

ECONOMIC, FINANCIAL AND
TRANSIT DEPARTMENT

WORLD
ECONOMIC SURVEY

TENTH YEAR

1941/42

LEAGUE OF NATIONS

GENEVA

1942

Publications of the Economic, Financial and Transit¹⁾
Department of the League of Nations

WARTIME RATIONING AND CONSUMPTION.

MONEY AND BANKING 1940/42.

EUROPE'S TRADE.

THE NETWORK OF WORLD TRADE.

COMMERCIAL POLICY IN THE INTER-WAR PERIOD.

ECONOMIC FLUCTUATIONS IN THE UNITED STATES AND THE
UNITED KINGDOM, 1918-1922.

PROSPERITY AND DEPRESSION (REVISED AND ENLARGED EDITION).

RAW MATERIALS AND FOODSTUFFS: PRODUCTION BY COUNTRIES,
1935 AND 1938.

STATISTICAL YEAR-BOOK OF THE LEAGUE OF NATIONS 1940/41.

MONTHLY BULLETIN OF STATISTICS.

Series of League of Nations Publications

II. ECONOMIC AND FINANCIAL

✓1942. II.A. 5

TABLE OF CONTENTS

	PAGE
LIST OF TABLES AND DIAGRAMS	5
PREFACE	8
I. GENERAL OUTLINE OF THE SITUATION IN DIFFERENT	
• COUNTRIES	9
German War Economy	9
Shortages in Continental Europe	13
Germany's Relations with the Rest of the Continent	19
Soviet Russia's Economic Problems	24
China's Economy in Transformation	26
Extension of Government Controls in Japan	29
Transition to War Economy in the United States	31
The War Effort of the United Kingdom	38
The Sterling Area and Canada	42
Conditions in Latin America	48
II. PRODUCTION	
Foodstuffs	53
Raw Materials	65
Industrial Activity	77
III. CONSUMPTION AND RATIONING	
Food	89
Other Goods	103
IV. FINANCE AND BANKING	
Government Expenditure, Taxation and Borrowing	108
Expansion of Bank Credit	109
The Volume of Money	119
Interest Rates and Security Prices	126
V. PRICE MOVEMENTS AND PRICE CONTROL	
Price Movements	133
Price Control	138
Wages and Wage Control	145
VI. INTERNATIONAL TRADE	
Trade Outside Continental Europe	148
Trade in Continental Europe	151

	PAGE
VII. THE TRANSPORT SITUATION	177
The United Nations	177
Japan's Shipping Difficulties	185
Transport in Continental Europe	185
VIII. SUMMARY OF LATEST EVENTS	191
Germany and German-Controlled Europe	191
Japan's "Co-Prosperity Sphere"	194
The United Kingdom	195
The United States	196

LIST OF TABLES AND DIAGRAMS

Chapter I.—GENERAL OUTLINE OF THE SITUATION IN DIFFERENT COUNTRIES

Tables:	PAGE
France: Consumption of Coal	15
Births, Deaths and Natural Increase of Population in Seven Countries	19
China's Exports of Certain Products to Japan	29
United States: Gross National Expenditure, 1939-1941	32
United States: Disposal of Consumers' Income	36
United Kingdom: National Income and Expenditure	39
United Kingdom: Percentage Change in Prices	42
Exchange Reserves of Certain Sterling Area Countries	43
Financing of United Kingdom's Expenditure in Canada	46
Canada: Indices of Economic Activity	46
Canada: Composition of National Output	47
Argentina: Surplus Stocks of Agricultural Products	50
Diagram:	
Industrial Production in the United States	35

Chapter II.—PRODUCTION

Tables:	
Approximate Indices of Foodstuff Production	53
Wheat Crops	58
Denmark and Sweden: Animal Products	61
Wheat Stocks	63
Share of Far East in World Output of Raw Materials	66
Vegetable Oil Materials and Crude Oils	67
Textile Fibres	68
Cotton Production	69
Rubber Shipments from Producing Countries	69
Rubber Stocks	70
Crude Rubber	71, 72
North and Latin America: Non-Agricultural Raw Materials ...	72
Production of Steel Ingots and Castings in 1939	74
Petroleum Production	75
Tin Production	76
Industrial Production Indices of European Countries	80
Indices of Industrial Employment in Australia and Canada	87
Diagrams:	
Indices of Manufacturing Production and Employment	82
Index of Munitions Production in the United States	84

Chapter III.—CONSUMPTION AND RATIONING

Tables:	PAGE
Food Rations	90
Calorie Content of Total Legal Rations	101
Calorie Value of Rationed Foods per Consumption Unit	101
Relative Point Values of Representative Items of Clothing	104

Chapter IV.—FINANCE AND BANKING

Tables:	
Government Expenditure, Tax Receipts and Borrowing	111
Government Tax Revenue	114
Changes in Holdings of U.S. Government Securities	119
United Kingdom: Increase in National Debt and in Certain Bank Holdings	120
Exchange Reserves of Certain European Central Banks	122
Note Circulation and Commercial Bank Deposits	126
Velocity of Circulation of Commercial Bank Deposits	132
Prices of Industrial Shares	135

Diagrams:

Note Circulation and Commercial Bank Deposits	128
Bond Yields and Money Rates	134
Prices of Industrial Shares	136

Chapter V.—PRICE MOVEMENTS AND PRICE CONTROL

Tables:	
Percentage Increase in Wholesale Prices	139
Import and Export Prices of Certain European Countries	142
Cost-of-Living Indices in South-American Countries	144
Hourly Money Wages, the Cost of Living and Real Wages	149

Diagrams:

Wholesale Prices and Cost of Living	140
Wholesale Prices of Certain Primary Products	143
Wholesale Prices in the United States	146

Chapter VI.—INTERNATIONAL TRADE

Tables:	
Quarterly Merchandise Imports (excl. Continental Europe) ...	152
Quarterly Merchandise Exports (excl. Continental Europe) ...	154
United States Imports, January-September, 1939-1941	156
United States Trade with Latin America	158
Export-Import Bank's Credits to Latin America	158
United States Lend-Lease Aid	160
Distribution of Lend-Lease Aid by Commodities	162

	PAGE
Distribution of Farm Products Transferred for Lend-Lease Shipments	162
United States: Lend-Lease Articles Transferred, March 11th, 1941-February 28th, 1942, Compared with Exports in 1938 ..	163
Canada: Foreign Merchandise Trade	166
Latin-American Republics: Trade with Latin America	168
Quantum of Sweden's Trade	171
Quarterly Merchandise Trade of Continental Europe	172
German Exports to Sweden in 1941	174
Roumania's Exports of Grain	175
 Diagram:	
United States: Lend-Lease Aid and Exports	161

Chapter VII.—THE TRANSPORT SITUATION

Tables:

Number and Tonnage of Ships of 2,000 Gross Tons or More ..	178
United States: War Risk Insurance Rates	180
Shipbuilding Programme of the United States Maritime Commission, as of January 31st, 1942	181
United States Ship Completions	181
Quarterly Index of Freight Car Loadings, 1940-42	183
Netherlands: Percentage of Internal Trade carried by Inland Waterways, Railways and Roads	186
Continent of Europe: Railway Rolling Stock	186

PREFACE

The last *World Economic Survey* covered the period from the autumn of 1939 to the summer of 1941. It dealt mainly with the transition from the economics of peace to the economics of war, with the principles of war finance and the manner in which those principles were applied in different countries, the manner in which the resources of production were progressively mobilized for the prosecution of war.

Like its predecessor the present *Survey* deals with a world at war, and the area of the conflict has been vastly extended since the autumn of 1941. The war today is both total and global; the concentration of resources on the war effort has become both more intense and more widespread. This volume deals, therefore, at once with this intensification and the strains it imposes and with the extension in time and space of the tendencies that were traced last year. It continues the story up to the early autumn of this year, although the various chapters have naturally been written at somewhat different dates.

Governments at war necessarily impose restrictions on the statistical and other information that they publish concerning economic and financial developments; and any person endeavouring to follow the course of events is forced to a constantly increasing extent to have recourse to such bald statements as may be issued to the public. While every effort has been made to check and countercheck the accuracy of the information given and to make sure of the responsible nature of the sources employed, it can scarcely be that the relationship between a public statement and the fact that lies behind it will in all cases have been accurately interpreted. But in total warfare the economic activities of every citizen are controlled or directed by the State, and the State is bound in these circumstances to issue instructions to every citizen—concerning rations, price ceilings, labour problems, etc.—which at once largely determine and reflect the general economic conditions with which this *Survey* is concerned. While some information available in times of peace is therefore no longer available, much of this information is of minor interest today and much of what is of major interest is not only public but imperative.

A. LOVEDAY,
*Director of the Economic,
Financial and Transit Department.*

League of Nations,
October 1942.

CHAPTER I

GENERAL OUTLINE OF THE SITUATION IN DIFFERENT COUNTRIES

The German attack on Russia in the summer of 1941 opened a new, momentous phase in the Second World War and had far-reaching effects on Germany's domestic war economy, on conditions in German-controlled Europe and on the economic life of the Soviet Union. In this introductory review of developments since the middle of 1941, these countries will be discussed first.

The fresh outburst of Japanese aggression at the end of 1941 brought the United States of America into active participation in the war on all five continents. After reviewing the situation in China and Japan, the course of economic mobilization in the United States is accordingly considered next. The war effort of the British Commonwealth of Nations will engage our attention in the later part of the chapter. A final section is devoted to the problems of the Latin-American countries.

GERMAN WAR ECONOMY

The repercussions of the Russian campaign were felt in every sphere of Germany's internal economy; but it was the labour situation that was most seriously affected. Even before, labour had become one of the most critical "bottle-necks" in German war economy. Whether or not the physical efficiency of labour was maintained, its economic efficiency was severely reduced by the blockade, which caused a high proportion of the labour force to be absorbed in the costly processes of synthetic production. It was this, combined with the army's demand for manpower, that led to the progressive extension of the drastic labour controls described in the last *Survey*.¹

In the first two years of the war, the course of military operations made it possible from time to time to release large numbers of soldiers for work in the war industries. Thus in the first two war winters, 1939-40 and 1940-41, the German industrial machine was kept running at maximum speed in preparation for the ensuing spring campaigns.

¹ *World Economic Survey 1939-41*, Chap. II.

In the Russian campaign, however, the fighting proved to be continuous in time and unprecedented in scale, requiring the mobilization of millions of additional soldiers. Even if the military situation in the third war winter (1941-42) had permitted it, the great distance and the shortage of transport rendered a temporary shift of men from the front to the war factories quite impracticable. The casualty rate at the front, on the contrary, led to a further drain on Germany's labour force.

At the end of 1941, according to German sources,¹ the number of workers employed in Germany, amounting to 23.9 million, was one million less than at the outbreak of war in 1939. This was so in spite of the greater utilization of women, accounting for 9.4 million of the total as against 8.3 million in 1939; in spite of the importation of over 2 million foreign workers;² and in spite of the employment of juvenile labour³ and the reemployment of old age pensioners, etc. Since the opening of the Russian campaign, the number of men absorbed by Germany's armed forces, including auxiliary formations, has risen to more than half of the pre-existing male working population between the ages of 18 and 45. There is little doubt, therefore, that total employment in the Reich declined in the latter half of 1941. In addition to the numerical decline, there was, as already mentioned, a change in the composition of the total, equivalent to a deterioration in quality. Women, children and old men are not equal in economic efficiency to men in their most productive ages. Nor are foreign workers—recruited largely in the occupied countries, and largely by methods such as the withdrawal of unemployment relief on the one hand, the deliberate closing down of factories on the other, the curtailment of food rations, etc.—likely to have proved an equal substitute.⁴ The employment figures just quoted do not include prisoners of war, of whom about 1.5 million seem to have been in

¹ It is not known whether and, if so, to what extent the scope of these statistics has been altered by the incorporation of territories such as Western Poland, Alsace-Lorraine, etc. If this has been the case, then the figures understate the fall in employment.

² In September 1941, there were 2.1 million foreign workers in Germany. In June 1942 the number had risen to 2.5 million.

³ A further step in this direction was a decree issued in April 1942 under which school children from the age of 14 and in certain cases from the age of 10 were mobilized for farm work from April 15th to November 15th, 1942.

⁴ An official German report concerning the recruitment of labour in the occupied territories during the First World War contains the following statement: "In using the necessary force it was possible to send the desired number of persons to the desired working posts. But once on the spot it was not possible to induce them to work carefully and diligently, especially where a certain amount of skill and knowledge was required." (Cf. Kohler, *Die Staatsverwaltung der besetzten Gebiete*, Vol. I, p. 166, quoted in R. Ardenne, *German Exploitation of Belgium*, p. 51.)

Germany at the end of 1941; but these obviously represent an even more doubtful contribution to Germany's productive capacity.

From this one cannot by any means conclude that there has been a corresponding decline in Germany's armament production. If, as is likely, total output showed a tendency to fall off after the middle of 1941, war production may still have been maintained, since production for civilian needs was further curtailed. An "iron savings" scheme, virtually compulsory, was started in October 1941; indirect taxation was increased in November 1941; more and more of the less essential consumers' goods became unobtainable; private travel was severely restricted; the clothing rationing was tightened up; and in April 1942 there followed a sharp cut even in the most essential food rations, including bread, meat and fats.¹

There is a point, however, at which a further reduction in consumption, even though numerically liberating further resources for war production, is more than offset by an all-round decline in productive efficiency. The central authorities have therefore launched a relentless drive to counter the drain on labour supplies by an improvement in industrial organization rather than by a further cut in consumption. All German sources point, in fact, to a thorough-going overhaul of the entire economic structure in the early months of 1942. The main slogans of the new programme were: "rationalization"; standardization of products; simplification of administrative machinery; decentralization of economic organization; concentration of industrial production.

