LEAGUE OF NATIONS

ECONOMIC AND FINANCIAL SECTION

MEMORANDUM

ON

PRODUCTION AND TRADE

1923 TO 1928/29

Geneva, June 1930.

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LEAGUE OF NATIONS

MEMORANDUM ON PRODUCTION AND TRADE 1923 to 1928-1929.

Errata.

Page 8. — Note :

After " 1913 was employed " *read* " as base ".

Page 25. — Table VIII, indice for foodstuffs 1928 :

For " 103 " *read* " 108 ".

Page 41. — Table XIII *(b)*, column 6 :

For " output in 1929 as percentage of that in 1915 " *read* " output in 1929 as percentage of that in 1925 ".

Page 59. — Line 4.

For " 205 metric tons " *read* " 220 metric tons ".

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PREFACE.

The first *Memorandum on Production and Trade* was published in October 1926 as one of the preparatory documents for the World Economic Conference. The Conference expressed a wish that the work then undertaken should be continued and two editions of the Memorandum have since been published. This fourth volume covers the period 1923-1928, but preliminary results for 1929 are also furnished.

The base period adopted in the preceding editions was 1913 or the quinquennium 1909-1913. In the present edition, 1926 has been substituted as the base year in the chapters on production of foodstuffs and raw materials, trade and population, and new series of relative numbers and indices have been calculated. For the sake of continuity, however, indices based on 1913 are also given in the annexes.

As the result of a recommendation of the Economic Consultative Committee at its last session, that the Economic Organisation of the League " should continue and expand its studies concerning the comparative prices of agricultural and industrial products ", a special enquiry into the recent relative movements of such prices has been undertaken and is at present being pursued. For the purposes of this enquiry, the results of which it is hoped to publish before next year's meeting of the Consultative Committee, the year 1913 is being taken as base. It has, therefore, been thought advisable to maintain 1913 as the base period in the price chapter contained in the present volume.

The study of certain aspects of manufacturing industry, which is included for the first time in this volume, is the outcome of a resolution adopted by the Assembly of the League of Nations at its last session. The Assembly requested the Council to " consider the possibility of arranging for the preparation of a comprehensive annual survey of economic developments in the near future and for the collection by the Economic Organisation of all the information required for this purpose ". On the advice of the Economic Committee, the Council decided that the preparation of a general and separate survey of economic conditions should be postponed until after the International Convention relating to Economic Statistics has come into force. At the same time, it gave instructions that, as a provisional measure, a chapter dealing with such information concerning the development of industrial activity as is now available should be prepared for the next edition of the *Memorandum on Production and Trade.*

This study, tentative and incomplete as it is, forms a useful complement to the chapter on the production of foodstuffs and raw materials and is helpful when checking the conclusions regarding the recent development of the world's industrial output, to which the returns for raw products point. It covers in general the period 1925-1929: the year 1925 is adopted as base.

The detailed figures on which the indices for population and the production of foodstuffs and raw materials are based, will be published simultaneously with this volume in the *International Statistical Year-Book*, 1929. Those relating to trade have already appeared in the *Memorandum on International Trade and Balances of Payments*, 1926-1928, Volumes I and III.

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

A. LOVEDAY.

Geneva, June 1930.

INTRODUCTORY.

The general form and composition of this Memorandum is similar to that of the editions published in earlier years, except for the addition of the chapter on industrial production to which reference is made in the preface.

One important change has, however, been made. The base year for the calculation of the indices of foodstuffs and raw materials contained in Chapter II, and of international trade contained in Chapter III, has been changed from 1913 (or the quinquennium 1909-13) to 1926. This later year is not wholly satisfactory as a base period as it was affected by the British coal dispute. But it is perhaps preferable to the preceding year in which the range of price movements was relatively wide and tended, therefore, to affect the accuracy of the trade figures.

The year 1926, however, while preferable for the international trade figures and therefore for the indices of raw material production which are compared with them, is not well suited for use as a base period when considering the output of individual industries. It has been thought preferable, therefore, even at some sacrifice of comparability between Chapter IV and those which precede it, to employ for this purpose the year 1925. This system has the additional advantage in that, since fairly complete preliminary data concerning industrial output are available for 1929, it thus became possible to cover the whole of the quinquennium ending in that year.

In Table I below, the most important indices relating to population, the production of raw materials and foodstuffs and the quantum of trade are set out in parallel columns. The indices for both production and trade are quantitative, changes in value having been eliminated by processes of analysis described later. The world has been divided into seven continental groups and Europe into three sub-groups.

Table I.

Growth of Population, Production and Trade of the World 1926-1928.

(Base : 1926 = 100)

Continental groups	Population	Prod. of foodstuffs and raw materials		Quantum of trade	
	1928	1927	1928	1927	1928
(a) Eastern & Central Europe :					
Excluding Russia (U.S.S.R.) . .	102	111	120	124	130
Including Russia (U.S.S.R.) . . .	103	105	111	123	129
(b) Rest of Europe	101	118	118	109	112
Europe, excluding Russia (U.S.S.R.) . .	102	115	119	113	117
Europe, including Russia (U.S.S.R.) . .	102	110	113	113	117
North America	102	99	104	102	107
Caribbean	102	96	102	102	96
South America	105	115	121	113	119
Africa	103	103	107	111	122
Asia, excluding Asiatic Russia[1]	101	102	105	100	98
Oceania	103	100	104	105	101
World	102	A 105 B 103 C 107	108 108 109	108	111

A = Foodstuffs and raw materials ; B = Foodstuffs ; C = Raw materials.

[1] Excluding production of foodstuffs in China.

Note. — In order to afford a link with the preceding editions of this Memorandum in which the year 1913 was employed, the following table has been prepared.

(Base : 1913 = 100)

Continental groups	Population	Production of foodstuffs and raw materials			Quantum of trade		
	1928	1926	1927	1928	1926	1927	1928
(a) Eastern & Central Europe :							
Excluding Russia (U.S.S.R.) . .	105	92	100	108	86	106	111
Including Russia (U.S.S.R.) . . .	108	100	103	109	76	94	99
(b) Rest of Europe[1]	107	99	115	114	101	110	112
Europe excluding Russia (U.S.S.R.)[1] .	106	96	107	111	96	109	112
Europe including Russia (U.S.S.R.)[1] .	108	99	107	110	92	104	107
North America	126	130	128	135	152	154	162
Caribbean	108	153	147	158	136	138	131
South America	143	133	150	156	107	120	127
Africa	110	140	145	152	110	125	133
Asia, excluding Asiatic Russia[2]	107	118	122	124	154	153	150
Oceania	125	128	129	133	136	143	138
World	110	A 116 B 109 C 128	120 111 136	125 116 140	112	121	124

A = Foodstuffs and raw materials ; B = Foodstuffs ; C = Raw materials.

[1] In calculating the *quantum* figures for trade on the base 1913 = 100 the Netherlands have been left out of account owing to incomparability of pre- and post-war statistics.

[2] Excluding production of foodstuffs in China.

The group of Central and Eastern European countries here and elsewhere in this Memorandum consists of Albania, Austria, Bulgaria, Czechoslovakia, Estonia, Germany, Greece, Hungary, Latvia, Lithuania, Poland, Roumania, U.S.S.R., Yugoslavia and European Turkey.

The whole of the present Union of Soviet Socialist Republics is incorporated in Europe in all the calculations. The absolute figures from which the various indices have been calculated, therefore, are all somewhat too low in the case of Asia and too high in the case of Europe. The procedure adopted was unavoidable, as under the new administrative system the old line of division between Asiatic and European Russia has been abolished and all production figures available refer to the whole Union, including the territories in Asia. The population to-day of what used to be considered as Asiatic Russia is probably over 30 million persons.

The Caribbean group comprises the continental States from Mexico in the north to Panama in the south and all the islands in the Gulf ; the North American group is composed of Alaska, Canada, Labrador, Newfoundland and the United States.

The evidence afforded by the table and later analysis points to the following general conclusions, certain of which will require subsequent interpretation and qualification :

(a) World population in 1928 was about 10 per cent greater than in 1913, world production of foodstuffs and raw materials was about 25 per cent greater, and world trade about 22 per cent greater. The corresponding increases since 1926 have been about 2 per cent, 8 per cent and 11 per cent.

World production and trade developed considerably in 1928, and, according to the preliminary information available, further headway was made in 1929.

(b) The growth of world population between 1926 and 1928 may be estimated at approximately 35 millions — an average increase of about 1 per cent per annum. The rate of increase was highest in South America.

(c) In recent years the world production of foodstuffs has increased at a somewhat slower rate than that of industrial raw materials. The discrepancy was considerably reduced in 1928 as a result of the exceptionally heavy food crops, but it was again accentuated in 1929, for which the provisional indices based on 1926 were 106 for foodstuffs and 117 for raw materials.

(d) Such statistical information as is available suggests that the manufacturing industry has progressed more rapidly than the production of industrial raw materials in recent years. Year by year, new economies in industrial processes are effected and a larger product is obtained from a given supply of raw materials. The iron and steel industry, the mechanical industry (including engineering, shipbuilding and automobile manufacture) and the electrical industry would appear to have raised their production between 1925 and 1929 by 25 per cent or more. In the textile group, the relatively slow development of the cotton and wool industries has been only partly offset by an increase in the output of natural and

artificial silk. The production of electricity increased by about one-third during the period 1925-1928.

(e) International trade was stimulated in 1927 and 1928 by considerable capital movements, largely due to the demand arising from the reorganisation of industry in Europe and industrial development in other parts of the world. It would appear that, in spite of a heavy fall in the general price level, there was a further increase in the value of trade in 1929.

(f) Since 1926, Europe has continued to make rapid progress. The increase in the production of foodstuffs in Europe, excluding Russia, in the period 1926 to 1928, was greater than in any other part of the world. The rate of growth in the output of raw materials was exceeded only in South America. The expansion of international trade in Europe, as a whole, between 1926 and 1928, was less than in Africa and in South America, but the indices for the Eastern and Central European group of countries were the highest in the world.

(g) In North America, new records in production and trade were reached in 1928. But the rate of advance in both since 1926 has been slower than in Europe. Indeed, the raw material output was higher in 1925 than in the two succeeding years, and the rise in the general production index for 1928 was exclusively due to exceptionally good harvests. On the other hand the national indices of industrial production for Canada and the United States show continuous progress in manufacturing activity in 1928 and during a large part of 1929. Towards the end of the latter year, however, production fell off here and elsewhere.

(h) The production of foodstuffs and raw materials in South America grew between 1924 and 1928 more rapidly than in any other part of the world, and trade developed at an almost equal rate. It would appear, however, that this progress was not maintained in 1929.

(i) In Africa, production has made steady but relatively slow progress. On the other hand, the increase in African trade in 1927 and 1928 was second only to that of Eastern and Central Europe.

(j) The indices for Asia point to a development in production similar to that of Africa, but foreign trade declined in 1927 and again in 1928.

(k) Oceania has made little advance in recent years. Production remained stationary in 1926 and 1927 and increased only slightly in the following year ; trade, after a 5 per cent increase in 1927, returned almost to the 1926 level in 1928.

(l) Compared with 1913, the prices of manufactured articles taken as a group appear to have remained, in 1928 and 1929, relatively higher than those of raw materials and foodstuffs, at any rate in Europe.

(m) The discrepancy between the two groups of prices since 1926 has been less pronounced than in earlier post-war years. On the other hand, the indices for the last two or three years show no further tendency to approach one another.

(n) It would appear that, between 1926 and 1928, agricultural produce ruled generally higher in price than raw products of the extractive industries, but that the position was largely reversed in 1929 as a result of the heavy fall in the prices of cereals and textiles.

Such are the broad general results to which the analysis of available data on population, production and trade has led. They are based on statistics that 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.

I. POPULATION.

The figures relating to population, which are confined to the years 1926 and 1928, are given in this Memorandum only with a view to comparing the growth of population with the indices of production of foodstuffs, raw materials and international trade. It is not necessary, therefore, to consider in any great detail the demographic statistics of the world.

Table II.

Changes in the Population of the World in the Period 1926-1928.

Continental groups	Population (000,000's)		Percentage movement		Percentage distribution	
	1926	1928	1926	1928	1926	1928
(a) Eastern and Central Europe :						
Excluding Russia (U.S.S.R.)	171.3	174.7	100	102.0	8.9	8.9
Including Russia (U.S.S.R.)	318.3	328.7	100	103.3	16.5	16.7
(b) Rest of Europe	195.0	197.3	100	101.2	10.1	10.1
Europe, excluding Russia (U.S.S.R.)	366.3	372.0	100	101.6	19.0	19.0
Europe, including Russia (U.S.S.R.)	513.3	526.0	100	102.5	26.6	26.8
North America	127.8	130.8	100	102.3	6.6	6.7
Caribbean	31.8	32.4	100	101.9	1.7	1.6
South America	76.0	79.8	100	105.0	3.9	4.1
Africa	140.0	143.5	100	102.5	7.3	7.3
Asia (excluding Asiatic Russia) ..	1,028.4	1,040.3	100	101.2	53.4	53.0
Oceania	9.2	9.5	100	103.3	0.5	0.5
World	1,926.5	1,962.3	100	101.9	100	100
World (excluding China).	1,467.8	1,503.6	100	102.4	—	—

The figures on which the calculations are based are frequently open to doubt. In many Asiatic and certain other countries, no regular census of population is taken, and even the census figures of the native population in Africa, South America, as well as other parts of the world, are often conjectural in character. Moreover, censuses are usually taken at long intervals and often at different years in the various countries, so that the majority of the figures are official or unofficial intercensal estimates. The information concerning China is particularly defective ; the different estimates which have been made vary to a very appreciable extent. As the population of China represents some 23 per cent of the world's total, the calculations for the world as a whole are necessarily approximate. In the table given above it has been assumed that the Chinese population has remained stationary between 1926 and 1928.

In view of these facts it is perhaps desirable to consider the world figures both with and without China. If China is excluded, the annual increase amounted to nearly 18 millions, or about 1.2 per cent. If the Chinese population (458.7 millions) is included, the absolute increase is the same, but the annual rate of increase drops to under one per cent.

The figures for Europe (plus Asiatic Russia) are largely influenced by the U.S.S.R., which accounts for about 29 per cent of the total and has a national increase much in excess of the European average. If the U.S.S.R. be excluded, Europe shows a smaller advance than any other continent except Asia. The low Asiatic figure, however, is largely due to the fact that no change in population is indicated for China. The rate of growth in Europe without U.S.S.R. is lower than in Asia excluding China.

The population of the whole American continent has advanced during the two years under review by 3.1 per cent. The Caribbean population has shown a very low rate of increase over the whole post-war period. On the other hand, so far as can be judged from the confessedly imperfect statistics available, the population of South America continued to increase considerably more rapidly than that of any other continent, namely, by 5 per cent in the two years. With this may be compared 3.3 per cent in Oceania.

The rate of growth of the population in Africa is the same as that of Europe including the U.S.S.R. The Asiatic countries, other than Asiatic Russia and China, represent only about 53 per cent of the presumed total for this continent ; their average rate of increase in the two years concerned has been 2.1 per cent.

Although the populations of the various continental groups given have thus increased at very varying rates, the period reviewed is too brief for this fact to have had any substantial effect upon the distribution of population and, indeed, the share of Asia and Europe together, where the rate of increase has been slowest, is so great, amounting to about 80 per cent of the total, that the influence on distribution of such variations in rates can only very gradually make itself felt.

II. PRODUCTION.

Very few countries publish comprehensive information concerning the output of industry, and it is impossible from the evidence available to obtain any accurate conception of the changes which have taken place in world industrial capacity or productivity. It is necessary, therefore, to approach the question indirectly and consider the figures of the production of raw materials and crude foodstuffs if a synoptic view is desired. Changes in the volume of raw materials produced, however, are not necessarily coincident with changes in the volume of industrial output. The science of industrial production is concerned largely with the discovery of means by which equal services may be rendered with a smaller consumption of crude products.

Moreover, the statistics of the production of raw materials taken alone and without reference to variations in stocks may fail to reflect accurately changes in industrial activity. The supplies of vegetable raw materials in a single year will depend primarily on the atmospheric conditions and not on the immediate industrial demand. The indices which are given below, therefore, should be interpreted with these facts in mind.

In order to measure the changes in the aggregate production of the world and its main territorial divisions by this means, it is necessary to take into account the output of a large number of different commodities. Owing to the multiplicity and variety of goods that require to be considered, the indices based on weight or volume statistics must be rendered comparable by expressing them in terms of some common denominator. It has been necessary, therefore, to calculate a quantitative index. For this purpose, the relative values of the various commodities calculated on the basis of representative price quotations in a defined period have been utilised as constant weights.

The prices employed are annual averages of actual quotations for medium qualities of the various articles in leading producing countries or free markets, and may be considered fairly representative of relative values on the world market. The index is calculated by the aggregative system. A further explanation of the procedure adopted will be found in Annex I, which should be consulted.

For the reasons indicated in the preface, new calculations have been made with 1926 as base. It should be noted that the European production in that year was adversely affected by the British coal dispute and that, therefore, the figures for other years appear higher than they would have been had conditions in the base period been more normal. But the importance of this point should not be exaggerated, for in almost every year prior to 1926 some event of an exceptional character influenced production in one division of the world or another. Moreover, production in Eastern Europe, excluding U.S.S.R., as well as in Western Europe was lower in 1926 than in 1925.

In view of the changes that have taken place in relative values, it has been considered desirable to make double calculations using as weighting coefficients, in the one case, the prices ruling in 1926 and, in the other, prices in 1928. The results obtained from these two methods of procedure in most cases vary but slightly. It is sufficient, therefore, to consider in the following analysis only those obtained by employing the 1926 values as weights. Discrepancies of some little importance do, however, occur in certain groups of commodities composed of articles the prices of which underwent substantial change between 1926 and 1928, and for this reason complete comparative figures are given in the Annexes.

The following sixty-two commodities have been taken into consideration :

List of Commodities included in the Production Index.

Wheat	Sesame-seed	Pig-iron and ferro-alloys
Rye	Soya beans	Steel (ingots and castings)
Barley	Ground-nuts	Copper
Oats	Copra	Lead
Maize	Palm and palm-kernel oil (raw)	Zinc
Rice	Olive oil (raw)	Tin
Potatoes	Cotton	Aluminium
Beet-sugar	Flax	Nickel
Cane-sugar	Hemp	Silver
Beef and veal	Manila hemp	Natural phosphates
Pork	Jute	Potash
Mutton and lamb	Wool	Sulphur
Coffee	Raw silk	Natural guano
Cocoa	Artificial silk	Chilian nitrate of soda
Tea	Raw rubber	Nitrate of lime (Norwegian and ammoniated)
Hops	Mechanical pulp	
Tobacco	Chemical pulp	Cyanamide of calcium
Cotton-seed	Cement	Sulphate of ammonia
Linseed	Coal	Superphosphates of lime
Rape-seed	Lignite	Basic slag
Hemp-seed	Petroleum	Sulphate of copper

Owing to the absence of complete or sufficiently representative data, certain classes of products have had to be omitted, the most important being dairy produce and timber. From the metal group, gold has been omitted, as so large a part of the production is used for monetary purposes. The production of certain other metals likewise excluded is probably too unimportant to have any noticeable effect upon the index. For China, no comprehensive statistics of the production of cereals and other foodstuffs exist. The tentative calculations relating to hides and skins given last year have been omitted from the present edition. Their influence on the general indices was, however, of no great significance. Further, no reliable figures of cement production in the Caribbean, South America and Africa are available; but this omission, too, is of very small importance.

Sub-indices have been calculated for the following groups of products : (1) cereals ; (2) cereals and other vegetable foodstuffs ; (3) meat ; (4) colonial produce ; (5) vegetable oil materials ; (6) textile materials ; (7) rubber ; (8) wood pulp ; (9) cement ; (10) fuels ; (11) metals ; (12) chemicals (fertilisers). The second group

includes the same cereals as the first and also rice, raw sugar and potatoes. Cereals, other food-crops, and meat constitute the " foodstuffs ", all other groups the " raw materials ". These foodstuffs, plus coffee, tea, cocoa, and hops account for over 60 per cent and the raw materials for just under 40 per cent of the total aggregates on which the general index is based. Any rough division is necessarily largely arbitrary and, in addition to the colonial products mentioned above, some of the oils and fats classed as raw materials are used as food. Taken in conjunction with the omissions mentioned above, this circumstance tends to diminish the relative importance of the production of foodstuffs as compared with the output of raw materials in the following calculations.

* * *

It is convenient to show first the general index of foodstuffs and raw materials combined, based on 1926 and weighted by 1926 values for the world as a whole and its main continental groups.

TABLE III.

GENERAL INDICES OF PRODUCTION WEIGHTED BY 1926 VALUES.

(Base: 1926 = 100)

Continental groups	1923	1924	1925	1926	1927	1928
(a) Eastern and Central Europe:						
Excluding Russia (U.S.S.R.) ...	84	91	105	100	111	120
Including Russia (U.S.S.R.) ...	76	81	99	100	105	111
(b) Rest of Europe	102	107	112	100	118	118
Europe, excluding Russia (U.S.S.R.)..	93	99	108	100	115	119
Europe, including Russia (U.S.S.R.)..	86	91	104	100	110	113
North America	97	90	96	100	99	104
Caribbean	101	110	105	100	95	102
South America	98	91	98	100	114	121
Africa	88	94	100	100	103	107
Asia (excluding Asiatic Russia)[1]	89	94	99	100	102	105
Oceania	86	93	99	100	100	104
WORLD	91	92	100	100	104	108

[1] Excluding production of foodstuffs in China.

Judging from the preliminary information available, the general world index in 1929 appears to have risen to about 111.

The above table requires to be considered in the light of the information furnished in earlier editions of this Memorandum. The apparently very rapid and substantial progress achieved by Europe in the period given represented, until 1925, a recovery of lost ground. In that year, the European index on the base of 1913 stood at 103. The indices of all the other continental groups were very substantially higher — North America 127, Caribbean 162, South America 130, Africa 143, Asia 127, Oceania 118. In 1923, the earliest year shown here, all the indices except that

for Europe, which stood at 85, were well above the pre-war level.[1] The rising figures for these continents, therefore, during the whole period 1923 to 1928 represent rather normal progress than recovery.

The figures indicate an almost continuous increase in production, only interrupted in 1926. There was, in the world as a whole, a substantial advance between 1923 and 1925, and again in the two years 1927 and 1928. The total increase during the six years from 1923 to 1929 amounts to 22 per cent,[2] which is equivalent to an average rise of 3.6 per cent per annum.

This remarkable development has not been equally shared by all continents. In Europe the rate of growth since 1923 has averaged some 5.8 per cent per annum, while in the rest of the world it was only 2.4 per cent. According to the preliminary information available, this differentiation in the rate of progress continued during 1929. If the U.S.S.R. were excluded from Europe, the differences would be still greater.

Within Europe, somewhat similar tendencies may be traced. On the one hand, the output of foodstuffs and raw materials in Eastern and Central Europe has recovered at an exceedingly rapid rate from the low levels of the early post-war years. The recovery in the U.S.S.R., however, slackened markedly, as the second of the indices in the table shows, in the more recent years under review. On the other hand, the rate of growth in Western and Maritime Europe, although substantial, has been less dramatic than in those countries which initially lost most ground. Moreover, in the last four years, the rate of growth in Western Europe has been relatively slow. The index for 1926, owing largely to the British coal dispute, was lower than in any year of the period considered, the index for 1927 was only 5 per cent greater than that for 1925 and no advance at all was made in 1928. As a result, the old quantitative equilibrium between the two main divisions of Europe has been largely, though not completely, restored. If the U.S.S.R. is omitted from the calculations, the deviation from the pre-war balance is further lessened. This substantial restoration of the pre-war quantitative equilibrium, however, must not be interpreted as implying a similar or equivalent restoration of the pre-war channels or composition of trade.

Of the continents, the development of which represents throughout the whole period a real progress as distinct from recovery, South America, Africa and Oceania record the highest figures ; namely, an advance of over 20 per cent between 1923 and 1928. The South American index has been influenced both by the increase in raw material production, to which further reference will later be made, and by the exceptional coffee crops and cereal harvests in 1927 and 1928. It should be borne in mind, however, that the 1926 index was only two points higher than that for 1923. Further, the increase in quantities in the last two years under review undoubtedly exceeded that in values.

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[1] In all cases these figures refer to the index weighted by 1913 values and are, therefore, not quite comparable with the figures given in Table III. Comparable figures for the years 1923 to 1928 are given in Annex III.

[2] Throughout this chapter, the rates of development of production are calculated direct from production aggregates and therefore do not always exactly coincide with the changes indicated by the indices and percentages shown in the tables.

North America hardly maintained the level of production of 1923 in 1925, but advanced in 1926 and again in 1928 by somewhat over 4 per cent, which is considered as the " normal annual rate of expansion of general business " in the United States of America. There has been a net increase over the whole period under review, but the rate of advance has been less than in any of the other groups, except the Caribbean. This last-mentioned group has been adversely affected by the steady decline in the output of petroleum in Mexico, a point to the significance of which further reference is made below.

Certain of the major factors responsible for these relative changes will become clear from an examination of the indices for different groups and sub-groups. Tables IV and V give the indices for foodstuffs and raw materials separately in a manner similar to that adopted in the preceding table.

TABLE IV.

FOODSTUFFS PRODUCTION INDICES, WEIGHTED BY 1926 VALUES.

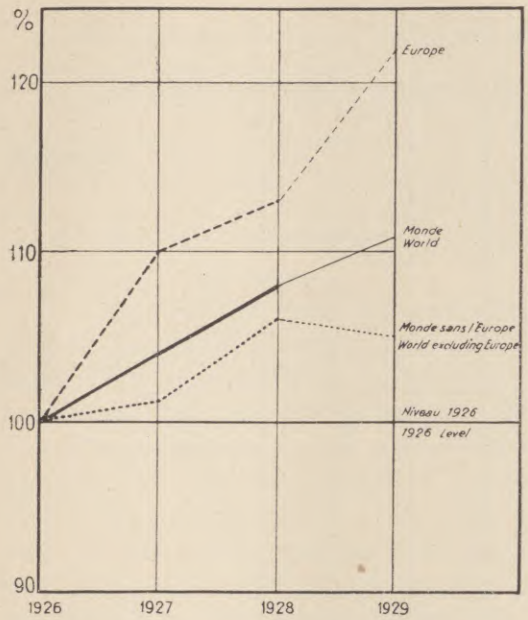
(Base : 1926 = 100)

Continental groups	1923	1924	1925	1926	1927	1928
(a) Eastern and Central Europe :						
Excluding Russia (U.S.S.R.)	94	94	110	100	109	122
Including Russia (U.S.S.R.)	81	82	101	100	102	109
(b) Rest of Europe	97	98	108	100	105	106
Europe, excluding Russia (U.S.S.R.) .	95	96	109	100	107	115
Europe, including Russia (U.S.S.R.) .	86	87	103	100	103	108
North America	109	99	100	100	105	111
Caribbean	92	110	104	100	97	109
South America	100	91	98	100	102	108
Africa	97	100	103	100	111	110
Asia (excl. Asiatic Russia and China)	96	100	101	100	101	103
Oceania	86	102	88	100	95	108
WORLD	95	94	101	100	103	108

No information is yet available for the production of meat in 1929, but if it be assumed that the rate of growth in that year was the same as the average rate for 1927 and 1928, the world foodstuffs index works out in the neighbourhood of 106. The corresponding index for raw materials is estimated at 117.

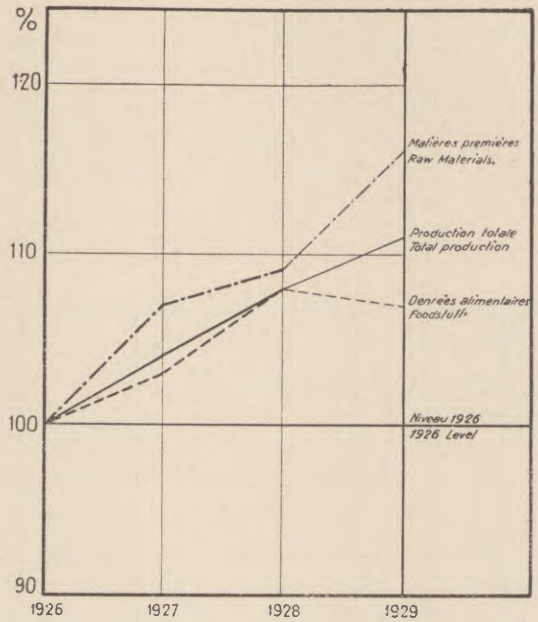
Both the production of foodstuffs and the output of raw materials have increased. But the rate of growth of the former has been slower than that of the latter. The average rate of annual increase for foodstuffs from 1923 to 1928 has been 2.6 per cent and for raw materials 4.9 per cent.

The above grouping is, however, not perfect and if colonial products other than tobacco be added to the foodstuffs group, the above rates would become 2.7 per cent and 4.8 per cent.



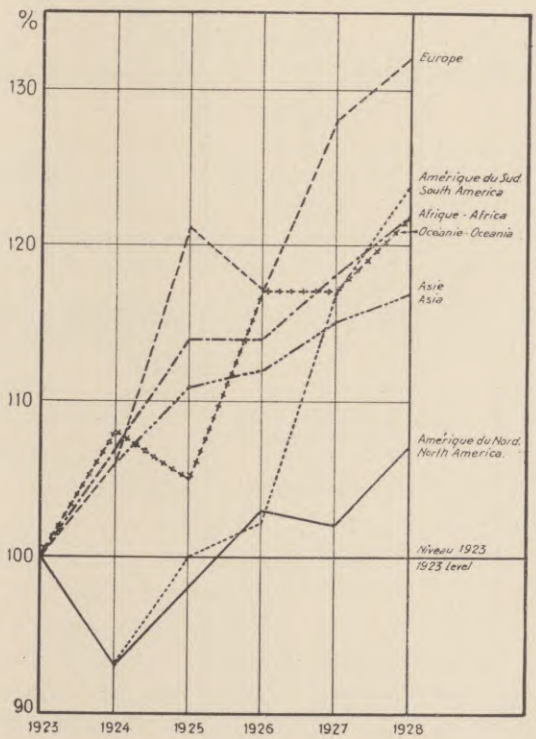
1. Aggregate Production of Foodstuffs and Raw Materials in the World and in Europe, 1926-1929.

1926 = 100.



