
<i>Asia :</i>										
India <sup>3</sup> : Jute industry . . . . .	93	96	99	104	107	95	73	76	76	
Japan <sup>4</sup> : Hemp, jute and flax yarns . . .	84	78	59	114	167	143	127	141	...	
<i>Europe :</i>										
Germany <sup>5</sup> {	Linen industry . . . . .	124	81	133	85	78	69	61	58	66
	Linen-spinning . . . . .	128	84	133	82	72	68	59	61	69
	Linen-weaving . . . . .	119	79	133	87	82	58	53	45	...
	Hemp-spinning . . . . .	87	82	118	107	106	86	73	64	74
Belgium <sup>6</sup> {	Jute-spinning . . . . .	102	80	102	113	103	73	61	50	...
	Linen industry . . . . .	78	92	99	126	105	84	64	66	54
Denmark <sup>7</sup> {	Linen-weaving . . . . .	80	83	104	97	136	158	213	209	249
	Jute-spinning . . . . .	78	68	158	115	81	105	159	181	232
Finland <sup>8</sup> {	Linen-spinning . . . . .	90	77	114	118	101	87	65	57	...
	Linen-weaving . . . . .	106	105	102	97	90	68	50	44	...
	Jute-spinning . . . . .	.	.	(60)	(116)	(123)	(98)	(84)	(119)	...
Hungary <sup>9</sup> {	Jute-weaving . . . . .	.	.	(50)	(114)	(136)	(91)	(72)	(111)	...
	Jute-weaving . . . . .	86	62	105	117	130	120	75	61	90
Italy <sup>10</sup> {	Linen- and hemp-spinning . . . . .	.	.	.	(100)	(100)	(90)	(84)	(92)	(95)
	Linen- and hemp-weaving . . . . .	.	.	.	(97)	(103)	(92)	(81)	(71)	(71)
	Jute-weaving . . . . .	.	.	.	(98)	(102)	(87)	(73)	(61)	(69)
Norway <sup>11</sup> {	Hemp-spinning . . . . .	.	.	(88)	(105)	(107)	(112)	(94)	(118)	...
	Linen- and jute-weaving . . . . .	.	.	(86)	(92)	(122)	(110)	(61)	(104)	...
Poland <sup>12</sup> {	Linen-spinning . . . . .	.	.	(82)	(111)	(107)	(84)	(90)	(130)	(169)
	Jute-spinning . . . . .	.	.	(80)	(105)	(115)	(82)	(58)	(50)	(49)
	Hemp-spinning . . . . .	.	.	(52)	(162)	(86)	(83)	(64)	(57)	(61)
	Linen-weaving . . . . .	.	.	(79)	(115)	(107)	(93)	(90)	(135)	(182)
	Jute-weaving . . . . .	.	.	(81)	(103)	(115)	(86)	(58)	(47)	(45)
Roumania <sup>13</sup> : Linen, hemp and jute . .	102	92	68	159	79	280	364	459	535	
United Kingdom <sup>14</sup> : Jute, hemp, linen.	97	73	121	101	107	78	78	75	87	
Sweden <sup>15</sup> {	Linen- and hemp-spinning . . . . .	99	101	103	107	90	89	80	97	...
	Linen- and hemp-weaving . . . . .	98	93	102	106	102	100	86	96	...
	Jute-spinning . . . . .	94	91	97	105	113	112	87	104	...
Czechoslovakia <sup>16</sup> : Jute industry . . .	Jute-weaving . . . . .	99	89	98	103	110	110	92	115	...
	Jute industry . . . . .	103	79	110	96	111	113	89	52	78
U.S.S.R. <sup>17</sup> : Linen industry . . . . .	.	.	(97)	(93)	(111)	(115)	(112)	(76)	...	