The concentration policy was not entirely new. But on the whole, the previous policy—prompted by social, political and military considerations—had been one of wide dispersal of Government orders. Orders were now to be concentrated on the large firms, while the smaller and generally less efficient plants were to close down. This policy, which clearly favoured the big industrialists, led to a wave of mergers and amalgamations among joint-stock companies and private firms.

Furthermore, efforts were made to reduce the complexity of economic organization and planning so as to release clerical staffs for other purposes and, at the same time, give more scope to the initiative of private entrepreneurs and certain local organizations. While the entrepreneur's responsibility and freedom of action were thus enlarged, a decree of March 1942 ordered severe penalties, including capital punishment, for any misuse of these powers, such as inaccurate reporting or misdirection of labour and raw material supplies.

¹ For details, see Chapter III below.

Finally, in April 1942, a decree was issued setting up a uniform type of regional economic organization under the name of *Gauwirtschaftskammer* and abolishing various pre-existing local bodies such as chambers of commerce and industry. The new *Gauwirtschaftskammer*, or Regional Economic Boards, were intended to form the sole intermediary between the Central Government and the individual entrepreneur, to eliminate all redundant links in the administrative system and to strengthen the regional element in economic control. The area of jurisdiction of each board was made co-extensive with the "Gau," the regional unit of the National Socialist Party, with which trade and industry were accordingly brought more closely into line. While on the one hand there was a certain delegation of authority to the industrial magnates, the power of the local party organs was, if possible, still further increased.

It is interesting to note, in passing, a certain similarity in the evolution of economic organization in Germany, and in the United Kingdom: the two outstanding features of the German plan—industrial concentration and regional planning—were anticipated in the United Kingdom, the one by nearly a year, the other by a few months.¹

The new tendencies in German industrial policy were reinforced by an important change in the methods of price control. In 1938, Government contracts had been exempted from the 1936 price-stop decree: they were to be based on costs plus a standardized fee or profit. As armament production expanded, so the sphere of the price-stop contracted. In the winter of 1941/42, however, the "cost-plus" principle for Government orders was largely replaced by a system of uniform "target prices," based on the costs not of an average but of an "efficient" producer. As in most industries costs varied widely between the different firms, two or more target prices were often fixed for the same article, corresponding to different "cost groups." Firms in the lowest cost group were to receive preferential treatment in the allocation of labour, raw materials, etc. Not only were firms within the same cost group driven to reduce their costs to the level of the "efficient" producer; but there was thus also an inducement to qualify for entry into the lowest cost group.

In 1941, all "excess profits," variously defined, had to be surrendered to the Price Commissioner. In March 1942, however, a uniform excess profit tax was introduced applying to profits exceeding those made in 1938 by more than 50%. The profit motive was

¹ As will be seen below, the regional system of control was strengthened in the United Kingdom under the new office of Minister of Production set up in February 1942.

thus strengthened, but it was placed at the service of the general cost-reduction campaign. In a word, price control came to be used predominantly as a means to secure the utmost economy and efficiency in the use of labour and other scarce resources.

The volume of money continued to increase through the expansion of credit for Government needs; but the additional money, as it passed into the hands of private consumers and producers of consumers' goods, tended to remain idle and unspendable, owing to rationing and other quantitative controls and restrictions on the supply of goods and productive resources. The accumulation of unusable funds and the fear of inflation led to a great increase in share prices. With the rigid control of commodity flows, the rise in share values represented merely a shift of unspendable funds from one holder to another and was in itself powerless to draw away resources from the war effort. Nevertheless, the authorities considered the rise extremely objectionable on psychological grounds. At the beginning of 1942 ordinary shares had risen to such a level that their net percentage yield was far below that of Government bonds. Compulsory declaration of share holdings, and other measures of this kind, proved of little avail. In June 1942, therefore, a decree was issued placing the stock exchanges under strict Government control, prohibiting the sale of shares acquired after September 1939 and authorizing the Reichsbank to take over such shares at fixed prices in exchange for Treasury bonds. Thus disappeared the last relic of a legal free market in Germany.

SHORTAGES IN CONTINENTAL EUROPE

Even before the invasion of Russia, transport had become one of the most critical bottle-necks in occupied Europe. The reasons for this were obvious: the disruption of intra-European sea transport by the blockade; the contraction of road traffic owing to lack of oil, despite the increased use of producer gas; the destruction of railways and rolling stock through land warfare and aerial bombardment, etc.

The invasion of Russia enormously increased the pressure on the European transport system. By the end of 1941, Germany, by her conquests of Russian territory, had increased her railway net from about 50,000 miles to about 70,000 miles, or by 40%, practically without any increase in rolling stock.¹ Consequently, Germany proceeded to seize or borrow rolling stock from other European countries, occupied or unoccupied. Thus in France about one-third of the

¹ It may be noted that, owing to the virtual absence of Russian rolling stock, the additional 20,000 miles had to be converted from the broader Russian gauge to standard gauge.

total rolling stock was requisitioned by Germany.¹ Sweden has had to send many railway trucks to Germany to secure the transport of her coal imports from the German mines. In Belgium, in the summer of 1941 only about 50,000 of the 114,000 freight cars belonging to the Belgian railways were left in the country.² Everywhere in Europe passenger services were cut down. In a number of countries, including Germany, Norway, Finland, Hungary, Roumania, etc., travelling was made subject to licence and was permitted, apart from official business, only in cases of urgent need.

The transport shortage has profoundly dislocated economic intercourse throughout the Continent, and has tended to prevent the inter-regional equalization of supplies. The result has been a serious maldistribution of commodities such as coal, cereals and mineral oil, of which there is a general shortage; and severe local shortages have arisen even in commodities with which the continent as a whole is well supplied. This is the case, for example, with timber, which is increasingly required for the manufacture of synthetic textile fibres, cellulose fodder, producer gas, etc.

The economic development of the Continent of Europe was made possible, in the past, only by intensive trade with the outside world, on which it depended for a wide range of essential commodities.³ The German conquests in the first two years of the war turned virtually the whole continent into an area cut off from the rest of the world. Apart from human food and animal fodder, serious deficiencies arose, for example, in textile raw materials and in certain non-ferrous metals. Efforts were made to alleviate them in the case of textiles by the development of artificial fibres, and in the case of metals by the collection of scrap and by requisitions from consumers.

But there was one basic commodity—namely, coal—which could not be replaced by substitutes and which indeed was itself required to an increased extent for the production of synthetic substitutes for commodities such as petrol and rubber. Before the war, the continent depended on the outside world, mainly on Great Britain, for 12 to 15% of its coal supplies. In the third war winter, coal became another critical bottleneck in the continental economy. German coal deliveries to other countries—including for example, Sweden and Switzerland—fell off, owing to transport and other difficulties. The Ruhr district, which accounts for about two-thirds of Germany's coal production, suffered from aerial bombardment.

¹ H. Alphan: *The Financial and Economic Situation of France* (March 1942) p. 15.

² R. Ardenne: *German Exploitation of Belgium* (Brookings Institution, Washington, D.C.) p. 49.

³ Cf. *Europe's Trade* (League of Nations, 1941).

On the other hand, owing to the exceptionally dry and cold winter, there was a sharp decline in hydro-electric power output, particularly in France, Switzerland and Italy, which increased the need for coal for heating and for the production of electricity. In Italy, the basic ration of household coal was reduced to 30% of normal pre-war consumption, and the consumption of gas and electricity was also restricted.

In France, in the autumn of 1941, about 220,000 workers were employed in the coal mines as against 249,000 at the beginning of 1939; and coal production in 1941 has been estimated at 35 to 40 million tons compared with 46.5 million tons produced in 1939 and 70-75 million tons normally consumed in pre-war years. The monthly rate of coal consumption in the autumn of 1941 is shown below by main classes of consumers, and is compared with the rate of consumption in 1938:

France: Monthly Consumption of Coal

	(Thousands of Tons)		Percentage change:
	1938	1941	
Railways	928	840	-10%
Gas and electricity	737	640	-13%
Industry	2,329	1,498	-34%
Household consumption	1,671	721	-57%
Total	5,666	3,699	-35%

The fuel shortage was particularly acute in the unoccupied zone. The occupied zone, where about 80% of industry is stated to have been working on German orders,¹ was better supplied. The sharp drop in industrial coal consumption in France as a whole illustrates clearly the condition of French industry. The volume of French industrial production in 1941 has, in fact, been estimated at 40% below the pre-war level;² and there is no doubt that the scarcity of coal, in addition to that of raw materials, has been the chief obstacle to the resumption of activity. In the winter of 1941/42, the fuel shortage compelled the Government to impose severe restrictions on household consumption, to order all factories (except mines, electrical power plants, blast furnaces and bakeries) to close down from December 21st to January 4th, and to promote in all possible ways the use of peat.

Belgian coal production in the latter part of 1941 was about 20% below the pre-war level.³ Owing to inadequate nutrition, miners were

¹ Cf. H. Alphand: *The Financial and Economic Situation of France*, p. 16.

² H. Alphand, *op. cit.*, p. 17.

³ R. Ardenne: *German Exploitation of Belgium*, p. 42.

seeking employment requiring less physical effort,⁹ and those that remained—about 94% of the pre-war number—were declining in strength and efficiency. In the winter of 1941/42, it was reported that owing to transport difficulties, frequent stoppages occurred in various industries for lack of coal. In view of the reduction in Belgium's rolling stock, transport must indeed have been inadequate. It may also be noted, however, that a large part of Belgian coal production in 1941 was exported to Germany.¹

While in some places shortages of coal have arisen from transport difficulties, in others transport has had to be curtailed because of the coal shortage. Thus from Norway it is reported that the dearth of coal has been largely responsible for the great restriction of rail-
way traffic.²

The production of mineral oil in Roumania has greatly declined, partly owing to depletion of the existing wells and partly for other reasons. Total output in 1941 has been estimated at less than 5 million tons as against 8.7 million in 1936, while exports have fallen to about 3 million tons as against 6.8 million in 1936.

The use of producer gas in place of petrol has spread throughout the continent. In Sweden, where it seems to have increased most, 72,000 motor vehicles, or 29% of the number in use at the beginning of the war, were propelled by means of producer gas in November 1941. The shortage of tires and lubricants, however, made it necessary to restrict all road traffic to the indispensable minimum. In countries such as Italy and Switzerland, even producer gas has been subjected to rationing.

The European food situation in the early part of 1942 is fully described in Chapter III; only a few examples and general indications need be given here. Everywhere except in Spain, the situation has deteriorated since the middle of 1941; and the general shortage has been aggravated by uneven distribution between different areas. Conditions in Greece have undoubtedly been the worst, with parts of Yugoslavia, occupied Russia, Poland, Belgium and Finland probably next in order of distress. Certain foodstuffs have become exceedingly scarce even in countries that used to produce them for export. In Roumania, where wheat production was affected by military mobilization as much as by weather conditions, bread consumption was restricted at first by "breadless days" and later by stringent rationing. Visible stocks of wheat declined from 35,870 tons in June 1940 to 810 tons in June 1941; and practically no exports took place from September 1940 to June 1941, the latest

¹ R. Ardenne, *op. cit.*, p. 43.

² O. C. Malterud: *Norges Næringsliv under Okkupationen* (Stockholm 1942), p. 74.

month for which figures are available. Norwegian fishing^o in 1941 yielded about 40% less than normal, owing to military restrictions, requisition of boats and shortages of fuel and labour; and of the smaller catch, little was available for the Norwegian population. Danish butter production, highly dependent on imported feeding-stuffs, fell off to such an extent that Germany cannot have received much more butter from occupied Denmark in 1941 than she received from a free Denmark before the war. The German fat ration was reduced^o by 20-25% in April 1942.

In France, according to an official statement, the quantity of fats available in 1941 was only 20% of the quantity consumed in 1938. The consumption of wine was severely restricted, partly because of a deficient crop, partly because wine was used increasingly for the manufacture of motor spirit. The legal food rations in the winter of 1941/42 provided for a daily supply of only some 1,500 calories per consumption unit, compared with the generally accepted minimum of 2,400 necessary for health. The remaining 900 calories could sometimes be purchased in the black market, but only at prices over four times as high and therefore beyond the reach of common people.¹ In Belgium, though the nominal food rations were somewhat higher than in France, the quantities actually obtainable were considerably lower. In Finland, Poland and Greece they were much lower still.

Wheat production in Continental Europe (excluding the U.S.S.R.) has been estimated at approximately 375 million quintals in 1941 as compared with an average harvest of about 425 million in the period 1934-38. In addition to the fall in output, imports of overseas wheat, which covered nearly one-tenth of the continent's needs before the war, were almost completely cut off.

The Italian wheat crop is officially stated to have been 71 million metric quintals in 1941 or about the same as in 1940, as compared with an average of over 80 million in the three pre-war years. The basic bread ration in Italy was reduced by 25% in March 1942.

The German harvest of 1941, though better than in 1940, was still below the pre-war average; and prospects for the 1942 crop were affected by the long and severe winter combined with the shortage of farm labour and of certain fertilizers. In consequence the German bread ration was reduced in April 1942 by 7 to 20% according to classes of consumers.