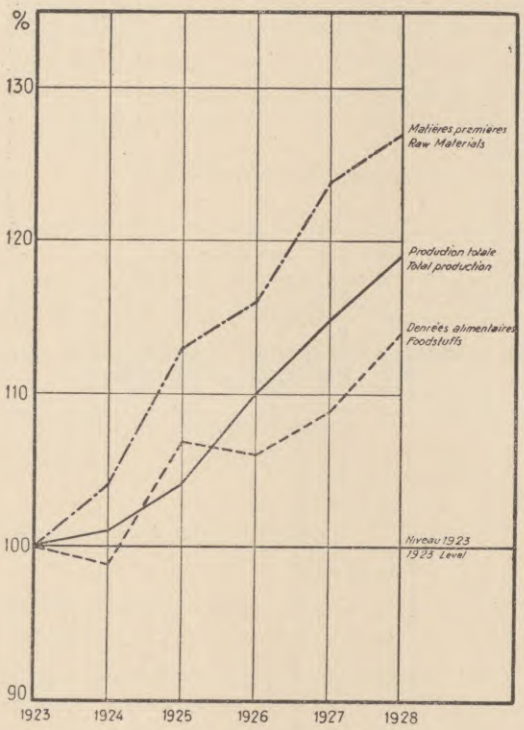
2. World Production of Foodstuffs and Raw Materials, 1926-1929.

1926 = 100.



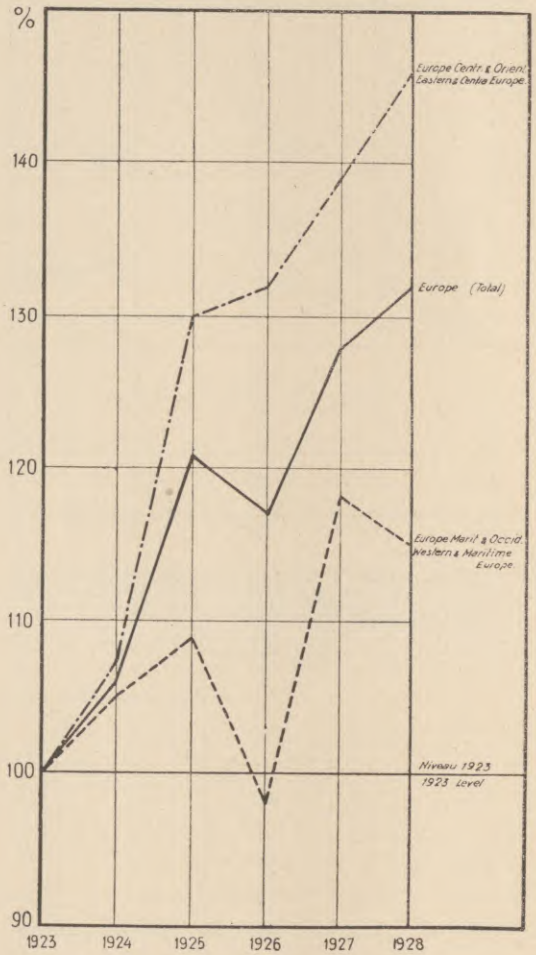
3. Aggregate Production of Foodstuffs and Raw Materials by Continental Groups, 1923-1928.

1923 = 100.



4. World Production of Foodstuffs and Raw Materials, 1923-1928.

1923 = 100.



5. Aggregate Production of Foodstuffs and Raw Materials in Europe, 1923-1928.

1923 = 100.

That the production of foodstuffs should have developed less rapidly than that of raw materials is to be expected in all progressive countries after they have reached a certain standard of living. This change of ratio is, indeed, a world-phenomenon which is likely to continue unless a rapid economic development takes place in countries with a relatively low standard of living and a large population. But, as was shown last year, if China be ignored (and she is excluded from the foodstuffs index), the production of foodstuffs per head of population is somewhat greater to-day than it was in pre-war years.

Comparison of Table IV with Table V below will show, however, that the foodstuffs index increased in 1928 substantially more than did that for raw materials. Indeed, the year 1928 was remarkable for the generality of the good harvests reaped. As a result, the carry-over of certain cereals was exceptionally heavy and prices sank.

When considering the indices for the various continental groups, it is again necessary to bear in mind that, in the basic year 1926, very different stages of progress had been achieved. European production was fractionally higher than in the last pre-war quinquennium, while in, for instance, South America and Oceania, it was about one-third higher. In the two first years given in the table, European production was substantially below the pre-war average. It is interesting, therefore, in this connection to note that the increase of foodstuffs was more rapid in Europe than in the rest of the world from 1923 to 1925 (that is, during the years of recovery) but was equal to the world average in the period 1926 to 1928.

TABLE V.

RAW MATERIAL PRODUCTION INDICES, WEIGHTED BY 1926 VALUES.

(Base : 1926 = 100)

Continental groups	1923	1924	1925	1926	1927	1928
(a) Eastern and Central Europe :						
Excluding Russia (U.S.S.R.)	65	85	94	100	114	116
Including Russia (U.S.S.R.)	62	80	93	100	113	117
(b) Rest of Europe	108	118	117	100	134	131
Europe, excluding Russia (U.S.S.R.)	90	104	107	100	125	125
Europe, including Russia (U.S.S.R.)	86	99	105	100	123	124
North America	88	85	92	100	94	98
Caribbean	116	110	106	100	93	92
South America	94	91	97	100	134	141
Africa	79	88	98	100	96	104
Asia (excluding Asiatic Russia). .	79	86	96	100	105	107
Oceania	86	84	92	100	104	101
WORLD	86	90	97	100	107	109

The rise in the production of raw materials in 1928 was small — less than 2 per cent. But, in the two years 1927 and 1928, it rather exceeded the normal rate of growth. As will be seen from Table VI below, the contributions of the various continental groups to the total production of raw materials in each case vary widely and, despite the exceptionally high South American index, the advance achieved was mainly due to an increase in the general output in Europe, and more especially in Western Europe. This is due in part, of course, to the fact that, in the base year 1926, Western European production fell off, owing to the British coal dispute. But, if comparison is made between 1928 and 1925, it still remains true that Europe contributed more to the world increase in the production of raw materials than did any other continental group. The 1928 index for Europe, based on 1925, amounted to 118 ; that for the other groups shown in the table only to 109.

It was stated above that the world index for 1929 on the preliminary and incomplete data at present available works out at about 117, showing, therefore, a substantial increase over 1928. This fact helps to illustrate a somewhat interesting characteristic of Table V, namely, the sudden jerks by which progress is achieved. The foodstuff index is more irregular than that for raw materials inasmuch as in some years it increases, in others decreases. It constitutes, however, a much smoother curve. Thus, the raw materials index increased in 1924 by 4.1 per cent, in 1925 by 8.4, in 1926 by 2.8, in 1927 by 6.6, in 1928 by 2.6 and in 1929 by approximately 7.4 per cent.

These figures seem to suggest that the underlying forces of world progress, when temporarily checked by this or that special factor, tend very rapidly to reassert themselves.

Reference was made above to the very rapid progress achieved during the last two years in South America. This must be attributed mainly to the growth of the petroleum industry in Venezuela and Colombia, and to the great improvement in the Chilian nitrate production. The index is, however, also largely influenced by the very large coffee crops in Brazil in the last two years given. With it should be compared the steadily declining index for the Caribbean group, due to the constantly diminishing output of petroleum in Mexico. It should be remembered in this connection that figures for the Caribbean are based largely on exports and not on production. The weight given to petroleum is accordingly exaggerated and the decline in the index shown in Table V is not really representative of the economic conditions obtaining in that part of the world. A much truer picture may be obtained by a careful study of Annex III. Raw material production exclusive of petroleum increased by 10 per cent between 1926 and 1928.

Although production in North America was over 4 per cent higher in 1928 than in 1927, it still failed to reach the exceptional level of the basic year. The index for Oceania declined, being affected particularly by the drop in the production of wool and coal. Those for Africa and Asia rose, and indeed, raw material production in these two continents has increased steadily and almost uninterruptedly during the whole period under review.

The extent to which the contributions of the different continental groups to the total volume of production considered have changed in relative importance in recent years is brought out in Table VI. This table gives the average percentage distribution of the aggregate production of foodstuffs and raw materials and of these two groups of commodities combined during the years 1923 to 1925 and 1926 to 1928.

TABLE VI.

PERCENTAGE DISTRIBUTION OF AGGREGATE PRODUCTION OF FOODSTUFFS AND RAW MATERIALS, WEIGHTED BY 1926 VALUES.

(World total = 100.)

Continental groups	Foodstuffs		Raw materials		Total production	
	Average 1923-1925	Average 1926-1928	Average 1923-1925	Average 1926-1928	Average 1923-1925	Average 1926-1928
(*a*) Eastern and Central Europe :						
Excluding Russia (U.S.S.R.) .	16.4	17.0	9.7	11.3	13.5	14.4
Including Russia (U.S.S.R.) . .	27.2	29.9	12.1	14.6	20.7	23.1
(*b*) Rest of Europe	13.2	12.6	17.8	16.4	15.2	14.3
Europe excluding Russia (U.S.S.R.)	29.6	29.6	27.5	27.7	28.7	28.7
Europe including Russia (U.S.S.R.)	40.4	42.5	29.9	31.0	35.9	37.4
North America	24.5	23.4	39.3	37.5	30.9	29.8
Caribbean	2.6	2.4	2.2	1.7	2.4	2.1
South America	5.8	5.9	5.1	5.8	5.5	5.8
Africa	2.5	2.5	3.0	2.9	2.7	2.7
Asia (excluding Asiatic Russia) . . .	22.5	21.6	18.3	18.9	20.7	20.3
Oceania	1.7	1.7	2.2	2.2	1.9	1.9
WORLD	100	100	100	100	100	100

As has been shown above, the most striking feature of the last few years has been the gradual restoration of the balance in Europe between the eastern and central countries on the one hand, and the rest of the continent on the other. This tendency continued almost uninterrupted, year by year, during the period covered by the table. The recovery of the eastern and central countries has further tended to raise the share of Europe as a whole in world production. Although Europe's share is substantially higher to-day than it was in 1923 or 1924, the change since 1925 has been but slight. Indeed, Europe's share in the aggregate of all commodities dropped in 1928 and was only fractionally greater than in 1925.

The complement to this change in Europe's relative position is to be found in a slight tendency for the share of North America to diminish — a tendency which is

more pronounced in the figures for raw materials contained in Table VI. The share of the other continents taken together and the individual shares of Africa, Asia and Oceania have changed but little. South America has gained, and the Caribbean group, for the reasons explained above, has somewhat lost ground.

The indices already examined render it clear that, of the total of the commodities considered, foodstuffs tend to constitute a gradually diminishing proportion. The figures for any single year are naturally influenced by weather conditions, but the nature of this tendency can be appreciated by an inspection of the following table showing the percentage of aggregate values constituted by the two main groups during the three-year period 1923 to 1925, compared with the similar period 1926 to 1928. As stated above, the raw material group necessarily includes some commodities which are used in part for food, as certain products grown mainly for food also have industrial uses. In Table VII, two additional columns are given which show the influence of allocating all colonial products, except tobacco, to the foodstuffs group, where they more properly belong. The figures are all weighted by 1926 values, so that the changes result from alterations in quantities only.

TABLE VII.

SHOWING THE RELATIVE IMPORTANCE OF FOODSTUFFS AND RAW MATERIALS IN AGGREGATE PRODUCTION, WEIGHTED BY 1926 VALUES.

(Total Production of each Continental Group = 100.)

Continental groups	Foodstuffs		Raw materials		Foodstuffs plus colonial produce[1]		Raw materials less colonial produce[1]	
	Average 1923-1925	Average 1926-1928	Average 1923-1925	Average 1926-1928	Average 1923-1925	Average 1926-1928	Average 1923-1925	Average 1926-1928
(*a*) Eastern and Central Europe Excluding Russia (U.S.S.R.)	69.3	64.9	30.7	35.1	69.7	65.5	30.3	34.5
Including Russia (U.S.S.R.)	75.0	71.6	25.0	28.4	75.3	71.9	24.7	28.1
(*b*) Rest of Europe	49.4	48.5	50.6	51.5	50.0	49.1	50.0	50.9
Europe excluding Russia (U.S.S.R.)	58.8	56.8	41.2	43.2	59.3	57.3	40.7	42.7
Europe including Russia (U.S.S.R.)	64.2	62.8	35.8	37.2	64.6	63.2	35.4	36.8
North America	45.2	43.5	54.8	56.5	45.4	43.6	54.6	56.4
Caribbean	60.3	63.9	39.7	36.1	68.3	73.4	31.7	26.6
South America	60.6	55.5	39.4	44.5	76.6	73.8	23.4	26.2
Africa	52.4	51.1	47.6	48.9	59.2	58.3	40.8	41.7
Asia	62.0	58.4	38.0	41.6	65.8	62.2	34.2	37.8
Oceania	50.5	49.0	49.5	51.0	51.0	49.5	49.0	50.5
WORLD	57.0	55.2	43.0	44.8	59.3	57.6	40.7	42.4

[1] Coffee, cocoa, tea, hops (but not tobacco).

It will be seen that foodstuffs have lost, and industrial raw materials gained, in relative importance in all continental groups except the Caribbean.

Too much significance should not be attached to the relative importance of foodstuffs and raw materials respectively in the different continental groups since, for metals, smelter production is taken. In consequence, the figures for, for instance, North America and Western Europe are inflated and those for Africa and South America reduced.

From an inspection of Annex V, it will be seen that, if 1928 weights be employed instead of those for 1926, the share of foodstuffs in the aggregates of all the products considered is, throughout the period, somewhat higher. This is due to the fact that the prices of the raw materials group declined more rapidly than did the prices of agricultural products. In 1926, the more important cereals, with the exception of wheat, ruled remarkably low in price. Between 1926 and 1928, there was a substantial decline in the prices of the majority of mineral products, while rubber prices have dropped to less than one-half. These falls have more than counterbalanced the simultaneous fall in the prices of, for instance, wheat and pork, bacon, etc.

In Table VIII below are given the indices for each commodity group for the years 1923 to 1928.

TABLE VIII.

GROUP INDICES OF PRODUCTION IN THE WORLD AS A WHOLE, WEIGHTED BY 1926 VALUES.

(Base : 1926 = 100)

Groups of products	1923	1924	1925	1926	1927	1928
Cereals	96	86	100	100	100	105
Cereals and other food crops	95	93	102	100	103	107
Meat	(93)	(99)	(98)	(100)	(104)	(111)
Colonial produce, etc.	89	90	100	100	118	113
Vegetable oil materials	86	96	103	100	116	109
Textiles	74	84	94	100	95	101
Rubber	74	75	90	100	109	104
Wood-pulp	78	81	90	100	106	108
Cement	76	84	93	100	110	115
Fuels	99	98	100	100	110	108
Metals	84	86	97	100	107	116
Chemicals	80	87	100	100	105	121
Foodstuffs	95	94	101	100	103	103
Raw materials	86	90	97	100	107	109
General index	91	92	100	100	104	108

The first index given above is supplementary to the second which includes, in addition to cereals, rice, potatoes and raw sugar. The indices of commodities which are comprised in these groups are given in Annex II, and the group indices for the separate continental groups will be found in Annex III.

Cereals and Other Food Crops.

Of all the commodity groups, that for cereals is the most important, accounting to-day for 25 per cent of the aggregate on which the indices are based. The two groups of cereals and other food crops taken together account for over 44 per cent of the aggregate. The production of cereals has, however, increased but little since the war and substantially less than that of any of the other groups of commodities except fuels. The aggregate of the group remained unchanged in the period 1925 to 1927 at about 5 per cent above the pre-war level. The 1928 harvest, however, was exceptionally good. Record returns were obtained for wheat, oats and barley. The rye crop was substantially, and the maize crop slightly, lower than in 1927. The production of rice, potatoes and of both beet and cane sugar in 1928 also equalled or exceeded that for any preceding year. Owing to the measures taken to restrict the area under sugar in Cuba, cane-sugar production in 1926 and 1927 was lower than in 1925. These measures were abolished, however, in 1928. In spite of this fact, however, beet-sugar production continued in that year to expand somewhat more rapidly than that of cane sugar. But, as is stated in the report of the Economic Committee of the League of Nations on the world sugar situation : " Beet sugar accounted in the opening years of the twentieth century for more than one-half of the world's total ; in 1913 for something less than half, and to-day for about one-third. "[1]

Meat.

The meat-production index, which is printed in parentheses in view of its somewhat conjectural character, continued to rise in 1927-1928. This increase was largely due to the growth in the production of pork, more especially in Europe. It would appear, from statistics shown in Annexes II and III, that there has been a substantial shift in demand in recent years from cereals to meat and potatoes and simultaneously from beer to non-alcoholic beverages. No doubt, if statistics for fruit were available, it would be found that the consumption of fruit had likewise very considerably increased. In this connection, however, it is interesting to note that the production of meat — and, indeed, the consumption per head — in North America is lower to-day than it was in 1923-24, whereas in Europe it increased between 1923 and 1928 by almost one-half.

Colonial Produce, Tobacco, Hops.

The group indices shown for 1927 and 1928 reflect the remarkable variations in the coffee crops. The 1927 crop (season 1927-28) was the heaviest ever harvested,

[1] *The World Sugar Situation,* 1929, page 6.

exceeding that of the preceding season by 64 per cent. A large surplus of some 10 million bags was left over and production in 1928 (1928-29) dropped considerably, although it was substantially above the 1926 level. The aggregate production of colonial products other than coffee remained practically unchanged over the period 1926-28.

From the figures available, it would appear that the production of tobacco has diminished since 1926. But too much reliance should not be placed on the statistics presented as, owing to the lack of data, the Asiatic production has had to be roughly estimated on the basis of figures of area under cultivation.

Vegetable Oils.

The output of all the oil products of temperate regions was lower in 1928 than in the preceding year. But the drop in the index is very largely due to the fact that the production of olive oil in 1927 was on a quite exceptional scale. The tropical supplies of vegetable oil slightly increased, the falling off in palm-oil and sesamum being more than outweighed by the substantial advance in the supplies of copra, ground-nuts and soya beans.

Textiles.

The textile industry showed some recovery in 1928, compared with the previous year. Indeed, as an inspection of Annex II will show, the production of all textiles excepting jute increased. The total change since 1926 was very slight, however, and this despite a further very large addition to the quantities of artificial silk placed on the market. According to the figures available, the production of artificial silk increased by 18 per cent in 1926, 32 per cent in 1927, 24 per cent in 1928 and 18 per cent in 1929. As Annex III shows, the textile index in the last fifteen years rose less than any of the others, excepting those for foodstuffs and fuels. The fuel index, however, excludes electric power.

Food and clothing are tending steadily to diminish in importance.

Rubber.

The production of raw rubber advanced exceedingly rapidly during the whole post-war period until 1927, notwithstanding the scheme for restriction adopted in the British-controlled areas in 1922. This scheme was abandoned in November 1928. The total production of 1928, however, remained about 36,000 tons below the high level of the preceding year. The bulk of the drop was attributable to British Malaya where the " standard production " decreased by 23,300 tons ; production in most other plantation areas in Asia as well as that of para and wild rubber likewise diminished, while that of the Netherlands East Indies remained practically stationary. In spite of this decrease, total shipments of rubber increased in 1928 by some 6 to 7 per cent, owing to the stocks previously accumulated. The removal of the restriction scheme made itself felt in 1929 when both production and shipments increased more than in any single year of the period under review. Stocks in the United Kingdom decreased from 67,300 tons on December 31st, 1927, to 22,900 tons a year after, but rose again to 74,300 tons on December 31st, 1929.

Wood Pulp.

There has been a slight slackening in recent years in the development of the wood pulp industry and the output in 1928 was only 2 per cent higher than in 1927. Production in Europe showed no increase. The tendency, to which reference has been made in previous years, for chemical pulp to replace mechanical, has continued.

Cement.

As stated above the cement index does not include South or Central America or Africa and is not complete for certain other continents. It is, however, sufficiently representative to afford a fair indication of the growth of this particular industry in the regions to which it relates ; these regions, indeed, undoubtedly account for the bulk of the production of the world as a whole. But the index should not be employed as a measure of building activity. It will be seen that production has increased at the rate of a little less than 9 per cent per annum during the period covered by the table. This increase is largely due to the development of the industry in a large number of small producing areas.

Fuels.

The fuel index in 1928 was just under 2 per cent lower than in 1927. This drop was wholly due to the reduction in the output of coal by 39.9 million tons. A stimulus had been given to production in 1927 by the depletion of stocks, owing to the British coal dispute in the previous year. The set-back in 1928 is attributable in part to the long coal stoppage in the central coalfields of the United States of America. In 1929, there was a substantial recovery and, from the preliminary data available, it would appear that the world production in that year was about 11 per cent higher than in 1926.

The production of the other components of this index, namely, lignite and petroleum, increased in both 1927 and 1928, in spite of attempts to control the output of petroleum in the United States. There was a further advance in 1929, and the output of petroleum in that year exceeded that in 1926 by about one-third. In the main producing countries, the most rapid development has taken place in Venezuela and Colombia and, to a lesser extent, in the Union of Soviet Socialist Republics.

Metals.

The statistics of metals on which the index is based relate to smelter production and not to the production of ore. In consequence, the continental distribution in the Annexes must not be interpreted as indicating the ultimate sources of supply. The figures for North America and Europe are much higher, and for the other continents appreciably lower, than they would have been had it been possible to employ data relating to the output of mines.

It will be seen that the index rose about 16 per cent between 1924 and 1926 and again by the same amount between 1926 and 1928. In the last two years there

has been a very substantial increase in the production of nickel, tin, aluminium, copper and steel — in that order. The production of nickel in 1928, according to the information received, was nearly 15,000 metric tons greater than in 1927, an increase of over 45 per cent compared with 1926, when production was somewhat low. But, of all the metals considered, aluminium has shown the most rapid and much the most consistent development during the whole period under review.

The iron and steel industry is dealt with in Chapter IV and need not be discussed here. It may, however, be remarked that it accounts for between two-thirds and three-quarters of the aggregates upon which the metal index is based and that, as a consequence, the movements of that index are largely determined by it.

Chemicals.

The production of heavy chemicals and fertilisers shows a more pronounced advance than that of any other group under consideration — 52 per cent since 1923 and 21 per cent since 1926. The three principal groups of fertilisers considered are phosphates, potash and nitrates. The increase has been least in the phosphates group as a whole, but in certain countries remarkable progress has been recorded : in North Africa in the output of natural phosphates ; in France, Belgium and Luxemburg in that of basic slag ; and in the United States of America and Japan in that of superphosphates. The production of potash, the world monopoly of which is shared by Germany and France, has risen since 1926 by 29 per cent. The increase is mainly due to the development of the Alsatian industry, which has expanded steadily in recent years, while German production has been adversely affected by the drop in domestic demand.

The nitrate industry, the most important branch of the fertiliser group, has, however, shown the greatest advance. In 1927, the production of Chilian nitrate of soda, which was being rapidly replaced by synthetic products, only amounted to little more than half of the pre-war figure ; but it nearly doubled in 1928, and exceeded, for the first time, the 1913 level. The recent progress in the production of manufactured synthetic fertilisers has been particularly marked in Europe, which now produces considerably more than half of the world's total output of fertilisers. The share of South America, however, increased substantially in 1928. It should be noted that in 1929, an agreement was concluded between the Chilian nitrate industry and the largest European producers of synthetic nitrogen.

III. INTERNATIONAL TRADE.

The following tables show the dollar value of world trade in 1926, 1927 and 1928 and the manner in which that trade is divided between different continental groups and, within Europe, between certain divisions of that continent.

TABLE IX.

WORLD TRADE, BY CONTINENTAL GROUPS.

Value in dollars (000,000's omitted).

(Basis : Recorded values ; special trade ; merchandise (1) only.)

Continental groups	IMPORTS			EXPORTS			TOTAL		
	1926	1927	1928	1926	1927	1928	1926	1927	1928
1. Central and Eastern Europe :									
(*a*) Incl. Russia (U.S.S.R.)..	4,530	5,888	6,105	4,368	4,712	5,058	8,898	10,600	11,163
(*b*) Excl. Russia (U.S.S.R.).	4,141	5,521	5,619	4,006	4,301	4,654	8,147	9,822	10,273
2. Rest of Europe.....	12,605	12,987	13,359	9,167	10,085	10,200	21,772	23,072	23,559
3. Europe, excluding Russia (U.S.S.R.)	16,746	18,508	18,978	13,173	14,386	14,854	29,919	32,894	33,832
4. Europe, including Russia (U.S.S.R.)	17,135	18,875	19,464	13,535	14,797	15,258	30,670	33,672	34,722
5. North America(2)	5,472	5,307	5,376	6,016	6,047	6,494	11,488	11,354	11,870
6. Caribbean (3)	696	681	649	871	867	815	1,567	1,548	1,464
7. South America	1,720	1,773	1,908	1,862	2,134	2,235	3,582	3,907	4,143
8. Africa	1,334	1,474	1,558	1,260	1,395	1,498	2,594	2,869	3,056
9. Asia, excl. Asiatic Russia..	4,774	4,605	4,584	5,274	5,117	4,965	10,048	9,722	9,549
10. Oceania	986	1,025	936	952	951	968	1,938	1,976	1,904
TOTAL (groups 4 to 10)....	32,117	33,740	34,475	29,770	31,308	32,233	61,887	65,048	66,708

(1) In the case of a few countries, the figures include bullion and specie or relate to general trade.

(2) *i.e.*, Canada, U. S. A., Newfoundland, Greenland and St. Pierre et Miquelon.

(3) *i.e.*, Mexico to Panama, both inclusive, plus West Indies.

TABLE X.

PERCENTAGE DISTRIBUTION OF WORLD TRADE, BY CONTINENTAL GROUPS.

(Basis : Recorded Values, reduced to dollars ; Special Trade ; Merchandise (1) only.)

Continental groups	IMPORTS			EXPORTS			TOTAL		
	1926	1927	1928	1926	1927	1928	1926	1927	1928
1. Central and Eastern Europe :									
(*a*) Incl. Russia (U.S.S.R.)	14.1	17.4	17.7	14.7	15.1	15.7	14.4	16.3	16.7
(*b*) Excl. Russia (U.S.S.R.)	12.9	16.4	16.3	13.5	13.7	14.5	13.2	15.1	15.4
2. Rest of Europe.....	39.2	38.5	38.8	30.8	32.2	31.6	35.2	35.5	35.3
3. Europe, excluding Russia (U.S.S.R.)	52.1	54.9	55.1	44.3	45.9	46.1	48.4	50.6	50.7
4. Europe,incl. Russia (U.S.S.R.)	53.3	55.9	56.5	45.5	47.3	47.3	49.6	51.8	52.0
5. North America (2).....	17.0	15.7	15.6	20.2	19.3	20.2	18.6	17.5	17.8
6. Caribbean (3)	2.2	2.0	1.9	2.9	2.8	2.5	2.5	2.4	2.2
7. South America	5.4	5.3	5.5	6.3	6.8	6.9	5.8	6.0	6.2
8. Africa	4.1	4.4	4.5	4.2	4.5	4.7	4.2	4.4	4.6
9. Asia, excl. Asiatic Russia...	14.9	13.7	13.3	17.7	16.3	15.4	16.2	14.9	14.3
10. Oceania	3.1	3.0	2.7	3.2	3.0	3.0	3.1	3.0	2.9
TOTAL (groups 4 to 10).....	100	100	100	100	100	100	100	100	100

(1) (2) and (3) See notes to preceding table.

It will be seen from these two tables that Europe accounts for over half of the recorded world trade, North America for over one-sixth and Asia for almost exactly one-seventh. The figures are to some extent affected by the exclusion of freights from the recorded imports of some countries, particularly the United States and Canada. If freights were included throughout, the North-American imports and total trade in 1928 would rise from 15.6 and 17.8 per cent, respectively, to about 16.4 and 18.2 per cent of world imports and total trade, and the shares of Europe would show a corresponding fall. The shares of other continents would remain practically the same.

Trade during the three years shown in the tables was largely influenced by capital movements. In 1926, the net capital exports, not only from the United Kingdom, which suffered from the coal dispute, but also from the United States of America, were on a much lower scale than in earlier years. It is true that subscriptions to foreign capital issues continued on a normal scale, but these were offset by the movement of existing securities and short-term capital ; the United Kingdom particularly would appear to have withdrawn large amounts from the Continent of Europe.

In 1927 there was a considerable inflow of capital into Europe. Part of the capital which had left the Continent in the preceding year was repatriated, and some countries which had previously received capital — *e. g.*, India and the Dutch East Indies — recorded a net export. To this in part must be attributed the increase in European trade, particularly imports, which is shown in Table X.

In 1928 capital transfers were on a still larger scale and trade was further stimulated. The net capital exports of the United States of America rose by more than $600 million, or 130 per cent. British capital exports also increased considerably in this year.

The larger capital movements in 1927 and 1928, rendered available by the increase of savings, was largely due to the demand arising from the re-organisation of industry in Europe and industrial development in other parts of the world. It has naturally affected the composition of world trade. There is a marked increase in the trade in capital goods, more especially in machinery. On the other hand, the trade in certain classes of consumption commodities, more especially of textiles, has fallen off.

* * *

In order to compare the development of international trade with the production of raw materials and foodstuffs, it is necessary to take price changes into consideration. An estimate of the average changes in the prices of the goods entering into international trade cannot, of course, be made with any close precision ; but there are reasons for believing that in 1927 and 1928 both import and export prices were approximately 3 per cent lower than in 1926. In 1929 prices fell further.

It is not necessary here to discuss in detail the data upon which the above estimate is based or the principles applied in framing it. The question is treated in a companion publication to this.[1] The procedure here adopted in order to ascertain the growth or contraction of world trade, however, differs from that employed in an earlier section in the case of raw materials. For raw materials, quantum indices, with prices in selected years as fixed weights, are employed. In the table given below the trade of each group of countries for 1927 and 1928 has been divided by the same price index (97), irrespective of the actual prices at which the goods handled by any particular country may have been actually bought or sold. This procedure has been adopted because separate price indices are available for a restricted number of countries only. The effect of the difference of methods employed is likely to be negligible so far as the world as a whole is concerned, but it may not be without importance when the more detailed figures are considered.

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(1) See *Memorandum on International Trade and Balances of Payments*, 1926-1928, Vol. I.

For this reason the table should be accepted with reserve and less precision should be attributed to the import or export figures for continents and parts thereof than to figures for total trade and the general trend of development in the years in question.

TABLE XI.

PERCENTAGE CHANGES IN QUANTUM OF TRADE.

Continental groups	IMPORTS			EXPORTS			TOTAL		
	1926	1927	1928	1926	1927	1928	1926	1927	1928
(*a*) Eastern and Central Europe :									
Excluding Russia (U.S.S.R.)	100	138	140	100	111	120	100	124	130
Including Russia (U.S.S.R.).	100	134	139	100	111	119	100	123	129
(*b*) Rest of Europe	100	106	109	100	113	115	100	109	112
Europe, excluding Russia (U.S.S.R.)	100	114	117	100	113	116	100	113	117
Europe, including Russia (U.S.S.R.)	100	114	117	100	113	116	100	113	117
North America.....	100	100	101	100	104	111	100	102	107
Caribbean	100	101	96	100	103	96	100	102	96
South America.....	100	106	114	100	118	124	100	113	119
Africa	100	114	120	100	114	123	100	111	122
Asia, exclusive Asiatic Russia.	100	99	99	100	100	97	100	100	98
Oceania	100	107	98	100	103	105	100	105	101
World	100	108	111	100	108	112	100	108	111

Note. — In the case of a few countries, the figures include bullion and specie or relate to general trade.