<sup>1</sup> Index of production in the hemp, flax and jute industries: Dominion Bureau of Statistics.  
<sup>2</sup> Indices based on imports of unmanufactured fibres.  
<sup>3</sup> Index based on exports of jute bags and tissues.  
<sup>4</sup> Index based on production figures: Japanese Department of Commerce and Industry.  
<sup>5</sup> Indices of the Institut für Konjunkturforschung.  
<sup>6</sup> Index based on imports of flax.  
<sup>7</sup> Indices based on production figures: Statistiske Departement.  
<sup>8</sup> Indices based on production figures; jute: basis 1927-1929: Central Statistical Bureau.  
<sup>9</sup> Index of the Ungarisches Institut für Wirtschaftsforschung.  
<sup>10</sup> Basis 1928-1929. Indices of ratio of spindle and loom hours worked to normal. Annual averages of figures for last week of each month: Ministero delle Corporazioni.  
<sup>11</sup> Basis 1927-1929. Indices based on production figures: Statistiske Centralbyrå.  
<sup>12</sup> Basis 1927-1929. Indices based on production figures: Central Statistical Office.  
<sup>13</sup> Index based on figures of production of linen, hemp and jute tissues: Institutul Românesc de Conjunctura.  
<sup>14</sup> Quantities of raw material retained, plus home crops: London and Cambridge Economic Service.  
<sup>15</sup> Indices based on production figures: Kommerakollegium.  
<sup>16</sup> Index based on figures of consumption of jute: Státnj Úrad Statistický.  
<sup>17</sup> Basis 1927-1929. Index based on figures of production of linen tissues: *Sowjetwirtschaft und Aussenhandel and Cotton* (Manchester).

Appendix II. Table 14.  
ACTIVITY IN THE WOOL INDUSTRY.  
Average 1925-1929 = 100.

Country	1925	1926	1927	1928	1929	1930	1931	1932	1933
<i>America :</i>									
Canada <sup>1</sup> { (a) . . . . .	93	110	101	112	85	69	75	71	132
{ Spinning (b) . . . . .	84	94	103	107	111	81	85	99	...
{ Weaving (c) . . . . .	96	98	102	111	92	76	94	109	...
Chile <sup>2</sup> . . . . .			(73)	(101)	(124)	(154)	(228)	(354)	(315)
United States <sup>3</sup> . . . . .	102	95	100	98	105	75	85	66	91
<i>Asia :</i>									
Japan <sup>4</sup> { Spinning . . . . .	75	72	106	115	132	139	189	205	237
{ Weaving . . . . .	81	104	98	113	105	99	99	105	82
<i>Europe :</i>									
Germany <sup>5</sup> { Spinning . . . . .	93	89	107	107	104	111	107	98	...
{ Weaving . . . . .	81	100	124	100	95	86	77	69	...
Belgium <sup>6</sup> . . . . .	76	84	114	115	111	85	80	66	81
Denmark <sup>7</sup> { Spinning . . . . .	86	92	101	108	113	112	138	168	176
{ Weaving . . . . .	100	85	95	107	114	110	97	105	143
Spain <sup>8</sup> . . . . .	89	102	94	112	104	116	132	140	117
Finland <sup>9</sup> { Spinning . . . . .	97	99	105	108	90	69	72	96	...
{ Weaving . . . . .	103	109	109	99	80	81	76	95	...
France <sup>10</sup> . . . . .	96	103	97	105	100	94	83	73	90
Greece <sup>11</sup> . . . . .	72	92	92	132	112	125	122	122	171
Hungary <sup>12</sup> { Spinning . . . . .			(92)	(108)	(100)	(80)	(77)	(108)	(133)
{ Weaving . . . . .			(112)	(99)	(89)	(76)	(60)	(77)	(97)
Italy <sup>13</sup> . . . . .				(102)	(98)	(90)	(83)	(76)	(83)
Norway <sup>14</sup> { Spinning . . . . .			(99)	(98)	(103)	(105)	(96)	(125)	...
{ Weaving . . . . .			(100)	(95)	(105)	(115)	(99)	(136)	...
Netherlands <sup>15</sup> Weaving . . . . .	88	88	101	109	113	...	...	...	...
Poland <sup>16</sup> { Spinning . . . . .			(108)	(99)	(93)	(72)	(79)	(67)	(75)
{ Weaving . . . . .			(113)	(104)	(83)	(63)	(58)	(45)	...
Roumania <sup>17</sup> { Spinning . . . . .	83	117	136	93	70	62	42	81	91
{ Weaving . . . . .	87	122	115	94	83	77	59	86	...
United Kingdom <sup>18</sup> . . . . .	97	109	100	98	95	85	82	84	89
Sweden <sup>19</sup> { Spinning . . . . .	96	99	97	105	103	102	87	96	...
{ Weaving . . . . .	97	97	98	103	105	108	92	102	...
U.S.S.R. <sup>20</sup> . . . . .	69	89	112	104	126	141	144	112	147
<i>Oceania :</i>									
Australia <sup>21</sup> { Spinning . . . . .	67	85	113	112	123	118	96	132	...
{ Weaving . . . . .	67	80	114	130	109	104	113	164	...
New Zealand <sup>22</sup> { Spinning . . . . .	100	84	103	113	99	55	116	176	...
{ Weaving . . . . .	91	100	120	106	82	69	79	94	...