In Hungary, wheat production was affected by an agreement with Germany under which the area sown to wheat was restricted and the cultivation of oil-bearing plants made compulsory. During the first

¹ H. Alphand, *op. cit.*, p. 21.

half of 1942, the bread ration of normal consumers^o was reduced by 40% (from 250 to 150 grammes per day, as compared with average peace-time consumption of about 700 grammes per day).

Spain was the only continental country where the bread situation improved in 1941 though it still remained serious. Wheat imports from the Argentine were greater than in 1940, and the domestic crop rose from 21.6 million quintals in 1940 to 29.7 million in 1941, permitting an increase in the bread ration.

In addition to the general deficiency in cereal food supplies in Continental Europe, there was a substantial decline in the output of animal foodstuffs. The available data are summarized in Chapter II; while Chapter III should be consulted for a detailed analysis of food consumption in Continental Europe.

Birth and death rates have inevitably been affected by the decline in living conditions. The consequences of this decline naturally take some time to become fully apparent. Nevertheless, it may be of some interest to quote the vital statistics for Germany, Italy, France, Belgium and the Netherlands from 1938 to 1941, and to compare them with those for the United Kingdom and the United States.¹ The figures for the United Kingdom, it should be noted, are affected by air raid casualties. Those for Germany, Italy and France exclude all military losses.

Both Germany and Italy registered a sharp drop in the natural population increase in 1941. Had it not been for the removal of a large part of the German population outside the Reich frontiers, the number of deaths in Germany would undoubtedly have shown a rise in 1941 as it did in 1939 and 1940. France shows a disastrous increase in civilian deaths in 1940. In the first 5 months of 1941, compared with 1939, mortality in France increased by 10%, 22% and 43% in the age groups under 15, from 15 to 60 and over 60 respectively. In Belgium, the death rate in the first half of 1942 was 21.5 per thousand inhabitants, as against an average of 13 in the last three pre-war years. In German-occupied Europe as a whole, the rise in infant mortality has been estimated at 40% above normal. In Greece, 320,000 deaths were registered from August 1941 to March 1942, exceeding the normal death rate more than five times.

Recent reports concerning morbidity in the occupied countries are equally ominous. All evidence points to a great lowering in the physical health and strength of the conquered populations. There is little doubt that a more even distribution of the necessities of life in Continental Europe would raise the productive efficiency of the area as a whole. On non-economic grounds, however, Germany is intent on

¹ Cf. *Monthly Bulletin of Statistics* (League of Nations), April 1942.

Births, Deaths and Natural Increase of Population in Seven Countries

	1938	1939	1940	1941
<i>Germany:</i> ^a		(000's omitted)		
Births	1,508	1,633	1,645	1,528
Deaths ^b	949	(1,009)	(1,046)	(996)
Increase ^b	559	(624)	(599)	(532)
<i>Italy:</i> ^a				
Births	1,037	1,040	1,046	929
Deaths ^b	615	591	(607)	(619)
Increase ^b	422	449	(439)	(310)
<i>France:</i> ^c				
Births	612	614	535	....
Deaths ^b	647	(643)	(735)	....
Increase ^b	-35	(-29)	(-200)	....
<i>Netherlands:</i>				
Births	178	181	185	182
Deaths	74	76	88	90
Increase	104	105	97	92
<i>Belgium:</i>				
Births	132	129	112	99
Deaths	110	116	134	120
Increase	22	13	-22	-21
<i>United Kingdom:</i>				
Births	736	731	719	....
Deaths	559	582	673	705 ^d
Increase	177	149	46	....
<i>United States:</i>				
Births	2,287	2,266	2,360	2,500 ^d
Deaths	1,381	1,388	1,417	1,420 ^d
Increase	906	878	943	1,080 ^d

^a Including Austria, the Sudetenland, Danzig and Memel.

^b The figures in brackets take no account of war losses.

^c Excluding Alsace-Lorraine in 1940.

^d Probable figures computed on the basis of partial data.

mitigating the decline in her living conditions at the expense of other nations; and her policies in relation to the rest of the continent are designed with this end in view.

GERMANY'S RELATIONS WITH THE REST OF THE CONTINENT

Outright seizure and expropriation have frequently occurred in the occupied territories. In general, however, Germany's policy has been to "pay" for what she receives. But the payment takes the form not of commodities but of money created in the occupied countries themselves. These monetary means of payment, as was explained in the last *Survey*, are obtained by occupation levies and loans; by the

use of clearing accounts; and, as a temporary expedient in the first stages of occupation, by the issue of *Reichskreditkassenscheine*.¹ In addition, manipulation of exchange rates and monopolistic control of import and export prices have been practised to alter the terms of trade in Germany's favour. Thus after the middle of 1941, the official valuation of the Reichsmark in south-eastern European countries was increased once more; and in her external trade generally, Germany continued to raise the prices of such goods as she chose to export, while keeping down the prices of her imports by strict insistence on wage and price stops in the countries of origin.

In France, the occupation levy, originally fixed at 400 million francs per day or 146,000 million per year, was far in excess of what the Germans actually needed for occupation costs and of what goods and capital assets they could find to buy. As has happened with political tributes before, it was found that the "real transfer" of the levy could not be effected in whole. By the end of 1940 the Germans had, in consequence, accumulated an unused balance of 41,400 million francs at the Bank of France. It was in these circumstances that, as an apparent concession, the levy was reduced from 400 to 300 million francs per day from May 10th, 1941. For 1941 as a whole, therefore, the levy amounted to 122,500 million francs. Since the unused balance increased further to 64,600 million at the end of 1941, the amount actually used during the year was 99,300 million francs. In addition the French Treasury was called upon to advance about 20,000 million francs on clearing account to Germany. The net total of financial exactions thus amounted to about 120,000 million francs, or 6,000 million marks, financed for the most part by credit expansion by the Bank of France.

Belgium's "occupation costs" have been estimated at an annual rate of 15,000 million francs, or 1,200 million marks. In addition there was a clearing balance of over 10,000 million francs at the end of April 1942, of which probably one-half accumulated during 1941. The total exactions during that year would therefore seem to have amounted to about 20,000 million francs, or 1,600 million marks.

With the abolition of exchange control between the Netherlands and Germany on April 1st, 1941, the Dutch-German clearing account was closed. But this affected only the bookkeeping mechanism: the Dutch authorities continued to finance German orders in the Netherlands, as a result of which the Netherlands Bank's foreign (i.e., German) Treasury bills increased by 914.5 million in 1941 while its external book claims rose by 30.0 million guilders, making 944.5

¹ About 4.5 milliard marks of these notes were outstanding at the end of 1941, mostly in Greece and in the occupied Russian territories. Elsewhere they had been mostly withdrawn in exchange for additional amounts of national currency.

million guilders in all, or 1,260 million marks. This figure represents only the part financed by the central bank. As in France, a part of the German charges, for which recent data are lacking, was financed outside the central bank.¹

Norway's occupation levy in 1941, financed almost wholly by the bank of issue, has been reported at about 2,400 million kroner, equivalent to 1,360 million marks.

The Danish central bank's "advances" to the Germans on clearing and other accounts increased during 1941 by 887 million kroner, or 425 million marks.

For these five countries alone, the figures quoted—which, at any rate in the case of the Netherlands, are admittedly incomplete—add up to a total of 10,650 million marks, equal to practically 10% of Germany's national income as estimated for 1941. The real value of this contribution, compared with Germany's national income, was still greater, since the exchange rates fixed by the Germans in 1940 considerably overvalued the Reichsmark in terms of the local—especially the French and the Belgian—currencies, so that the purchasing power of the mark over goods and services in these countries was higher there than at home.

Germany was even able to obtain financial "assistance" from two of the remaining neutral countries. From Sweden she obtained in the summer of 1941 a clearing credit of 100 million kroner, of which 75 million had been utilized at the end of the year; and from Switzerland she obtained an export credit of 400 million francs, most of which was used up during the latter part of 1941.

As already observed, Germany continued in 1941 to increase the value of the mark in her exchange clearings with south-eastern Europe, so as to cheapen the Reichsmark cost of her imports from these countries and to render her exports there more expensive. After her occupation of Yugoslavia, she raised the conversion rate in Serbia from 17.8 dinars to 20 dinars per Reichsmark, and the new Croatian currency unit, the kuna, was fixed at the same level. The new exchange rates in these countries were fixed at such a level as to remove the previous discount of the Reichsmark in relation to free currencies and place the mark at par with the dollar. It may be recalled that in the autumn of 1940 the value of the Reichsmark in the south-eastern countries was raised in such a way as to reduce the discount on the mark in terms of the dollar to a uniform level of 20%.² In 1941 Germany proceeded to abolish this discount altogether, starting, as just mentioned, with Serbia and Croatia. Shortly afterwards, the rate was raised in Greece from 48.5 to 60 drachmas to the mark. In

¹ Cf. *World Economic Survey 1939/41*, p. 156.

² Cf. *Ibid.*, p. 158.

September 1941, Hungary reduced the official premium on free currencies so as to place them on the same level with the mark. In October 1941, Bulgaria abolished her 25% premium on free currencies, which had meant a 20% discount on the mark, and a similar measure was taken in Roumania.

Denmark, it may be noted in passing, is the only country under German control which has been able to secure an appreciation of its currency so as to reduce the effects of the German trade policy on its domestic price and income structure. In January 1942 the exchange value of the Danish krone was raised by 8%, that is, to the level of August 1939.

In most of the countries of south-eastern Europe, clearing claims on Germany increased very considerably in 1941. The German clearing balance of the Slovak puppet state, for instance, rose above 2,000 million crowns at the beginning of 1942, to an amount exceeding the total note circulation of the country (1,957 million crowns in March 1942). Only a part of this, however, was financed by the bank of issue: advances of the National Bank of Slovakia against clearing claims rose from 447 million to 845 million crowns in the course of 1941.

The "foreign assets" of the National Bank of Roumania increased from 7,260 million lei at the end of 1940 to 19,664 million at the end of 1941. Those of the Bulgarian National Bank rose during the same period from 2,340 million to 11,776 million leva in the course of the year. This increase in clearing claims is all the more remarkable since Bulgaria, like Slovakia, had a passive balance of trade in 1941. The explanation, according to a German authority, lies in the fact that the clearing balances arose not only from Bulgaria's exports to Germany, but also from supplies and services to German troops stationed in Bulgaria, and from financial transactions such as the acquisition by Germany of shares in Bulgarian concerns.¹ The explanation is interesting. It means that Bulgaria, an ally of the Axis powers, is treated like any other occupied country except that the "occupation costs" are entered in what is called a "clearing account"; and it means that the clearing account, in addition, supplies Germany with funds to buy up Bulgarian enterprises.

In sum, the German occupation levies and borrowings through clearing accounts and otherwise, provide the Reich with practically unlimited monetary means for the purchase of goods and services and capital assets in all the occupied territories. The German orders on which the industries of these countries are engaged are paid for from the same funds. It is not money that sets a limit to the German

¹ Cf. *Die Bank*, February 25th, 1942.

purchases: it is the increasing shortage of raw materials and food-stuffs, the disorganization of transport and the general decline in output and productive efficiency, to which reference has already been made. The fact that the Germans pay out money for what they buy may give their individual transactions a semblance of legality. But the money is additional money which the local central banks are forced to create; it involves no real payment by Germany. Germany's elaborate financial methods do not therefore, for the time being at least, differ in essence from simple seizure and expropriation. But in comparison with seizure and expropriation they have the disadvantage of creating incalculable monetary problems for the future. It will be shown in Chapter IV how greatly the volume of currency and bank deposits has increased throughout occupied Europe as a result of the proceedings here described. The vast expansion of purchasing power is dammed up for the time being by the stringent controls which Germany enforces there and which depend directly, of course, on her military and political power. It is clear that any change leading to a breakdown in these controls would at once release the accumulated forces of inflation.

There remains to be mentioned one further device used by Germany in her dealings with the rest of the continent, a device which serves the same ends, but which does not entail the same expansion of purchasing power: that is, the manipulation of export and import prices. In 1940 Germany discontinued the system of export subsidies which she had practised formerly to compensate for the overvaluation of the mark. Since then, she has gone even further, raising wherever possible the prices of such goods as she allowed to be exported; while in the countries under her control she has insisted on the strict enforcement of price and wage controls so as to keep down the prices of her imports. This may be observed to some extent from the price indices for export and import goods available for certain countries whose trade since 1940 has been predominantly with Germany.¹ These price indices have lost much of their value owing to the radical changes in the composition of trade; but they may nevertheless afford a useful illustration.

Denmark's price index for export goods rose by 7% from March 1941 to March 1942 while the import price index increased by 3%. Finland's price indices, for which only annual averages are available, rose, in the case of exports, by 18%, while the proportionate rise in import prices from 1940 to 1941 was twice as great, namely 36%. In Switzerland, home-produced commodities rose in price by 15% between January 1941 and January 1942 while imported goods rose

¹ Cf. Table 2 in Chapter V, below.

by 28%. Sweden's export price index rose by barely 5% from October 1940 to October 1941, while import prices increased by 25%. Bulgaria's export prices, according to the annual indices for 1940 and 1941, increased by 7%, while import prices rose by 22%.