It will be seen that world trade in 1927 was about 8½ per cent and in 1928 11 per cent greater than in 1926.

The imports of the Caribbean dropped slightly in 1928 and those of Oceania by nearly 9 per cent. This heavy falling-off in Oceanic imports was due mainly to reduced purchases by Australia, whose import values were lower by $89 million. Australian exports, moreover, were $36 million lower in 1928 than in 1926 in spite of the high price of wool. There was an insignificant contraction in the imports of Asiatic countries and a much more serious contraction of their exports, amounting to over $150 million. The exports of British Malaya were seriously affected by the low prices of rubber. Japan also suffered from the steady decline in the price of her principal export — raw silk — and her sales of cotton yarns and tissues fell heavily in 1927 and 1928, mainly, it would appear, as a result of European competition.

Both the imports and exports of Europe and of every group of European countries shown, of North and South America and of Africa, continued to increase. The growth of European trade was, in fact, somewhat greater than the figures show since they are influenced by an apparent decrease in the French trade in pearls and precious stones, due, not to any contraction of business done, but to a change in the method of recording.

The remarkable increase in the quantum of imports of the Central and Eastern European countries, exclusive of Russia, by 40 per cent requires a word of explanation. It is due to some extent to the drop in German and Polish imports in the base year 1926, in consequence of the general contraction in the European capital market to which reference has been made above. Borrowings were resumed on an increased scale in 1927 and 1928, and, although they were used partly, especially in 1928, for gold purchases by the central banks, their influence on merchandise imports was very considerable. The imports of Germany rose by more than 40 per cent over the period and those of Poland by the extraordinary figure of 118 per cent. In 1928 imports of this group were about 2 per cent greater than in 1927. Its exports, however, rose by 8½ per cent and its passive balance of trade, as reference to Table IX will show, was reduced by $255 million. Indeed, the relative growth of its exports during 1928 exceeded that of any other group, though North American and African exports rose by over 7 per cent.

Of all the continental groups, however, Africa and South America show the greatest progress, both in the year 1928 and during the whole period under consideration. The African totals were mainly influenced by the development of the exports of Egypt and of both the imports and exports of Morocco, Tunis and Algeria.

South-American exports also increased substantially. Those of the Argentine rose by $242 million in 1927 and again by $15 million in 1928 as the result of two successive excellent harvests. Brazilian exports in 1928 were $97 million and those of Chile $46 million higher than in the preceding year. It should be noted, however, that 1926 was a poor year for several South-American countries, in particular the Argentine and Chile ; in the former the wheat exports and in the latter the exports of nitrates were considerably below the average for the three previous years.

* * *

It is not possible to give world or continental totals for 1929 as returns for many countries are not yet available. It would appear, however, from the preliminary data published in a companion volume[1] that, in spite of a considerable fall in the general price level, the value of world trade was greater in this year than in 1928.

In Europe, the only continent for which almost complete figures are available, there was a slight increase in imports and a considerably greater increase in exports. The exports of the Central and Eastern group of countries, including Russia, rose by about 8 % ; its imports, however, were lower than in 1928.

(1) See *Memorandum on International Trade & Balances of Payments*, 1926-28, Vol. III.

IV. INDUSTRY.

A general review of the development of industrial activity cannot embrace as many countries and branches of production as do the statistics relating to the output of foodstuffs and raw materials. The great diversity of the products of the manufacturing industries renders a study of industrial production difficult. Further, comprehensive industrial statistics are compiled in relatively few countries and as a rule for a few industries only.

All that can be aimed at, therefore, is a rough survey of general industrial activity in a few countries, and of the trend of development in a few branches of production. For the review of general industrial activity, only those countries which publish indices of production are taken into account. The method employed in compiling such indices varies from country to country. The indices generally cover both mining and manufacturing and, in some cases, also the building industry. They do not, of course, show the relative level of production in the several countries but serve to indicate the changes which have taken place in industrial activity.[1] The review of manufacturing industries is confined to iron and steel, the mechanical and electrical industries, including engineering, the production of electrical current, shipbuilding and motor-car manufacture, as well as textiles.

General Industrial Activity.

The general impression afforded by the data relating to industrial activity confirms the results of the preceding analysis regarding raw materials.

The increase of industrial activity has been particularly marked in Europe. In the earlier years under review, Europe was adversely affected by the instability of the Belgian, French and Italian currencies, the readjustments required in Germany and elsewhere as a consequence of currency reforms just accomplished, and in 1926 by the coal stoppage in Great Britain. In the following year France and Italy were handicapped by the readjustments necessitated by the definite stabilisation of the franc and the lira. In 1928 and the first part of 1929, conditions were, on the whole, relatively favourable and continued to improve. In the second half of 1929, there was a reaction in certain countries.

In Table XII below, indices of production for a number of countries are given.

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[1] For details concerning the manner in which these indices are computed, see Introduction to *Monthly Bulletin of Statistics*, 1928, No. 8 ; 1929, Nos. 3-6 and 9 ; and 1930, No. 2.

TABLE XII.

INDICES OF INDUSTRIAL PRODUCTION IN VARIOUS COUNTRIES[1].
1925 = 100

Country	1926	1927	1928	1929
America :				
Canada	117	125	138	154
United States	104	102	107	113
Europe :				
France	117	102	118	130
Germany	95	120	120	122
Poland	98	122	138	138
Sweden	103	108	104	127
Switzerland	95	112	117	111
United Kingdom[2]	.	107	106	112
U.S.S.R. *(a)*	141	172	208	*(b)*240

[1] The source and original base of each series are indicated in Annex VI.
[2] Board of Trade Index based on 1924=100.
(a) Year ending September 30th.
(b) October 1928 to August 1929.

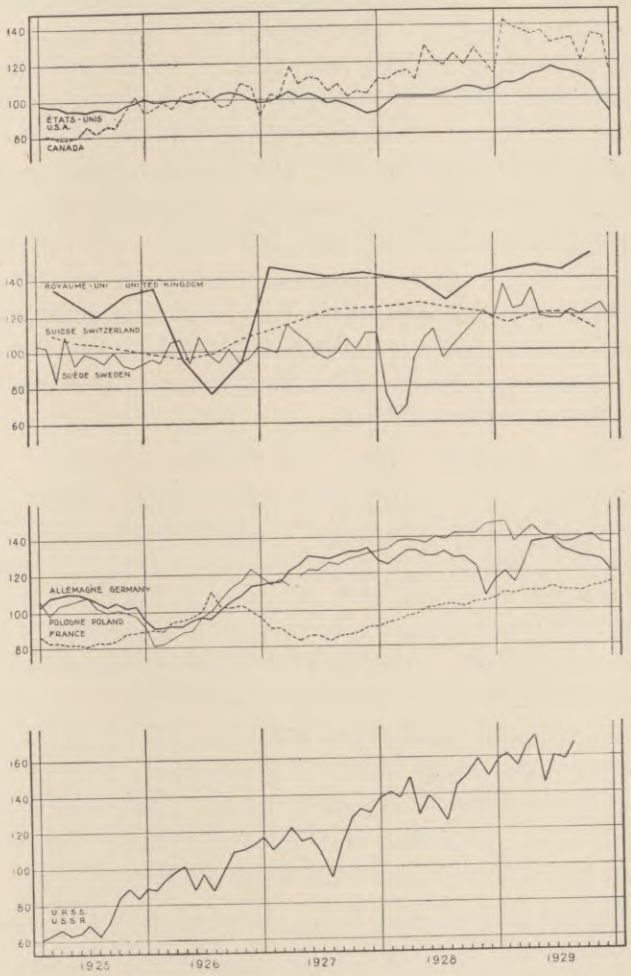
The indices shown are annual averages and do not, therefore, give a perfectly accurate impression of the course of events, which is better illustrated by Diagrams VI to IX giving the monthly indices for the whole period. For these diagrams the year 1926 is taken as the base period in order to permit of comparison with the diagrams given in Chapter I. A common scale is employed in all cases.

The Canadian index, which shows an astonishing rise during the period, relates mainly to mining and the simple forms and early stages of manufacture. Thus it covers milling, sugar manufacture, butter and cheese making, slaughter statistics, the production of pig-iron and crude steel and of news-print paper. The development of the textile industry is shown by two series based on the imports of raw cotton and wool, and that of petroleum refining is indirectly measured by the imports of crude petroleum. The only highly finished products directly measured are motor-vehicles. The industrial growth in recent years has been so remarkable that it may be interesting to set out the annual progress since 1924 :

1925 as percentage of 1924 = 107
1926 as percentage of 1925 = 117
1927 as percentage of 1926 = 107
1928 as percentage of 1927 = 111
1929 as percentage of 1928 = 112

Indices of Production

1926 = 100



The highest monthly figure was reached in January 1929, since when there has been some falling off.

The index of production for the United States, which is compiled by the Federal Reserve Board, includes mining and covers sixty series of returns relating to thirty-five industries. " It includes many commodities which enter as materials into great numbers of other factory products and thus serves as a fairly close measure of variations in manufacturing activity, especially over relatively short periods. " [1] It will be seen from the diagram that the index rose steadily, indeed, in the latter part of that period, rapidly, up to the middle of 1929, except for a temporary check in 1927. This check was due largely to the temporary closing down of one of the large motor-car plants. Production declined in the latter half of 1929 ; this decline, which was greatly accelerated in the last two months by the repercussions of the Stock Exchange slump, spread far beyond the frontiers of the United States, as an inspection of the diagrams will show.

The French index covers mining, textiles, the heavy metal industries, various forms of engineering, including shipbuilding and the manufacture of motor-vehicles, building, pulp-paper manufacture and rubber. It will be seen that a rapid and very remarkable recovery was made from the temporary setback caused by the *de facto* stabilisation of the franc, and by the end of December 1929 the French index stood higher compared with 1925 than that of any other country for which data are available, except the U.S.S.R.

The German index includes thirty-one distinct series, of which one-half are basic industries — mining, heavy metals, production of cement, bricks, etc. — and the other half finishing industries, such as engineering, manufacture of textiles, shoes, porcelain, pianos, clocks and watches, etc. The development in Germany has been irregular and is better followed from the diagram than from the table. It will be seen that there was a rapid recovery in 1926-27 from the depression which set in towards the end of 1925. During the last two years, the position has been fairly held without any marked increase in production.

The Polish index likewise covers the whole range of production from mining to finished textile products, although, owing to the industrial structure of the country, the basic industries predominate. Textiles, however, constitute 20 per cent of the whole. The general movement has not been dissimilar from that in Germany, although the extent of recovery since 1925 has been somewhat greater.

Different indices for the United Kingdom are shown in the table and in the diagram, as the official index does not cover the years 1925-26. The official index embraces mining, quarrying, production of iron and steel and manufactures thereof, non-ferrous metals, engineering and shipbuilding, textiles, chemicals and allied trades, paper, building, leather, boots and shoes, food, drink and tobacco, gas and electricity. The index given in the diagram, which is less comprehensive, lies habitually somewhat below the official index. Thus the average figures for 1929

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[1] United States Department of Commerce : *Commerce Year-Book*, 1929, Vol. 1, page 2.

were 110.6 and 111.6.[1] It should be observed that the base year 1926 employed for the purposes of the diagram is quite unsuitable for the United Kingdom, as production was largely arrested that year by the coal dispute. The significance of the diagram lies only in the quarterly fluctuations shown in the other years given and not in the extent to which the major portion of the diagram lies above its base. The reaction which took place in the third quarter of 1928 resulted in the total production in that year being slightly lower than in the preceding year. In 1929, there was an appreciable recovery which continued in the last quarter in spite of the widespread depression in December.

The Swedish index, owing to the economic structure of the country, reflects mainly the conditions obtaining in industries employing wood as their raw material and in the heavy metal industries. Wood, pulp and paper account for well over half of the total. Labour disputes, particularly in the first quarter, seriously affected the production figures for 1928, in spite of rapid improvement in the last two quarters of that year. Remarkable progress was made in 1929.

The index for Switzerland is completely different in character from those given for other countries and is based on returns to a questionnaire sent out to a large number of manufacturers requesting them to indicate the general activity of their works. The index rose steadily for two years from the second quarter of 1926. Since the middle of 1928, however, there has been a slow general downward trend.

The Russian index covers both the mining and manufacturing industries in the proportion of 27 to 73. Heavy industries and textiles predominate in the latter group, which also includes leather, paper and tobacco. Since the end of 1927 the figures indicate a remarkable increase in activity, which reflects the effort towards industrialisation that has been made in this country in recent years.

It is interesting to observe the different rates of industrial development in " old " and in " new " industries during recent years. Raw cotton consumption increased between 1924-25 and 1928-29 by 12 per cent, whereas the output of artificial silk more than doubled in the same time. Within the group of fertilisers, the output of Chilian saltpetre increased between 1925 and 1928 by 31 per cent and that of synthetic nitrogen by 82 per cent. A still more striking example is furnished by the lighting industry ; the consumption of gas mantles declined by 5 per cent in the three years 1925 to 1927, while that of electric lamps rose by 31 per cent. In the domain of the power industries, the increased use of petroleum and the progress of electrification have hampered the development of coal-mining ; between 1925 and 1928 the output of coal rose by nearly 4 per cent, whereas that of petroleum and electricity increased by 24 and 40 per cent respectively. Moreover, the world production of coal in 1925 was no greater than it was in 1913.

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[1] Based on 1924 in both cases.

Iron and Steel Industry.

As was shown in the study of raw materials, the production of pig-iron and raw steel increased continuously from 1923 to 1928 and 1929. Figures for individual countries are given in Table XIII.

TABLE XIII *(a)*

PRODUCTION OF PIG-IRON.

Countries	Output in metric tons (000's)					Output in 1929 as percentage of that in 1925	Output as percentage of world total	
	1925	1926	1927	1928	1929		1925	1929
North America	37,863	40,798	37,896	39,836	44,072	116.4	49.5	45.1
Canada	606	828	779	1,100	1,108	182.8	0.8	1.1
United States of America	37,257	39,970	37,117	38,736	42,964	115.3	48.7	44.1
Asia	1,994	2,221	2,635	2,714	3,000	150.5	2.6	3.1
Japan	932	1,135	1,268	1,520	1,750	187.7	1.2	1.8
Europe	36,198	34,948	45,271	45,253	50,100	138.1	47.3	51.2
European Steel Entente (Western Group)	.	.	30,537	30,512	32,949	.	.	33.7
Belgium	2,543	3,368	3,709	3,905	4,096	161.1	3.3	4.2
France	8,505	9,430	9,236	10,097	10,441	122.8	11.1	10.7
Germany	10,089	9,636	13,089	11,804	13,401	132.8	13.2	13.7
Luxemburg	2,363	2,559	2,732	2,770	2,906	123.0	3.1	3.0
Saar Basin	1,453	1,625	1,771	1,936	2,105	144.9	1.9	2.2
Czechoslovakia	1,166	1,088	1,260	1,569	1,642	140.8	1.5	1.7
Italy	482	513	489	507	678	140.7	0.6	0.7
Poland	315	327	618	684	706	224.1	0.4	0.7
United Kingdom	6,362	2,498	7,410	6,717	7,701	121.0	8.3	7.9
U.S.S.R.	1,290	2,207	2,963	3,281	4,318	334.7	1.7	4.4
WORLD	76,566	78,508	86,414	88,289	97,700	127.6	100	100

TABLE XIII *(b)*

PRODUCTION OF STEEL

Countries	Output in metric tons (000's)					Output in 1929 as percentage of that in 1915	Output as percentage of world total	
	1925	1926	1927	1928	1929		1925	1929
North America	46,887	49,858	46,578	53,631	56,436	120.4	51.8	47.7
Canada	765	789	922	1,260	1,402	183.3	0.8	1.2
United States of America	46,122	49,069	45,656	52,371	55,034	119.3	51.0	46.5
Asia	1,807	2,087	2,298	2,414	2,750	152.2	2.0	2.3
Japan	1,300	1,506	1,685	1,685	2,100	161.5	1.4	1.8
Europe	41,236	40,958	52,278	53,450	58,600	142.1	45.6	49.5
European Steel Entente (Western Group)	.	.	32,517	32,478	34,955	.	.	29.5
Belgium	2,549	3,374	3,680	3,934	4,132	162.1	2.8	3.5
France	7,464	8,617	8,306	9,387	9,666	129.5	8.3	8.2
Germany	12,119	12,264	16,167	14,517	16,246	134.1	13.4	13.7
Luxemburg	2,084	2,344	2,471	2,567	2,702	130.0	2.3	2.3
Saar Basin	1,575	1,736	1,893	2,073	2,209	140.3	1.7	1.9
Czechoslovakia	1,476	1,344	1,692	1,992	2,151	145.7	1.6	1.8
Italy	1,786	1,780	1,595	1,963	2,149	120.3	2.0	1.8
Poland	782	788	1,244	1,433	1,377	176.0	0.9	1.2
United Kingdom	7,504	3,654	9,243	8,656	9,810	130.7	8.3	8.3
U.S.S.R.	1,868	2,911	3,552	4,156	5,046	270.1	2.1	4.3
WORLD	90,447	93,400	101,717	110,000	118,300	130.8	100	100

The increase from 1925 to 1929 was 27 per cent in the case of iron and 30 per cent in that of steel. The persistent rise in the world totals is the more noteworthy, as the production was disturbed in one or another of the great centres of production in the majority of the years under review : by the British coal stoppage in 1926, the effects of which extended to the iron and steel industry ; by the temporary closing down of one of the most important motor-car plants in America in 1927 ; and by the industrial dispute in the Ruhr works in 1928.

The world production of steel in 1927 slightly exceeded 100 million tons, of which Europe accounted for over one-half. The following year the output of North America increased by over 7 million tons, with the result that, in 1928 and 1929, the output of the two continents was practically equal.

Since the formation of the " European Steel Entente ", of which the western group[1] covers about two-thirds of the pig-iron output and 60 per cent of the steel output in Europe, three main groups of iron and steel producers may be distinguished, whose shares in the world production were in 1929 as follows :

[1] The Central European Group, comprising several of the minor producers, is more loosely connected with the Entente.

1. The United States : 44 per cent of pig-iron and 47 per cent of steel.
2. European Steel Entente (Western Group) : 34 per cent and 30 per cent respectively.
3. The United Kingdom : 8 per cent of each product.

The output of all other producers amounts to 14 per cent and 15 per cent respectively.

Of the total quantity of iron and steel entering into international trade, the Belgo-Luxemburg Union, France-Saar, Germany, and the United Kingdom are each responsible for an approximately equal share — a little over one-fifth each in 1928. The United States have advanced their exports more rapidly than the other major producing countries and the United Kingdom less rapidly.

In the last two years prices, which sagged in 1927 and 1926, have advanced, as the following rough indices demonstrate :

	1925	1926	1927	1928	1929
Germany (Stabeisen Oberhausen)	100	101	101	105	107
Belgium (Barres, free station)	100	90	87	103	106
France (Aciers march. Eastern works)	100	99	88	100	109
Great Britain (Middlesbrough, rounds and squares $\frac{3}{8}$ to 3 in., free destination)	100	93	93	88	90
United States (Pittsburgh, steel bars, *ex* works)	100	99	91	93	95

The quotations on which these indices are based are, of course, not strictly comparable and for this reason the absolute figures have not been given. These latter show clearly, however, that there has been a tendency in recent years for prices in different countries to draw closer together.

Mechanical Engineering.

Owing to the diversity of the products of the mechanical engineering industry, no uniform measure of production is possible. The variation in the activity of this industry in certain countries may, however, be roughly gauged from the indices of production which have been compiled. Further, relatively complete information is available with reference to certain branches. Thus it is known that the tonnage of ships launched increased by about 27 per cent between 1925 and 1929, and it is estimated that the output of motor-vehicles rose in the same period by over 30 per cent. The following figures, extracted from a companion volume to this,[1] of the exports of machinery from certain of the major producing countries, show that, during the period 1925-28, the total value increased by approximately 30 per cent.

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[1] *Memorandum on International Trade and Balances of Payments*, 1926–1928, Vol. 1, Geneva 1929.

	$ (000,000's) 1925	1928
United Kingdom	236.6	261.3
Germany	158.3	244.1
France	58.9	75.9
United States of America	367.9	497.2
Austria	11.7	14.4
Switzerland	36.0	45.1
Total	869.4	1,138.0

These miscellaneous sources of information suggest that the production of the engineering industry, taken as a whole, probably increased by some 25 per cent or more between 1925 and 1929. This progress no doubt reflects largely the steps being taken at the moment, especially in Europe, to improve industrial equipment.

The above estimate would seem to be confirmed by the indices of engineering production published by certain countries. These indices vary in scope and method of compilation and cannot be directly compared.

The following French index relates to the treatment of iron and is indirectly calculated from the consumption of raw steel :

	1925	1926	1927	1928	1929
France	100	117	103	123	139

The movement is similar to that of the general index of production.

The German Institut für Konjunkturforschung publishes an index based on machines dispatched, the annual averages of which are as follows :

	1925	1926	1927	1928	1929
Germany	100	85	112	122	121

The great increase in activity shown in 1927 and 1928 was due mainly to foreign demand ; home consumption, it is stated, has fallen. For this reason the figures relating to exports of machines quoted above tend somewhat to exaggerate the total demand to-day and the increase in that demand during the four-year period covered.

The index compiled by the British Board of Trade covers at once engineering proper and shipbuilding. It is based on the average for the year 1924 :

	1924	1927	1928	1929
United Kingdom	100	115	113	121

As the tonnage of ships launched in 1929 was about 6 per cent greater than in 1924, it may be presumed that the expansion of the other branches of engineering has been greater than the index suggests. On the other hand, as the figures quoted above show, exports by value in 1928 were only 11 per cent greater than in 1925.

The Swedish Board of Trade publishes an index of the value of the gross production of the engineering and shipbuilding industries based on 1913 prices, which has moved as follows :

	1925	1926	1927	1928
Sweden	100	119	124	151

The remarkable advance indicated by the figures is largely due to the activity of the Swedish shipyards, which doubled their output during the period under review. Consequently, the development of the engineering industry proper has been considerably less than the general index would suggest.

No direct measurement exists for the United States, but " the demand for foundry equipment and for machine tools " is considered " a significant indicator of the prospective activity anticipated by the machinery manufacturing industry ".[1] The annual indices for such orders were :

United States	1925	1926	1927	1928
Machine tools	100	108	92	158
Foundry equipment	100	106	93	130

Shipbuilding.

The total tonnage of ships of over 100 tons register launched in 1929 amounted to 2,793,000, and was greater than in any year since 1921. Indeed, there has been steady progress year by year since 1926, when a number of the British yards were temporarily closed down, and, in so far as it is possible to judge from the figures of tonnage under construction, which amounted to 3,111,000 tons at the end of 1929, there appear to be reasonable grounds for presuming that this improvement will continue in the near future. It is clear from these figures and from those given in the table below that the shipbuilding industry is gradually recovering from the depression from which it suffered after the largely artificial boom of 1920 and 1921.

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[1] *Commerce Year-Book*, 1929, Vol. 1, page 429.

TABLE XIV.

SHIPBUILDING.

(All vessels, including sailing vessels.)

Country	Tonnage launched Tons gross (000's omitted).			Tonnage launched as per cent of that in 1925				Tonnage launched as per cent of world total.	
	1925	1928	1929	1926	1927	1928	1929	1925	1929
North America :									
United States (Coast)[1] . . .	78.8	91.0	100.6	146	158	115	128	3.6	3.6
Asia :									
Japan	55.8	103.7	164.5	94	76	186	295	2.5	5.9
Europe :									
Denmark	73.3	138.7	111.5	98	98	189	152	3.3	4.0
France	75.6	81.4	81.6	161	59	108	108	3.4	2.9
Germany	406.4	376.4	249.1	44	71	93	61	18.5	8.9
Italy	142.0	58.6	71.5	155	71	41	50	6.5	2.6
Netherlands . . .	78.8	166.8	186.5	119	152	212	237	3.6	6.7
Sweden	53.8	106.9	107.2	100	125	199	200	7.5	3.8
United Kingdom .	1,084.6	1,445.9	1,522.6	59	113	133	140	49.4	54.5
WORLD . . .	2,193.4	2,699.0	2,793.2	76	104	123	127	100	100

[1] Excluding Great Lakes.

The launchings in 1929 exceeded those in 1925 by about 600,000 tons, of which the United Kingdom contributed over two-thirds. As a result, her share in the world's totals rose from 48 to 55 per cent. In spite of this, however, her shipyards were by no means fully occupied.

The second largest shipbuilder to-day is Germany. But her output has diminished substantially since 1925 and, as will be seen from the table, has fluctuated widely from year to year.

Sweden and Denmark passed the 100,000-ton mark for the first time in 1928, and are both producing to-day more sea-going vessels than the United States. The Netherlands and Japan have also made a remarkable recovery from the depression of preceding years.

Motor-Vehicles.

Only a limited number of countries publish statistics of the manufacture or sale of motor-vehicles. But it is possible to make a rough estimate from the statistics of car registrations and the statistics of imports and exports. For a

number of reasons, into which it is not necessary to enter here, such calculations can only be of approximate accuracy, and the totals obtained are of course not the totals of like units. All forms of vehicles are arbitrarily treated as equal. So long as the composition of the motor fleets of the different countries does not vary greatly, this fact may not have any great significance ; but, in view of the rapid changes which the industry has been undergoing, this form of measurement can clearly only be safely undertaken over relatively short periods of time.

The United States Department of Commerce has issued an estimate of world output which includes the major part of the period considered in this *Memorandum*. The main results are summarised in Table XV.

TABLE XV.

PRODUCTION OF MOTOR-VEHICLES

Country	Number (000's)					1928 as percentage of 1925
	1925	1926	1927	1928	1929	
1. *North America*	4,427	4,506	3,580	4,601	5,621	104
Canada	161	205	179	242	263	150
United States of America .	4,266	4,301	3,401	4,359	5,358	102
2. *Europe*	466	529	579	602	...	129
3. Total of 1 and 2	4,893	5,035	4,159	5,203	...	106
4. North America as percentage of total given	90	90	86	88	...	—

According to these statistics, North America accounts for about nine-tenths of world output, though the proportion was slightly lower during the last two years given in the table. It was affected in 1927 by the temporary closing down of one large plant. Of the European production, the United Kingdom and France probably account together for about two-thirds.

The wide fluctuations in total production shown in the table are, of course, mainly determined by conditions in the United States. One million less vehicles were produced in 1927 than in either the preceding or succeeding year and a million more in 1929 than in 1928. The annual fluctuations in this single country thus substantially exceeded the total European production.

The statistics for Europe are no doubt less accurate than those for North America, being based largely or wholly on estimates and not on direct returns. They indicate that European production has increased by about 29 per cent in the period 1925-1928. A comparison of the production and export figures for the United States shows that the proportion of the total production of motor-vehicles

exported increased from 8 per cent in 1925 to 12 per cent in 1929. The exports of the major European producers, except the United Kingdom, have fallen during recent years.

TABLE XVI

MOTOR-CAR EXPORTS.

Country and category	Number (000's)					Value in $ (000,000's)				
	1925	1926	1927	1928	*1929	1925	1926	1927	1928	*1929
North America.										
Canada : [2]										
Passenger cars [1]	61.5	51.3	31.7	72.1	50.2	29.4	24.9	19.2	31.2	23.2
Lorries [1]	19.2	20.4	15.1	31.5	29.7	6.3	6.9	5.6	11.8	12.1
Total	80.7	71.7	46.8	103.6	79.9	35.7	31.8	24.8	43.0	35.3
United States :										
Passenger cars [1]	244	238	279	368	339	184.9	176.4	208.0	263.6	234.3
Lorries and buses [1]	59	67	106	139	197	37.7	47.2	70.1	91.3	111.4
Total	303	305	385	507	536	222.6	223.6	278.1	354.9	345.7
Parts (excluding engines and tyres)	.	.	.	.	.	85.7	90.8	106.3	139.4	190.6
Engines only	146	118	97	124	95	15.3	12.5	10.9	13.0	10.2
Europe.										
France :										
Passenger cars [1]	59.0	54.7	46.9	*40.9	39.1	102.2	70.3	61.1	*53.3	48.6
Lorries [1]	4.8	5.1	5.2	*5.1	9.9	8.7	7.2	6.8	*7.1	12.8
Total	63.8	59.8	52.1	*46.0	49.0	110.9	77.5	67.9	*60.4	61.4
Germany :										
Passenger cars [1]	1.5	1.4	2.7	4.6	4.8	3.2	2.3	3.9	6.3	7.7
Lorries [1]	1.1	0.8	1.4	3.4	3.4	2.4	2.3	2.5	5.0	5.6
Total	2.6	2.2	4.1	8.0	8.2	5.6	4.6	6.4	11.3	13.3
Italy :										
Motor-cars [1]	29.1	34.2	33.3	*28.3	23.7	26.6	27.6	31.2	*21.5	18.6
United Kingdom :										
Passenger cars (complete)	17.8	14.9	16.1	18.2	24.2	20.2	15.7	17.1	17.6	21.3
Lorries (complete)	1.5	1.2	1.7	1.4	2.6	4.3	2.8	5.3	3.7	4.9
Chassis for passenger cars	9.7	16.4	17.8	8.0	9.9	11.3	16.3	18.6	4.6	5.3
Chassis for lorries				4.9	5.6				8.6	9.4
Total	29.0	32.5	35.6	32.5	42.3	35.8	34.8	41.0	34.5	40.9
GRAND TOTAL [3]	508.2	505.4	556.9	*725.4	739.1	437.2	399.9	449.4	*525.6	515.2

* Provisional figures.
[1] Including chassis.
[2] Years beginning April 1st.
[3] Parts and engines exported from the United States are not included.

It will be seen that the value of the exports of France, Italy and the United Kingdom was lower in 1928 than in 1925. British exports, however, rose by nearly 6½ million dollars in 1929 and French by almost exactly 1 million dollars. Exports from Germany have risen steadily since 1926. After a phenomenal increase in 1927 and 1928, exports from the United States were checked in 1929. The value of complete cars and chassis sold abroad dropped in that year by over 9 million dollars. This drop, however, was more than offset by the continued growth in the exports of parts.