<sup>1</sup> Indices of (a) raw wool and woollen yarn imports, (b) woollen yarn production and (c) cloth production: Dom. Bureau of Statistics. — <sup>2</sup> Basis: 1927-1929. Index of production of wool for weaving: Dir. Gen. de Estadística. — <sup>3</sup> Index compiled from wool consumption, machinery, carpet- and rug-loom activity: Fed. Res. Board. — <sup>4</sup> Indices based on figures of production of woollen yarn and of woollen cloth, flannel, etc.: the spinning index for 1925-1929 relates to all factories in Japan proper, for 1930 and 1931 only to 12, and for 1932 only to the 10 biggest companies: Japanese Department of Commerce and Industry. — <sup>5</sup> Annual indices based on output of yarn from carded wool and output of woollen tissues: Institut für Konjunkturforschung. — <sup>6</sup> Index based on figures of wool conditioned at Verviers and Dison: Bq. Nat. de Belgique. — <sup>7</sup> Indices based on figures of production of woollen yarn and cloth: Statistische Departement. — <sup>8</sup> Index based on figures of wool conditioned at Sabadell and Terrassa: Institut d'investigacions econòmiques, Barcelona. — <sup>9</sup> Indices based on figures of production of woollen yarn and tissues: Central Statistical Bureau. — <sup>10</sup> Index based on wool conditioned at Roubaix, Tourcoing and Mazamet and on loom activity: Statistique générale de la France. — <sup>11</sup> Index of production of woollen cloth; 1933 half-year: Conseil Supérieur Economique. — <sup>12</sup> Basis: 1927-1929. Indices based on production of woollen yarn and woollen goods: Ungarisches Institut für Wirtschaftsforschung. — <sup>13</sup> Basis: 1928-1929. Index based on loom activity: Ministero delle Corporazioni. — <sup>14</sup> Basis: 1927-1929. Indices based on figures of production of woollen yarn and cloth: Statistiska Centralbyrå. — <sup>15</sup> Index based on figures of production of woollen cloth, flannel, etc.: Handels Hoogeschool. Economisch-Technologisch Instituut, Tilburg. — <sup>16</sup> Basis: 1927-1929. Indices based on figures of production (Continued at foot of page 143).

Appendix II. Table 15.

ACTIVITY IN THE NATURAL SILK INDUSTRY.  
Average 1925-1929 = 100.