The fact that countries such as Denmark, Bulgaria and Slovakia, whose trade balance was active in 1940, showed an import surplus in 1941 is clearly due, in part if not in whole, to the deterioration in their terms of trade. This change in price relationships meant that, even if exports and imports remained the same in *value*, the countries trading with Germany received an ever smaller physical volume of imports in return for a larger volume of exports; and some of them even got into Germany's debt through the increase in German export prices. Norway, at the beginning of 1942, had a clearing debt of about 200 million kroner, due partly to the great rise in prices of German goods, but partly also to the fact that even goods that were imported from Germany for the German military authorities in Norway were debited to the Norwegian clearing account.¹ The Finnish trade position, strained in the extreme, was greatly aggravated by the widening spread between export and import prices in 1941. Finnish imports in 1941, excluding military supplies, were valued at 8,820 million markkaa, of which less than half (4,188 million) was paid for by exports; and the foreign liabilities of the Bank of Finland alone, consisting mainly of clearing debts, increased by 1,903 million markkaa in the course of the year.

SOVIET RUSSIA'S ECONOMIC PROBLEMS

The Soviet economy was not unprepared when Germany launched her assault. For fifteen years previously Russia's economic life was dominated by a vigorous drive for industrialization. Defence industries were among those to which special attention was devoted; and the development of the Eastern territories, rich in natural resources, was among the foremost objectives of economic policy. Capital formation was pushed forward at a rapid pace; and this meant that a relatively high proportion of the country's productive forces was engaged in investment industries, that is, in industries generally well suited for conversion to war purposes. The organization of war economy was ready; no essential changes were required in the existing machinery of State control and planning. When the invasion came, that machinery was at once employed to reduce consumption, to divert civilian industries to defence needs, to mobilize all available manpower and raw-material resources and to allocate them to the most essential tasks. Bread cards, abolished in 1935,

¹ Cf. O. C. Malterud, *op. cit.*, p. 37.

were re-introduced in the large cities in July 1941, even though the satisfactory harvest of 1941 assured an adequate food supply for the time being. Restrictions on hours of work were suspended. Industrial conscription of all men (between the ages of 16 and 55) and women (between 16 and 45) not serving in the army or working in war industries was introduced by a decree of February 1942. A similar decree relating to agricultural labour was issued in April 1942, substantially increasing the minimum quotas of work to be performed by members of collective farms, and mobilizing children of 12 to 16 years for agricultural employment. At the same time the "Stakhanovite" campaign for industrial efficiency and increased productivity was greatly intensified.

The loss of territory, up to the spring of 1942, did not involve a proportionate loss in productive capacity. Of the total railway network, about 35-40% was lost. But the great bulk of the rolling stock was saved. The evacuation of rolling stock was indeed part of a great movement of men and machines away from the threatened areas. Factory equipment was removed as far as possible, together with the skilled labour forces. Agricultural workers were also evacuated, especially from the Ukraine, together with large numbers of live-stock. The war thus accelerated the shift of productive power towards the Eastern territories. This mass migration of workers and industries was carried out largely in the autumn of 1941. In the winter of 1941/42 the interruption and partial reversal of the German advance provided the necessary breathing space for the re-settlement and re-organization of the evacuated industries. As a complement to the evacuation programme, a "scorched-earth" policy was adopted on a large scale aiming at the destruction of buildings and installations that could not be removed from the enemy's grip.

From all accounts it seems that the evacuation was remarkably successful. But it could not prevent a serious loss of natural resources. The Dniepropetrovsk region alone accounted in 1938 for over 50% of total extraction of iron ore in the Soviet Union and the Don Basin for about 60% of the output of coal. Among foodstuffs, the production of sugar was the most affected, since the territories under German occupation in the spring of 1942 provided about 85% of the total before the war. Sugar, accordingly, has been one of the commodities recently furnished to Soviet Russia by the United States.

The Soviet authorities have made strenuous efforts to offset at least part of these losses by the opening of new mines and by the expansion of farm output in the Eastern territories. It has been their policy, in fact, to stimulate local production of minerals and foodstuffs to the utmost, so as to make each separate region as nearly

self-sufficient as possible, partly with a view to relieving the strain on transport. This tendency towards regional development in the Soviet war economy, accompanied by a certain decentralization of controls, is one which, as mentioned before, has shown itself also in the United Kingdom and in Germany.

CHINA'S ECONOMY IN TRANSFORMATION

The economic problems of China in the first five years of her resistance to Japanese aggression were in some respects similar to those of Soviet Russia during the first year of the German invasion. Evacuation and "scorched earth" policies alike were practised in China on a considerable scale. Many important factories were transplanted from the coastal provinces to the interior of China. Railway facilities being wholly inadequate, the equipment, materials, and workers were transported by junks and steamers up the main rivers (a method which, for geographical reasons, was of little avail in Russia).

The re-establishment of these factories in the interior laid the foundation to the remarkable industrial development which has begun in that area. Even more important than the removal of physical equipment was the migration of industrial workers, technicians and intellectuals. The fruits of modern science, technology and industrial organization were thus brought to bear on the vast but hitherto dormant resources of inner China; and under the spur of national necessity, a spirit of energy and enterprise was infused into communities living in a stagnant and feudal condition.

Three main types of economic organization were evolved in the development of the interior provinces. The heavy industries, including munitions, were developed by the State, and were operated by the National Resources Commission, a subsidiary of the Ministry of Economic Affairs. A Central Machine Works, for example, was established in the province of Yunnan for the production of machinery and military equipment. A Central Electrical Manufacturing Works for the production of electrical equipment is another important enterprise owned by the National Government. New blast furnaces and steel plants have been set up in Szechwan and Yunnan, provinces rich in iron ore.

The light industries manufacturing consumers' goods were developed by private enterprise.

Thirdly, there has been a great expansion of the industrial co-operative movement, by which small-scale production is given the benefits of technical knowledge and of large-scale purchasing, marketing and standardization.

The output of coal in the interior increased from 3.7 million tons

in 1937 to 5.7 million tons in 1940, or by over 50%. The generating capacity of electrical power plants in the south-western provinces increased by 25% between 1937 and 1941. In addition to iron and steel, the output of tin, copper, tungsten, antimony, wolfram and mercury has also been expanded. The development of roads and railways has received particular attention. The serious shortage of petroleum for motor transport has been mitigated to some extent by the production of alcohol from sugar beets and by the use of wood oil and charcoal burners.

It has been estimated that in 1941 Free China, though containing about two-thirds of the total population, had less than half of the cultivated area of all China. The agricultural development of the interior became consequently one of the foremost objectives of the National Government's economic policy. A National Agricultural Research Bureau was set up to promote agricultural improvement; reclamation and irrigation works were taken in hand on a large scale; farmers were encouraged to migrate into the newly developed regions; and agricultural production in general was stimulated by loans, subsidies, interest reductions, tax concessions and by the formation of co-operative societies.

As was observed in the last *Survey*,¹ the requirements of war finance, met largely by borrowing from the banks, produced a rapid rise of prices. Since the middle of 1941, the Government has taken a variety of measures to hold the inflation in check.

Food prices are reported to have risen from 20 to 30 times during the nine months from September 1940 to June 1941. In July 1941, a Ministry of Food was set up, with a network of Food Control Bureaus in the provinces, in order to check hoarding; to stimulate output and to ration supplies. The effect of these measures was strengthened by a good harvest and the price of rice is reported to have declined by 50% in the succeeding six months.²

A Commodity Administration was founded early in 1942 to enforce a system of price and commodity control on the same lines but on a wider scale.

As tax assessments could not be adjusted frequently enough to keep pace with the inflation, the Government introduced a number of fiscal reforms to increase its real revenue. Early in 1942, reviving an ancient tradition, it began to collect the land tax in kind; and these collections brought in enough to cover a large part of the food requirements of the army and the civil service. The rest of these requirements was met by compulsory government purchases of food-

¹ *World Economic Survey 1939/41*, Chapters IV and V.

² Cf. *China at War*, May 1942.

stuffs from landowners paid partly in cash and partly in "food bonds" expressed in physical units of the product in question.

Another method to strengthen the central revenue was the creation of monopolies. Sugar and salt were placed under government monopoly in January 1942, and the system was later extended to matches and tobacco.

A fiscal reform of far-reaching significance was initiated in the summer of 1941 when the National Government decided to take over the main sources of revenue of the provincial governments, including the land tax, in return for fixed grants from the central budget to cover the indispensable costs of local administration. A uniform and centralized system of taxation thus came into being for the first time.

In order to stimulate private saving and to promote the sale of Government securities to the public, the Government made use of the \$500 million loan it received from the United States in February 1942. On the security of a part of this money it began issuing domestic Treasury certificates and bonds ("Gold Savings Certificates" and "Victory Gold Bonds") redeemable after one to ten years in U.S. dollars or in domestic currency at the rate of the day.

Finally, the whole system of war finance and war economy in Free China was further strengthened by the National General Mobilization Act, which came into force in May 1942, providing for the compulsory purchase or commandeering of private property and commodity supplies, for the control of prices and consumption, and for the conscription of labour.

In "occupied" China—that is, in the areas subject to Japanese military interference—the resistance of the local population has constantly tended to obstruct the Japanese programme of economic exploitation. Japan's policy was to exploit these areas chiefly as a source of raw materials. The rural population, however, has tended to replace "cash crops"—including raw cotton, wool and other materials required by Japan—by "subsistence crops," such as rice and wheat, which it consumes itself. In consequence, it appears that Japan obtains less Chinese wool and cotton than she obtained by normal trade before 1937. The following data are available concerning exports of five important materials from China to Japan.¹

Only in the case of salt and coal was Japan able to obtain more in 1940 than in 1936. Of the other three materials, the quantities shipped to Japan seem to have been much lower in 1940 than in 1936.

The loot collected by the Japanese army may well have been considerable, in spite of the Chinese "scorched-earth" policy. But it is

¹ See H. D. Fong: "Economic Reconstruction in Wartime China," *Harvard Business Review*, Summer Number, 1942.

China's Exports of Certain Products to Japan

	(In thousands of metric tons)				
	Raw Cotton	Wool	Salt	Coal	Iron Ore
1936	26	96	312	1,000	1,301
1937	23	16	433	1,275	586
1938	96	95	592	1,611	79
1939	5	14	350	2,369	102
1940	3	30	679	3,785	230

one thing to seize existing supplies; it is another to harness the productive forces of a subjected population for the invader's benefit.

In Manchuria the Japanese have experienced difficulties similar to those in the territories occupied since 1937. Agricultural production declined in 1941, partly because of a falling off in the annual migration of labour from North China. In addition, the peasants showed a marked reluctance to deliver their crops to the official collecting agencies, in view of the impossibility of purchasing manufactured goods with the money received. In consequence the authorities were forced to adopt a system whereby Japanese cotton goods were distributed to farmers in proportion to crop deliveries; and a Manchurian Agricultural Produce Corporation was formed with the object of controlling the collection, distribution and exportation of farm products.

EXTENSION OF GOVERNMENT CONTROLS IN JAPAN

The freezing of Japanese assets in the United States, the British Commonwealth and the Netherlands Indies in July 1941 was followed by a great extension of Government controls in Japan for the purpose of diverting export industries to other uses, developing substitutes for commodities previously imported, and increasing the output of war supplies. As exports of raw silk, for example, came to a standstill, a campaign was started immediately to divert the land from silk to cereal production. Pending the completion of this diversion, steps were taken to use the current output of silk worm pupae for the production of oil and fertilizers. Plants were built for synthetic petroleum, which subsequently, however, became unnecessary. Supplies of cotton and woollen textiles became very scarce, and the succeeding conquests did nothing to alleviate this shortage. The synthetic textiles that began to be made were inadequate in quantity and quality. One of the most serious effects of the freezing order was the complete cessation of scrap iron and steel imports from the United States. In view of the lack of domestic sources of iron and coal, efforts were made to speed up the exploitation of such sources in the occupied areas on the mainland; to eliminate production for

civilian needs; and to find substitutes for steel. Thus a programme for the construction of wooden cargo boats was taken in hand early in 1942.

The tightening of Government control in the latter part of 1941 affected all branches of manufacture, mining, agriculture, trade and transport; but it was particularly drastic in the heavy industries, which were placed under the direction of official control organizations for the expansion and concentration of production and for the pooling and allocation of labour, equipment and materials. Of the innumerable decrees and ordinances issued during this period, mention may be made of the "National Commodity and Mobilization Plan" adopted on August 22nd, 1941, calling for a centralized control in the exploitation of the occupied territories, for a special effort in steel and coal production, for a general mobilization of labour reserves and for an immediate expansion of armament output.

The economic preparations for the attack on the United States, the British Commonwealth and the Netherlands Indies were thus extremely thorough. These and subsequent measures inevitably entailed a further cut in the standard of living of the Japanese population. In the spring and summer of 1941, the system of rationing, previously confined to such commodities as sugar, charcoal, matches, etc., was extended to a wide range of foodstuffs including rice, wheat flour, food oil, meat, and soya bean products. Later in the year, orders were issued prohibiting the manufacture and sale of better-grade textile articles and of the remaining durable consumers' goods. The Government took over the purchase and distribution of rice, beef, pork, mutton and horse meat, limiting the quantities retained by the peasants for their own use. The distribution of petroleum for non-essential purposes was stopped on September 1st. The amount of rice allocated for the production of *sake* (rice wine) was drastically reduced. The quarterly beer ration in Tokyo was cut from 6 bottles per household to 4 bottles in the last quarter of 1941. In November a rigid limit was imposed on consumption of electricity, which was further reduced by 30% in the following month. A point rationing system affecting all articles of clothing was adopted in February 1942. Sharp increases in indirect taxation were effected just before December 7th, and again in January 1942. The savings campaign, virtually compulsory even before, was further intensified, and the volume of national savings is reported to have increased from about 12,000 million yen in the fiscal year 1940/41 to over 16,000 million in 1941/42.