Electrical Industry

Owing to the miscellaneous character of the products of the electrical industry, it is almost more difficult than in the case of mechanical engineering to gauge, even approximately, the development which is taking place. That that development is considerable is, however, beyond doubt. According to an unofficial estimate submitted to the World Economic Conference and published in the documentation of that Conference, the world production of electrical goods in 1925 amounted to about 3 milliard dollars. An estimate, compiled on a comparable basis by the same experts [1] for the year 1927 gives 3.45 milliard dollars, an increase of 14 per cent. Since then a further substantial advance has been made and the value of the exports of the most important trading countries in 1928 was about 30 per cent greater than in 1925. In the two years 1925-27 exports increased by 16 per cent, and in the following two years by about 14 per cent. German domestic consumption in the last couple of years probably expanded somewhat less than her exports, and French domestic consumption certainly expanded very substantially, while exports dropped. These figures seem to confirm the unofficial estimate of production just mentioned and it is not improbable that the rate of increase quoted continued throughout the quinquennium and that there was, therefore, an expansion of output during the period in the neighbourhood of 30 per cent.

The following table gives the value of the exports of the electrical industry of various countries in terms of dollars.

[1] Reichsverband der deutschen Industrie, Fachgruppe Elektrotechnik.

TABLE XVII.

EXPORTS OF ELECTRICAL GOODS.

	$ (000,000's)				1929 as percentage of 1925
	1925	1927	1928	*1929	
America.					
United States of America	84	99	107	. . .	*(a)*127
Europe.					
France	19	15	*15	18	95
Germany	84	103	126	146	174
Netherlands	13	17	25	50	385
Sweden	10	15	19	17	170
Switzerland	10	10	14	14	140
United Kingdom.	85	91	90	96	113
Total	305	350	*396	. . .	. . .
Total as percentage of 1925	100	115	130	. . .	—

(a) 1928 as percentage of 1925.
* Provisional figures.

The definition of the term " Electrical Industry " is not uniform in all countries, and the classification of electrical goods in the trade returns varies. But, in so far as possible, the above statistics have been compiled on a uniform basis and embrace electrical machinery (motors, dynamos, transformers, etc.), bulbs, electric installation materials, boiling apparatus, radio receivers, electrometers cables, etc. Since 1927, the value of the German exports exceeded those of any other country. In the first of the five years given, the difference in the totals of Germany, the United States of America and the United Kingdom was under 1.5 million dollars. In 1929, German exports exceeded those of the United Kindgom by 50.2 million dollars. The most rapid progress, however, was made not by Germany but by Sweden and the Netherlands. The economic development of Sweden (whose industries are somewhat specialised) in post-war years has, as her indices of production show, been very remarkable. There has also been in recent years a very rapid industrial development in the Netherlands, which is reflected in certain of the tables contained in this chapter.

Electrical Energy

Statistics of electrical current generated are available for a considerable number of countries, but are, in the majority of cases, incomplete. Those for Germany, Belgium, Poland, Sweden, Russia and Japan cover the whole national production. The Canadian, Dutch, French, Italian and Swiss figures are believed

to account for about 90 per cent of the total. The British figures account for rather less than 90 per cent and those for the United States for rather more.

On the basis of the available information it would appear that the production of electric current increased by about one-third between 1925 and 1928, a figure which may be compared with that given for electrical products above.

Owing to the incompleteness of the statistics, it is not possible to estimate with precision the national contributions to the totals ; but the United States has developed the generation of electric current to a far greater extent than any other country and probably accounts for 45 per cent or more of the world production. The joint output of the United States and Canada must be over one-half of the world total. The output per head, however, is greater in both Canada and Switzerland than it is in the United States.

The relative rate of growth in different parts of the world is indicated in the following table, in which the countries are grouped according to the approximate percentage increase between 1925 and 1928.

TABLE XVIII.

RATE OF INCREASE IN THE PRODUCTION OF ELECTRICAL CURRENT. 1925 TO 1928.

Group	Percentage increase	Countries	Group	Percentage increase	Countries
I	11-20	*(a)* Roumania	III	31-40	France
		Denmark			Italy
		(a) South Africa			Germany
		Sweden	IV	41-50	Australia
II	21-30	*(a)* Finland			Netherlands
		(a) Spain	V	51-60	Poland
		United Kingdom			Switzerland
		United States			Canada
		Uruguay			
		(a) Japan	VI	125	U. S. S. R.

Source : See *International Statistical Year-Book 1929*, where absolute figures are given.
(a) Production in 1927 as percentage of that in 1925.

It should be observed that several of the countries whose indices are above the average, such as Belgium, the Netherlands, Poland, Australia and New Zealand, generate only a small amount of current. New Zealand's production is, indeed, quite negligible. Much more important than the progress achieved by these minor producing countries is the all-round advance of about 30 per cent. The uniformity of the rate of increase of about one-quarter to one-third during the period given is, indeed, very remarkable.

Textiles

The textile industry as a whole constitutes a striking contrast to those which have been considered above. It has been shown that the production of steel in the quinquennium ending 1929 increased by about 30 per cent, the estimated

output of motor-cars by over 30 per cent, engineering in general by some 25 per cent, electrical engineering and the production of electrical current by 30 per cent or more, while the indices in Chapter II show a growth in the production of heavy chemicals by 22 per cent and of wood pulp by 20 per cent. The textile raw materials index in 1929, on the other hand, was probably only about 109, and this index is influenced by the very remarkable increase in the quantity of artificial silk produced and to a lesser extent by the rise in the sales of natural silk in the world markets. The increase in the production of most of the major or coarser textiles was still lower. Thus, cotton rose between 1925-26 and 1928-29 by only 6 per cent. Hemp fell by 11 per cent and flax by 9 per cent between 1925 and 1928. Similarly, during the last two years there has been a tendency for the development of the wool industry to be arrested. Further, although it is true that the production and exports of artificial silk continued to rise, the total value of world exports of this product dropped in the last 12 months under review.

In the following table the indices of textile production for those countries for which they are compiled are given :

TABLE XIX.

INDICES OF PRODUCTION IN THE TEXTILE INDUSTRY.

1925 = 100

Country	1926	1927	1928	1929
America :				
United States [1]	100	109	103	111
Europe :				
France [2]	107	98	109	101
Germany [3]	83	107	94	*(a)* 84
Poland [4]	95	141	147	131
Sweden [5]	112	120	125	...
United Kingdom [6]	.	102	100	99

[1] Federal Reserve Board.
[2] Statistique Générale.
[3] Institut für Konjunkturforschung (Old index based on 1924/26).
[4] Conjuncture Institute.
[5] Kommerskollegium.
[6] Board of Trade ; figures for 1925 and 1926 are not available ; this calculation is therefore based on 1924.
(a) January to September 1929.

The composition of the indices given in the table varies considerably. That for France refers to the cotton, wool and silk industries, and is based on average output of cotton per spindle and per loom, spinning and weaving being combined in the proportion of 7 : 12, wool conditioned at two manufacturing centres and silk conditioned at Lyons. The German index refers to the yarn production of cotton and linen and the quantity of hemp yarn despatched. It does not include the production of artificial silk. The British, Polish and Swedish indices are much

wider in their scope. The Polish index covers cotton spinning, weaving, bleaching, dyeing and printing, the woollen and worsted industry, jute, silk and artificial silk. The Swedish index includes the production of cotton and woollen yarn and cloth, linen, jute and hemp spinning, linen and jute weaving, rope-making, hosiery, etc. That for the United Kingdom covers cotton spinning, weaving, bleaching, dyeing and printing, the woollen and worsted industry, jute, silk, artificial silk, linen and hosiery ; that for the United States, the production of cotton, woollen and worsted goods and silk manufactures, and is based on the mill consumption of raw material and on spindle and loom activity for wool and silk.

As a general rule, the indices which cover the greatest range of industries tend to rule highest, a fact which was to be expected, as it is the major branches of the industry, namely, cotton and wool spinning and weaving, which, in recent years, have been most depressed. Thus, if hosiery be omitted from the Swedish calculations, the index for that country in 1928 drops from 124 to 120. Hosiery is, indeed, one of the branches of the textile industry which has made very remarkable progress in recent years. Indeed, in Sweden, while the total textile index, excluding hosiery and ready-made clothing, was, in 1928, only 9 per cent above the 1913 level, the hosiery index was 96 per cent higher. Unfortunately, it is only for a relatively few countries that details about this particular branch are available.

The table shows that, with the exception of Sweden and Poland, the development of the textile industry as a whole in the last five years has been relatively slow, and that there was a steady decline in industrial activity in 1929 in all the countries under review, excepting the United States. The activity in the textile industry in the United States has closely followed the general economic development in that country. It increased steadily until the middle of 1929, but declined suddenly towards the end of the year.

In studying the table, however, it is necessary to bear in mind, first, that certain important textile countries, — such as, for instance, Czechoslovakia, Italy and Switzerland — are omitted ; and, secondly, that the indices are composite and are, in some cases, unduly raised by the inclusion of artificial silk. In all cases the computations are made with fixed weights and do not, therefore, take into account the very substantial fall in the price of artificial silk in the last few years. They refer to quantities and not to values. They indicate the volume of production but not the profits earned.

Cotton

In Table XX below is given the consumption of raw cotton in all the countries for which the Federation of Master Cotton Spinners' Associations obtains information. The original figures are converted into metric tons at the rates indicated at the foot of the table. It should be observed that the scope of the statistics is not quite worldwide and that the Continental totals refer to those countries from which the facts have been ascertained and not necessarily to the whole area of the respective continents.

TABLE XX

COTTON MILL CONSUMPTION FROM 1924-25 to 1928-29.

Metric tons (000's omitted).[1]

Countries	American cotton					East Indian cotton					Egyptian cotton				
	1924-25	1925-26	1926-27	1927-28	1928-29	1924-25	1925-26	1926-27	1927-28	1928-29	1924-25	1925-26	1926-27	1927-28	1928-29
North America	1,210	1,273	1,412	1,343	1,399	5	4	4	4	5	37	41	49	43	48
Canada	32	41	38	39	44	—	—	—	—	—	—	1	3	1	3
United States	1,178	1,231	1,374	1,304	1,355	5	4	4	4	5	37	40	46	42	45
Caribbean and S. America	—	1	—	—	—	—	—	—	—	—	1	—	—	—	—
Brazil	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mexico	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Asia	154	202	350	302	286	623	640	629	507	564	14	12	14	13	13
China	14	24	55	59	56	51	73	69	46	60	—	—	—	1	—
India	2	2	70	28	10	351	302	328	275	281	3	2	1	1	1
Japan	138	176	226	215	220	221	265	233	186	223	11	10	13	11	12
Europe:															
Including U. S. S. R.	1,268	1,255	1,372	1,415	1,302	193	184	140	162	200	227	210	224	218	222
Excluding U. S. S. R.	1,206	1,201	1,294	1,317	1,224	193	184	140	162	200	215	196	203	197	205
Belgium	30	35	41	43	44	22	23	19	22	26	6	1	1	1	2
Czechoslovakia	68	71	81	87	75	18	15	10	12	14	6	6	7	8	7
France	161	167	165	165	165	24	24	24	27	32	31	31	29	28	31
Germany	183	176	242	255	204	32	30	26	32	38	17	12	19	18	20
Holland	21	24	26	29	30	4	4	4	5	6	—	—	—	—	—
Italy	128	142	136	141	149	43	38	28	27	34	16	15	14	14	15
Poland	33	32	54	64	42	4	3	5	4	3	2	2	4	3	5
United Kingdom	468	418	415	389	381	27	25	12	18	27	129	114	107	104	106
U. S. S. R.	62	54	78	98	78	—	—	—	—	—	12	14	21	21	17
Various countries n. e. i.	14	10	15	14	23	5	6	4	4	7	3	4	5	4	4
Total	2,646	2,740	3,149	3,075	3,009	826	834	778	677	775	282	267	292	278	287
Total as percentage of 1924-25.	100	104	119	116	114	100	101	94	82	94	100	95	104	99	102

Countries	Sundries					Total					1928-29 as percentage of 1924-25	Consumption as percentage of world total	
	1924-25	1925-26	1926-27	1927-28	1928-29	1924-25	1925-26	1926-27	1927-28	1928-29		1924-25	1928-29
North America	13	12	13	13	11	1,265	1,330	1,478	1,403	1,463	116	28	29
Canada	—	—	—	—	—	32	42	41	40	47	147	1	1
United States	13	12	13	13	11	1,233	1,287	1,437	1,363	1,416	115	27	28
Caribbean and S. America	144	200	125	148	127	145	201	125	148	127	88	3	3
Brazil	106	156	89	110	94	106	156	89	110	94	89	2	2
Mexico	38	44	37	38	33	38	45	37	38	33	87	1	1
Asia	304	261	272	329	296	1,095	1,115	1,265	1,151	1,159	106	25	23
China	239	229	237	281	256	304	326	361	387	372	122	7	7
India	14	7	12	11	12	370	313	411	315	304	82	8	6
Japan	50	26	23	37	28	420	477	495	449	483	115	9	10
Europe:													
Including U. S. S. R.	234	397	343	406	457	1,922	2,046	2,079	2,201	2,181	113	43	44
Excluding U. S. S. R.	87	111	141	147	117	1,701	1,692	1,778	1,823	1,746	103	38	35
Belgium	2	3	5	2	11	60	62	66	78	83	138	1	2
Czechoslovakia	1	1	1	1	1	93	93	99	108	97	104	2	2
France	10	15	40	15	16	226	237	258	235	244	108	5	5
Germany	5	4	5	7	6	237	222	292	312	268	113	5	5
Holland	—	1	1	—	—	25	29	31	34	36	144	1	1
Italy	4	4	4	4	38	191	199	182	186	236	124	4	5
Poland	2	1	1	2	1	41	38	64	73	51	124	1	1
United Kingdom	55	74	96	95	68	679	631	630	606	582	86	15	12
U. S. S. R.	147	286	202	259	340	221	354	301	378	435	197	5	9
Various countries n. e. i.	12	21	25	34	36	34	41	49	56	70	206	1	1
Total	707	890	778	929	926	4,461	4,731	4,997	4,959	4,997	112	100	100
Total as percentage of 1924-25.	100	126	110	131	131	100	106	112	111	112	112	—	—

Source: *International Cotton Bulletin.*

[1] Bales have been converted to metric tons according to the following rates:
American cotton and sundries 1 bale = 440 lb. = 199.581 kg.
Indian cotton . . . . . 1 bale = 330 lb. = 149.685 kg.
Egyptian cotton . . . . . 1 bale = 640 lb. = 290.299 kg.

The consumption of cotton in the last year given was somewhat over 500,000 tons greater than in 1924-25. Although the section of the industry spinning the finer counts is in general more prosperous than are the other branches, the whole of this increase was constituted by American cotton and the miscellaneous crops. The consumption of Indian cotton diminished slightly, but this fact is of no great significance as the crops in the first two years given in the table were exceptionally heavy.

During the last three years the amount of cotton consumed has been practically stationary. But this is due to the fact that during this period the takings of the Russian mills have steadily increased, and there has been a similar increase in the use of cotton in some of the minor producing countries, grouped together at the bottom of the table. If these two users of cotton be ignored, it will be found that the consumption in the year ending July 31st, 1929, was lower in all the continental groups (excepting South America, where the change was slight) than it was in the commercial year 1926-27. It is this fact which gives the true picture of the situation. Amongst the countries in which there has been a material falling-off may be mentioned the following :

	1926-27	1927-28	1928-29
United Kingdom	100	96	92
Germany	100	107	92
Poland	100	114	80
India	100	77	74

In the earlier post-war years there was an important change in the centres of production, Asia greatly increasing her share. During the last two or three years, however, this tendency has ceased to operate and Asiatic consumption has slightly fallen off.

The following table gives indices of the development of the actual production of yarn and of cloth separately for the limited number of countries for which production statistics are available. The interesting fact which the table adds to the information afforded by the statistics of raw cotton consumption is the steady rise in yarn production in Belgium, a rise which is in striking contrast to the exports of yarn.

Table XXI *(a)*.

Activity in the Cotton-Spinning Industry.

1925 = 100.

Country	1926	1927	1928	1929
America :				
Canada [1]	113	114	113	113
United States [2]	105	117	103	111
Asia :				
China [3]	106	99	108	...
India [3]	95	112	112	...
Japan [3]	110	107	104	...
Europe :				
Belgium [3]	116	128	136	...
France [5]	103	98	106	106
Germany [4]	84	116	105	103
Italy [3]	100	87	97	...
United Kingdom [6]	84	93	85	...
U. S. S. R. [3]	128	161	167	...

[1] Production index of the *Monthly Bulletin of Business Statistics*, based on raw cotton imports.
[2] Production index of the Federal Reserve Board based on cotton consumption.
[3] Actual quantities of yarn produced.
[4] Production index of the Institut für Konjunkturforschung, based on output of yarn.
[5] Average production per spindle.
[6] Production index of the London and Cambridge Economic Service based on cotton consumption.

Table XXI *(b)*.

Activity in the Cotton-Weaving Industry.

1925 = 100.

Countries	1926	1927	1928
America :			
United States [1]	.	116	...
Asia :			
India [1] *(a)*	116	121	95*
Japan [1] [4]	108	110	119
Europe :			
France [2]	103	96	97
Germany [3]	100	115	111
Italy [1]	97	87	111
U. S. S. R. [1] *(b)*	135	153	167

[1] Actual quantities of cloth produced.
[2] Average production per loom.
[3] Looms active ; based on 1926 = 100.
[4] Production of mills affiliated to the Japan Cotton-spinners' Association.
(a) Economic years beginning April 1st.
(b) Economic years ending September 30th.
(*) Provisional figure.

Unfortunately, data for 1929 are only available for one or two countries. But the generality of the depression through which the cotton industry is passing can be judged by the following figures showing the number of weeks of forty-eight hours during which the total number of spindles from which returns were received were stopped. The figures refer to the half-years ending January 31st, 1926, 1927, 1928 and 1929.

TABLE XXII.

SHORT-TIME IN THE COTTON INDUSTRY.

[Number of Weeks of Forty-eight Hours during which the Total Number of Spindles were stopped.]

Countries	Half-year ending January 31st			
	1926	1927	1928	1929
North America[1]				
Canada	2.242	0.023	0.357	3.476
Caribbean and South America				
Brazil	—	8.992	1.317	4.927
Mexico	1.092	0.883	0.112	3.156
Asia				
China	3.000	9.170	17.812	9.982
Japan	6.556	4.054	10.958	12.072
Europe				
Austria	6.241	9.203	5.460	7.220
Belgium	0.546	0.588	0.688	0.750
Czechoslovakia	—	4.629	—[2]	—
Denmark	2.226	3.001	1.489	1.612
Finland	0.038	0.824	0.193	0.589
France	0.729	0.822	1.335	0.897
Germany	1.410	2.206	1.098	1.976
Italy	0.397	1.337	2.949	3.616
Netherlands	—	0.049	0.026	0.008
Norway	8.290	4.964	2.805	5.304
Poland	4.618	2.136	1.396	—[2]
Portugal	0.879	0.048	0.057	0.072
Spain	9.099	8.571	5.166	7.799
Sweden	1.842	1.036	0.574	1.273
Switzerland	0.418	1.069	—	1.495
United Kindgom	3.652	6.040	4.544	4.393

Source : *International Cotton Bulletin.*

[1] Figures for the United States are not available. In January 1929, 30,758,000 spindles were operating out of a total of 35,335,000.

[2] Overtime worked.

Only in five out of the nineteen countries given for 1929 was there any improvement in the last half-year given. In France, Poland and China the increase in employment was considerable.

Large as the trade in cotton goods is, most production is, nevertheless, for domestic purposes. According to an unofficial estimate made by one expert body,[1] less than 10 per cent of the cotton yarns and less than 20 per cent of the cotton cloth produced enters to-day into international trade. Exports are, however, vital to certain national industries. The total exports of yarn declined substantially in 1928-29 and the value of the exports of piece-goods fell steadily throughout the whole quinquennium. The latter figures, however, are affected by the decline in prices. Certain features of the question of the trade in cotton goods has been referred to in a companion volume[2] and need not be discussed here. Attention may, however, be drawn to the fact that the weight of the exports of yarn from Japan dropped between 1925 and 1928 by about 76 per cent and the value of the exports of British piece-goods by about one-third.

Wool.

The statistics of raw wool production should not be accepted as more than expert estimates. They probably reflect fairly, however, the general trend of development. Wool production and consumption were somewhat lower than before the war until about 1925. Since that date, there was a steady expansion, which by 1928 amounted to about 13 per cent. But the activity of the woollen industry in three of the four leading manufacturing countries has declined in the last few years, as is in part shown by the following table.

TABLE XXIII.

ACTIVITY IN THE WOOL INDUSTRY.

1925 = 100.

Country	1926	1927	1928	1929
America :				
United States [1]	97	104	102	111
Europe :				
France [2]	107	101	110	104
Germany [3]	98	112	98	. . .
United Kingdom [4]	111	112	106	. . .

[1] Production Index of the Federal Reserve Board based on raw wool consumption.
[2] Production Index of the " Statistique Générale " based on wool conditioned at Roubaix-Tourcoing and Mazamet.
[3] Actual production values of the wool industry (*Wirtschaftsdienst*, 1930, page 53).
[4] Annual Production Index of the London and Cambridge Economic Service, based on raw wool consumption.

[1] The Manchester Cotton Trade Statistical Bureau.
[2] League of Nations, *Memorandum on International Trade and Balances of Payments*, 1926-28, Vol. I.

As may be seen from the above table, activity in Germany and the United Kingdom declined in 1928 and that in France in 1929. It would appear that the difficulties in the first two countries were accentuated in 1929. Unemployment in the British woollen industry increased from 11.7 per cent to 13.9 per cent and in the German industry employment (fully occupied workers, excluding short time) fell by about 7 per cent.

Production in the United States, on the other hand, showed an average increase of nearly 9 per cent in 1929, but it would appear that it declined markedly towards the end of that year.

The German index is, of course, affected by prices, which have fluctuated appreciably in recent years and tended to decline since the beginning of 1928. It has been, no doubt, further affected by the relatively weak domestic demand. German exports rose steadily from 1926 to 1928 as Table XXIV, showing the dollar value of the exports of woollen and worsted yarns and woollen piece-goods, shows :

TABLE XXIV.

EXPORTS OF WOOLLEN GOODS.

$ (000's omitted).

Country	Woollen tissues			Woollen and worsted yarns [1]		
	1925	1927	1928	1925	1927	1928
Belgium	6,046	5,586	5,006	18,887	18,361	18,777
Czechoslovakia .	32,308	35,118	36,118	13,762	17,447	17,343
France	68,920	62,514	63,726	34,698	68,186	57,131
Germany	50,673	64,532	66,537	21,991	22,678	29,063
Italy	18,237	11,964	12,905	2,026	5,560	5,644
United Kingdom	176,680	167,340	170,946	57,194	56,733	57,834
Total	352,864	347,054	355,238	148,558	188,965	185,792

[1] Tops, noils, rags, carpets, shawls and blankets excluded.

The above table affords a rather more favourable picture of the situation in 1928 than do the production indices ; this must be attributed in part, no doubt, to the fact that production precedes export.

Silk.

Little comparable information is available for the natural silk industry. The production of raw silk has advanced from 48,100 metric tons in 1925 to about

58,100 metric tons in 1928. This is primarily due to production increasing in the Far East by over 23 per cent. In Europe, it remained relatively stable, rising but slightly. It has declined year by year in Greece from 320 metrie tons in 1925 to 205 metric tons in 1928 and has simultaneously risen in Italy from 4,380 to 4,836 metric tons.

The most important silk industries are those of the United States, France, Italy, Germany, Switzerland and Great Britain. Table XXV gives such indices of production as are available.

TABLE XXV.

ACTIVITY IN THE SILK INDUSTRY.

1925 = 100

Country	1926	1927	1928	1929
America :				
United States of America [1]	100	110	114	124
Europe :				
France [2]	105	87	110	91
Germany [3]	84	118	.	.
Italy [4].	86	98	108	. . .
United Kingdom [5]	106	97	112	. . .

[1] Silk deliveries to mills.
[2] Production index of the " Statistique Générale ", based on silk conditioned at Lyons.
[3] Actual values of silk weaving (*Wirtschaft und Statistik*, 1929, page 80).
[4] Actual quantities of silk yarn produced.
[5] Annual production index of the London and Cambridge Economic Service, based on production of silk thrown and spun.

It will be seen that production has undergone considerable year-to-year fluctuations. In 1928, there was a general improvement in practically all important manufacturing countries. This was followed, however, by rapid reaction in 1929, which, in the last months of the year, became acute.

Artificial Silk.

Of the various branches of textiles, the artificial-silk industry has expanded by far the most in recent years. As shown in Table XXVI, the aggregate output more than doubled between 1925 and 1929.

TABLE XXVI.

ACTIVITY IN THE ARTIFICIAL SILK INDUSTRY.

Countries	Production of artificial silk. Metric tons (000's)		Production in 1926-1929 as percentage of that in 1925				Production as percentage of world total	
	1925	1929	1926	1927	1928	1929	1925	1929
America	24.1	61.3	124	147	191	254	27.8	31.1
United States . .	23.5	59.6	123	146	189	253	27.1	30.3
Asia.								
Japan	1.3	8.2	179	393	513	643	1.5	4.2
Europe	61.5	127.2	114	153	187	207	70.8	64.7
Belgium	5.0	6.8	119	123	136	136	5.8	3.5
France	6.5	16.8	122	147	209	258	7.5	8.5
Germany	11.8	25.0	115	154	202	212	13.6	12.7
Italy	14.0	32.3	119	174	186	231	16.1	16.4
Netherlands . . .	4.0	9.1	153	187	204	227	4.6	4.6
Switzerland . . .	2.8	5.6	130	168	194	199	3.2	2.8
United Kingdom .	13.5	24.1	86	130	175	178	15.6	12.2
Other countries .	3.9	7.6	115	159	192	196	4.4	3.8
WORLD . . .	86.8	196.7	118	155	193	227	100.0	100.0

In contrast to the concentration of the industry in a few European countries before the war, the post-war period has witnessed a noteworthy geographical extension. The United Kingdom, Germany, France, and Belgium were, in 1913, probably responsible for over 80 per cent of the world output. Their share was only 43 per cent in 1925 and not more than 30 per cent in 1929. The most remarkable progress was made in Italy and the United States in the first years after the war, and in Japan during the last quinquennium : the output of the Japanese industry increased in this period by over 370 per cent. However, demand has failed to keep pace with this general increase in output. A stagnation began to make itself apparent in European industries (except in that of the Netherlands) as early as 1928, when stocks accumulated and prices declined. Production in the United States, however, continued to expand until the latter part of 1929. Excepting in 1927, the trade in artificial silk has kept pace with production, as the following table shows :

Table XXVII.

Exports of Artificial Silk.

Countries	Quantities in quintals (000's)					1929 as percentage of 1925
	1925	1926	1927	1928	[1] 1929	
Belgium	33.2	32.2	37.2	39.8	31.6	95
France	6.4	10.9	48.4	50.5	60.2	941
Germany	38.0	36.6	44.1	62.8	91.3	240
Italy	72.6	97.9	147.6	150.0	160.0	220
Netherlands	30.4	55.4	72.0	77.8	88.5	291
Switzerland	18.7	29.5	33.3	37.6	39.1	209
United Kingdom	32.7	26.5	37.9	43.3	37.0	113
Total	232.0	289.0	320.5	461.8	507.7	219
Total in millions of dollars	63.3	61.2	78.5	92.4	72.6	115
Average price in dollars per quintal	272.8	211.7	244.8	200.0	143.0	52
Indices of Exports: Quantities	100	125	138	199	219	—
Indices of Exports: Values	100	97	124	146	115	—
Indices of Exports: Prices	100	77	90	73	52	—

Source : National foreign trade returns.

[1] Preliminary figures.

But while the weight of exports in 1929 was over double that of 1925, the decline in prices has been so great that values were only up by 15 per cent. The quantitative indices, therefore, though they lose nothing of their significance from the point of view of the consumer, must not be taken as indicating the financial prosperity of the productive enterprises. The above table is of particular interest as showing the enormous changes that have taken place in the relative importance in international trade of the various competing countries. In the five-year period, the exports of France increased over ninefold, those of the Netherlands almost trebled, and those of Germany rose from 38,000 to over 91,000 quintals. On the other hand, the exports of the United Kingdom and Belgium have expanded but slightly compared with these countries and, indeed, showed a definite contraction in the last year under review. In the beginning of this period they both exported about the same amount and but little less than Germany, which was and remains the second biggest source of supply. By 1929, they had been outstripped by all of their five major competitors. By far the largest exporter is Italy, whose sales in 1929 amounted to 160,000 quintals.

V. THE RELATIVE MOVEMENTS IN THE PRICES OF RAW PRODUCTS AND MANUFACTURED ARTICLES.

In previous issues of this MEMORANDUM, a tentative approach has been made to the problem of the relationship of prices of raw products and manufactured articles. On the ratio of the prices of these two groups of commodities, the productive activity (and incidentally the foreign trade) of different classes of producers and different countries is largely dependent, and the problem is therefore one of very great practical importance. In the present chapter, the analysis of certain of the somewhat inadequate available data is continued.

For the reason set out in the preface, the relative price movements that have taken place since 1913, and not only those of the past few years, will be studied. Comparison with pre-war years is particularly difficult owing to the inadequacy of the data concerning the prices of manufactured products. The lack of information is not simply due to the fact that students of prices have unduly concentrated on raw materials and foodstuffs or that standard manufactured articles at any given date are relatively few in number. Methods of production have undergone important modifications ; demand has changed and the products of industry, even when bearing the same name as in 1913, are often no longer the same. Even when price data are available, therefore, they frequently fail to measure identical goods. It is partly in consequence of this difficulty that the amount of carefully sifted data that is available is remarkably small. It is therefore not advisable to rely on any single line of enquiry or to endeavour to prove thereby the character or the degree of change that has taken place. It is preferable — in the first instance, at any rate — to select evidence as independent in origin as possible, to apply a number of different tests, and to ascertain whether the data thus drawn from different sources tend to point in a like direction. Four sources of evidence — none of them in itself wholly satisfactory, or by itself adequate — are in fact available.

First, in certain countries, the indices of wholesale prices are composed of groups that embrace respectively raw materials, semi-manufactured articles and finished products. Secondly, it is possible to obtain price quotations in some markets for raw materials and for the articles manufactured therefrom. Thirdly, price indices of the goods entering into the external trade of a number of countries whose imports or exports are mainly composed of raw materials or manufactured articles are available. Fourthly, something may be learnt from a comparison of wholesale and retail price indices.

The evidence drawn from these four sources pointed in previous years to the conclusion that the prices of individual manufactured goods had, in the great majority of cases for which information was available, risen more since before the war than those of the raw materials from which they are made, and that, in certain important areas of the world, manufactured goods as a whole had risen more in price than raw products. It will be shown below, that this price discrepancy continued to exist in 1928 and 1929, though to what extent it may be explained by improvement or change in the quality or nature of the manufactured articles it is impossible to state. Further, it does not necessarily follow from this that, if it were possible to compute world indices for raw materials and for manufactured products, the discrepancy between these indices would be similar to that which the evidence considered below suggests. In the first place, a number of manufactured products are in everyday popular use now that were scarcely obtainable or were not obtainable before the war — wireless receiving-sets and many classes of knitted over-garments may be quoted by way of illustration. Secondly, changes of great significance have taken place in the relative importance of the consumption of goods which were in use in 1913. The growth of the motor-car and electrical and aluminium industries, for instance, has been such that any price index of manufactured goods based on 1913 weights implies a hypothesis which is not in conformity with facts.