Country	1925	1926	1927	1928	1929	1930	1931	1932	1933
<i>America :</i>									
Canada <sup>1</sup> . . . . .	51	73	105	122	149	179	223	286	...
United States <sup>2</sup> { Deliveries and loom activity. . . . . Deliveries . . . . .	93	92	99	104	112	104	104	92	(a) 91
	91	92	100	104	113	106	108	100	86
<i>Asia :</i>									
Japan <sup>3</sup> { Spinning . . . . . Weaving . . . . .	70	82	107	98	141	125	142	147	...
	89	97	104	106	104	95	94	106	140
<i>Europe :</i>									
Germany <sup>4</sup> . . . . .	86	87	115	103	110	82	59	44	...
France <sup>5</sup> . . . . .	101	106	88	112	92	75	61	35	42
Greece <sup>6</sup> . . . . .	64	89	95	114	139	196	240	296	296
Hungary <sup>7</sup> { Spinning . . . . . Weaving . . . . .	.	.	(93)	(100)	(106)	(128)	(154)	(158)	(146)
	.	.	(86)	(116)	(99)	(136)	(90)	(43)	(17)
Italy <sup>8</sup> . . . . .	.	.	.	(97)	(103)	(91)	(85)	(67)	(78)
Poland <sup>9</sup> . . . . .	.	.	[63]	(92)	(108)	(102)	(116)	(71)	...
Portugal <sup>10</sup> . . . . .	.	.	.	.	(1)	(100)	(181)	(148)	(265)
United Kingdom <sup>11</sup> { (a) . . . . . (b) . . . . . (c) . . . . .	b)(78)	.	(92)	(114)	(116)	(114)	(119)	(126)	(136)
	92	97	90	104	117	103	110	141	167
	86	77	92	119	127	112	122	163	191
Switzerland <sup>12</sup> . . . . .	95	81	114	121	88	52	41	28	24

(a) Average of January-June. — (b) 1924.

<sup>1</sup> Index of production of silk and silk manufactures : Dominion Bureau of Statistics.

<sup>2</sup> Indices compiled by the Federal Reserve Board.

<sup>3</sup> Index based on figures of production of silk yarn : Japanese Department of Commerce and Industry ; and index based on figures representing the " amount of export silk piece-goods inspected by the Prefectural Inspection Bureaus " : Mitsubishi Economic Research Bureau.

<sup>4</sup> Annual index of silk weaving : Institut für Konjunkturforschung.

<sup>5</sup> Index representing silk conditioned at Lyons : Statistique générale de la France.

<sup>6</sup> Index of production of silk tissues ; 1933 half-year : Conseil Supérieur Economique.

<sup>7</sup> Basis : 1927-1929. Indices of production of silk yarn and silk tissues : Ungarisches Institut für Wirtschaftsforschung.

<sup>8</sup> Basis : 1928-1929. Index of activity in weaving based on ratio of loom hours worked to normal : Ministero delle Corporazioni.

<sup>9</sup> Basis : 1928-1929. Index based on figures of production of tissues of silk, half-silk, artificial silk and half-artificial silk ; figure for 1927 is not strictly comparable : Central Statistical Office.

<sup>10</sup> Basis : 1930. Index based on figures of production of silk yarn : Direcção Geral de Estatística.

<sup>11</sup> (a) Index based on deliveries of natural silk for home consumption. Basis : 1924, 1927-1929 : Board of Trade ; (b) annual and (c) quarterly indices, the former based on silk consumed and the latter on silk consumed and artificial silk produced : Lond. and Camb. Econ. Service.

<sup>12</sup> Index based on figures of silk conditioned at Zurich and Basle : Banque Nationale Suisse.

NOTES to Table 14 of Appendix II (continued from page 142).

of woollen yarn and tissues : Central Statistical Office. — <sup>17</sup> Indices based on figures of production of woollen yarn and cloth : Institutul Românesc de Conjunctura. — <sup>18</sup> Annual index based on wool and worsted, retained : Lond. and Camb. Econ. Service. — <sup>19</sup> Indices based on figures of production of woollen yarn and tissues : Kommerskollegium. — <sup>20</sup> Index based on figures of production of woollen tissues : Narodnoie khoziaistvo S.S.S.R. (National Economy of the U.S.S.R.). — <sup>21</sup> Indices based on figures representing scoured wool used by mills (Spinning), and tweed, cloth and flannel produced (Weaving) ; years ending 30. VI : Commonwealth Bureau of Census and Statistics. — <sup>22</sup> Indices based on figures of production of woollen yarn (Spinning), and of woollen tweed, cloth and flannel (Weaving) ; years ending 31. III. of following year : Census and Statistics Office.