All this, however, was not enough to meet the needs of the military machine. A large proportion of the Government's borrowing was met by credit creation. The note circulation of the Bank of

Japan, confined to Japan proper and not affected by territorial expansion, increased by 35% in the twelve months to April 30th, 1942. The consequent rise in prices tended further to lower civilian purchasing power in real terms. The official cost-of-living and wholesale-price indices, after advancing continuously in 1941, were kept almost stationary in the first four or five months of 1942;¹ but these indices are based on official and largely nominal quotations. Reports from Japan indicate a continued price rise. Indeed it appears to have been the policy of the Government to allow free scope to the advance in commodity prices, except in the case of the staple necessities, so as to curtail as much as possible the physical volume of consumption.

Japan's financial methods of exploitation in the territories recently occupied have followed to a large extent the German model. In each separate territory, the military authorities have introduced new currency notes which they issue in unlimited amounts in settlement of their requisitions and purchases. With the countries under "friendly" administrations—Thailand and French Indo-China—the Japanese have concluded clearing agreements through which commercial transactions are paid for in blocked accounts. They have followed the German practice in arbitrarily raising the value of the yen. Thus in Thailand the Japanese yen, which previously was worth about 40% less than the Thai baht, was made equal in value to the baht in April 1942. In March 1942 a South Sea Development Bank was set up by the Japanese Government to finance the exploitation of raw material sources and "to regulate credit conditions" in the South Sea territories; and in the following month the Bank of Japan, by a change in its statutes, was assigned additional functions as a reserve centre and clearing house for the extended "yen area."

TRANSITION TO WAR ECONOMY IN THE UNITED STATES

Japanese aggression brought the United States into the war as an active belligerent in December 1941. The economic defence preparations, of course, had started earlier, and were marked notably by the adoption of the domestic rearmament programme in June 1940 and by the passage of the Lend-Lease Act in March 1941. Under the stimulus of armament contracts, there occurred a remarkable expansion in the volume of employment and economic activity. From April 1940 (just before the announcement of the defence programme) to December 1941 the physical volume of industrial production rose by 50%; and the expansion, though most marked in this field, was not confined to industry. In consequence, as one writer

¹ Cf. *Monthly Bulletin of Statistics* (League of Nations). See also Diagram 1, Chapter V, below.

has put it, "the increase in military expenditures from under 3 billion dollars in 1940 to over 13 billion in 1941, far from being associated with a reduction in civilian consumption, was actually accompanied by the highest level of consumption in our history."²

These developments are summarized in the following table, showing the movement and composition of total expenditure on goods and services in the United States—or, which is the same thing, the total output of goods and services in current money value—during the three years 1939-41.³

Gross National Expenditure (or Output), 1939-41

	\$(100,000,000's)		
	1939	1940	1941
Gross national expenditure (or output)	86.3	94.3	114.7
Government expenditures for goods and services ^a	15.3	16.2	24.7
National defence expenditures ^b	1.4	2.8	13.3
Other government expenditures	13.9	13.4	11.4
Private expenditures for goods and services	71.0	78.1	90.0
Private capital expenditure ^c	10.0	13.1	16.2
Construction	3.7	4.4	5.2
Equipment	4.2	5.6	6.5
Increase in foreign assets (net) ^d	0.8	1.3	1.5
Increase in inventories (net)	1.3	1.8	3.0
Private consumption expenditure	61.0	65.0	73.8
Durable goods	7.2	8.4	10.5
Non-durable goods and services	53.8	56.6	63.3
Indices (1939 = 100) :			
Gross national expenditure (or output)	100	109	133
Wholesale prices	100	102	113
Cost of living	100	101	107

^a Excluding transfer expenditures, not related to currently produced goods and services.

^b Including lend-lease expenditures.

^c "Gross" capital expenditure, including depreciation and depletion charges (for renewal and replacement of plant, equipment, etc.) estimated at 5.2, 5.4 and 5.9 billion dollars in 1939, 1940 and 1941 respectively.

^d Including assets sold in the United States by foreign governments to finance military orders.

Comparing the year-to-year movement of these figures with that of the price indices given at the foot of the table, it is clear that the expansion shown by all the component series (except non-military Government expenditure) was considerable not only in monetary but also in real terms. It may be noted in particular that in addition to the concurrent increase in defence output and civilian consumption, there was also a sharp rise in private capital formation. The

¹ Milton Gilbert: "War Expenditures and National Production," *Survey of Current Business* (U.S. Department of Commerce), March 1942.

² Source: *Survey of Current Business* (U.S. Department of Commerce), March 1942, p. 11.

total volume of output—including farm products, services, etc., as well as manufactures and minerals—would seem to have increased in real terms by some 20% from 1939 to 1941.

After December 7th, war production was sharply accelerated under the direction of the War Production Board set up in January 1942. The output of finished munitions in June 1942 was three times as large as in November 1941, the last month before the declaration of war.¹ This increase was achieved, firstly, by a continued expansion of aggregate production and secondly, by a large-scale conversion of peace-time industries to war-time uses. "Expansion" and "conversion" in the industrial sphere are illustrated in Diagram 1 below. A more comprehensive indication is given by the following comparison between the second quarter of 1941 and the second quarter of 1942, showing the increase in war expenditure and the sources from which it has been met. The amounts shown for the second quarter of 1942 are estimated at the prices ruling in the second quarter of 1941. The intervening rise in prices has thus been eliminated, and the figures consequently reflect the real volume and the real sources of war finance.²

Annual rates, adjusted for seasonal variations. \$(100,000,000's)	Second quarter :		Increase or De- crease (—)
	1941	1942*	
War expenditure	9.0	39.2	30.2
Other government expenditure	13.0	12.4	—0.6
Private capital expenditure	18.7	12.8	—5.9
Private consumption expenditure	75.4	69.4	—6.0
Total national expenditure (or output) ...	116.1	133.8	17.7

* At prices ruling in the second quarter of 1941.

From the last column of the table it appears that the reduction in consumption and in private investment each provided about one-fifth of the increase in war output. More than half of that increase was derived from the expansion in aggregate national output.

This expansion was made possible, in spite of military mobilization, by a further increase in the labour force employed; by longer working hours³ and fuller utilization of plant and equipment; and

¹ The official monthly index of munitions production, based on November 1941 = 100, stood at 303 in June 1942, as compared with 59 in June 1941. The index covers aircraft, ships, tanks, guns, ammunition and other war equipment used in the field.

² Source: *Survey of Current Business* (U.S. Department of Commerce), August 1942.

³ The scope available for expansion on this account is shown by the fact that the average length of the working-week in 1941 was 40.5 hours, compared with over 50 in the United Kingdom and Germany. In February 1942, however, the average working week in war production plants in the United States was 48 hours; in the machine-tool industry it was as long as 55 hours (*cf. Monthly Labor Review*, U.S. Department of Labor, May 1942).

by an increase in labour productivity.¹ The increase in labour productivity, in turn, was due to improvements in organization; to transfers of labour from industries using relatively little capital equipment to highly mechanized industries; and, last but not least, to the preceding investment activity, both private and governmental, which, particularly in 1941, greatly increased the stock of capital instruments—machinery and other equipment—per unit of labour employed.² The capacity of the machine-tool industry was greatly enlarged in 1940 and 1941; and the output of machine-tools and other machinery for productive uses in the first half of 1942 was more than twice as large as two years before.

Of the war industries in the narrower sense, the greatest relative increase occurred in the aircraft industry. To illustrate the scale of the expansion required in that industry, the following passage may be quoted from an official statement: "We think of the automotive industry as the industrial miracle of the twentieth century, but please consider that we are faced with the herculean task of building up the aircraft industry in three short years—1940, 1941, 1942—from the small beginning to a more gigantic output than the automotive industry obtained during 30 years of spectacular development. In other words, airplane production, in 1939, was about equal to the automobile production of 1910. But the airplane production of 1942 must substantially exceed the \$3,000,000,000 of automobile production obtained in 1940."³

Expansion of plant and equipment for war production, though it continued on a considerable scale, met increasing difficulties in the early half of 1942. The installation of new production facilities used up materials that were more urgently required for an immediate increase in munitions output with the existing facilities. Shortages developed, for instance, in steel plates, required particularly for ship-building, and in copper. The Chairman of the War Production Board stated in June 1942 that current production was only limited by the supply of materials. In these circumstances the War Production

¹ How great this increase has been in recent years is shown by the fact that average output per man-hour in 1941 was 20% higher than in 1937 and 42% higher than in 1920.

² An increase in productivity is of course the normal outcome of a process of capital formation; but in this case it was war production rather than private consumption that benefited from the process. The opposite phenomenon tends to occur where the exigencies of war economy lead to capital consumption. In Germany, for instance, it appears from the annual reports of industrial companies that the inability to replace fully the current wear and tear of machinery has frequently necessitated substitution by manual labour; and this has been one of the factors tending to increase the drain on Germany's labour force and to lower her aggregate productive capacity.

³ *Inquiry as to Defense Construction* (Hearings, House Committee on Military Affairs), Vol. 2, April 1941, p. 16.

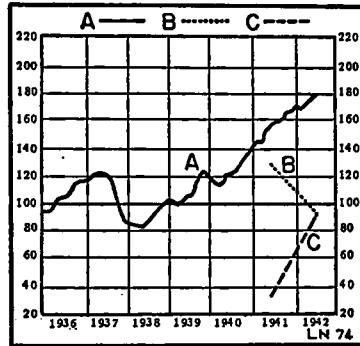
Board decided to curtail its plant expansion programme and to concentrate on further conversion of civilian industries to war requirements.

Conversion, indeed, was taken in hand on a large scale very soon after December 7th, and in the first quarter of 1942 the movement was in full swing. Fears of widespread temporary unemployment arising from the stoppage of civilian output proved unfounded. The volume of factory employment decreased by less than 1% between January and March 1942, and the industrial production index showed only a very slight drop in March (see Diagram 1). Con-

Diagram 1. Industrial Production in the United States

(A) Total production (1935-39 = 100; adjusted for seasonal variations; monthly movement, January 1936-June 1942); of which: (B) Production for civilian needs (June 1941 and June 1942); (C) Production for war purposes (June 1941 and June 1942).

Source: Federal Reserve Bulletin, July 1942, p. 628.



version was in most cases accomplished much more rapidly than was generally expected.

The results of this process, as well as the increase in total production, may be observed from Diagram 1. Industrial production for civilian needs declined by 28% between June 1941 and June 1942, and its share in the total index dropped from 80% in the former to 51% in the latter month. Production for war purposes during the same period increased by 275%,¹ and its share in the total rose from 20% to 49%.

As part of the conversion programme, the manufacture of the great majority of durable consumers' goods was prohibited or curtailed. In spite of the fact that there existed stocks to draw upon, the volume of civilian purchases, as distinct from production, also showed a marked fall in the spring of 1942. For the first time in

¹ This covers, in addition to finished munitions, production of clothing and other supplies for the armed forces, of equipment for war plants and of basic materials to be used for war purposes. The official index of munitions output, quoted earlier, refers solely to finished implements of war.

more than three years, the total value of retail sales in April 1942 was less than in the same month of the preceding year. In May 1942, retail sales were 10% less in value than in May 1941; and since in the interval retail prices had risen by some 15%, there was a drop of over 20% in volume. Sales of durable goods, in particular, were down by 47% in value and by more than half in volume.

This slackening in purchases was partly due to the fact that consumers had accumulated large supplies in anticipation of shortages and higher prices. Moreover, the official price ceilings announced in April 1942¹ removed much of the inducement to forward buying. But these were influences of a special and temporary nature. The problem created by the gap between consumers' disposable income and the volume of civilian goods available—a gap that was widening owing to an increase in the former as well as a decrease in the latter—became more and more serious. The problem may be illustrated by the following figures concerning the disposal of consumers' income in the first quarter of 1941 and 1942:²

	First quarter:		Increase or Decrease (—)
	1941	1942	
\$(000,000,000's)			
Total consumers' income	20.4	25.1	4.7
Less direct personal Federal taxes	0.8	1.9	1.1
Disposable income	19.6	23.2	3.6
Of which: Saved ^a	3.1	5.4	2.3
Spent on goods and services	16.5	17.8	1.3
Expenditure on goods and services, valued at price ruling in the first quarter of 1941	16.5	15.9	—0.6
Expenditure dissipated in the form of higher prices..	—	1.9	1.9

^a This is largely a residual item and includes, to the extent of about 10% of the 1941 figure, direct taxes paid to state and local governments. The increase in these taxes from 1941 to 1942 was so slight that the change in this item can be wholly attributed to savings.

It appears that the volume of goods and services available to consumers in the first quarter of 1942 was 4% less than in the corresponding period of 1941. But, even after saving practically two-thirds of the increase in their disposable income, consumers had more money to spend; and their competition for the available commodities served no other purpose than to drive up prices by approximately 12%.

It has been officially estimated that during the year 1942 as a whole, individual incomes will reach a level of \$117 billion dollars, of which taxes and savings are expected to absorb \$31 billions,

¹ See Chapter V, below.