If the evidence to be considered, therefore, points to the conclusion that the prices of individual manufactured products have risen more than those of raw materials and foodstuffs in certain countries, it must not be presumed that it is necessarily true that the prices of manufactured goods as a whole are likewise, and to the same extent, higher than those of raw materials and foodstuffs as a whole. There is, indeed, a strong presumption that they are higher. But the present analysis is at least insufficient to measure the amount of such discrepancy. Moreover, as will be shown later, although all the evidence points to the conclusion that the prices of those particular manufactured commodities which it is possible to compare in the years considered rule, as a whole, relatively higher than the prices of the raw materials from which they are manufactured, the discrepancy which exists to-day is appreciably less than it was some years ago.

Unfortunately, very few countries publish indices of wholesale prices in such a form as to permit of a clear distinction being made between goods in various stages of manufacture. In the following table, indices for eight countries are given. The figures show the average prices for the years 1928 and 1929. Two systems of classification or a combination of these two are adopted. According to one system, the commodities are divided into raw materials, semi-finished and finished goods, and, according to the other, into consumers' and producers' goods. Consumers' goods may be taken as roughly equivalent to finished products including foodstuffs ; producers' goods are nearer akin to semi-manufactured

products, although they include industrial machinery and tools. Thus, in the case of Sweden, under consumers' goods are included various textile fabrics, stockings, boots and shoes, flour, meat, etc., and under producers', various grains and animals, iron ore and pig-iron, metal sheet and wire, building materials and yarns.

Table XXVIII.

Comparative Prices; Averages for 1928 and 1929.

1913=100.

Country	Year	Raw materials	Semi-finished products	Finished products	Producers' goods	Consumers' goods	General index
Canada	1928	153	147		143	154	151
	1929	153	144		142	153	149
Denmark.....	1928	134				173	153
	1929	133				169	150
Germany	1928	134		159	137	175 [4]	140
	1929	132		157	139	172 [4]	137
Italy [1] (Milan)..	1928	490	449	512			491
	1929	464	450	514			481
Norway	1928	157				165	161
	1929	149				158	153
Sweden.....	1928	144	150	149	140	155	148
	1929	135	141	142	134	145	140
U.S.A. [2].....	1928	101	82	98			97
	1929	99	81	97			96
U.S.S.R. ...	1928	157 [3]		188			172
	1929	171 [3]		188			179

[1] Revised index, excluding foodstuffs of domestic origin.
[2] Base 1923, converted from 1926 base.
[3] Agricultural products.
[4] Excluding foodstuffs.

The evidence afforded by this table is striking. In Denmark, Germany, Italy, Norway, Sweden and the U.S.S.R., the indices for finished products or consumers' goods lie well above those for materials in earlier stages of manufacture. The Italian index for semi-manufactured products is, however, considerably lower than that for raw materials, a fact which is to be attributed in part to the influence of textiles and chemicals.

The two series shown for Canada point to opposite conclusions. The first, which shows a movement contrary to that of the other countries considered, has the disadvantage of not showing either raw materials or manufactured articles alone; special indices for the five groups of commodities in their raw and manufactured state have, however, been compiled and are given below for the years 1928 and 1929.

Articles of :	1928		1929	
	Products		Products	
	Raw and semi-manufactured	Manufactured and mainly manufactured	Raw and semi-manufactured	Manufactured and mainly manufactured
Farm origin :				
Field	154	157	153	152
Animal	157	144	157	145
Marine origin	116	170	123	175
Forest origin	148	181	150	163
Mineral origin	142	129	145	131

It will be noted that, in general, the figures for goods manufactured from articles of farm and mineral origin are lower than those for the raw materials constituting these groups. The term " farm origin " is used by the compilers of the index in its widest sense, and embraces such articles as cotton fabrics, fibre products, etc.

The composition of the two divisions — raw materials and manufactured products — into which the group indices are separated is not identical. The indices do not therefore indicate exactly the difference in average prices for similar commodities according to their stage of manufacture. Table XXIX (given below on pages 67 and 68), which sets out the prices of certain individual commodities classified according to their stage of manufacture, presents results which are in direct contradiction to those for the farm products and mineral groups contained in the above table.

The partial indices of the second series, those relating to producers' and consumers' goods, cover groups which are more clearly divided according to stages in manufacture.

	Producers' Goods		*Consumers' Goods*	
	Producers' materials	Producers' equipment (tools, heat and power equipment, etc.)	Foods, beverages and tobacco	Other (clothing, household goods)
1928	139.3	170.1	161.3	149.4
1929	136.9	171.5	160.5	146.3

" Producers' materials " may be taken as roughly equivalent to industrial raw materials, and " producers' equipment " on the one hand and " consumers' goods other than foodstuffs " on the other as roughly equivalent to finished goods. It will be observed that the price relationship witnessed by these series has been the same as in the other countries considered.

The figures given for the United States of America in Table XXVIII are not comparable with those of the other countries, as they are based on the year 1923. This is to be regretted, as it might be expected that, in those countries in which the newer industries not producing prime necessities of life have made exceptional progress, the discrepancy between the prices of manufactured goods and raw materials would be of an order different from that which characterises other countries.

Of some value in this connection, however, is the grouping employed in the revised index of the Department of Labor, which shows :

	Average			
	1913	*1927*	*1928*	*1929*
1. Farm products	100	138	137	135
2. Foodstuffs.	100	150	157	155
3. Textile products	100	167	179	164
4. Hides and skins	100	159	179	160
5. Fuel and lighting	100	141	135	140
6. Metals and metal products	100	108	110	115
7. Chemicals	100	120	119	118
8. House-furnishing goods . .	100	174	165	172
9. Miscellaneous	100	97	89	86

The sixth group includes motor-cars, agricultural implements, etc., in addition to crude metal products ; the ninth, paper and pulp, rubber, rubber tyres, etc. The low indices of these groups are in striking contrast at once to those for agricultural products and for such standard pre-war industrial products as those represented in the textile group.

Table XXIX.

Relative Changes in the Prices of Individual Commodities or Groups of Commodities arranged according to Stages of Manufacture

(Base period for indices : 1913.)

A. *UNITED STATES OF AMERICA*

Commodities	Indices			Percentage changes in relative value		
	1926	1927	1928	1926	1927	1928
Rye	150	165	178	100	100	100
,, flour	179	182	204	119	110	115
Oats	115	132	148	100	100	100
,, meal	124	142	150	108	108	101
Wheat	171	156	151	100	100	100
,, flour	189	174	167	111	112	111
,, bread	199	198	191	116	127	126
Cattle	112	150	170	100	100	100
Beef, fresh	124	143	172	111	95	101
,, salt	112	105	143	100	70	84
Hogs	155	125	117	100	100	100
Pork, fresh	181	160	149	117	128	127
Hams	176	148	137	114	118	117
Cotton	133	136	153	100	100	100
,, yarn, carded	145	142	150	109	104	98
,, thread	186	186	186	140	137	122
,, cloth	142	144	146	107	106	95
,, hosiery	197	198	201	148	146	131
,, underwear	191	174	175	144	128	114
Hides, cow	63	99	121	100	100	100
Harness	109	117	135	173	118	112
Skins, calf	92	104	145	100	100	100
,, shoes	155	155	157	168	149	108
Skins, goat	103	106	110	100	100	100
Shoes, kid	145	143	147	141	135	134
Milk, fresh	148	150	145	100	100	100
Butter, cheese, etc.	142	153	143	96	102	99

Commodities	Indices			Percentage changes in relative value		
	1926	1927	1928	1926	1927	1928
Wool	182	177	216	100	100	100
,, yarn	185	176	200	102	99	93
,, underwear	176	176	188	97	99	87
Silk, raw	163	144	139	100	100	100
,, yarn	172	143	133	106	100	96
,, hosiery	131	123	141	80	85	101
Iron ore	114	114	114	100	100	100
Pig iron	124	119	112	109	104	98
Bar iron	181	169	167	159	148	146
Skelp	137	132	136	120	116	119
Wire and nails	161	145	147	141	127	129
Cutlery	217	217	217	190	190	190
Sewing-machines	194	197	190	170	173	167
Copper	88	82	93	100	100	100
,, wire	96	97	100	109	118	108
Lead	192	154	143	100	100	100
,, pipe	195	162	153	102	105	107
Zinc, slab	132	113	109	100	100	100
,, sheet	146	128	121	111	113	111
Glass, window	140	134	139	100	100	100
,, plate	150	124	121	107	93	87
,, tumblers	152	139	150	109	104	108
Wood, pulp (chemical)	129	118	113	100	100	100
Paper, newsprint	167	157	157	129	133	139
Paper boards	186	166	176	144	141	158
Yellow pine, timber	190	174	167	100	100	100
Flooring	196	167	158	103	96	95
Furniture	141	138	135	74	79	81

B. *CANADA*

	1926	1927	1928	1926	1927	1928
Sugar	130	143	125	100	100	100
,, products	143	149	138	110	104	110
Grains	164	166	154	100	100	100
Flour	166	158	158	101	95	103
Bakery products	191	194	191	116	117	124
Cotton, raw	144	142	165	100	100	100
,, yarn and thread	158	147	157	110	104	95
,, fabrics	181	166	171	126	117	104
Live-stock	127	115	156	100	100	100
Meat	145	141	173	114	123	111
,, canned and cured	171	141	151	135	123	97
Milk	135	142	143	100	100	100
,, products	144	146	153	107	103	107
Silk, raw	167	135	131	100	100	100
,, manuf.	194	181	165	116	134	126
Wool	167	141	184	100	100	100
,, yarn	186	186	186	111	132	101
Cloth, hosiery	220	226	232	132	160	126
Fish, fresh	127	129	118	100	100	100
,, dried	112	102	126	88	79	107
,, canned	203	207	202	160	160	171

	1926	1927	1928	1926	1927	1928
Lumber, timber	148	149	152	100	100	100
Pulp	156	148	144	105	99	95
Paper	176	173	172	119	116	113
Furniture	195	195	195	132	131	128
Pig iron	128	122	116	100	100	100
Rolling mill prod.	149	148	143	116	121	123
Hardware	165	159	154	129	130	133
Copper	101	95	105	100	100	100
,, wire	107	99	107	106	104	102
Lead	176	145	131	100	100	100
,, pipe	253	225	178	144	155	136
Hides	75	110	136	100	100	100
Harness leather	117	126	148	156	115	109
Manufactured leather	131	133	149	175	121	110
Bricks	171	176	178	100	100	100
Pottery	330	330	321	193	188	180
Glass, window	100	90	83	100	100	100
,, tumblers	114	111	94	114	123	113
Rubber	71	54	32	100	100	100
Goloshes	128	125	124	180	231	388

TABLE XXIX *(continued)*

C. *GERMANY*

Commodities	Indices			Percentage changes in relative value		
	1927	1928	1929	1927	1928	1929
Rye	157	151	121	100	100	100
,, flour	165	156	129	105	103	107
Wheat	140	123	119	100	100	100
,, flour	132	115	109	94	93	92
Cattle	114	110	109	100	100	100
Beef	118	113	115	104	103	106
Pigs	110	114	138	100	100	100
Pork	119	124	149	108	109	108
Milk	124	126	121	100	100	100
Butter	147	152	148	119	121	122
Coal	121	131	137	100	100	100
Briquettes	151	151	151	125	115	110
Iron ore	115	113	114	100	100	100
Pig iron	113	111	115	98	98	101
Hardware, tools, etc. *	125	132	132	109	117	116
Machines ‡	136	141	144	118	125	126
Copper	87	96	119	100	100	100
,, sheets	98	114	133	113	119	112
Zinc	126	111	109	100	100	100
,, sheets	132	118	117	105	106	107

Commodities	Indices			Percentage changes in relative value		
	1927	1928	1929	1927	1928	1929
Wool	195	201	163	100	100	100
,, cloth	257	266	269	131	132	165
Flax	218	223	169	100	100	100
Linen yarn	190	187	174	87	84	103
Cotton	137	155	148	100	100	100
,, yarn	158	164	155	115	106	105
,, tissues	186	179	169	136	115	114
Hemp	141	159	142	100	100	100
,, yarn	152	159	146	108	100	103
Jute	111	118	111	100	100	100
,, yarn	123	125	123	111	106	111
,, tissues	117	122	111	105	103	100
Sacks	121	126	114	109	107	103
Hides and skins	111	134	92	100	100	100
Calf leather	108	136	98	97	101	107
Sole leather	125	150	122	113	112	133
Shoes	137	160	143	123	119	155
Pulpwood	128	143	...	100	100	...
Pulp	151	149	148	118	104	100
Newsprint paper	148	148	148	116	103	100
Paper boards	169	168	172	132	117	116

* Kleineisenwaren.
‡ Composite index.

D. *SWEDEN*

	1926	1927	1928	1926	1927	1928
Cattle	135	108	119	100	100	100
Meat	149	124	133	110	115	112
Iron ore	110	110	111	100	100	100
Pig iron	127	118	119	115	107	107
Iron and steel prod.	134	124	116	122	113	105
Wood	147	150	148	100	100	100
Wooden articles	177	183	185	120	122	125
Tallow	125	111	123	100	100	100
Candles and soap	153	148	146	122	133	119

	1926	1927	1928	1926	1927	1928
Raw textiles	123	140	138	100	100	100
Yarn	164	158	162	133	113	117
Tissues	192	182	190	156	130	138
Hides and Skins	81	103	125	100	100	100
Leather	109	118	141	135	115	113
Shoes	161	146	162	199	142	130
Pulp	171	136	133	100	100	100
Tar paper	155	160	160	91	118	120
Paper	176	171	171	103	126	129

The general conclusion to be drawn from the composite indices of goods in various stages of manufacture — namely, that there remained in 1928 and 1929, as in preceding years, a general and appreciable alteration in relative values in favour of manufactured articles — is confirmed by the price indices of certain raw materials and articles manufactured therefrom (Table XXIX), quoted in four national markets. The exceptions to this rule are surprisingly few. Moreover, it will be noted that the discrepancy between the relative price levels is greater the higher a commodity is placed in the scale of production.

The indices are based on the annual averages of actual quotations for medium or representative qualities of the articles considered.

The tables necessarily fail to take account of the price movement in new industries and happen not to cover certain important commodities in the manufacture of which marked technical progress has been made. It will be observed, however, that in the great majority of the groups considered the more finished goods remained in 1928 and 1929 relatively higher in price than the raw materials from which they were made.

To the question of recent price tendencies it will be necessary to turn shortly. Before doing so, however, it is desirable to set out the third and fourth groups of evidence, namely, that afforded by indices of foreign trade prices and wholesale and retail price indices. In the following table are compared the export and import price indices of certain countries whose imports and exports

TABLE XXX.

IMPORT AND EXPORT PRICE INDICES FOR CERTAIN COUNTRIES.

1913=100.

	1926		1927		1928		Imp. as % of Exp.			Manufactured articles as % of total		
	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.	1926	1927	1928	Imp.	Exp.	In year
Europe :												
Czechoslovakia	144	139	142	144	141	144	104.2	98.4	97.7	27.4	65.8	1927
Denmark.....	160	156	147	136	147	139	102.6	108.1	105.8	39.9	11.7	1926
Germany.....	126	133	125	134	127	134	94.7	93.3	94.8	17.2	72.4	1927
Irish Free State..	96	101	92	95	90	95	95.0	96.8	94.7			
Norway	187	175	151	144	147	140	106.9	104.9	105.0	44.8	23.3	1926
United Kingdom	142	173	135	163	137	163	82.1	82.8	84.0	17.7	76.6	1926
U.S.S.R.....	163	147	143	140	141	131	110.9	102.1	107.6	33.6	1.0	1926/7
Hungary	145	116	133	128	137	127	125.0	103.9	107.9	54.6	17.2	1927
Asia and Oceania :												
China.....	151	154	165	168	169	168	98.1	98.2	100.6	43.1	17.4	1927
Dutch E. Indies	165	137	160	130	155	127	120.4	123.1	122.0	64.9	1.7	1926
India	148	132	136	130	133	127	112.1	104.6	104.7			
New Zealand .	146	145	140	146	137	161	100.7	95.9	85.1	71.1	1.7	1926

are fairly homogeneous, either manufactured goods or raw materials and foodstuffs. In the second column, the import price index is expressed in each case as a percentage of the export index.[1] Whenever, therefore, the figures in this column exceed 100, import prices have risen more than export prices ; whenever they are below 100, export prices have risen the more.

It will be observed that, in general, the export indices of industrialised States such as Germany, Switzerland and the United Kingdom are relatively high, while the export indices of agricultural States such as Denmark, the U.S.S.R., British India or the Dutch East Indies are relatively low. Reciprocally, the industrial States buy their imports of raw materials and foodstuffs cheap, while the producers of foodstuffs and raw materials buy their requirements of manufactured goods dear.

The movement in recent years has, however, been somewhat in favour of the agricultural States, more especially those exporting animal products — meat, hides and skins, wool, etc. The only countries in the above table exporting mainly agricultural products whose imports have become relatively more expensive in terms of these exports are Denmark and the Dutch East Indies, both of which were affected by the markets for one or two commodities. Denmark suffered from the serious fall in 1927 in the price of one of her two principal exports — bacon, and the Dutch East Indies from the decline in sugar and rubber.

Further light may be thrown on the problem under investigation by a comparison of retail and wholesale price indices, as the former normally relate to the prices of consumers' goods and the latter to crude foodstuffs, raw materials and semi-manufactured goods. Such comparison must, however, be made with care. In the first place, the objects for which the two sets of indices are compiled are different. Retail price (cost-of-living) indices generally include rent and only such goods as are likely to be consumed by a typical working-class family. Comparison is made, therefore, between a selection of raw materials, foodstuffs, etc., which is intended to be characteristic of the general economy of the country and a special group of immediately consumable commodities (or services) of major concern to one section of the population. It is possible — indeed, in present conditions probable — that these retail price indices tend to stand higher than would indices covering all classes of manufactured goods, for it is in the industries catering for secondary needs rather than in those supplying the prime necessities of life that the greatest technical progress has been made in recent years, and the products of these industries have probably fallen most in price. On the other hand the level of the cost-of-living indices is lowered in most countries by the inclusion of rent and by the fact that the base period for these indices is July 1914, when retail prices were generally higher than in 1913.

There is, however, a second reason why comparison between the two sets of indices requires caution. In the last two years, in contrast to the almost universal fall in wholesale prices, cost-of-living indices have either risen or

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[1] Further discussion of certain special aspects of this subject will be found in the League of Nations *Memoranda on International Trade and Balances of Payments.*

remained stable in the majority of countries. This phenomenon cannot be ascribed to a relative increase in the prices of manufactured articles ; indeed, as will be shown later, the evidence suggests that there has been a trend in the opposite direction.

These reservations do not rob the following table of value. Even allowing for a considerable margin of error, the fact of a general discrepancy between the indices remains :

TABLE XXXI.

AVERAGE WHOLESALE AND RETAIL PRICES IN 1928 AND 1929.

	Wholesale 1928	Retail 1928	Wholesale 1929	Retail 1929	Wholesale Base period	Retail Base period
South Africa .	120	132	116	131	1913	1914
Australia	165	156	166	162	1913	XI, 1914
Austria	130	108	130	111	I–VI, 1914	VII, 1914
Bulgaria	115	105	120	109	1914	1914
Canada	151	152	149	153	1913	1913
Czechoslovakia	143	109	135	109	VII, 1914	VII, 1914
Egypt	120	152	115	151	I, 1913-VI, 1914	I, 1913–VI, 1914
Estonia.....	121	112	117	117	1913	1913
Finland.....	145	161	140	160	1913	I–VI, 1914
Germany	140	152	137	154	1913	X,1913;I,IV,VII,1914
Hungary.....	135	118	121	117	1913	1913
British India ..	163	165	159	167	1913	VII, 1914
Italy	134	145	131	149	1913	I–VI, 1914
Latvia.....	129	110	120	118	1913	VII, 1914
New Zealand..	147	162	147	161	1913	VII, 1914
Norway	161	190	153	180	1913	VII, 1914
Poland	120	122	113	125	I, 1914	I, 1914
Switzerland....	145	161	141	161	VI–VII, 1914	VI, 1914
United Kingdom	140	165	137	164	1913	VII, 1914
U.S.A.....	140	162	138	161	1913	VII, 1914
U.S.S.R.	173	205	180	220	1913	1913

In fourteen out of the twenty-one countries given in the foregoing table, the retail price indices are distinctly higher than the wholesale ; in Estonia, the two equated in 1929 ; in six countries, the wholesale price indices are higher. These countries are Australia, Latvia and a group of Central and South-East European countries — Austria, Czechoslovakia, Hungary and Bulgaria. The Austrian and Hungarian cost-of-living indices are affected by the inclusion of rent, as in both countries rents are still subject to special legislation. It is probable that, in all the five European countries, the level of wages has had an important influence on the ratio of retail to wholesale prices. The position in Australia must be ascribed in large measure to the effects of the tariff. The wholesale index covers a large selection of protected industrial raw and semi-manufactured products in addition to foodstuffs. The retail index is almost entirely composed of foodstuffs : the price of those crude food products of which Australia has a net export surplus are naturally determined by world conditions.

* * *

Up to this point, raw materials and foodstuffs have been in general considered as a single group of commodities and contrasted with finished articles. Such a grouping, however, may tend, and indeed in certain quarters has tended, to lead to exaggerated views concerning the extent to which the change in relative prices has adversely affected agricultural interests. It is necessary, therefore, to pursue the analysis a little further and to compare the prices of agricultural products with those of other raw materials and semi-manufactured products. Unfortunately, the goods entering into the existing index numbers of wholesale prices are grouped so variously that it is often difficult to employ them for this purpose. In the following statement, certain group indices which, though far from ideal, afford some evidence of value are tabulated. The groups are never identical in composition, and the figures for one country must not be compared with those for another.

Table XXXII.

Price Indices of Agricultural and Other Products.

(Base 1913, unless otherwise indicated).

Country	Group Index	Average for year				Compiler
		1926	1927	1928	1929	
Australia	Cereals and vegetables	182	166	157	...	Melbourne, Commonwealth Bureau of Statistics. (Converted from base 1911.)
	Meat	154	168	161	...	
	Dairy produce	169	173	166	...	
	Metals and coal	185	188	183	...	
	Chemicals	175	188	193	...	
Austria	Foodstuffs	115	127	122	122	Federal Statistical Office. I–VI, 1914=100.
	Raw materials and semi-manuf. prod.	140	145	146	146	
Belgium	Foodstuffs	782	938	879	793	Ministère de l'Industrie, du Travail et de la Prévoyance sociale. IV, 1914 = 100.
	Fuels	819	892	825	960	
	Metallurgical products	730	798	791	823	
	Textiles	910	1,072	1,124	996	
Czechoslovakia	Foodstuffs	129	137	136	125	State Statistical Office. VII, 1914=100.
	Ind. raw materials and semi-manuf. [1]	150	150	151	146	
	Minerals	161	156	150	151	
Denmark	Raw foodstuffs	131	136	144	132	Central Statistical Department.
	Raw materials and semi-manuf. prod.	155	124	119	132	
Finland	Foodstuffs (Imports)	1,058	1,044	1,005	928	Central Customs Administration.
	Ind. raw materials. (Imports)	974	923	983	910	
France	Foodstuffs	577	598	584	579	Statistique générale de la France.
	Raw materials and semi-manuf. prod.	789	678	697	669	
	Minerals and metals	594	525	522	560	
	Textiles	819	821	840	755	
Germany	Agricultural products	129	138	134	130	Central Statistical Office
	Ind. raw materials and semi-manuf.	130	132	134	132	
	Iron and steel	124	125	128	130	
	Chemicals	123	124	126	127	
Hungary	Agricultural products	114	126	131	...	Central Statistical Office 1909–1913=100.
	Ind. raw materials and semi-manuf. prod. [1]	131	136	139	...	
Italy	Foodstuffs	683	568	555	539	Provincial Economic Council, Milan.
	Ind. raw materials and semi-manf.	643	510	467	458	
	Minerals and metals	665	503	429	447	
Netherlands	Food	144	153	157	149	Central Statistical Office
	Total	145	148	149	142	
Norway	Food	197	165	157	149	Central Statistical Office
	Other goods	200	168	164	157	
	Textiles	228	195	191	182	
	Iron and metals	173	150	144	143	

[1] Including a few manufactured products.

TABLE XXXII *(continued)*

PRICE INDICES OF AGRICULTURAL AND OTHER PRODUCTS.

(Base 1913, unless otherwise indicated.)

Country	Group Index	Average for year				Compiler
		1926	1927	1928	1929	
POLAND.....	Agricultural products.....	184	131	127	112	Central Statistical Office 1914=100.
	Ind. raw materials and semi-manuf. prod.[1]	181	112	117	116	
SPAIN.....	Foodstuffs	183	182	176	180	Ministry of Labour.
	Ind. raw materials and semi-manuf. prod.	179	163	158	163	
	Building materials	207	207	207	203	
	Metals	181	154	148	163	
SWITZERLAND....	Foodstuffs	152	146	149	147	Federal Labour Office. VII, 1914=100.
	Raw materials and semi-manuf. prod.	141	140	141	136	
	Fodder and fertilisers.....	128	129	135	130	
UNITED KINGDOM	Domestic agric. produce	147	140	143	...	Ministry of Agriculture. (Converted from base 1911-1913.)
	Foodstuffs	155	152	152	145	
	Other than foodstuffs.....	144	136	134	132	Board of Trade.
	Cereals and meat	152	148	153	143	
	Textiles.....	153	157	165	145	*Economist.*
	Minerals	150	125	115	120	
UNITED STATES OF AMERICA.	Farm products	142	144	150	147	Department of Labour.
	Non-agricultural products.....	154	146	149	145	

[1] Including a few manufactured products.

Attention should be drawn to the fact that some countries group all agricultural products together, while the majority distinguish between foodstuffs on the one hand and raw materials on the other. The raw materials group in this latter case includes agricultural products not primarily intended for food. As textile price indices were, in most markets, relatively high even in 1929, this system tends to raise the raw materials indices and to depress the foodstuffs indices.

An examination of the table will show that in most countries the ratio between foodstuffs or agricultural products, as the case may be, on the one hand, and the prices of raw materials or raw materials of mineral origin on the other hand tended to move in favour of agriculture during the years 1926-1928. In general, indeed, the prices of mineral and metallurgical products ruled lower in 1928 than did those of agricultural products. This is not, however, true of Australia or of Austria, Hungary and Czechoslovakia. Reference has been made above to the situation in Australia. The position in Hungary is in some ways not dissimilar. The foodstuffs indices for Austria and Czechoslovakia would be raised if 1913 were taken as base instead of the first half of 1914 or July of that year, as foodstuffs rose in price in the latter period.

Prices for products of the extractive industries, on the other hand, showed no corresponding general movement. In Austria, iron products were lower in the first two quarters of 1914 than in 1913 and coal prices remained practically stable.

It should be observed that the indices for foodstuffs or agricultural products have, in many cases, been influenced by the low prices recently ruling for the most important colonial products — coffee, tea and cocoa — and to that extent under-estimate the return to the farmer in temperate regions.

In 1929, there was a substantial drop in agricultural prices and a less marked fall in other prices. In this connection, it may be observed, in view of the length of time which has to elapse between the preparation for production and the sale of the article produced, falling prices affect the agriculturist particularly adversely.

* * *

The foregoing tables, which are confined to three or four years only, however, do not bring out clearly the wider tendencies of recent years.

In the following table, the percentage differences between certain price indices of raw materials and finished articles and between certain import and export price indices have been traced back to 1921.

Table XXXIII.

Percentage Differences between the Average Annual Price Indices of Raw Materials and Finished Products and between Certain Import and Export Indices.

Raw materials or similar indices = 100.

Year	Sweden	U.S.A.		Germany	Hungary	U.K.	British India	New Zealand	U.S.S.R.
	Finished products				Imports	Exports	Imports	Imports	Imports
			1923=100						
1921	+ 27	+ 22	.	.	+ 56	+ 42	+ 69	+ 31	.
1922	+ 33	+ 7	.	.	+ 48	+ 32	+ 21	+ 47	.
1923	+ 22	+ 7	.	.	+ 27	+ 28	+ 31	+ 8	.
1924	+ 17	+ 6	— 2	+ 30	+ 24	+ 22	+ 17	— 7	+ 30
1925	+ 8	+ 6	— 6	+ 18	+ 43	+ 19	+ 4	+ 13	+ 10
1926	+ 9	+ 11	— 1	+ 16	+ 25	+ 23	+ 12	+ 41	+ 11
1927	+ 8	.	— 3	+ 12	+ 4	+ 21	+ 4	— 4	+ 2
1928	+ 3	.	— 3	+ 18	+ 8	+ 19	+ 5	— 15	+ 8
1929	+ 4	.	— 2	+ 19	...	+ 19	...	...	...

In every case, the index which measures the price of crude products or the group of commodities, whether imports or export, which is known to consist mainly of crude products, is taken as equal to 100 and the percentage difference between it and the other index named at the top of each column is calculated. All figures preceded by a plus sign (+) indicate that the price index of the more finished goods stood higher than that for goods in earlier stages of manufacture. It will be seen that the discrepancy during the last three years has in almost every case been less than during the preceding three years. In other words, the advantage in price which the industrialist enjoyed has diminished. The import and export indices show a less well-defined movement than do the others, as is to be expected, since they are composed of less homogeneous groups of commodities.

The general tendency noticeable particularly in the period 1922 to 1926 for the two curves on which the figures are based to converge is, however, now no longer so clearly discernible. In Germany and the United States, for instance, there has been no decrease in the margin in the last three years. Such a situation might indeed be expected during a period of falling prices, for raw materials are normally affected more seriously than any others.

It should be remembered that 1913 was a year of rapidly rising prices : a convincing comparison of the price movements of raw products and manufactured articles can only be made when similar conditions again prevail. Were the downward price trend to cease and a contrary movement to begin, the markets for raw products would probably be affected first and the margin between the two series be narrowed.

In many countries, however, the margin during the last few years has been so small as to be scarcely significant. Attention was drawn above to the influence of the changes which have taken place in the quality and character of industrial products and it is by no means improbable that these changes have been sufficient — they may have been more than sufficient — to account for the smaller discrepancies indicated in the table as existing to-day in certain countries.

ANNEXES

Annex I.

Method of Calculation of the Composite Production Index.

The index is composed of 62 articles which are given in Annex II. 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 selected " world " prices. The prices selected are intended to be representative in the sense that they refer to representative qualities and that their ratios are fairly typical of relative values on the world market. They are annual averages of actual quotations for medium qualities of the various articles in leading producing countries. They are not averages of prices of different qualities or of prices in different countries. They have all been converted into terms of dollars according to the annual average rates of exchange.