² Source: *Survey of Current Business* (U.S. Department of Commerce), May 1942, p. 4.

leaving \$86 billions available for spending. Against this, the supply of available consumers' goods and services, at the prices ruling in April 1942, has been estimated at no more than \$60 billions, leaving a gap, which, in the absence of increased taxation and/or saving, would produce a price rise of nearly 25%.

Higher taxes were, in fact, proposed by the Treasury in the summer of 1942, and at the same time the war savings campaign was intensified. As already mentioned, retail price ceilings were introduced in April; and the cost-of-living index remained practically stable in the third quarter of 1942. Ration cards were introduced in May for sugar and, in the eastern states, for gasoline. The restrictions on consumers' credit introduced in September 1941 were tightened up in March 1942 and again in May. A decision made by the National War Labor Board in July 1942 to link up money wage rates with the cost of living so as to stabilize the relation between the two at the level of January 1941, though it tended to increase money incomes further, implied in effect that the inevitable reduction in consumption was to be carried out by such means as increased taxation, savings and rationing, rather than by a rise in prices unaccompanied by an increase in income rates.

Having outlined the increase in war production and its two main sources—"expansion" and "conversion"—we must also take note of the fact that a growing proportion of it was exported. The physical volume of total exports from the United States in the first four months of 1942 exceeded all previous records, and was 31% larger than in the same months of 1941. In the corresponding period of 1939, exports represented approximately 3.6% of the gross national output; in 1941 the proportion rose to 4.4% and in 1942 to 4.9%.

Imports in the first four months of 1942 were 16% less than in the same period of 1941. The resulting export surplus, the largest in value since 1919, was the largest ever attained in physical volume.

The export figures include lend-lease shipments, but not shipments to United States armed forces. Lend-lease assistance to the British Commonwealth, China, the Soviet Union and the 33 other nations eligible for it, accounted in fact for about one-half of total exports in the early part of 1942. Moreover, there was a significant change in the composition of the lend-lease deliveries. In 1941 they consisted predominantly of agricultural products and industrial materials. In the spring of 1942 more than half consisted of military equipment.¹

To coordinate the war production of the United States with the needs and resources of other members of the United Nations, five important agencies were set up in 1942. On January 26th, a Muni-

¹For more details concerning the foreign trade and the lend-lease programme of the United States, see Chapter VI.

tions Assignments Board was set up to pool the munition resources of the United States and the United Kingdom and to regulate their distribution among all the United Nations. On the same date, the Chairman of the War Production Board and the British Minister of Production formed a Combined Raw Materials Board to secure the most efficient distribution, use and expansion of the available raw material resources; and a Combined Shipping Adjustment Board was created to operate the British and American merchant tonnage as a common pool. On June 9th, a Combined Production and Resources Board, consisting of the Chairman of the War Production Board and the British Minister of Production, was established with the object of integrating the production programmes of the two countries. On the same day, the United States and the United Kingdom created a Combined Food Board "to obtain a planned and expeditious utilization of the food resources of the United Nations."¹

THE WAR EFFORT OF THE UNITED KINGDOM

The development of the British war economy is most clearly revealed by the official estimates of national income and expenditure recently published.² These estimates are expressed in current money values and are thus affected by the rise in prices that has taken place since the beginning of the war. We may, however, attempt to evaluate the relevant magnitudes at pre-war prices so as to obtain a rough idea not only of the growth in the "real" volume of war expenditure but also of the "real" sources from which it has been met. The calculation is necessarily tentative and more than a purely illustrative value is not claimed for it, even though the general order of magnitude of the figures presented is probably not very far from the truth.³

¹ Cf. *Fifth Report to Congress on Lend-Lease Operations*.

² Cf. "An Analysis of the Sources of War Finance and an Estimate of the National Income and Expenditure in 1938, 1940 and 1941," *Cmd. 6347*, April 1942.

³ The calculation here given follows the method adopted in two articles published in *The Economist* (London) on January 3rd and January 31st, 1942. It is based, however, on the revised and up-to-date official data published in April 1942, which may be summarized as follows:

	1938	1940	1941
	£(000,000's)		
Government expenditure on goods and services ^a	833	3,056	4,182
Personal expenditure on consumption ^b	3,584	3,871	3,863
Net private investment at home	406	—	—
Total expenditure	4,823	6,927	8,045
Government expenditure as % of total	17	44	52
Net disinvestment at home	—	286	493
Net disinvestment abroad	55	759	798
Net national income	4,595	5,585	6,338
Balance ^c	173	297	416
Total, as above	4,823	6,927	8,045

Footnote 3 continued on p. 39.

*National Income and Expenditure in Real Terms**

(i.e., at 1938 prices, expressed as percentages of the net national income in 1938.)

	1938	1940	1941
Government expenditure	17	55	70
Personal consumption	76	70	63
Investment at home	8	—	—
Disinvestment at home	—	—6	—8
Disinvestment abroad	—1	—14	—15
Net national income	100	105	110

The increase in Government expenditure from 17 in 1938 to 70 in 1941 may be taken to represent the country's economic war effort, equal to 53% of the 1938 national income.¹ This increase was met from the following sources: expansion of total current output, as reflected in national income (10); reduction in consumption (13); release of resources from the production of new investment goods (8); depletion of commodity stocks and release of resources from the production of investment goods for replacing current wear and tear (8); liquidation of foreign assets and increase in overseas liabilities (14), making a total of 53% of the 1938 national income.

In the same way, the increase in Government expenditure from 1940 to 1941, equivalent to 15% of the 1938 national income, came out of increased production (5), reduced consumption (7), disinvestment at home (2) and disinvestment abroad (1).

Footnote 3 continued from page 38:

* Including local authorities; excluding transfer payments.

¹ Plus Government subsidies; minus indirect taxes on consumption.

² Representing certain indirect taxes, local taxes and war insurance premia, of which the allocation to component groups of the total is not given.

The conversion of these figures to the 1938 price-level involves a host of difficulties. It is quite probable, for instance, that the prices of goods and services bought by the Government and by consumers have not changed in the same degree; but there is no means of making allowance for this. Nor is it possible to make precise allowance for the changes that have occurred in the *composition* of, for instance, consumers' outlay. In computing the indices shown in the text it has been assumed that, on the average, prices in 1940 were 15-20% and in 1941 25-30% higher than in 1938. The percentage rise of money-wage rates was less; that of the wholesale-price index was greater. The latter, however, is heavily weighted with imported goods, which, for special reasons, have risen most in price. In percentages of the 1938 level, wage-rates, the cost of living and wholesale prices in 1940 and 1941 were as follows:

	1940	1941
Money wage rates	112	122
Cost of living	119	127
Wholesale prices	135	151

¹ This is subject to two qualifications. Firstly, there has been a decrease in non-war Government expenditure in real terms, so that war expenditure has increased by somewhat more than total Government expenditure. Secondly, it should be remembered that even in 1938 a large part—nearly one-half—of Government expenditure (excluding transfer payments) was for military purposes and that accordingly total military expenditure in 1941 was equivalent to more than 53% of the 1938 national income. But for the *transition* problem, what matters is the *increase* from 1938 to 1941.

The wide margin of uncertainty to which these indices are subject precludes further refinements of analysis. But it may be useful, taking the figures as shown, to set out the approximate proportions in which the various sources would seem to have contributed to the war effort:

	Increase in Government expenditure	
	from 1938 to 1941	from 1940 to 1941
Reduction in consumption	25%	47%
Increase in total output	19%	33%
Cessation of new investment	15%	—
Disinvestment at home	15%	13%
Disinvestment abroad	26%	7%
Total	100%	100%

The last item, "disinvestment abroad," does not accurately reflect the economic assistance—the "import surplus"—received by the United Kingdom from the rest of the world.¹ Thus, on the one hand, a part of this disinvestment has served to finance military operations overseas and has not, to that extent, given rise to any imports into the United Kingdom. On the other hand, however, this item takes no account of the growing volume of lend-lease shipments received from the United States since March 1941, which are not included in British Government expenditure.

It may be better therefore to confine our attention to the domestic sources of war finance. The proportions in which they contributed to the war effort were approximately as follows:

	Increase in Government expenditure on domestic resources	
	from 1938 to 1941	from 1940 to 1941
Reduction in consumption	33%	50%
Increase in total output	26%	36%
Cessation of new investment	21%	—
Disinvestment at home	20%	14%
Total	100%	100%

Disinvestment as a source of war finance decreased in relative importance in 1941, while the reduction in consumption appears to have provided about half and the expansion in output about a third of the increase in Government requirements over 1940.

From the consumption estimates given earlier, which include income received in kind by the armed forces and thus cover the whole

¹ Needless to say, the external disinvestment has made possible not only an increase in imports but also a diversion of export industries to domestic war production. The Lancashire cotton industry, one of the leading export industries in the past, may be mentioned as an example. Exports of cotton manufactures were greatly restricted, and in March 1942 they were prohibited altogether.

population, the volume of consumption appears to have declined by some 17% between 1938 and 1941. Further curtailments were effected in the early months of 1942. Rationing was extended, for example, to soap (in February) and to sweets and chocolates (in July). The basic petrol ration was withdrawn altogether at the end of June. A sharp cut was made in the clothing ration. Restrictions were imposed on consumption of coal and electricity, even though the introduction of a general fuel rationing scheme was temporarily postponed.

On the other hand, a series of measures were taken to secure a further increase in war production, not only by further conversion of civilian industries but also by further expansion of aggregate output. Thus a new National Service Act made single women aged 20 to 30 liable for essential war work or, alternatively, for auxiliary military service. The policy of industrial concentration initiated in April 1941, which during the first year of its operation resulted in the release of over 40% of workers in the industries concerned,¹ was extended to other fields, such as retail trade.

A Minister of Production, replacing the former Production Executive of the War Cabinet, was appointed in February 1942 and was charged with the general direction of the war output programme including the allocation of raw materials and industrial equipment. The change in organization was marked by a certain decentralization of control increasing the authority and competence of the regional boards.

According to a statement of the Minister of Production, the output of all weapons of war as a whole increased by 100% during the twelve months to June 1942.

The expansion of industrial activity produced an acute shortage of coal in the spring of 1942. Exports of coal, it is true, had fallen to insignificant proportions. But the decline in exports during the first two years of the war had been matched in part by a reduction in total output, owing chiefly to the transfer of miners to other industries and to the armed forces. In the first half of 1942, however, industrial consumption of coal exceeded all previous records; and, in addition to certain restrictions imposed on non-industrial uses, strenuous efforts were made to secure a return of miners to the pits and to raise their average productivity. With this end in view, coal miners were granted a wage increase in June 1942, which was followed by a rise in the selling price of coal. In the same month, a Ministry of Fuel and Power was created with the object of expanding the production and controlling the consumption of coal.

¹ From July 1939 to April 1941, employment in these industries had already declined by roughly one-half, mainly as a result of the Limitation of Supplies Orders concerning non-essential production.

The general rise in commodity prices, due largely to the higher cost of imports owing to the reduction in the exchange value of the pound and the increase in freight and insurance rates, caused much concern during the first year after the outbreak of war. With the extension of rationing, industrial controls and Government subsidies for essential consumers' goods, the rate of increase has slowed down considerably, as is clear from the following figures :

Percentage change in:	June 1939 to June 1940	June 1940 to June 1941	June 1941 to June 1942
Wholesale prices	+36.7	+13.4	+4.8
Cost of living	+18.3	+10.5	-0.5
Weekly wage rates	+10.4	+ 9.4	+7.0

The rise in average wage rates in the twelve months to June 1942 was mainly due to an increase in agricultural wages, the effects of which on the cost of living were offset by higher subsidies, and to the rise in coal miners' wages mentioned earlier. Owing to longer hours, wage *earnings* have, of course, increased much more than rates. But rationing, while securing an adequate and equitable distribution of daily necessities, has closed many outlets of expenditures; and the workers' increased wage earnings, after deduction of increased taxes, have tended to accumulate in the form of bank notes, deposits or savings certificates as a claim on future consumption.

THE STERLING AREA

The contribution made by the members of the sterling group to the war effort of the United Kingdom is reflected to some extent in their central exchange reserves, which, as was explained in the last *Survey*,¹ arise largely from British purchases and are invested largely in British Treasury bills. The increase in these reserves since the beginning of the war is illustrated in the following table. The table, it should be noted, does not cover the whole of the sterling area; nor does it include, except in two cases, the holdings of commercial banks.

The rising trend in sterling-area exchange reserves was very marked during 1941, Australia being the only important exception. The total for the seven countries shown increased by £85 million, from £353 million in December 1940 to £438 million in December 1941; and the increase continued in the early months of 1942, particularly in India, Iraq and Ireland. In addition to the increase in exchange reserves—representing largely, in effect, a short-term advance to the United Kingdom—some of these countries, as will be seen below, made important contributions by repatriating long-term securities formerly held in the United Kingdom. In these two ways

¹ *World Economic Survey, 1939/41*, pp. 130 ff.