The indices are thus compiled by the aggregate method, the mathematical formula of which is :

$$I = \frac{q_1' p' + q_1'' p'' + q_1''' p''' + \ldots\ldots\ldots\ldots\ldots + q_1^n p^n}{q_0' p' + q_0'' p'' + q_0''' p''' + \ldots\ldots\ldots\ldots\ldots + q_0^n p^n} = \frac{\Sigma(q_1 p)}{\Sigma(q_0 p)}$$

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 year. As the prices are constant, variations in the index represent changes in the quantities produced and not in the values.

In view of the changes that have taken place in relative values, three different calculations have been made, employing the prices for 1913, 1926, and 1928 respectively. In part A of Annex III the basic year is 1913, and the prices employed are those for the basic year and 1928, the last year considered ; in part B the basic year is 1926, and the prices for that year and for 1928 have been used.

In Annex IV, showing the percentage distribution of aggregate production by continental groups, as well as in Annex V, showing changes in the relative importance of each group of commodities, the percentages are calculated from the aggregates obtained by employing prices for 1926 and 1928.

Two tables showing the aggregates from which the general index has been calculated are given below.

Production Aggregates in Terms of Dollars (000,000's omitted)

Groups of Commodities	(*a*) Aggregates according to 1926 Prices							(*b*) Aggregates according to 1928 Prices						
	1913	1923	1924	1925	1926	1927	1928	1913	1923	1924	1925	1926	1927	1928
Cereals and other food crops	23,994.2	24,724.0	24,126.5	26,559.1	26,036.7	26,727.3	27,795.2	24,095.9	24,769.9	24,078.4	26,511.8	25,982.8	26,447.1	27,513.9
Meat	5,496.5	5,747.4	6,074.7	6,060.1	6,157.2	6,381.0	6,858.4	5,533.8	5,784.6	6,119.5	6,148.3	6,257.4	6,421.2	6,795.8
Colonial produce, etc	1,600.0	1,918.3	1,935.8	2,153.7	2,144.2	2,522.9	2,416.6	1,483.0	1,911.6	1,933.3	2,001.2	1,977.7	2,307.8	2,222.9
Vegetable-oil materials	1,258.8	1,443.3	1,624.9	1,736.0	1,687.1	1,960.3	1,835.3	1,349.9	1,493.5	1,689.2	1,799.9	1,736.7	2,045.7	1,877.3
Textiles	4,132.0	3,954.7	4,489.3	5,062.1	5,364.6	5,074.3	5,419.7	4,563.0	4,306.1	4,907.8	5,541.1	5,819.6	5,520.6	5,910.0
Rubber	122.2	400.8	435.3	544.5	689.3	668.9	713.9	54.8	179.7	195.1	244.2	309.0	299.8	320.1
Wood-pulp	392.4	507.7	532.2	591.7	654.5	690.6	708.6	319.9	415.8	435.2	484.5	536.3	566.1	580.8
Cement	485.6	533.8	581.0	654.2	711.1	788.5	846.4	485.6	533.8	581.0	654.2	711.1	788.5	846.4
Fuels	7,406.0	8,569.5	8,511.6	8,643.9	8,656.3	9,479.6	9,379.3	4,385.7	5,176.3	5,143.3	5,230.6	5,243.2	5,752.0	5,705.7
Metals (smelter production)	4,132.6	4,291.2	4,358.3	4,930.4	5,096.0	5,474.2	5,920.9	3,768.9	3,919.6	3,979.4	4,500.0	4,649.6	4,994.8	5,408.6
Chemicals (fertilisers)	551.6	580.7	637.2	726.1	728.8	763.5	882.6	525.0	553.4	603.4	690.7	693.1	727.9	836.7
Total	49,571.9	52,671.4	53,306.8	57,661.8	57,925.8	60,531.1	62,776.9	46,565.5	49,044.3	49,665.6	53,806.5	53,916.5	55,871.5	58,018.2

Territorial Divisions	(*a*) Aggregates according to 1926 Prices							(*b*) Aggregates according to 1928 Prices						
	1913	1923	1924	1925	1926	1927	1928	1913	1923	1924	1925	1926	1927	1928
Eastern and Central Europe :														
Excluding U.S.S.R.	8,547.6	6,628.4	7,211.3	8,269.4	7,906.3	8,766.1	9,456.8	7,636.2	5,972.2	6,350.4	7,340.6	7,052.3	7,644.8	8,259.5
Including U.S.S.R.	13,124.2	10,027.5	10,771.0	13,082.2	13,231.8	13,898.1	14,651.1	12,205.0	9,278.9	9,900.1	12,020.7	12,171.6	12,570.3	13,247.8
Rest of Europe	8,099.2	7,903.4	8,262.4	8,645.3	7,715.0	9,140.9	9,087.6	6,922.1	6,803.3	7,099.5	7,485.8	6,856.8	7,954.2	7,886.2
Europe, excluding U.S.S.R.	16,646.8	14,531.8	15,473.7	16,914.7	15,621.3	17,907.0	18,544.4	14,558.3	12,775.5	13,449.9	14,826.4	13,909.1	15,599.0	16,145.7
Europe, including U.S.S.R.	21,223.4	17,930.9	19,033.4	21,727.5	20,946.8	23,039.0	23,738.7	19,127.1	16,082.2	16,999.6	19,506.5	19,028.4	20,524.5	21,134.0
North America	13,470.6	17,326.1	16,149.5	17,065.5	17,845.5	17,607.2	18,482.4	12,518.0	15,717.4	14,667.9	15,761.1	16,258.0	15,982.5	16,896.0
Caribbean	784.7	1,273.4	1,389.4	1,319.6	1,261.8	1,204.5	1,288.3	784.9	1,178.1	1,303.7	1,236.9	1,198.7	1,153.1	1,239.1
South America	2,384.8	3,069.8	2,858.0	3,071.3	3,145.8	3,601.4	3,813.6	2,400.9	3,141.3	2,916.8	3,154.2	3,196.2	3,590.8	3,748.9
Africa	1,115.0	1,372.2	1,462.1	1,564.2	1,559.2	1,612.5	1,669.5	1,170.0	1,441.8	1,547.7	1,654.9	1,640.9	1,695.4	1,779.5
Asia	9,692.0	10,698.2	11,333.2	11,867.7	11,999.4	12,299.3	12,565.2	9,657.9	10,486.3	11,163.5	11,450.0	11,437.8	11,759.8	12,010.9
Oceania	901.4	1,000.8	1,081.2	1,046.0	1,167.3	1,167.2	1,219.2	906.7	997.2	1,066.4	1,042.9	1,156.5	1,165.4	1,209.8
World	49,571.9	52,671.4	53,306.8	57,661.8	57,925.8	60,531.1	62,776.9	46,565.5	49,044.3	49,665.6	53,806.5	53,916.5	55,871.5	58,018.2

Annex II.

INDICES OF WORLD PRODUCTION OF FOODSTUFFS AND RAW MATERIALS.

Groups of Products and Articles	Base 1913 = 100						Base 1926 = 100					
	1923	1924	1925	1926	1927	1928	1923	1924	1925	1926	1927	1928
Cereals and other food crops												
Wheat	101	92	106	114	112	120	89	81	93	100	98	105
Rye	96	83	108	99	104	97	97	84	109	100	106	98
Barley	87	79	91	88	89	103	99	90	104	100	101	117
Oats	97	95	102	103	98	111	94	92	98	100	95	108
Maize	109	92	112	106	104	102	103	87	105	100	98	96
Rice	103	111	111	110	110	113	94	101	101	100	100	103
Potatoes	106	113	117	107	123	123	98	105	109	100	115	114
Sugar { Beet sugar	76	104	106	99	114	120	77	105	108	100	115	122
Sugar { Cane sugar	154	168	177	169	175	190	91	100	105	100	103	112
Meat												
Beef and veal	107	114	116	118	118	120	90	96	98	100	100	101
Pork, bacon etc.	107	113	110	111	118	133	96	102	99	100	107	120
Mutton	87	87	90	95	98	101	92	92	95	100	104	107
Colonial produce, etc.												
Coffee	129	116	118	120	197	137	108	97	98	100	164	115
Cocoa	205	222	219	207	208	221	99	107	106	100	101	107
Tea	105	110	110	116	119	122	91	94	94	100	102	105
Hops	47	85	72	72	80	80	65	119	100	100	112	111
Tobacco	140	144	148	150	147	147	94	96	99	100	98	98
Vegetable-oil materials												
Cotton-seed	89	112	126	125	110	115	71	89	100	100	88	92
Linseed	113	119	142	128	139	137	88	93	111	100	108	107
Rape-seed	96	90	97	78	79	71	123	114	123	100	101	91
Hemp-seed	88	84	135	131	141	139	67	64	103	100	108	106
Sesamum	94	97	78	81	99	84	116	119	96	100	121	103
Soya beans	208	251	212	254	285	294	82	99	83	100	112	116
Copra	171	180	184	205	199	235	83	87	90	100	97	115
Palm oil and palm-kernel oil (raw)	142	160	170	161	163	160	88	99	105	100	101	100
Olive oil (raw)	116	132	112	97	182	110	120	137	116	100	187	113
Ground-nuts	129	155	198	204	249	270	63	76	97	100	122	133
Textiles												
Cotton	88	111	126	127	109	117	70	88	99	100	86	93
Flax	53	70	82	73	68	75	72	96	111	100	92	102
Hemp	92	85	107	98	82	96	94	86	109	100	84	98
Manila hemp	122	128	117	118	112	116	103	108	99	100	95	98
Jute	100	96	105	143	120	117	70	67	74	100	84	82
Wool	92	91	100	107	111	114	86	85	94	100	103	106
Raw silk	138	150	164	174	184	198	79	86	94	100	106	114
Artificial silk	305	404	537	632	833	1,036	48	64	85	100	132	164

Annex II (*concluded*).

INDICES OF WORLD PRODUCTION OF FOODSTUFFS AND RAW MATERIALS.

Groups of Products and Articles	Base 1913 = 100						Base 1926 = 100					
	1923	1924	1925	1926	1927	1928	1923	1924	1925	1926	1927	1928
Raw Rubber	426	433	518	579	632	602	74	75	90	100	109	104
Wood-pulp												
Mechanical pulp	118	127	138	150	155	158	79	85	92	100	104	106
Chemical pulp	135	140	157	175	186	191	77	80	90	100	106	109
Cement	111	121	135	145	160	166	76	84	93	100	110	115
Fuels												
Coal	99	98	98	98	105	102	102	100	101	100	108	105
Lignite	125	133	144	144	155	168	87	92	100	100	108	117
Petroleum	263	262	276	283	326	341	93	93	98	100	115	121
Metals (*smelter production*).												
Pig-iron	88	86	97	100	110	112	89	87	98	100	110	112
Steel	103	102	118	122	133	144	84	84	97	100	109	118
Copper	122	130	138	144	151	170	85	90	96	100	105	118
Lead	102	114	128	135	143	144	75	84	95	100	106	106
Zinc	97	104	117	127	135	144	77	82	92	100	107	114
Tin	106	112	112	113	122	139	93	99	99	100	107	123
Aluminium	227	264	284	310	324	349	73	85	91	100	105	113
Nickel	101	114	121	109	111	158	92	104	110	100	101	145
Silver	108	105	112	116	112	114	94	91	97	100	97	98
Chemicals (*fertilisers*)												
Natural phosphates	98	114	122	134	139	139	73	85	91	100	103	104
Potash	101	90	129	114	130	147	89	79	113	100	114	129
Sulphur	250	172	188	240	268	255	104	72	78	100	112	106
Natural guano	242	288	283	203	244	274	119	142	140	100	120	135
Nitrate of soda	70	88	92	74	59	115	94	119	125	100	80	156
Nitrate of lime	223	196	260	521	674	818	43	38	50	100	129	157
Superphosphates of lime	87	92	108	108	108	120	80	85	99	100	99	111
Basic slag	63	96	103	109	124	126	58	88	94	100	114	115
Cyanamide of calcium	284	336	452	534	538	575	53	63	85	100	101	108
Sulphate of ammonia	174	199	225	228	260	281	76	87	99	100	114	124
Sulphate of copper	104	106	99	107	119	122	97	99	93	100	111	113

N.B. This Annex is based on figures which are sometimes more recent than those which were available at the time when the other Annexes were compiled.

Annex III.

A. Indices of Production of Foodstuffs and

Production in

Groups of Products	Years	Eastern and Central Europe				Rest of Europe (Western and Maritime)		Europe			
		Excluding U.S.S.R.		Including U.S.S.R.				Excluding U.S.S.R.		Including U.S.S.R.	
		(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)
Cereals	1923	82	82	77	78	100	100	89	89	83	84
	1924	71	71	72	72	92	92	80	79	77	77
	1925	90	90	96	96	109	108	98	97	100	99
	1926	86	86	99	99	98	98	91	91	99	99
	1927	83	83	93	93	98	97	89	89	94	94
	1928	94	93	98	98	98	98	95	95	98	98
Cereals and other food crops	1923	85	84	84	83	97	98	90	89	87	87
	1924	83	80	84	81	98	97	89	87	88	85
	1925	97	95	104	102	110	109	102	101	105	104
	1926	87	86	102	101	100	100	92	91	101	100
	1927	93	91	102	100	105	103	98	96	103	101
	1928	100	99	106	104	104	103	102	100	106	104
Meat	1923	69	71	70	72	100	100	85	86	82	83
	1924	84	86	87	89	103	102	94	94	94	94
	1925	95	97	96	97	106	104	101	101	100	100
	1926	99	100	99	101	106	105	103	103	102	102
	1927	105	105	106	106	110	108	107	107	107	107
	1928	132	129	124	122	114	113	123	121	120	118
Colonial produce, Tobacco, Hops	1923	95	101	92	95	93	98	94	100	92	96
	1924	123	128	111	114	150	154	133	137	121	124
	1925	103	108	128	133	139	145	116	120	131	136
	1926	103	107	131	135	129	134	112	116	130	135
	1927	116	119	131	133	115	121	116	119	127	130
	1928	107	108	114	115	114	121	109	112	114	116
Vegetable-oil materials	1923	89	78	82	77	122	126	114	114	107	108
	1924	124	114	105	101	135	139	132	133	123	125
	1925	96	86	112	106	117	120	112	112	115	115
	1926	92	83	107	101	98	100	96	96	101	101
	1927	94	86	111	105	205	211	179	181	169	172
	1928	118	109	123	117	100	103	104	104	109	108
Textiles	1923	106	100	74	67	119	108	114	104	90	79
	1924	125	112	84	78	141	121	135	117	104	91
	1925	136	119	100	92	169	140	156	131	125	107
	1926	137	115	99	89	190	153	169	137	131	108
	1927	145	119	99	88	229	176	197	152	145	115
	1928	161	125	114	98	260	194	222	165	165	128
Rubber	1923	—	—	—	—	—	—	—	—	—	—
	1924	—	—	—	—	—	—	—	—	—	—
	1925	—	—	—	—	—	—	—	—	—	—
	1926	—	—	—	—	—	—	—	—	—	—
	1927	—	—	—	—	—	—	—	—	—	—
	1928	—	—	—	—	—	—	—	—	—	—

Annex III.

RAW MATERIALS WEIGHTED BY: (*a*) 1913 VALUES ; (*b*) 1928 VALUES.

1913 = 100.

North America		Caribbean		South America		Africa		Asia		Oceania		World	
(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)
123	123	84	83	145	145	113	112	91	91	123	121	101	101
104	105	85	85	113	113	113	113	88	87	162	160	90	90
115	115	65	65	138	138	118	118	86	85	113	112	105	105
112	112	73	73	138	138	115	114	85	85	155	153	105	104
118	118	72	72	141	140	121	120	89	88	122	120	104	104
126	126	71	71	144	143	128	128	81	81	156	154	109	109
123	123	147	142	156	155	119	118	103	102	121	120	103	103
107	106	182	175	129	127	124	123	107	107	155	155	102	100
114	114	171	162	151	149	127	126	108	107	132	128	111	110
112	112	163	156	152	150	121	119	107	106	153	151	109	108
118	118	156	149	153	152	137	135	108	107	142	138	111	110
127	127	177	168	155	153	134	133	110	109	163	160	116	114
135	133	109	110	105	108	110	111	123	119	105	104	105	105
136	133	107	108	108	112	114	115	129	125	108	105	111	111
126	126	107	109	108	111	117	117	132	127	105	101	111	111
127	127	111	113	111	114	123	124	130	126	104	101	113	113
127	126	114	117	112	115	132	132	137	131	112	109	117	116
128	126	119	120	123	126	134	135	138	133	117	114	124	123
138	142	113	111	139	138	291	279	121	120	135	136	130	129
117	119	109	108	126	125	335	320	133	130	140	124	133	130
129	131	114	114	120	119	353	341	138	135	130	120	137	135
123	125	107	106	123	123	364	356	133	132	125	120	135	133
117	118	130	130	200	203	364	358	137	135	175	168	157	156
131	133	128	129	175	177	376	365	137	136	135	140	151	150
82	82	138	114	187	186	130	129	118	111	193	197	114	111
115	115	144	121	154	155	138	135	130	123	199	201	129	125
118	119	138	119	238	238	163	161	136	131	211	214	137	133
125	126	206	177	220	219	160	159	133	127	229	229	133	129
105	106	141	118	250	248	155	154	152	147	250	252	153	152
106	108	168	142	257	255	166	167	156	151	234	236	143	139
84	83	86	84	118	112	106	107	108	108	107	107	97	94
110	107	99	97	116	111	121	121	118	120	99	99	112	108
130	127	101	97	123	116	138	138	128	129	110	110	127	121
147	142	166	159	120	115	136	137	129	128	125	124	135	128
113	109	89	87	123	117	118	121	137	137	129	129	128	121
129	123	127	123	128	123	145	147	136	137	126	126	138	130
—	—	—	—	56	56	22	22	896	896	—	—	426	426
—	—	—	—	58	58	22	22	910	910	—	—	433	433
—	—	—	—	71	71	33	33	1084	1084	—	—	518	518
—	—	—	—	67	67	44	44	1220	1220	—	—	579	579
—	—	—	—	78	78	44	44	1327	1327	—	—	632	632
—	—	—	—	58	58	33	33	1282	1282	—	—	602	602

Annex III (*continued*)

A. Indices of Production of Foodstuffs and

Production in

Groups of Products	Years	Eastern and Central Europe				Rest of Europe		Europe			
		Excluding U.S.S.R.		Including U.S.S.R.				Excluding U.S.S.R.		Including U.S.S.R.	
		(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)
Wood-Pulp	1923	80	81	74	74	118	118	101	102	97	98
	1924	90	90	84	84	133	133	114	115	110	110
	1925	112	112	103	103	145	146	131	131	126	126
	1926	121	121	114	114	154	155	140	140	136	136
	1927	132	132	125	125	169	169	152	153	148	149
	1928	140	141	133	133	161	162	152	153	148	149
Cement	1923	50	50	44	44	124	124	84	84	78	78
	1924	55	55	50	50	137	137	93	93	87	87
	1925	71	71	66	66	147	147	106	106	100	100
	1926	74	74	74	74	161	161	115	115	111	111
	1927	91	91	90	90	181	181	133	133	129	129
	1928	98	98	98	98	190	190	141	141	138	138
Fuels	1923	65	65	62	63	96	96	84	84	81	82
	1924	90	91	85	85	97	97	94	94	92	92
	1925	95	96	91	91	91	91	93	93	91	91
	1926	105	106	104	104	62	62	79	79	80	80
	1927	112	112	113	113	97	97	102	103	103	104
	1928	114	115	117	117	93	93	101	101	103	104
Metals	1923	55	55	47	47	86	86	74	73	68	68
	1924	72	72	63	62	101	101	89	89	83	83
	1925	88	88	79	79	104	104	97	97	92	92
	1926	90	89	85	85	99	98	95	95	92	92
	1927	116	116	110	109	119	119	118	118	115	114
	1928	113	112	109	109	127	127	121	121	119	118
Chemicals (fertilisers)	1923	97	94	96	92	110	111	104	103	104	103
	1924	118	109	116	108	121	122	120	116	119	116
	1925	151	142	149	140	129	130	138	135	137	135
	1926	156	143	154	142	133	135	142	138	142	138
	1927	180	166	178	165	140	143	157	153	156	153
	1928	183	170	181	169	149	151	163	159	162	159
General Index	1923	78	78	76	76	98	98	88	88	85	84
	1924	85	83	83	81	103	103	94	92	91	89
	1925	97	96	100	98	109	108	103	102	103	102
	1926	94	92	101	100	100	99	96	96	100	99
	1927	103	100	106	103	116	115	109	107	110	107
	1928	111	108	112	109	116	114	114	111	113	110
Foodstuffs	1923	82	82	81	81	98	98	88	89	86	86
	1924	83	81	84	82	99	98	90	88	89	87
	1925	97	96	102	101	109	108	102	101	104	103
	1926	89	89	101	101	101	101	94	94	101	101
	1927	95	93	103	101	106	104	100	98	104	102
	1928	106	104	109	107	107	106	106	105	109	107
Raw Materials	1923	68	68	62	62	98	98	86	86	81	80
	1924	88	88	80	78	108	108	100	100	94	93
	1925	99	97	93	91	109	108	105	104	102	100
	1926	105	102	100	97	98	97	100	99	99	97
	1927	121	117	114	109	128	127	125	123	121	118
	1928	123	119	118	113	126	124	125	122	122	119

Annex III (*continued*)

RAW MATERIALS WEIGHTED BY : (*a*) 1913 VALUES ; (*b*) 1928 VALUES.
1913 = 100.

North America		Caribbean		South America		Africa		Asia		Oceania		World	
(*a*)	(*b*)	(*a*)		(*b*)		(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)
171	172	93		93		—	—	541	552	—	—	130	130
167	167	93		93		—	—	549	561	—	—	136	136
180	181	139		140		—	—	621	635	—	—	151	151
203	205	139		140		—	—	752	772	—	—	167	168
206	207	162		164		—	—	816	839	—	—	176	177
217	219	162		164		—	—	854	880	—	—	181	182
		(*a*)	(*b*)	(*a*)	(*b*)								
144	144	—	—	—	—	—	—	233	233	191	191	111	111
156	156	—	—	—	—	—	—	250	250	235	235	121	121
169	169	—	—	—	—	—	—	292	292	250	250	135	135
172	172	—	—	—	—	—	—	358	358	412	412	145	145
182	182	—	—	—	—	—	—	392	392	456	456	160	160
186	186	—	—	—	—	—	—	392	392	362	362	166	166
142	144	546	548	285	294	144	144	160	161	100	100	117	118
128	130	514	516	430	445	150	151	172	173	110	110	116	117
132	134	433	434	637	664	158	158	182	184	110	110	118	119
144	146	346	347	1058	1104	168	169	181	183	108	108	118	120
144	146	254	255	1598	1671	164	166	187	188	112	112	130	131
140	142	212	213	2387	2497	159	160	183	185	100	100	129	130
137	138	133	139	345	343	686	715	126	130	94	99	105	104
122	122	127	133	337	335	949	968	143	148	99	107	107	106
142	142	141	147	348	346	963	971	150	155	106	115	120	119
150	150	154	162	372	369	874	891	155	161	108	118	124	123
143	143	159	171	417	414	991	1015	166	174	113	124	133	133
161	161	168	179	503	500	1226	1244	176	183	116	127	144	144
166	159	246	246	71	71	114	113	189	177	96	96	108	105
139	135	286	286	89	89	152	152	214	202	108	110	118	115
163	158	234	234	93	93	158	160	240	225	159	157	134	132
180	174	306	306	74	74	167	169	272	257	146	145	136	132
183	176	311	311	61	60	199	201	303	286	148	147	143	139
214	207	297	297	116	116	189	191	304	288	148	147	163	159
127	126	153	150	129	131	124	123	115	109	111	110	107	105
118	117	170	166	120	121	134	132	122	116	121	118	109	107
127	126	162	158	130	131	143	141	127	119	118	115	118	116
131	130	156	153	131	133	142	140	130	118	129	128	119	116
129	128	150	147	147	150	147	145	132	122	130	129	124	120
137	135	162	158	155	156	153	152	136	124	136	133	129	125
126	125	141	136	130	131	117	116	104	103	115	113	104	103
113	112	169	163	119	119	122	121	108	108	137	134	103	102
117	117	160	153	129	130	124	123	109	108	121	117	111	110
116	115	154	148	131	132	121	121	108	107	134	130	110	109
121	120	148	143	132	134	135	134	109	108	131	126	112	111
127	126	166	159	139	139	134	133	112	111	146	141	117	116
128	126	178	181	126	130	135	134	142	122	106	107	113	109
124	123	171	174	123	125	152	150	155	134	104	103	119	115
137	136	167	169	132	134	170	169	171	144	114	113	130	125
148	147	162	163	133	136	171	170	182	146	125	125	135	128
138	137	154	155	171	177	164	161	188	155	130	131	143	136
147	145	154	154	181	185	180	180	194	157	126	127	148	140

Annex III (*continued*)

B. Indices of Production of Foodstuffs and

Production in

Groups of Products	Years	Eastern and Central Europe				Rest of Europe (Western and Maritime)		Europe			
		Excluding U.S.S.R.		Including U.S.S.R.				Excluding U.S.S.R.		Including U.S.S.R.	
		(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)
Cereals	1923	96	96	77	79	103	102	99	98	84	85
	1924	82	83	71	73	94	94	87	88	78	78
	1925	106	105	97	97	112	111	109	108	101	101
	1926	100	100	100	100	100	100	100	100	100	100
	1927	99	97	94	94	100	100	99	98	96	95
	1928	112	109	100	99	101	100	107	105	100	99
Cereals and other food crops	1923	100	98	83	82	98	98	99	98	87	86
	1924	97	93	81	80	98	97	97	95	85	85
	1925	113	111	102	101	110	110	112	110	104	103
	1926	100	100	100	100	100	100	100	100	100	100
	1927	110	106	101	99	105	103	108	105	102	100
	1928	118	114	105	103	105	104	113	110	105	103
Meat	1923	68	71	69	71	94	95	82	83	80	81
	1924	84	86	88	88	97	97	91	92	92	92
	1925	96	96	97	97	100	99	98	98	98	98
	1926	100	100	100	100	100	100	100	100	100	100
	1927	106	104	107	105	104	103	105	104	106	104
	1928	136	128	127	121	108	108	121	118	119	116
Colonial produce, Tobacco, Hops	1923	87	94	69	71	71	73	80	86	70	71
	1924	115	120	86	84	121	115	118	118	97	92
	1925	100	101	98	98	108	108	104	103	101	101
	1926	100	100	100	100	100	100	100	100	100	100
	1927	120	111	105	99	89	90	106	103	100	97
	1928	114	101	94	85	86	90	102	97	92	86
Vegetable-oil materials	1923	96	94	76	77	125	126	119	119	106	107
	1924	134	137	97	100	138	139	137	138	121	124
	1925	105	104	105	105	119	119	116	116	114	114
	1926	100	100	100	100	100	100	100	100	100	100
	1927	102	104	104	104	210	211	186	188	167	171
	1928	128	132	104	108	110	103	114	109	107	108
Textiles	1923	85	87	75	75	70	71	75	76	73	73
	1924	96	97	86	88	80	79	85	86	83	84
	1925	103	104	103	104	91	91	95	96	98	99
	1926	100	100	100	100	100	100	100	100	100	100
	1927	104	104	100	99	116	115	112	111	108	106
	1928	111	109	112	111	129	127	123	121	120	118
Rubber	1923	—	—	—	—	—	—	—	—	—	—
	1924	—	—	—	—	—	—	—	—	—	—
	1925	—	—	—	—	—	—	—	—	—	—
	1926	—	—	—	—	—	—	—	—	—	—
	1927	—	—	—	—	—	—	—	—	—	—
	1928	—	—	—	—	—	—	—	—	—	—

Annex III (*continued*)

RAW MATERIALS WEIGHTED BY : (*a*) 1926 VALUES ; (*b*) 1928 VALUES.

1926 = 100.