Exchange Reserves of Certain Sterling Area Countries

	Converted into pounds sterling (000,000's)			
	Aug. 1939	Dec. 1940	Dec. 1941	June 1942
Australia: Commonwealth Bank	25.3	69.4	47.9	51.0
New Zealand: Reserve Bank	4.6	9.3	10.7	17.5
New Zealand: Trading Banks	2.6	9.6	9.7	10.6 ^c
India: Reserve Bank	50.2	141.6	206.2	242.1
Iraq: Currency Board	5.3	6.8	11.5	15.0 ^d
Egypt: National Bank	17.9	34.1	51.7	.
South Africa: Reserve Bank	6.4	0.8	0.3	1.1
Ireland: Currency Commission	7.5	12.6	15.9	15.8
Ireland: Irish Banks	61.8 ^a	68.8 ^b	83.8 ^b	88.0 ^e

^a Second quarter 1939. ^b Fourth quarter. ^c April. ^d May. ^e First quarter.

the sterling area has provided a substantial proportion of the external financing ("disinvestment abroad") which, as was shown in the preceding section, has played so important a part in the United Kingdom's war effort.¹

The members of the sterling group are highly dependent on overseas trade, and the balance of external payments is an important element in their economic situation. But we must also take note of the domestic factors affecting recent developments in these countries.

Australia's economic mobilization was sharply intensified in the autumn of 1941, when the Federal Government set up a Production Executive to make an industrial survey and a register of manpower and to divert labour, materials and plant from non-essential activities to war production. In December, severe restrictions were imposed on imports of consumers' goods. In February 1942, the Government adopted a comprehensive "Economic Plan," including a rigid pegging of prices and wages at the existing level; a limitation of profits to 4%; a prohibition of absenteeism and a strict control over transfers of labour. Drastic measures were taken to release manpower for the war industries and the armed forces. Private building, which had been remarkably active in the first two years of the war, was made subject to permit, and, in fact, dropped off heavily in the first half of 1942. The gold mining industry lost a large part of its labour force and curtailed its output in consequence. The manufacture of a wide range of consumers' goods was prohibited. Judging by the volume of sales and employment in retail trade, consumption in the first quarter of 1942 was slightly higher than a year before, but was beginning to fall off as a result of the various restrictions imposed. In May 1942,

¹ It should be mentioned, however, that the British Government, in order to help producers overseas, has used some of these funds for the purchase of primary products—such as Australian wool and Egyptian cotton—in excess of the quantities immediately required by it.

for example, the Government ordered a 25% cut in sales of clothing and clothing materials. A coupon rationing scheme for these articles was introduced in the following month.

New Zealand took similar measures at the beginning of 1942 to concentrate her resources on the defence effort. In January 1942 the Minister of National Services was given full power to direct manpower into essential industries and to mobilize additional labour supplies. Private building was restricted; public works expenditure was sharply curtailed, and the Government's employment promotion schemes were practically liquidated. Wages were kept unchanged in the twelve months to March 1942, while the rise of the cost of living was limited to 2% and that of wholesale prices to 5% during the same period.

India's industrial development, like that of Australia and New Zealand, has been intensified as a result of the war, and has made notable gains in the output of iron ore, steel and a variety of war supplies. A limiting factor has been the shortage of skilled labour. In the spring of 1942, the Government expanded its labour training programme; and a scheme under which Indian artisans were sent to the United Kingdom for six months' training courses completed its first year of operation. Restrictions on motor traffic and coastal shipping, and transfers of rolling stock to the Middle East placed a heavy strain on the internal transport system; and steps were taken to promote domestic manufacture of railway equipment. Wholesale prices having risen by over 25% in the preceding twelve months, preparations for a general control of prices were taken in hand in the spring of 1942. The price of silver rose by over 30%, reflecting the hoarding demand of the peasants, which was met partly from stocks and partly by a reduction in the silver content of coins. British purchases of Indian supplies were financed not only by a substantial net increase in India's sterling balances but also by the repatriation of Indian Government sterling bonds amounting to about £100 million from the outbreak of war up to the end of 1941. A further £80 million of long-term debt was repatriated in March 1942; and the last remaining external bonds of the Indian Government, amounting to about £78 million, were called for redemption in January 1943.

Egypt's agriculture, faced with a loss of export markets, was assisted by British purchases of three-quarters of the 1940 cotton crop. Most of this was in excess of British requirements and was left in storage in the country. The support given to cotton growing kept up the cotton acreage and led to a decline in cereal production. Wheat, formerly an export product, became scarce in 1941, increased in price, and had to be imported in considerable quantities. In consequence, British purchases of cotton in 1941 were reduced to one-half of the

crop and were made conditional upon a 25% reduction in the cotton acreage, while the Egyptian Government introduced subsidies for increased wheat production. The general level of prices rose by some 30% during 1941, and towards the end of the year the Government, in an effort to check the rise, took various measures including an extension of price fixing, control of distribution, and a ban on the export of a number of foodstuffs.

In South Africa, the extension of Government control was marked by the appointment of a Price Controller in August 1941 and of a Controller of Food Supplies early in 1942, while the Director-General of War Supplies was given additional powers to mobilize resources for war production. Industrial activity, as reflected, for example, in employment of labour and consumption of electricity, continued to grow. Progress was made notably in the engineering and metal working industries, based on the abundant domestic sources of coal, iron ore and other minerals. The gold mining industry reached the end of a long period of expansion, as working costs and taxes increased and as the skilled labour, explosives and equipment required by it were in demand for more urgent purposes. Towards the end of 1941, the Government repatriated over £30 million of long-term bonds from the United Kingdom, while on private account repatriation of gold mining shares continued.

In neutral Ireland, the war has caused a shortage of imported materials, which, in the absence of large-scale war production, has led to a fall in industrial and commercial activity. The quantum of imports dropped by over 60% from 1939 to 1941, while that of exports declined by 22%. The shortage of coal, only partly relieved by increased use of peat, has been particularly severe and has necessitated a strict rationing of household fuel and gas and a drastic curtailment of railway services; while the lack of petrol has put an end to private motoring. Rationing of clothes was introduced in June 1942. Official rationing of foodstuffs was confined to sugar, tea and cocoa; but a shortage of wheat arose in the spring of 1942, leading to informal rationing coupled with official appeals for a voluntary reduction in bread consumption. The wheat acreage, under a compulsory tillage plan, was increased by about 50% from 1940 to 1941, largely at the expense of pasture; but the yield did not rise in proportion and was not sufficient to make up for the decline in imports. Expansion of cereal production has been impeded by a lack of artificial manure; and an increased use of seaweed as a fertilizer has been possible only in coastal areas. In spite of a greater demand for rural labour in cereal and peat production, unemployment, though relieved to some extent by migration to the United Kingdom, has remained serious in the towns. National defence activities have not been on such a scale as to

counter-balance the decline in private business. Government expenditure in the fiscal years 1940/41 and 1941/42 was not more than 10% in excess of current revenue.

CANADA'S CONTRIBUTION

Though not technically a member of the sterling area, Canada, in addition to her domestic war effort, has made important contributions to the war economy of the United Kingdom by methods similar to those used in the sterling area proper, namely, by the accumulation of sterling balances and the repatriation of securities; and she has recently gone even further by making a large gift to the United Kingdom.

From the beginning of the war up to March 31st, 1942, the United Kingdom's deficit in her financial relations with Canada, amounting to \$(Can.)1,870 million or about £420 million, was covered as follows:

	Can. \$(000,000's)
Payments in gold	250
Repatriation of Canadian Government and Government guaranteed securities..	635
Repatriation of private securities	126
Accumulation of sterling balances	859
Total	1,870

The financing of British war purchases was placed on a new basis at the beginning of 1942 when Canada made a contribution of \$1,000 million to the United Kingdom for the financial year beginning on April 1st, 1942. Of the Canadian sterling balance, \$700 million was converted into a long-term loan free of interest for the duration of the war.

The great increase in Canada's export surplus to the United Kingdom, accompanied by an increase in imports from the United States under the lend-lease arrangement of April 1941,¹ is shown in detail in Chapter VI.

The war has tended to change Canada not only from a debtor to a creditor nation but also from an agricultural to an industrial country. The war-time expansion of her economic activity is shown by the following indices. (Each of the last three series is a component of the preceding.)

	First half of 1940	First half of 1942	Percentage change
	1935-39 = 100		
Physical volume of business	114.4	136.1	+19%
Industrial production	125.1	144.7	+16%
Manufacturing	125.6	151.6	+20%
Steel production	153.6	248.3	+61%

¹ Cf. *World Economic Survey, 1939/41*, p. 139.

The output of manufacturing industry in the first half of 1942 was 20% higher than two years before and over 50% higher than the average of 1935-39. The index of industrial production as a whole shows nearly as large gains, but it has been affected by a reduction in building activity from 1941 to 1942 and by the fact that gold mining has increased only to a very limited extent since the beginning of the war. It has been estimated that in the middle of 1942 over 40% of Canada's industrial capacity was engaged in war work.¹

The industrialization of the Canadian economy is reflected in the composition of national output, showing an increase in the share of manufacturing to practically one-half and a decline in the share of agriculture to about one-fifth of the total.

	1919-28	1939	1941
Agriculture	37.1	25.5	21.0
Manufacturing	33.7	39.2	47.6
Construction, mining, forestry, etc.	29.2	35.3	31.4
Total, net value of production	100.0	100.0	100.0

In agriculture, there has been a marked shift from wheat to other farm products in response to war requirements. The Government has endeavoured to reduce wheat production by "acreage reduction payments" of \$2 per acre based on the 1940 acreages; and the area sown to wheat has thus been reduced by 26% from 28.7 million acres in 1940 to an estimated 21.3 million in 1942. Production of animal food-stuffs, on the other hand, has been encouraged; and the area under barley and oats, the two principal feed grains, has greatly increased. An increase has likewise occurred in the output of flaxseed, a source of vegetable oil which has become particularly important since the loss of the coconut and palm oil resources of the Netherlands Indies, the Philippines and British Malaya.

The outstanding event in the latter part of 1941 was the general price "ceiling" announced on October 11th and enforced as from December 1st, which meant that prices were not allowed to rise beyond the highest level reached in the four weeks prior to October 11th. A noteworthy feature of this scheme was that it imposed a strict limit on wages and salaries as well as commodity prices.²

Cooperation between Canada and the United States has become steadily closer. In April 1941, when the lend-lease principle was extended to materials needed by Canada for the manufacture of war supplies for the United Kingdom, it was agreed that "each country should provide the other with the defence articles which it is best able

¹ Cf. The Canadian Bank of Commerce, *Monthly Commercial Letter*, July 1942.

² Cf. Chapter V, below.

to produce . . . and that production programmes should be co-ordinated to this end." In November 1941, having already set up Joint Economic Committees and a Material Co-ordinating Committee, the two countries established a Joint War Production Committee, with the object of integrating their industrial effort so as to maximize their joint output. For a more effective utilization of their agricultural resources, an agreement was concluded in April 1942 by which the United States undertook to increase her output of oil-bearing plants so as to alleviate the impending shortage of vegetable oils in North America, while Canada engaged herself to expand her acreage of barley, oats and flaxseed.

CONDITIONS IN LATIN AMERICA

Since the middle of 1941, economic activity in the Latin-American countries, dependent to a high degree on foreign trade, has been influenced by a variety of conflicting tendencies, favourable in some cases, unfavourable in others. The loss of European markets, which caused much anxiety in 1940, was subsequently more and more offset by an increase in exports to the United States.¹ The demand of the United States, however, limited by shipping space, became increasingly selective, leaving some of the South American surplus products unaffected and concentrating notably on minerals and, after December 1941, on certain products formerly imported from Asia. While exports, on the whole, recovered, imports became more and more difficult to obtain as the North American and other sources of supply were progressively diverted to war production.² The central problem thus came to be the shortage of imported products rather than a lack of export markets or of foreign exchange. Exchange resources tended, indeed, to increase,³ but, though potentially useful as future reserves, they could not be employed to augment the supply of essential imports; and their expansive effects on the volume of domestic credit

¹ Cf. Chapter VI, below.

² The shipping shortage was probably not a decisive factor in the decline of imports as compared with exports, since the tonnage of the latter was for obvious reasons generally far greater than that of the former. Colombia, for instance, exported 3,398,000 and imported 372,000 tons in 1941. Peru exported 1,977,000 and imported 432,000 tons. In the Argentine, however, the usual relationship was reversed in 1941, the total weight of exports (6.2 million) being slightly less than that of imports (6.5 million tons).

³ The Argentine's foreign assets rose from 308 to 570 million pesos in the twelve months to May 1942. Brazil's gold reserve increased from 924 to 1,319 millions milreis and Uruguay's gold and exchange reserve from 137 to 152 million pesos during 1941. Peru's gold reserve increased from 15 to 31 million soles during the year ending May 1942. Venezuela's gold stock rose from 112 to 158 million bolivars during the year ending February 1942. In the six months from May to November 1941, gold and foreign exchange reserves rose from 377 to 657 million bolivianos in Bolivia and from 80 to 89 million sucres in Ecuador.

gave added strength to inflationary tendencies, present in some cases for other reasons such as Government expenditure for public works or for purchases of surplus crops.

Price control in the United States was extended to the goods supplied to Latin America; but in view of the rise in shipping costs and the absence of effective price controls in the receiving countries, the scarcity of imported products was reflected in a great rise in their prices. In Peru and Chile, for example, where separate price indices are available for imported commodities, they showed increases of 50% and 70% respectively in the twelve months up to the spring of 1942, while the general indices of wholesale prices in the two countries increased by 32% and 42% respectively. In Chile the quantum of imports fell by 11% from 1940 to 1941, while that of exports, reflecting increased sales of copper, rose by 8% to a level surpassed during the last twelve years only in 1937.