North America		Caribbean		South America		Africa		Asia		Oceania		World	
(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)
110	110	116	115	107	105	100	99	107	107	78	79	96	97
94	94	116	117	83	82	98	99	103	103	103	104	86	87
101	103	90	90	99	100	105	104	100	100	73	73	100	101
100	100	100	100	100	100	100	100	100	100	100	100	100	100
106	105	99	99	103	102	106	106	104	104	78	79	100	100
114	113	98	97	109	104	112	113	94	95	100	101	105	104
110	110	90	91	104	103	100	99	96	96	79	80	95	95
95	95	112	112	86	85	102	103	100	101	101	102	93	93
100	103	105	104	98	100	106	105	101	101	84	85	102	102
100	100	100	100	100	100	100	100	100	100	100	100	100	100
106	106	96	96	102	101	113	113	101	101	90	91	103	102
114	114	109	108	106	102	111	111	103	103	106	106	107	106
108	104	100	98	95	95	90	89	94	95	103	103	93	92
108	105	97	96	97	98	92	92	98	99	102	105	99	98
100	99	97	96	97	97	94	94	101	101	98	100	98	98
100	100	100	100	100	100	100	100	100	100	100	100	100	100
101	99	103	103	102	102	107	107	106	104	109	108	104	103
103	99	108	106	112	111	108	109	108	105	115	113	111	109
110	113	104	105	112	112	79	78	91	91	114	113	89	97
95	95	97	101	101	102	90	90	99	99	110	103	90	98
104	105	107	107	96	97	89	96	102	103	100	100	100	101
100	100	100	100	100	100	100	100	100	100	100	100	100	100
95	95	123	123	167	165	101	100	103	103	131	140	118	117
107	107	122	122	145	144	96	103	103	103	115	117	113	112
66	65	67	64	85	85	80	81	87	87	85	86	86	86
92	91	70	68	70	71	85	85	97	97	87	88	96	97
95	94	68	67	109	109	101	102	102	103	93	94	103	104
100	100	100	100	100	100	100	100	100	100	100	100	100	100
85	84	70	66	114	114	97	97	115	116	110	110	116	118
86	85	82	80	117	117	105	105	119	119	103	103	109	108
58	58	53	53	98	98	78	78	83	84	86	86	74	74
76	76	61	61	96	96	88	88	91	93	80	80	84	84
89	89	61	61	101	101	100	100	98	100	88	88	94	95
100	100	100	100	100	100	100	100	100	100	100	100	100	100
77	77	54	55	102	102	88	88	104	106	104	104	95	95
87	87	77	77	106	106	107	107	104	107	101	101	101	102
—	—	—	—	83	83	50	50	73	73	—	—	74	74
—	—	—	—	87	87	50	50	75	75	—	—	75	75
—	—	—	—	107	107	75	75	89	89	—	—	90	90
—	—	—	—	100	100	100	100	100	100	—	—	100	100
—	—	—	—	117	117	100	100	109	109	—	—	109	109
—	—	—	—	87	87	75	75	105	105	—	—	104	104

Annex III *(concluded).*

B. Indices of Production of Foodstuffs and

Production in

Groups of Products	Years	Eastern and Central Europe				Rest of Europe (Western and Maritime)		Europe			
		Excluding U.S.S.R.		Including U.S.S.R.				Excluding U.S.S.R.		Including U.S.S.R.	
		(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)
Wood-pulp	1923	66	66	64	65	77	76	73	73	72	72
	1924	74	74	74	74	86	86	82	82	81	81
	1925	92	92	90	90	94	94	94	93	93	93
	1926	100	100	100	100	100	100	100	100	100	100
	1927	109	109	110	110	109	109	109	109	109	109
	1928	116	116	116	117	105	105	109	109	109	109
Cement	1923	67	67	60	60	77	77	73	73	70	70
	1924	74	74	68	68	85	85	81	81	78	78
	1925	95	95	89	89	91	91	92	92	90	90
	1926	100	100	100	100	100	100	100	100	100	100
	1927	123	123	123	123	112	112	116	116	116	116
	1928	132	132	134	134	118	118	123	123	124	124
Fuels	1923	61	62	60	60	154	154	107	107	102	101
	1924	86	85	82	82	156	155	120	120	115	114
	1925	90	90	88	88	146	146	118	118	114	113
	1926	100	100	100	100	100	100	100	100	100	100
	1927	106	106	109	109	155	155	130	130	129	129
	1928	108	109	113	113	149	149	128	128	129	129
Metals	1923	62	62	56	56	87	88	77	78	74	74
	1924	81	81	74	74	102	102	94	94	90	90
	1925	98	98	94	93	105	106	103	103	101	100
	1926	100	100	100	100	100	100	100	100	100	100
	1927	130	130	129	129	120	120	124	124	124	124
	1928	126	125	128	128	128	129	127	128	128	129
Chemicals (fertilisers)	1923	64	65	63	65	83	82	74	75	74	74
	1924	76	76	76	76	91	91	84	84	84	84
	1925	97	99	97	99	97	97	97	98	97	98
	1926	100	100	100	100	100	100	100	100	100	100
	1927	116	116	116	116	106	106	111	111	111	111
	1928	119	119	119	119	112	112	115	115	115	115
General Index	1923	84	85	76	76	102	99	93	92	86	85
	1924	91	90	81	81	107	104	99	97	91	89
	1925	105	104	99	99	112	109	108	107	104	103
	1926	100	100	100	100	100	100	100	100	100	100
	1927	111	108	105	103	118	116	115	112	110	108
	1928	120	117	111	109	118	115	119	116	113	111
Foodstuffs	1923	94	93	81	80	97	97	95	95	86	85
	1924	94	92	82	82	98	97	96	94	87	86
	1925	110	108	101	100	108	107	109	107	103	102
	1926	100	100	100	100	100	100	100	100	100	100
	1927	109	105	102	100	105	103	107	105	103	101
	1928	122	117	109	106	106	105	115	112	108	106
Raw materials	1923	65	67	62	64	108	102	90	87	86	83
	1924	85	86	80	80	118	112	104	101	99	96
	1925	94	96	93	94	117	112	107	105	105	103
	1926	100	100	100	100	100	100	100	100	100	100
	1927	114	115	113	112	134	132	125	125	123	122
	1928	116	117	117	117	131	128	125	123	124	123

Annex III *(concluded).*

RAW MATERIALS WEIGHTED BY : (*a*) 1926 VALUES ; (*b*) 1928 VALUES.

1926 = 100.

North America		Caribbean		South America		Africa		Asia		Oceania		World	
(*a*)	(*b*)	(*a*)		(*b*)		(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)
84	84	70		67		—	—	72	72	—	—	78	78
82	82	70		67		—	—	73	73	—	—	81	81
89	89	100		100		—	—	83	82	—	—	90	90
100	100	100		100		—	—	100	100	—	—	100	100
101	101	123		117		—	—	109	109	—	—	106	106
107	107	123		117		—	—	114	114	—	—	108	108
		(*a*)	(*b*)	(*a*)	(*b*)								
84	84	—	—	—	—	—	—	65	65	46	46	76	76
91	91	—	—	—	—	—	—	70	70	57	57	84	84
98	98	—	—	—	—	—	—	81	81	61	61	93	93
100	100	—	—	—	—	—	—	100	100	100	100	100	100
106	106	—	—	—	—	—	—	109	109	111	111	110	110
108	108	—	—	—	—	—	—	109	109	88	88	115	115
99	98	157	158	27	27	85	85	89	88	92	92	99	99
89	89	148	149	41	40	89	89	95	95	101	101	98	98
92	92	125	125	61	60	94	94	101	100	101	101	100	100
100	100	100	100	100	100	100	100	100	100	100	100	100	100
99	100	73	73	151	151	98	98	103	103	103	103	110	110
96	97	61	61	225	226	95	95	101	101	92	92	108	109
92	92	86	86	93	93	81	80	82	81	83	84	84	84
81	81	81	82	90	91	108	109	93	92	90	91	86	86
95	95	90	91	94	94	108	109	94	96	98	98	97	97
100	100	100	100	100	100	100	100	100	100	100	100	100	100
95	95	106	106	111	112	114	114	108	108	106	105	107	107
107	107	111	110	135	135	138	140	114	113	108	108	116	116
91	91	80	80	95	95	68	67	69	69	65	66	80	80
78	78	93	93	120	120	90	90	78	79	75	76	87	87
91	91	77	77	126	126	95	95	87	87	108	108	100	100
100	100	100	100	100	100	100	100	100	100	100	100	100	100
101	101	102	102	81	81	119	119	112	111	103	101	105	105
119	119	97	97	156	156	113	113	113	112	103	101	121	121
97	97	101	98	98	98	88	88	89	92	86	86	91	91
90	90	110	109	91	91	94	94	94	98	93	92	92	92
96	97	105	103	98	99	100	101	99	100	90	90	100	100
100	100	100	100	100	100	100	100	100	100	100	100	100	100
99	98	95	96	114	112	103	103	102	103	100	101	104	104
104	104	102	103	121	117	107	108	105	105	104	105	108	108
109	109	92	92	100	100	97	96	96	96	86	87	95	95
99	97	110	110	91	91	100	100	100	101	102	103	94	94
100	102	104	103	98	99	103	102	101	101	88	90	101	101
100	100	100	100	100	100	100	100	100	100	100	100	100	100
105	104	97	97	102	101	111	111	101	101	95	97	103	102
111	110	109	108	108	106	110	111	103	103	108	108	108	106
88	86	116	111	94	96	79	79	79	84	86	85	86	85
85	84	110	106	91	92	88	88	86	92	84	82	90	90
92	93	106	103	97	99	98	100	96	99	92	91	97	98
100	100	100	100	100	100	100	100	100	100	100	100	100	100
94	93	93	95	134	131	96	95	105	106	104	104	107	106
98	98	92	94	141	137	104	106	107	108	101	101	109	109

Annex IV.

PERCENTAGE DISTRIBUTION OF AGGREGATE PRODUCTION OF FOODSTUFFS

World Totals = 100.

Groups of Products	Years	Eastern and Central Europe				Rest of Europe (Western and Maritime)		Europe			
		Excluding U.S.S.R.		Including U.S.S.R.				Excluding U.S.S.R.		Including U.S.S.R.	
		(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)
Cereals	1913	19.7	20.0	37.9	37.8	14.4	13.5	34.1	33.5	52.3	51.3
	1923	16.0	16.3	28.8	29.2	14.3	13.4	30.3	29.7	43.1	42.6
	1924	15.1	15.7	29.8	30.2	14.5	13.7	29.6	29.4	44.3	43.9
	1925	16.8	17.1	34.7	34.5	14.9	13.9	31.7	31.0	49.6	48.4
	1926	15.9	16.5	36.0	35.9	13.3	12.7	29.2	29.2	49.3	48.6
	1927	15.7	16.1	33.7	33.8	13.4	12.6	29.1	28.7	47.1	46.4
	1928	17.0	17.2	34.2	34.1	12.8	12.1	29.8	29.3	47.0	46.2
Cereals and other food crops	1913	20.4	18.9	33.6	31.9	12.7	11.5	33.1	30.4	46.3	43.4
	1923	16.9	15.5	27.6	25.6	11.9	11.0	28.8	26.5	39.5	36.6
	1924	16.8	15.2	27.6	25.8	12.2	11.2	29.0	26.4	39.8	37.0
	1925	17.9	16.4	31.6	29.4	12.5	11.5	30.4	27.9	44.1	40.9
	1926	16.1	15.1	31.6	29.8	11.5	10.7	27.6	25.8	43.1	40.5
	1927	17.2	15.7	31.2	29.1	11.8	10.8	29.0	26.5	43.0	39.9
	1928	17.8	16.3	31.1	29.1	11.4	10.4	29.2	26.7	42.5	39.5
Meat	1913	17.5	17.0	26.1	26.0	17.9	17.9	35.4	34.9	44.0	43.9
	1923	11.1	11.5	17.0	17.9	17.1	17.1	28.2	28.6	34.1	35.0
	1924	13.1	13.2	20.3	20.9	16.8	16.6	29.9	29.8	37.1	37.5
	1925	14.9	14.8	22.5	22.8	17.2	16.8	32.1	31.6	39.7	39.6
	1926	15.3	15.1	22.9	23.1	17.0	16.6	32.3	31.7	39.9	39.7
	1927	15.8	15.4	23.6	23.7	17.0	16.7	32.8	32.1	40.6	40.4
	1928	18.6	17.8	26.2	25.8	16.4	16.5	35.0	34.3	42.6	42.3
Colonial produce, Tobacco, Hops	1913	6.9	5.1	9.6	8.0	4.5	2.6	11.4	7.7	14.1	10.6
	1923	4.7	4.0	6.6	5.9	3.1	2.0	7.8	6.0	9.7	7.9
	1924	6.1	5.1	8.1	7.0	5.2	3.0	11.3	8.1	13.3	10.0
	1925	4.8	4.1	8.3	7.9	4.2	2.7	9.0	6.8	12.5	10.6
	1926	4.8	4.1	8.5	8.1	3.9	2.6	8.7	6.7	12.4	10.7
	1927	4.9	3.9	7.6	6.9	3.0	2.0	7.9	5.9	10.6	8.9
	1928	4.9	3.7	7.1	6.1	3.0	2.1	7.9	5.8	10.1	8.2
Vegetable-oil materials	1913	3.6	5.0	8.8	9.2	13.7	15.9	17.3	20.9	22.5	25.1
	1923	3.2	3.5	6.2	6.5	15.0	18.1	18.2	21.6	21.2	24.6
	1924	4.0	4.5	6.9	7.4	14.7	17.7	18.7	22.2	21.6	25.1
	1925	3.0	3.2	7.1	7.3	11.9	14.3	14.9	17.5	19.0	21.6
	1926	2.9	3.2	7.0	7.2	10.2	12.4	13.1	15.6	17.2	19.6
	1927	2.6	2.8	6.2	6.4	18.5	22.2	21.1	25.0	24.7	28.6
	1928	3.4	3.9	6.7	7.8	10.3	11.8	13.7	15.7	17.0	19.6
Textiles	1913	4.2	4.8	12.7	15.1	6.4	6.7	10.6	11.5	19.1	21.8
	1923	4.5	5.1	9.2	10.7	7.3	7.6	11.8	12.7	16.5	18.3
	1924	4.4	5.0	9.3	10.9	7.3	7.5	11.7	12.5	16.6	18.4
	1925	4.2	4.7	9.8	11.5	7.5	7.7	11.7	12.4	17.3	19.2
	1926	3.8	4.3	9.0	10.5	7.7	8.0	11.5	12.3	16.7	18.5
	1927	4.3	4.7	9.5	11.0	9.4	9.7	13.7	14.4	18.9	20.7
	1928	4.2	4.6	10.0	11.4	9.8	10.0	14.0	14.6	19.8	21.4
Rubber	1913	—	—	—	—	—	—	—	—	—	—
	1923	—	—	—	—	—	—	—	—	—	—
	1924	—	—	—	—	—	—	—	—	—	—
	1925	—	—	—	—	—	—	—	—	—	—
	1926	—	—	—	—	—	—	—	—	—	—
	1927	—	—	—	—	—	—	—	—	—	—
	1928	—	—	—	—	—	—	—	—	—	—

Annex IV.

AND RAW MATERIALS WEIGHTED BY : (*a*) 1926 VALUES ; (*b*) 1928 VALUES.
World Totals = 100.

North America		Caribbean		South America		Africa		Asia		Oceania		World	
(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)
30.6	32.4	0.9	1.0	4.2	4.3	2.3	2.3	8.4	7.7	1.3	1.0	100	
38.2	39.6	0.8	0.9	6.2	6.1	2.5	2.6	7.5	7.0	1.7	1.2	100	
36.3	37.6	0.9	1.0	5.4	5.3	2.7	2.8	8.1	7.5	2.3	1.9	100	
33.7	35.4	0.6	0.7	5.5	5.6	2.5	2.5	6.7	6.3	1.4	1.1	100	
33.4	34.7	0.7	0.8	5.6	5.6	2.4	2.5	6.7	6.3	1.9	1.5	100	
35.3	36.7	0.7	0.7	5.8	5.7	2.6	2.6	7.0	6.7	1.5	1.2	100	
36.2	37.6	0.6	0.7	5.8	5.6	2.6	2.7	6.0	5.7	1.8	1.5	100	
19.6	21.7	1.7	1.8	3.0	3.2	2.0	2.1	26.3	26.8	1.1	1.0	100	
23.8	25.9	2.5	2.5	4.6	4.8	2.3	2.4	26.0	26.6	1.3	1.2	100	
21.2	23.0	3.2	3.2	3.9	4.0	2.4	2.5	27.8	28.7	1.7	1.6	100	
20.3	22.5	2.7	2.7	4.1	4.3	2.2	2.4	25.3	26.0	1.3	1.2	100	
20.6	22.4	2.6	2.6	4.2	4.4	2.2	2.3	25.7	26.4	1.6	1.4	100	
21.4	23.3	2.4	2.5	4.2	4.4	2.4	2.5	25.2	26.1	1.4	1.3	100	
22.0	24.0	2.7	2.7	4.2	4.2	2.2	2.4	24.8	25.8	1.6	1.4	100	
29.4	27.4	1.7	1.8	13.5	13.8	3.2	3.7	5.3	6.2	2.9	3.2	100	
38.5	34.7	1.8	1.9	13.0	14.2	3.3	3.9	6.4	7.1	2.9	3.2	100	
36.4	33.0	1.6	1.8	12.7	13.9	3.2	3.8	6.3	7.0	2.7	3.0	100	
33.6	31.0	1.7	1.8	12.7	13.8	3.2	3.8	6.5	7.1	2.6	2.9	100	
33.2	30.8	1.7	1.8	12.9	13.9	3.4	4.0	6.3	6.9	2.6	2.9	100	
32.4	29.9	1.7	1.8	12.6	13.7	3.5	4.2	6.5	7.0	2.7	3.0	100	
30.7	28.1	1.7	1.7	12.9	14.2	3.3	4.0	6.1	6.7	2.7	3.0	100	
15.0	13.9	7.5	7.7	25.7	25.4	2.5	2.8	35.0	39.4	0.2	0.2	100	
15.9	15.3	6.9	6.7	29.5	27.3	6.0	6.0	31.7	36.6	0.3	0.2	100	
13.6	12.7	6.4	6.4	26.3	24.3	6.8	6.9	33.3	39.4	0.3	0.3	100	
13.4	13.5	6.4	6.5	22.6	22.4	6.0	7.2	38.9	39.5	0.2	0.3	100	
12.9	13.0	6.0	6.2	23.5	23.4	6.8	7.5	38.2	38.9	0.2	0.3	100	
10.5	10.6	6.2	6.5	33.3	33.0	5.8	6.5	33.3	34.3	0.3	0.2	100	
12.2	12.4	6.5	6.6	30.2	30.0	5.8	6.9	35.0	35.7	0.2	0.2	100	
18.0	19.0	0.4	0.4	4.9	4.9	11.1	10.5	42.4	39.6	0.7	0.5	100	
13.1	14.1	0.4	0.4	8.0	8.0	12.6	12.3	43.6	39.7	1.1	0.9	100	
16.2	17.4	0.4	0.4	5.9	5.9	11.8	11.4	43.1	39.0	1.0	0.8	100	
15.6	17.0	0.4	0.4	8.5	8.5	13.1	12.8	42.4	38.9	1.0	0.8	100	
16.9	18.7	0.6	0.6	8.0	8.1	13.4	13.0	42.9	39.1	1.0	0.9	100	
12.4	13.3	0.3	0.3	7.9	7.8	11.2	10.6	42.5	38.5	1.0	0.9	100	
13.4	14.7	0.4	0.4	8.6	8.8	12.9	12.7	46.7	42.9	1.0	0.9	100	
29.7	29.6	0.5	0.5	5.5	5.7	5.1	5.2	32.4	29.1	7.7	8.1	100	
25.6	25.9	0.5	0.5	6.5	6.8	5.7	5.8	36.6	33.5	8.6	9.2	100	
29.4	29.5	0.5	0.5	5.6	5.9	5.7	5.8	35.2	32.4	7.0	7.5	100	
30.7	30.8	0.4	0.4	5.3	5.5	5.7	5.9	33.7	30.9	6.9	7.3	100	
32.5	32.9	0.6	0.6	4.9	5.2	5.4	5.6	32.5	29.3	7.4	7.9	100	
26.4	26.6	0.4	0.4	5.3	5.5	5.0	5.2	35.9	32.9	8.1	8.7	100	
27.8	28.1	0.5	0.5	5.2	5.4	5.7	5.9	33.6	30.8	7.4	7.9	100	
—	—	—	—	39.5	39.5	15.8	15.8	44.7	44.7	—	—	100	
—	—	—	—	5.2	5.2	0.8	0.8	94.0	94.0	—	—	100	
—	—	—	—	5.3	5.3	0.8	0.8	93.9	93.9	—	—	100	
—	—	—	—	5.4	5.4	1.0	1.0	93.6	93.6	—	—	100	
—	—	—	—	4.5	4.5	1.2	1.2	94.3	94.3	—	—	100	
—	—	—	—	4.9	4.9	1.1	1.1	94.0	94.0	—	—	100	
—	—	—	—	3.8	3.8	0.9	0.9	95.3	95.3	—	—	100	

Annex IV *(concluded).*

PERCENTAGE DISTRIBUTION OF AGGREGATE PRODUCTION OF FOODSTUFFS

World Totals = 100.

Groups of Products	Years	Eastern and Central Europe				Rest of Europe (Western and Maritime)		Europe			
		Excluding U.S.S.R.		Including U.S.S.R.				Excluding U.S.S.R.		Including U.S.S.R.	
		(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)
Wood-Pulp	1913	24.8	24.9	27.7	27.8	32.0	32.3	56.8	57.2	59.7	60.1
	1923	15.3	15.4	15.7	15.8	29.1	29.4	44.4	44.8	44.8	45.2
	1924	16.5	16.6	17.2	17.2	31.2	31.6	47.7	48.2	48.4	48.8
	1925	18.4	18.5	18.9	19.0	30.8	31.0	49.2	49.5	49.7	50.0
	1926	18.0	18.0	18.9	19.0	29.5	29.8	47.5	47.8	48.4	48.8
	1927	18.6	18.7	19.7	19.7	30.6	30.9	49.2	49.6	50.3	50.6
	1928	19.2	19.3	20.3	20.4	28.6	28.8	47.8	48.1	48.9	49.2
Cement	1913	27.1	27.1	31.7	31.7	23.6	23.6	50.7	50.7	55.3	55.3
	1923	12.2	12.2	12.7	12.7	26.4	26.4	38.6	38.6	39.1	39.1
	1924	12.3	12.3	13.1	13.1	26.7	26.7	39.0	39.0	39.8	39.8
	1925	14.2	14.2	15.4	15.4	25.7	25.7	39.9	39.9	41.1	41.1
	1926	13.9	13.9	16.1	16.1	26.3	26.3	40.2	40.2	42.4	42.4
	1927	15.5	15.5	17.9	17.9	26.7	26.7	42.2	42.2	44.6	44.6
	1928	16.0	16.0	18.8	18.8	27.1	27.1	43.1	43.1	45.9	45.9
Fuels	1913	16.8	16.8	20.5	20.7	27.5	27.0	44.3	43.8	48.0	47.7
	1923	9.4	9.4	11.0	11.0	22.8	22.0	32.2	31.4	33.8	33.0
	1924	13.1	12.9	15.1	15.0	23.2	22.3	36.3	35.2	38.3	37.3
	1925	13.6	13.5	15.9	15.8	21.5	20.6	35.1	34.1	37.4	36.4
	1926	15.1	14.8	18.1	18.0	14.7	14.1	29.8	28.9	32.8	32.1
	1927	14.6	14.4	18.0	17.8	20.8	19.9	35.4	34.3	38.8	37.7
	1928	15.0	14.8	18.8	18.7	20.2	19.3	35.2	34.1	39.0	38.0
Metals	1913	18.9	18.8	23.2	23.2	27.3	27.1	46.2	45.9	50.5	50.3
	1923	10.0	9.9	10.5	10.5	22.7	22.5	32.7	32.4	33.2	33.0
	1924	12.8	12.8	13.7	13.7	26.1	25.8	38.9	38.6	39.8	39.5
	1925	13.8	13.8	15.4	15.3	23.8	23.6	37.6	37.4	39.2	38.9
	1926	13.6	13.6	15.9	15.9	21.9	21.6	35.5	35.2	37.8	37.5
	1927	16.5	16.5	19.1	19.2	24.5	24.2	41.0	40.7	43.6	43.4
	1928	14.7	14.7	17.6	17.5	24.2	23.9	38.9	38.6	41.8	41.4
Chemicals (fertilisers)	1913	23.3	25.0	23.7	25.4	31.3	31.3	54.6	56.3	55.0	56.7
	1923	21.1	22.2	21.2	22.2	32.9	32.9	54.0	55.1	54.1	55.1
	1924	22.9	23.8	23.0	23.9	33.0	33.2	55.9	57.0	56.0	57.1
	1925	25.8	26.9	25.9	27.1	30.9	31.0	56.7	57.9	56.8	58.1
	1926	26.4	27.1	26.6	27.3	31.7	31.9	58.1	59.0	58.3	59.2
	1927	29.3	30.0	29.5	30.2	32.1	32.1	61.4	62.1	61.6	62.3
	1928	25.8	26.7	26.1	27.0	29.4	29.6	55.2	56.3	55.5	56.6
Total Production	1913	17.3	16.4	26.5	26.2	16.3	14.9	33.6	31.3	42.8	41.1
	1923	12.6	12.2	19.0	18.9	15.0	13.9	27.6	26.1	34.0	32.8
	1924	13.5	12.8	20.2	19.9	15.5	14.3	29.0	27.1	35.7	34.2
	1925	14.3	13.6	22.7	22.3	15.0	13.9	29.3	27.5	37.7	36.2
	1926	13.7	13.1	22.9	22.6	13.3	12.7	27.0	25.8	36.2	35.3
	1927	14.5	13.7	22.9	22.5	15.1	14.2	29.6	27.9	38.0	36.7
	1928	15.0	14.2	23.3	22.8	14.5	13.6	29.5	27.8	37.8	36.4
Foodstuffs	1913	19.9	18.5	32.2	30.8	13.6	12.7	33.5	31.2	45.8	43.5
	1923	15.8	14.7	25.5	24.1	12.9	12.2	28.7	26.9	38.4	36.3
	1924	16.1	14.8	26.1	24.8	13.1	12.3	29.2	27.1	39.2	37.1
	1925	17.3	16.0	29.9	28.2	13.4	12.5	30.7	28.5	43.3	40.7
	1926	15.9	15.1	29.9	28.5	12.6	11.8	28.5	26.9	42.5	40.3
	1927	16.9	15.6	29.7	28.0	12.8	12.0	29.7	27.6	42.5	40.0
	1928	18.0	16.6	30.1	28.4	12.4	11.7	30.4	28.3	42.5	40.1
Raw Materials	1913	13.4	12.7	18.1	18.2	20.3	18.6	33.7	31.3	38.4	36.8
	1923	8.1	7.9	10.1	10.3	17.9	16.8	26.0	24.7	28.0	27.1
	1924	10.2	9.7	12.5	12.4	18.6	17.4	28.8	27.1	31.1	29.8
	1925	10.4	9.9	13.3	13.3	17.1	16.1	27.5	26.0	30.4	29.4
	1926	10.8	10.1	14.0	13.8	14.2	14.0	25.0	24.1	28.2	27.8
	1927	11.6	10.9	14.8	14.6	17.8	17.4	29.4	28.3	32.6	32.0
	1928	11.4	10.8	14.9	14.7	17.1	16.4	28.5	27.2	32.0	31.1

Annex IV *(concluded).*

AND RAW MATERIALS WEIGHTED BY : (*a*) 1926 VALUES ; (*b*) 1928 VALUES.

World Totals = 100.

North America		Caribbean		South America		Africa		Asia		Oceania		World	
(*a*)	(*b*)	(*a*)		(*b*)		(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)
39.2	38.8	0.3		0.3		—	—	0.8	0.8	—	—	100	
51.7	51.4	0.2		0.2		—	—	3.3	3.2	—	—	100	
48.2	47.9	0.2		0.2		—	—	3.2	3.1	—	—	100	
46.8	46.5	0.3		0.3		—	—	3.2	3.2	—	—	100	
47.8	47.4	0.3		0.3		—	—	3.5	3.5	—	—	100	
45.8	45.5	0.3		0.3		—	—	3.6	3.6	—	—	100	
47.1	46.8	0.3		0.3		—	—	3.7	3.7	—	—	100	
		(*a*)	(*b*)	(*a*)	(*b*)								
41.4	41.4	—	—	—	—	—	—	2.9	2.9	0.4	0.4	100	
54.0	54.0	—	—	—	—	—	—	6.2	6.2	0.7	0.7	100	
53.4	53.4	—	—	—	—	—	—	6.0	6.0	0.8	0.8	100	
51.8	51.8	—	—	—	—	—	—	6.3	6.3	0.8	0.8	100	
49.3	49.3	—	—	—	—	—	—	7.2	7.2	1.1	1.1	100	
47.2	47.2	—	—	—	—	—	—	7.1	7.1	1.1	1.1	100	
46.3	46.3	—	—	—	—	—	—	6.9	6.9	0.9	0.9	100	
44.9	45.1	0.7	0.8	0.2	0.2	0.6	0.6	4.6	4.6	1.0	1.0	100	
54.4	54.9	3.4	3.8	0.4	0.4	0.7	0.7	6.4	6.4	0.9	0.8	100	
49.1	49.9	3.3	3.6	0.6	0.7	0.8	0.8	6.9	6.8	1.0	0.9	100	
50.0	50.8	2.7	3.0	0.9	1.0	0.8	0.8	7.2	7.1	1.0	0.9	100	
54.6	55.1	2.2	2.4	1.5	1.6	0.9	0.8	7.1	7.1	0.9	0.9	100	
49.4	50.2	1.4	1.6	2.0	2.3	0.8	0.7	6.7	6.6	0.9	0.9	100	
48.5	49.2	1.2	1.3	3.1	3.4	0.8	0.7	6.6	6.6	0.8	0.8	100	
41.5	42.1	1.7	1.7	0.6	0.7	0.1	0.1	4.2	3.8	1.4	1.3	100	
55.4	55.9	2.3	2.3	2.0	2.2	0.6	0.6	5.2	4.8	1.3	1.2	100	
48.2	48.7	2.2	2.1	1.9	2.2	0.7	0.8	5.8	5.4	1.4	1.3	100	
49.6	50.0	2.1	2.1	1.8	2.0	0.7	0.7	5.2	5.0	1.4	1.3	100	
50.8	51.3	2.3	2.2	1.8	2.0	0.6	0.7	5.3	5.0	1.4	1.3	100	
45.1	45.4	2.2	2.2	1.9	2.1	0.6	0.7	5.3	5.0	1.3	1.2	100	
46.8	47.2	2.2	2.1	2.1	2.4	0.7	0.8	5.2	4.9	1.2	1.2	100	
15.2	15.0	0.0	0.0	24.3	22.7	1.8	1.9	1.9	1.9	1.8	1.8	100	
22.7	22.7	0.1	0.1	16.3	15.2	1.9	2.0	3.3	3.3	1.6	1.6	100	
17.7	17.7	0.1	0.1	18.8	17.6	2.3	2.4	3.4	3.4	1.7	1.7	100	
18.2	18.1	0.0	0.0	17.3	16.1	2.2	2.3	3.4	3.3	2.1	2.1	100	
19.8	19.8	0.1	0.1	13.7	12.8	2.3	2.4	3.8	3.8	2.0	1.9	100	
19.1	19.1	0.1	0.1	10.6	9.9	2.6	2.7	4.1	4.0	1.9	1.9	100	
19.5	19.6	0.0	0.0	17.6	16.5	2.1	2.2	3.6	3.5	1.7	1.6	100	
27.2	26.9	1.6	1.7	4.8	5.2	2.3	2.5	19.5	20.7	1.8	1.9	100	
32.9	32.1	2.4	2.4	5.9	6.4	2.6	2.9	20.3	21.4	1.9	2.0	100	
30.3	29.5	2.6	2.6	5.4	5.9	2.8	3.1	21.2	22.5	2.0	2.2	100	
29.6	29.3	2.3	2.3	5.3	5.9	2.7	3.1	20.6	21.3	1.8	1.9	100	
30.8	30.2	2.2	2.2	5.4	5.9	2.7	3.1	20.7	21.2	2.0	2.1	100	
29.1	28.6	2.0	2.1	6.0	6.4	2.7	3.0	20.3	21.1	1.9	2.1	100	
29.4	29.1	2.1	2.1	6.1	6.5	2.7	3.1	20.0	20.7	1.9	2.1	100	
21.4	22.7	1.8	1.8	5.0	5.2	2.2	2.4	22.4	23.0	1.4	1.4	100	
26.6	27.6	2.4	2.4	6.2	6.5	2.5	2.7	22.3	22.9	1.6	1.6	100	
24.3	25.0	2.9	2.9	5.7	6.0	2.5	2.8	23.5	24.3	1.9	1.9	100	
22.8	24.1	2.5	2.5	5.7	6.1	2.4	2.6	21.8	22.5	1.5	1.5	100	
23.0	24.1	2.4	2.5	5.9	6,2	2.4	2.6	22.0	22.6	1.8	1.7	100	
23.5	24.5	2.3	2.4	5.8	6.2	2.6	2.9	21.6	22.4	1.7	1.6	100	
23.8	24.8	2.5	2.5	5.9	6.2	2.4	2.7	21.1	22.0	1.8	1.7	100	
35.6	34.1	1.4	1.4	4.6	5.2	2.3	2.8	15.3	16.8	2.4	2.9	100	
41.6	39.3	2.5	2.4	5.3	6.2	2.8	3.4	17.5	18.8	2.3	2.8	100	
38.1	36.5	2.3	2.2	5.0	5.7	3.0	3.6	18.3	19.6	2.2	2.6	100	
38.5	37.2	2.0	2.0	4.9	5.6	3.1	3.8	18.9	19.4	2.2	2.6	100	
40.5	39.2	1.9	1.9	4.9	5.5	3.1	3.7	19.1	19.1	2.3	2.8	100	
35.8	34.3	1.6	1.7	6.1	6.8	2.8	3.3	18.8	19.1	2.3	2.8	100	
36.4	35.3	1.6	1.6	6.3	6.9	2.9	3.6	18.7	18.9	2.1	2.6	100	

Annex V.

PERCENTAGE DISTRIBUTION OF AGGREGATE PRODUCTION OF FOODSTUFFS AND RAW

Total of Each Continent = 100.

Groups of Products	Years	Eastern and Central Europe				Rest of Europe (Western and Maritime)		Europe			
		Excluding U.S.S.R.		Including U.S.S.R.				Excluding U.S.S.R.		Including U.S.S.R.	
		(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)
Cereals	1913	32.6	40.0	40.9	47.2	25.1	29.7	28.9	35.1	34.9	40.9
	1923	34.3	42.0	40.9	48.3	25.8	30.1	29.7	35.7	34.3	40.6
	1924	26.8	34.0	35.4	42.0	22.5	26.6	24.5	30.1	29.8	35.6
	1925	30.3	37.5	39.5	46.1	25.7	29.8	27.9	33.6	34.0	39.8
	1926	29.9	37.1	40.3	46.8	25.6	29.3	27.8	33.3	34.9	40.5
	1927	26.6	33.3	36.1	42.6	21.7	25.2	24.1	29.2	30.4	35.8
	1928	28.0	34.5	36.3	42.7	22.0	25.5	25.0	30.1	30.8	36.2
Food crops other than Cereals	1913	24.6	19.6	20.5	15.7	12.4	10.5	18.7	15.2	17.4	13.8
	1923	28.7	22.2	27.0	20.0	11.5	9.8	19.3	15.6	20.1	15.7
	1924	29.4	23.6	26.3	20.8	13.1	11.3	20.7	17.1	20.6	16.8
	1925	27.2	21.6	24.6	18.8	12.7	10.8	19.8	16.2	19.9	15.8
	1926	23.1	18.4	21.8	16.7	13.4	11.1	18.3	14.8	18.7	14.7
	1927	25.8	20.9	23.8	18.5	12.9	10.9	19.2	15.7	19.5	15.6
	1928	24.4	19.8	22.8	17.7	12.8	10.9	18.7	15.4	19.0	15.2
Meat	1913	11.3	12.3	10.9	11.8	12.2	14.3	11.7	13.3	11.4	12.7
	1923	9.7	11.2	9.7	11.1	12.5	14.5	11.2	13.0	10.9	12.6
	1924	11.0	12.7	11.5	12.9	12.3	14.3	11.7	13.5	11.8	13.5
	1925	10.9	12.4	10.4	11.6	12.1	13.8	11.5	13.1	11.0	12.5
	1926	11.9	13.4	10.7	11.9	13.5	15.2	12.7	14.3	11.7	13.1
	1927	11.5	12.9	10.9	12.1	11.9	13.5	11.7	13.2	11.2	12.7
	1928	13.5	14.6	12.2	13.2	12.4	14.3	13.0	14.5	12.3	13.6
Colonial produce, Tobacco, Hops	1913	1.0	1.0	1.0	1.0	0.7	0.5	0.9	0.8	0.9	0.8
	1923	1.4	1.3	1.3	1.2	0.7	0.6	1.0	0.9	1.0	0.9
	1924	1.6	1.6	1.4	1.4	1.2	0.8	1.4	1.2	1.3	1.1
	1925	1.2	1.1	1.4	1.3	1.0	0.7	1.1	0.9	1.2	1.1
	1926	1.3	1.1	1.4	1.3	1.1	0.8	1.2	1.0	1.2	1.1
	1927	1.4	1.2	1.4	1.3	0.8	0.6	1.1	0.9	1.2	1.0
	1928	1.2	1.0	1.2	1.0	0.8	0.6	1.0	0.8	1.0	0.9
Vegetable-oil materials	1913	0.7	0.9	0.8	1.0	2.1	3.1	1.4	1.9	1.3	1.8
	1923	0.7	0.9	0.9	1.0	2.7	4.0	1.8	2.5	1.7	2.3
	1924	0.9	1.2	1.1	1.3	2.9	4.2	2.0	2.8	1.9	2.5
	1925	0.6	0.8	0.9	1.1	2.4	3.4	1.5	2.1	1.5	2.0
	1926	0.6	0.8	0.9	1.0	2.2	3.1	1.4	1.9	1.4	1.8
	1927	0.6	0.7	0.9	1.1	4.0	5.7	2.3	3.3	2.1	2.8
	1928	0.7	0.9	0.8	1.1	2.1	2.8	1.4	1.8	1.3	1.7
Textiles	1913	2.0	2.9	4.0	5.6	3.3	4.4	2.6	3.6	3.7	5.2
	1923	2.7	3.7	3.6	5.0	3.7	4.8	3.2	4.3	3.6	4.9
	1924	2.8	3.9	3.9	5.4	4.0	5.2	3.4	4.6	3.9	5.3
	1925	2.6	3.6	3.8	5.3	4.4	5.7	3.5	4.7	4.0	5.4
	1926	2.6	3.6	3.6	5.0	5.3	6.8	3.9	5.2	4.3	5.6
	1927	2.4	3.4	3.5	4.8	5.2	6.8	3.9	5.1	4.2	5.6
	1928	2.4	3.3	3.7	5.1	5.8	7.5	4.1	5.4	4.5	6.0
Rubber	1913	—	—	—	—	—	—	—	—	—	—
	1923	—	—	—	—	—	—	—	—	—	—
	1924	—	—	—	—	—	—	—	—	—	—
	1925	—	—	—	—	—	—	—	—	—	—
	1926	—	—	—	—	—	—	—	—	—	—
	1927	—	—	—	—	—	—	—	—	—	—
	1928	—	—	—	—	—	—	—	—	—	—

Annex V.

MATERIALS BY GROUPS OF PRODUCTS WEIGHTED BY : (*a*) 1926 VALUES ; (*b*) 1928 VALUES.
Total of Each Continent = 100.

North America		Caribbean		South America		Africa		Asia		Oceania		World	
(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)
32.1	39.4	16.8	20.9	25.1	27.0	28.6	29.4	12.2	12.2	19.9	17.9	28.5	32.8
31.4	38.7	8.8	11.6	28.9	30.0	26.1	26.9	10.0	10.2	22.2	19.7	27.0	31.3
28.8	35.2	8.1	10.7	24.2	25.1	23.8	25.1	9.1	9.2	27.0	24.3	24.0	27.7
29.4	36.0	6.6	8.6	26.7	28.4	23.9	24.5	8.5	8.8	19.6	17.5	25.8	29.8
27.8	33.9	7.7	9.9	26.4	28.0	22.9	23.8	8.3	8.8	24.2	21.5	25.6	29.4
29.9	36.3	8.0	10.2	23.9	25.4	23.5	24.5	8.5	8.9	18.9	16.8	24.5	28.4
30.5	36.9	7.4	9.4	23.9	24.7	23.9	24.7	7.5	7.9	23.3	20.6	24.8	28.6
2.8	2.3	36.4	35.4	5.3	4.7	13.8	13.3	52.9	54.8	9.9	9.2	19.9	19.0
2.5	2.2	39.6	41.6	8.2	7.5	14.7	14.1	50.2	52.7	10.6	9.9	19.9	19.2
2.9	2.5	46.9	48.5	8.8	8.0	15.4	14.7	50.1	52.7	11.8	11.4	21.3	20.8
2.2	1.9	47.6	49.4	8.3	7.7	14.1	13.5	48.2	51.5	13.4	12.7	20.3	19.5
2.3	1.9	46.3	47.5	8.5	7.7	13.1	12.5	47.4	51.2	11.2	10.6	19.3	18.8
2.6	2.3	46.2	46.9	7.2	6.8	15.9	15.2	46.3	49.8	13.0	12.3	19.7	19.0
2.7	2.2	50.0	50.6	6.6	6.3	13.3	12.6	47.3	51.0	12.5	12.0	19.5	18.8
12.0	12.1	12.3	12.5	31.1	31.8	15.7	17.3	3.0	3.6	17.6	19.5	11.1	11.9
12.8	12.8	8.2	9.2	24.4	26.2	13.7	15.6	3.4	3.9	16.5	18.4	10.9	11.8
13.7	13.8	7.3	8.2	27.0	29.2	13.2	15.0	3.4	3.9	15.2	17.5	11.4	12.3
11.9	12.1	7.6	8.7	25.1	26.8	12.6	14.3	3.3	3.8	15.1	17.1	10.5	11.4
11.5	11.8	8.3	9.3	25.2	27.1	13.4	15.3	3.3	3.8	13.8	15.4	10.6	11.6
11.7	12.0	8.9	10.0	22.3	24.5	13.8	15.8	3.3	3.9	15.0	16.6	10.5	11.5
11.4	11.3	8.7	9.5	23.2	25.7	13.6	15.3	3.4	3.8	15.1	16.6	10.9	11.7
1.6	1.6	15.3	14.6	17.2	15.7	3.7	3.6	6.4	6.1	0.5	0.3	3.2	3.2
1.8	1.9	10.4	10.8	18.4	16.6	8.4	8.1	5.7	6.7	0.6	0.3	3.7	3.9
1.7	1.7	8.9	9.4	17.8	16.2	9.0	8.7	5.7	6.8	0.5	0.3	3.6	3.9
1.7	1.7	10.4	10.5	15.8	14.2	8.3	8.6	7.1	6.9	0.5	0.3	3.7	3.7
1.6	1.6	10.1	10.1	16.0	14.5	9.3	9.1	6.8	6.8	0.4	0.3	3.7	3.7
1.5	1.5	13.0	12.9	23.3	21.3	9.1	8.9	6.8	6.7	0.5	0.4	4.2	4.1
1.6	1.6	12.1	11.9	19.1	17.8	8.4	8.6	6.7	6.6	0.5	0.3	3.9	3.8
1.7	2.1	0.6	0.7	2.6	2.7	12.5	12.2	5.5	5.5	0.9	0.8	2.5	2.9
1.1	1.3	0.5	0.6	3.8	3.8	13.2	12.7	5.9	5.6	1.6	1.4	2.7	3.0
1.6	2.0	0.4	0.5	3.3	3.4	13.1	12.4	6.2	5.9	1.5	1.3	3.0	3.4
1.6	1.9	0.5	0.5	4.8	4.9	14.6	13.9	6.2	6.1	1.6	1.4	3.0	3.3
1.6	2.0	0.7	0.8	4.3	4.4	14.4	13.8	6.0	5.9	1.6	1.4	2.9	3.2
1.4	1.7	0.5	0.6	4.3	4.5	13.6	12.9	6.8	6.7	1.7	1.5	3.2	3.7
1.3	1.7	0.6	0.7	4.1	4.4	14.1	13.4	6.8	6.7	1.6	1.4	2.9	3.2
9.1	10.8	2.7	3.0	9.5	10.8	18.8	20.2	13.8	13.7	35.3	40.9	8.3	9.8
5.8	7.1	1.4	1.7	8.4	9.3	16.3	17.4	13.5	13.8	34.0	39.7	7.5	8.8
8.2	9.9	1.5	1.8	8.9	9.9	17.4	18.4	14.0	14.3	29.2	34.4	8.4	9.9
9.1	10.8	1.6	1.9	8.7	9.6	18.5	19.6	14.4	15.0	33.5	39.0	8.8	10.3
9.8	11.8	2.7	3.1	8.3	9.4	18.5	19.7	14.6	14.9	34.0	39.8	9.3	10.8
7.6	9.2	1.6	1.8	7.4	8.5	15.7	16.8	14.8	15.5	35.3	41.0	8.4	9.9
8.2	9.8	2.1	2.3	7.3	8.5	18.5	19.5	14.5	15.2	33.0	38.6	8.6	10.2
—	—		—	2.0	0.9	1.7	0.7	0.6	0.3	—	—	0.3	0.1
—	—	—	—	0.9	0.4	0.3	0.1	3.5	1.6	—	—	0.8	0.4
—	—	—	—	1.0	0.4	0.3	0.1	3.6	1.6	—	—	0.8	0.4
—	—	—	—	1.1	0.5	0.4	0.2	4.2	2.0	—	—	0.9	0.5
—	—	—	—	1.0	0.4	0.6	0.2	5.4	2.5	—	—	1.2	0.6
—	—	—	—	1.1	0.5	0.6	0.2	5.1	2.4	—	—	1.1	0.5
—	—	—	—	0.7	0.3	0.4	0.2	5.4	2.5	—	—	1.1	0.6

Annex V *(concluded).*

PERCENTAGE DISTRIBUTION OF AGGREGATE PRODUCTION OF FOODSTUFFS AND RAW

Total of Each Continent = 100.

Groups of Products	Years	Eastern and Central Europe				Rest of Europe (Western and Maritime)		Europe			
		Excluding U.S.S.R.		Including U.S.S.R.				Excluding U.S.S.R.		Including U.S.S.R.	
		(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)
Wood-pulp	1913	1.2	1.0	0.8	0.7	1.6	1.5	1.3	1.3	1.1	1.0
	1923	1.2	1.1	0.8	0.7	1.9	1.8	1.6	1.4	1.3	1.2
	1924	1.2	1.1	0.8	0.7	2.0	2.0	1.6	1.5	1.4	1.2
	1925	1.3	1.2	0.9	0.8	2.1	2.0	1.7	1.6	1.4	1.2
	1926	1.5	1.4	0.9	0.8	2.5	2.3	2.0	1.8	1.5	1.4
	1927	1.5	1.4	1.0	0.9	2.3	2.2	1.9	1.8	1.5	1.4
	1928	1.5	1.4	1.0	0.9	2.2	2.1	1.8	1.7	1.5	1.4
Cement	1913	1.5	1.7	1.2	1.3	1.4	1.7	1.5	1.7	1.3	1.4
	1923	1.0	1.1	0.7	0.8	1.8	2.1	1.4	1.6	1.2	1.3
	1924	1.0	1.1	0.7	0.8	1.8	2.1	1.4	1.7	1.2	1.4
	1925	1.1	1.3	0.8	0.8	1.9	2.3	1.6	1.8	1.3	1.4
	1926	1.4	1.5	0.9	1.0	2.4	2.7	1.9	2.1	1.5	1.6
	1927	1.6	1.8	1.1	1.2	2.3	2.6	2.0	2.2	1.6	1.8
	1928	1.7	2.0	1.2	1.4	2.4	2.8	2.1	2.4	1.7	1.9
Fuels	1913	14.5	9.6	11.6	7.4	25.2	17.1	19.7	13.2	16.8	10.9
	1923	12.1	8.0	9.4	6.1	24.7	16.7	19.0	12.7	16.2	10.6
	1924	15.5	10.5	12.0	7.8	23.9	16.2	20.0	13.5	17.1	11.3
	1925	14.3	9.6	10.5	6.9	21.5	14.4	18.0	12.0	14.9	9.8
	1926	16.5	11.0	11.9	7.8	16.5	10.8	16.5	10.9	13.6	8.8
	1927	15.8	10.8	12.2	8.2	21.5	14.4	18.7	12.7	15.9	10.6
	1928	15.0	10.2	12.1	8.0	20.8	14.0	17.9	12.1	15.4	10.3
Metals	1913	9.1	9.3	7.3	7.2	13.9	14.8	11.5	11.9	9.8	9.9
	1923	6.4	6.5	4.5	4.5	12.3	12.9	9.6	9.9	7.9	8.0
	1924	7.8	8.0	5.5	5.5	13.8	14.5	11.0	11.4	9.1	9.3
	1925	8.2	8.4	5.8	5.7	13.6	14.2	11.0	11.3	8.9	9.0
	1926	8.8	9.0	6.1	6.1	14.5	14.7	11.6	11.8	9.2	9.2
	1927	10.3	10.7	7.5	7.6	14.7	15.2	12.5	13.0	10.4	10.5
	1928	9.2	9.6	7.1	7.2	15.8	16.4	12.4	12.9	10.4	10.6
Chemicals (fertilisers)	1913	1.5	1.7	1.0	1.1	2.1	2.4	1.8	2.0	1.4	1.6
	1923	1.8	2.0	1.2	1.3	2.4	2.7	2.2	2.4	1.8	1.9
	1924	2.0	2.3	1.4	1.4	2.5	2.8	2.3	2.6	1.9	2.0
	1925	2.3	2.5	1.4	1.6	2.6	2.9	2.4	2.7	1.9	2.0
	1926	2.4	2.7	1.5	1.6	3.0	3.2	2.7	2.9	2.0	2.2
	1927	2.5	2.9	1.6	1.7	2.7	2.9	2.6	2.9	2.0	2.2
	1928	2.4	2.7	1.6	1.7	2.9	3.1	2.6	2.9	2.1	2.2
Total Production	1913-1928	100	100	100	100	100	100	100	100	100	100
Foodstuffs	1913	68.5	71.9	72.3	74.7	49.7	54.5	59.3	63.6	63.7	67.4
	1923	72.7	75.4	77.6	79.4	49.8	54.4	60.2	64.3	65.3	68.9
	1924	67.2	70.3	73.2	75.7	47.9	52.2	56.9	60.7	62.2	65.9
	1925	68.4	71.5	74.5	76.5	50.5	54.4	59.2	62.9	64.9	68.1
	1926	64.9	68.9	72.8	75.4	52.5	55.6	58.8	62.4	65.3	68.3
	1927	63.9	67.1	70.8	73.2	46.5	49.6	55.0	58.1	61.1	64.1
	1928	65.9	68.9	71.3	73.6	47.2	50.7	56.7	60.0	62.1	65.0
Raw Materials	1913	31.5	28.1	27.7	25.3	50.3	45.5	40.7	36.4	36.3	32.6
	1923	27.3	24.6	22.4	20.6	50.2	45.6	39.8	35.7	34.7	31.1
	1924	32.8	29.7	26.8	24.3	52.1	47.8	43.1	39.3	37.8	34.1
	1925	31.6	28.5	25.5	23.5	49.5	45.6	40.8	37.1	35.1	31.9
	1926	35.1	31.1	27.2	24.6	47.5	44.4	41.2	37.6	34.7	31.7
	1927	36.1	32.9	29.2	26.8	53.5	50.4	45.0	41.9	38.9	35.9
	1928	34.1	31.1	28.7	26.4	52.8	49.3	43.3	40.0	37.9	35.0

Annex V *(concluded).*

MATERIALS, BY GROUPS OF PRODUCTS. WEIGHTED BY : (*a*) 1926 VALUES ; (*b*) 1928 VALUES.
Total of Each Continent = 100.

North America		Caribbean		South America		Africa		Asia		Oceania		World	
(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)
1.1	1.0	0.2	0.1	0.1	(0.04)	—	—	(0.03)	(0.02)	—	—	0.8	0.7
1.5	1.4	0.1	0.1	(0.03)	(0.03)	—	—	0.1	0.1	—	—	1.0	0.8
1.6	1.4	0.1	0.1	(0.04)	(0.03)	—	—	0.1	0.1	—	—	1.0	0.9
1.6	1.4	0.1	0.1	0.1	(0.04)	—	—	0.2	0.1	—	—	1.0	0.9
1.7	1.6	0.2	0.1	0.1	(0.04)	—	—	0.2	0.2	—	—	1.1	1.0
1.8	1.6	0.2	0.1	0.1	(0.04)	—	—	0.2	0.2	—	—	1.1	1.0
1.8	1.6	0.2	0.1	0.1	(0.04)	—	—	0.2	0.2	—	—	1.1	1.0
1.5	1.6	—	—	—	—	—	—	0.2	0.1	0.2	0.2	1.0	1.0
1.7	1.8	—	—	—	—	—	—	0.3	0.3	0.4	0.4	1.0	1.1
1.9	2.1	—	—	—	—	—	—	0.3	0.3	0.4	0.4	1.1	1.2
2.0	2.2	—	—	—	—	—	—	0.3	0.4	0.5	0.5	1.1	1.2
1.9	2.1	—	—	—	—	—	—	0.4	0.4	0.7	0.7	1.2	1.3
2.1	2.3	—	—	—	—	—	—	0.4	0.4	0.8	0.8	1.3	1.4
2.0	2.2	—	—	—	—	—	—	0.5	0.5	0.6	0.6	1.4	1.5
24.7	15.8	6.9	4.6	0.5	0.3	4.0	2.2	3.5	2.1	8.3	4.8	14.9	9.4
26.9	18.1	23.1	16.8	1.1	0.7	4.7	2.6	5.1	3.1	7.5	4.4	16.3	10.6
25.9	17.5	20.0	14.3	1.9	1.2	4.6	2.5	5.1	3.1	7.6	4.5	16.0	10.3
25.4	16.9	17.7	12.7	2.5	1.6	4.5	2.5	5.2	3.3	7.9	4.6	15.0	9.7
26.5	17.8	14.8	10.5	4.1	2.7	4.8	2.7	5.1	3.3	7.0	4.1	15.0	9.7
26.6	18.0	11.4	8.0	5.4	3.6	4.5	2.5	5.1	3.2	7.2	4.2	15.7	10.3
24.6	16.6	8.9	6.2	7.6	5.2	4.2	2.3	4.9	3.1	6.1	3.6	15.0	9.8
12.8	12.7	8.8	8.2	1.0	1.1	0.3	0.3	1.8	1.5	6.3	5.4	8.4	8.1
13.7	13.9	7.9	7.6	2.8	2.8	1.8	1.7	2.1	1.8	5.7	4.9	8.1	8.0
13.0	13.2	6.8	6.5	2.9	2.9	2.2	2.1	2.2	1.9	5.8	4.9	8.2	8.0
14.3	14.3	7.9	7.6	2.8	2.8	2.1	2.0	2.2	1.9	6.4	5.5	8.6	8.4
14.5	14.7	9.2	8.7	2.9	3.0	1.9	1.9	2.3	2.0	5.9	5.0	8.8	8.6
14.0	14.2	10.2	9.5	2.8	2.9	2.1	2.0	2.4	2.1	6.3	5.2	9.0	8.9
15.0	15.1	10.0	9.3	3.3	3.4	2.5	2.4	2.5	2.2	6.1	5.2	9.4	9.3
0.6	0.6	(0.01)	(0.01)	5.6	5.0	0.9	0.8	0.1	0.1	1.1	1.0	1.1	1.1
0.8	0.8	(0.02)	(0.02)	3.1	2.7	0.8	0.8	0.2	0.2	0.9	0.9	1.1	1.1
0.7	0.7	(0.02)	(0.02)	4.2	3.7	1.0	1.0	0.2	0.2	1.0	1.0	1.2	1.2
0.8	0.8	(0.02)	(0.02)	4.1	3.5	1.0	0.9	0.2	0.2	1.5	1.4	1.3	1.3
0.8	0.8	(0.03)	(0.03)	3.2	2.8	1.1	1.0	0.2	0.2	1.2	1.2	1.3	1.3
0.8	0.9	(0.03)	(0.03)	2.2	2.0	1.2	1.2	0.3	0.2	1.3	1.2	1.3	1.3
0.9	1.0	(0.03)	(0.03)	4.1	3.7	1.1	1.0	0.3	0.3	1.2	1.1	1.4	1.5
100	100	100	100	100	100	100	100	100	100	100	100	100	100
46.9	53.8	65.5	68.8	61.5	63.5	58.1	60.0	68.1	70.6	47.4	46.6	59.5	63.7
46.7	53.7	56.6	62.4	61.5	63.7	54.5	56.6	63.6	66.8	49.3	48.0	57.8	62.3
45.4	51.5	62.3	67.4	60.0	62.3	52.4	54.8	62.6	65.8	54.0	53.2	56.7	60.8
43.5	50.0	61.8	66.7	60.1	62.9	50.6	52.3	60.0	64.1	48.1	47.3	56.6	60.7
41.6	47.6	62.3	66.7	60.1	62.8	49.4	51.6	59.0	63.8	49.2	47.5	55.5	59.8
44.2	50.6	63.1	67.1	53.4	56.7	53.2	55.5	58.1	62.6	46.9	45.7	54.7	58.9
44.6	50.4	66.1	69.5	53.7	56.7	50.8	52.6	58.2	62.7	50.9	49.2	55.2	59.1
53.1	46.2	34.5	31.2	38.5	36.5	41.9	40.0	31.9	29.4	52.6	53.4	40.5	36.3
53.3	46.3	43.4	37.6	38.5	36.3	45.5	43.4	36.4	33.2	50.7	52.0	42.2	37.7
54.6	48.5	37.7	32.6	40.0	37.7	47.6	45.2	37.4	34.2	46.0	46.8	43.3	39.2
56.5	50.0	38.2	33.3	39.9	37.1	49.4	47.7	40.0	35.9	51.9	52.7	43.4	39.3
58.4	52.4	37.7	33.3	39.9	37.2	50.6	48.4	41.0	36.2	50.8	52.5	44.5	40.2
55.8	49.4	36.9	32.9	46.6	43.3	46.8	44.5	41.9	37.4	53.1	54.3	45.3	41.1
55.4	49.6	33.9	30.5	46.3	43.3	49.2	47.4	41.8	37.3	49.1	50.8	44.8	40.9

Annex VI.

NATIONAL INDICES OF INDUSTRIAL PRODUCTION.

1926 = 100.

Country	Canada (a)	United States (a)	Germany	France (b)	Poland (c)	United Kingdom		Sweden	Switzerland	U.S.S.R.
Source	Monthly Review of Business Statistics	Federal Reserve Board	Institut für Konjunkturforschung	Statistique générale	Institut de Recherches sur le mouvement des affaires	Board of Trade (d)	London and Cambridge Economic Service	Svensk Finanstidning	Rapports économiques et stat. sociales	Institut de Conjoncture
Original base	1919–24	1923–25	1928	1913	1925–27	1924	1924	1923–24	—	1923–24
1925 (average)	86	96	105	86	102	—	129	97	106	(e) 71
1926 ,,	100	100	100	100	100	—	100	100	100	(e) 100
1927 ,,	107	98	127	87	125	(107)	140	106	118	(e) 122
1928 ,,	118	103	127	101	141	(108)	136	101	123	(e) 147
1929 ,,	132	109	129	111	140	(112)	147	124	117	(f) 170
1925 I	80	98	103	87	106			104		61
II ...	81	97	108	83	99	—	136	103	110	63
III ...	79	97	109	83	104			83		66
IV ...	79	95	110	82	105			109		63
V	80	95	110	82	107	—	130	92	106	64
VI ...	86	94	108	81	108			99		69
VII ..	82	96	106	83	102			97		63
VIII..	86	95	103	83	100	—	120	94	104	70
IX ...	85	94	105	84	101			100		84
X	95	97	102	88	100			93		89
XI....	102	99	103	88	98	—	132	91	101	83
XII ..	93	101	96	89	92			94		89
1926 I	95	99	91	89	81			96		88
II ...	99	99	91	88	82	—	136	94	98	93
III ...	95	100	92	94	85			105		98
IV ...	102	100	92	95	88			107		101
V	103	99	95	96	89	—	96	94	96	88
VI ...	105	100	97	100	96			109		97
VII ..	101	100	96	111	100			98		87
VIII..	96	103	101	102	107	—	76	94	99	97
IX....	97	104	105	102	113			102		109
X	109	103	109	103	117			94		110
XI....	107	100	114	100	123	—	93	96	107	113
XII ..	91	98	115	96	119			103		117
1927 I	103	99	116	90	115			101		110
II ...	101	101	116	90	117		147	100	111	115
III ...	118	104	122	86	114			115		122
IV ...	108	101	125	83	(c) 119			110		114
V	112	103	130	86	122	107	144	105	116	116
VI	111	101	129	86	122			99		108
VII ..	104	98	128	83	126			96		94
VIII..	108	99	130	85	125		141	99	122	113
IX....	101	97	132	86	128			107		127
X	104	95	132	87	129			101		132
XI....	103	92	134	90	131		143	110	123	129
XII ..	111	93	127	91	132			110		138

(a) Adjusted for seasonal variations.
(b) Partly adjusted for seasonal variations.
(c) Adjusted for seasonal variations since April 1927.
(d) Original base has not been changed, as figures for 1926 are not available.
(e) Year ending September 30th.
(f) Average for the period from October, 1928, to August, 1929.

Annex VI *(concluded)*.

National Indices of Industrial Production.

1926 = 100.

Country		Canada (*a*)	United States (*a*)	Germany	France (*b*)	Poland (*c*)	United Kingdom		Sweden	Switzerland	U.S.S.R.
Source		Monthly Review of Business Statistics	Federal Reserve Board	Institut für Konjunkturforschung	Statistique générale	Institut de Recherches sur le mouvement des affaires	Board of Trade (*d*)	London and Cambridge Economic Service	Svensk Finanstidning	Rapports économiques et stat. sociales	Institut de Conjoncture
Original base		1919–24	1923–25	1928	1913	1925–27	1924	1924	1923–24	—	1923–24
1928	I	110	97	125	93	134			76		141
	II ...	114	101	129	94	138	(109)	140	64	124	138
	III ...	115	101	133	97	139			69		149
	IV ...	110	101	133	98	138			96		128
	V	129	101	130	101	137	(104)	138	107	126	139
	VI ...	121	101	130	102	140			112		133
	VII ..	118	102	132	103	139			96		124
	VIII..	124	104	129	103	142	(100)	127	103	123	144
	IX....	118	106	129	102	142			109		150
	X	128	106	124	104	142			115		159
	XI....	120	104	107	105	147	(108)	140	122	121	149
	XII ..	113	105	116	106	148			117		158
1929	I	143	108	121	109	149			136		161
	II ...	139	108	115	108	138	(110)	144	123	114	154
	III ...	137	110	125	110	142			124		165
	IV ...	135	113	137	110	146			134		173
	V	137	114	138	110	141	(112)	147	119	119	145
	VI ...	130	117	139	112	139			118		160
	VII ..	132	115	133	110	137			118		158
	VIII..	133	114	131	110	138	(111)	144	122	120	168
	IX....	120	112	129	110	140			120		...
	X	135	108	128	112	141			123		...
	XI....	134	98	127	113	137	(114)	153	126	111	...
	XII ..	110	92	121	114	136			119		...

(*a*) Adjusted for seasonal variations.
(*b*) Partly adjusted for seasonal variations.
(*c*) Adjusted for seasonal variations since April 1927.
(*d*) Original base has not been changed, as figures for 1926 are not available.

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