The shortage of imports gave a fresh impetus to industrial production in the Latin-American countries, so far, at any rate, as it was based on domestic raw materials, and so far as the necessary equipment was available. In many cases, indeed, industrial development was hampered by the difficulty of obtaining imported equipment and materials. The Chilean index of manufacturing activity, which was 13% higher in 1941 than in 1939, continued to advance in the first two months of 1942 compared with the same period a year before. In the Argentine, industrial employment in the first four months of 1942 was 11% higher than in the corresponding period of 1940. But in view of the continued depression in certain sectors of the economy, the Government found it necessary to maintain the public works programme on which it had spent 200 million pesos during 1941. In Venezuela, a programme of public works (including roads, ports and land improvements) was set on foot in January 1942 in order to combat the industrial unemployment caused by the shortage of foreign raw materials.

Brazil and the other coffee-producing States (including Colombia, Venezuela and Salvador) benefited by the American coffee agreement of November 1940, under which each of them was assigned a quota on the United States market. This agreement, to which the United States was a party, led to a substantial rise in coffee prices in 1941, which more than counterbalanced the quantitative limitation of exports. Colombian coffee exports, for example, declined by a third in quantity from 1940 to 1941 but rose by 13% in value. Coffee being still the principal export product of Brazil, the improvement in its price was mainly responsible for the 35% increase in the total value of Brazilian exports from 1940 to 1941.

Apart from Bolivian tin and Chilean copper, the southern part of

South America provided few commodities that were in great demand in the United States. But even the Argentine and Uruguay, whose total exports remained practically unchanged in value and declined in quantum, were able to increase their exports to the United States in 1941, mainly in the form of animal products such as meat, wool and hides.

The Argentine's total exports and imports fell in quantum by 17% and 21% respectively from 1940 to 1941. While imports showed a welcome improvement during the first half of 1942, being 12% larger in quantum than a year before, exports—with the exception of meat—continued to decline. Surplus stocks of agricultural products, as shown below, continued to accumulate:

	Tons (000,000's)		
	July 1st: 1940	1941	1942
Wheat	1.8	4.5	5.5
Maize	2.6	8.4	10.6
Linseed	0.3	1.2	1.8

These crops were purchased by the Government at fixed prices. Efforts were made to curtail production, especially of maize. But in spite of an 18% reduction in acreage, the 1941-42 maize crop was 20% above the average of 1935-40.

As a result of the transport shortage and of the reduction in supplies obtained from outside, a notable expansion has taken place in trade within Latin America. Thus the trade of the Argentine, Brazil and Chile with each other and with other South American countries reached a value, in U.S. dollars, of about \$270 million in 1941 as against \$170 million in 1938. The tendency became even more pronounced during and after 1941. For example, Peru's exports to her five adjacent neighbours (Chile, Bolivia, Brazil, Colombia and Ecuador) increased from 20.9 million soles in the first quarter of 1941 to 34.7 million in the first quarter of 1942, and their share in total exports rose from 17% to 28%. Various measures were taken to promote trade between the Latin-American republics. In November 1941, the Argentine and Brazil signed a treaty by which the products of new industries developing in one country were to be admitted free of duty by the other. Most-favoured-nation agreements, excepting preferences granted to adjacent countries, were concluded between the Argentine and Peru in January and between Chile and Mexico in March 1942.

The most far-reaching measures of commercial policy were, however, the agreements concluded by Latin-American countries with the United States. Cooperation with the United States, indeed, was

of outstanding significance not only in relieving the immediate difficulties of these countries but also in strengthening the foundations of their future progress in the industrial development of their resources, and in the diversification of their agricultural economy. On the part of the United States, similarly, the policy was inspired not only by immediate war needs but also by long-range plans for the economic development of the Western Hemisphere.

The measures adopted in pursuit of these objectives took a variety of forms, including long-term undertakings by the United States concerning the purchase of Latin-American products; supply of essential equipment by lend-lease assistance¹ or by financial credits; technical missions of engineers and other experts, etc.

With Brazil, for example, the United States made arrangements in 1941 for the purchase of the whole available supply of strategic materials such as manganese, nickel and bauxite. In March 1942 a series of further steps were taken. The United States undertook to increase her lend-lease shipments to Brazil. The United States Export-Import Bank granted a loan of \$100 million for the mobilization of Brazilian resources. A loan of \$14 million was allotted to a scheme designed to increase the yield of the rich Brazilian iron ore mines, both for the export of ore and for the needs of the domestic steel industry. The development of the Amazon valley, the original home of rubber, was another important project to which the United States contributed both in material equipment and in technical and scientific personnel. The United States Rubber Reserve Company contributed a fund of \$5 million to the Brazilian Amazon Development Company and agreed to purchase Brazil's rubber output for a period of five years. Provision was made for the expansion and improvement of railway and port facilities both in the Amazon basin and in the iron-ore region.

A similar agreement was concluded between the United States and Mexico in April 1942 providing, *inter alia*, for the development of certain basic industries and transport facilities in Mexico.

Cuba received United States assistance for the development of her nickel production. In January 1942, following the interruption of sugar imports from the Far East, the United States Defense Supplies Corporation contracted to buy virtually the whole Cuban sugar crop. Peru was helped by United States purchases of her cotton, the bulk of which was previously exported to Japan.

These examples may suffice to illustrate the general nature of the development programmes and commodity schemes undertaken in the Latin-American countries with the help of the United States. In

¹ Extension of the lend-lease policy to the Latin-American countries was announced in September 1941.

addition, the long-term policy of the United States in favour of tariff reductions and most-favoured-nation treatment was carried further by the conclusion of a great number of reciprocal trade agreements. An important example of these was a treaty signed in October 1941 by which the United States halved the tariff on Argentine linseed and canned meats and granted concessions on wool, hides and other products, while the Argentine reduced her tariff on about a third of her imports from the United States.

CHAPTER II

PRODUCTION

FOODSTUFFS

In Chapter III a brief account is given of the food rations in Europe. These rations have been almost consistently declining. That decline reflects the deterioration that seems to be taking place in agriculture, the depletion of stocks and the gradual elimination of imports. In 1940, as was shown in last year's *Survey*, the production of cereals and other vegetable foodstuffs and of dairy produce had already begun to show the effects of the war, though the slaughter of flocks and herds helped temporarily to maintain the meat supplies. Meanwhile on the American continent, in the U.S.S.R. and in the British Isles the production of foodstuffs was increased. Excepting in the U.S.S.R., where the German invasion, especially of the rich fields of the Ukraine, has wrought havoc or caused havoc to be wrought, these tendencies continued during 1941 and, so far as can yet be judged, during 1942. But as will be shown below, the cereal and root crops on the European continent in 1941 are estimated to have been some 3% larger in the aggregate than in 1940—an improvement that does not seem to have been maintained in 1942.

From such published statistics and estimates of varying degrees of authority as are available, the rough picture furnished by Table 1 presents itself.

Table 1.—Approximate Indices of Foodstuff Production.

	% SHARE IN WORLD TOTAL	INDICES (1938 = 100)		
		1938	1939	1940	1941
Continental Europe	35.4	99	(92)	(88)
U.S.S.R.	12.7	106	(109)	...
United Kingdom and Ireland	2.8	101	(103)	(105)
North America	18.5	103	109	108
Latin America	8.9	96	101	100
Oceania	2.9	107	101	104
Africa	2.3	105	(98)	(100)
Asia (excl. U.S.S.R. and China) ..	16.5	100	(97)	(98)

The drop in the figure for Europe from 92 in 1940 to 88 in 1941 was wholly due to a falling off in animal foodstuffs. The largest

slaughter of animals appears to have taken place during the latter half of 1940 and the first half of 1941, and its effect on the supply of milk and meat gradually made itself felt as the months passed.

Europe's aggregate production of cereals and potatoes in 1941 is estimated to have been some 10% short of average annual requirements (production and net imports) during the five pre-war years, 1934-38. The sugar-beet crop of 1941 seems to have been above the pre-war average. On the other hand, the aggregate output of meat and milk is estimated to have been more than 10% below that average. If it is true, as has been calculated,¹ that Continental Europe in the years 1936-38 furnished itself about 90% of its total food requirements and if, as the available evidence suggests, its production of foodstuffs in 1941 was some 10% below the average of these pre-war years, then there must have been a deficiency of some 20% to be made good by curtailment of consumption or changes in consumption and by the utilization of such stocks as may have been available and the very greatly reduced imports. But these global figures are to some extent misleading. A drop in the aggregate production of animal plus vegetable foods can normally be met to a considerable extent by a shift from animal to vegetable products in the diet; actually, fewer animal products are being consumed in Europe, and certain fodder crops, such as oats and barley are being used more for human and less for animal consumption. In order to judge the situation accurately, therefore, it is necessary to consider the evidence concerning different branches of farm production given later, in this chapter.

The exceptionally severe and protracted winter of 1941-42 in combination with shortages of farm labour, draught animals and certain fertilizers seriously affected the autumn-sown crops on the Continent, particularly in northern, central and eastern Germany and adjacent regions. But this was to a considerable extent made good by spring sowings, rye and in certain cases barley and potatoes being largely substituted for wheat. The harvesting conditions in the summer and early autumn of 1942 were relatively favourable. But in spite of this, the 1942 harvest of wheat and rye in German-controlled Europe, according to the latest reports, is expected to be below the average and below the subnormal crop of 1941, rye being better than wheat. Compared with 1941, the 1942 wheat crop is estimated to be about the same in Italy, Spain and France;² better in Portugal, Belgium and Sweden; and worse in central and south-eastern Europe. The rye harvest in central Europe would seem to be slightly smaller, but in

¹ *Foreign Agriculture* (U.S. Department of Commerce), August 1942: "Continental Europe's Pre-War Food Balance," by J. H. Richter.

² France is reported to have been asked to deliver 800,000 metric tons to Germany during the winter of 1942-43.

northern and eastern Europe larger than in 1941. The 1942 harvest of barley, oats and mixed grains is estimated to be larger, partly because of the increased acreage sown to these crops in place of damaged winter wheat. "Present indications are for a large production of root crops, especially potatoes in Europe as a whole. The actual production of this and other late root crops will depend largely upon weather conditions during October, except in southern France where severe drought damage is reported."¹

The 1941 crops in the U.S.S.R. are known to have been good, but comprehensive figures are lacking. Part of the crops in the invaded regions was lost, mainly owing to deliberate destruction before the ground was yielded. Part, especially in the Ukraine, was hastily harvested, and a large proportion of the livestock is stated to have been brought safely into the interior. There would not appear to have been any severe food shortage in unoccupied Soviet Russia during the 1941/42 season. With the further loss in 1942 of rich agricultural regions in the Northern Caucasus, however, the food prospects are believed to have seriously worsened despite the fact that good crops are reported in Southern Siberia and Central Asia where recent large-scale irrigation works have extended the productive area. In the Ukraine there has been starvation.

Agricultural production has increased steadily in the United Kingdom and Ireland. The arable area has been constantly extended, especially in England, and the aggregate production of bread cereals, sugar and potatoes was very substantially larger in 1941 than in 1938. Meat production is also stated to have been larger than before the war, but milk production in the United Kingdom was somewhat smaller and the yield of sea-fisheries has naturally declined. Production of milk, however, increased again in 1942 and was stated by the Minister of Agriculture to have been 10 million gallons larger in the first six months of this year than it was on the average in the corresponding period in the last three pre-war years and 13 million gallons more than in the first half of 1941.

The net effect of the measures taken to stimulate agriculture has been very greatly to reduce the dependence of the country on external sources of supply. In spite of this and the very favourable harvest prospects, the Minister of Agriculture announced in the House of Commons in July 1942 that he was asking farmers for a further substantial increase in the tillage area.² It was proposed to raise the area under wheat in England and Wales by 600,000 acres. Moreover, a 10% increase in the acreage under potatoes was foreseen in addition

¹ U.S. Office of War Information and Department of Agriculture: Press Release of October 13th, 1942.

² Hansard, Vol. 352, No. 94.

to a previous increase of nearly 60%. One effect of the whole agricultural and horticultural effort has been a very large increase in the production of vegetables—from 2,500,000 tons in 1938 to 4,000,000 tons in 1941. This fact requires to be borne in mind when considering the whole dietary situation in the light of the rationing system in force.

Food production in North America proved almost as large in 1941 as the record reached in 1940. The output of the main vegetable foodstuffs (excluding fodder cereals and tobacco) which are taken into account in the index shown in Table 1, declined by 5% and meat by 3%; but against this decline has to be set a 5% increase in the production of milk. The crops of fodder cereals (maize, barley and oats) also increased by 5-6%. As the stocks of most of the leading foodstuffs carried over from 1940/41 were large, plentiful supplies were available for lend-lease deliveries despite a marked increase in domestic food consumption consequent upon increased civilian and military demand.

In conformity with the war production programme, the acreage "for harvest" in 1942 was raised to 336 million acres compared with 324 million "harvested" in 1941 and an average of 328 million for 1930-39. The wheat acreage, however, was reduced from 55.8 million acres in 1941 to 50.6 millions. But an unprecedentedly high wheat yield is foreseen this year, 15% higher than in 1941 and 46% above the 1930-39 average, and similar increases in yield are expected for many other leading crops. According to the latest forecasts, the aggregate of crops, including fodder cereals, hay, cotton and tobacco, is expected to be 14% higher than in 1941. The production of milk up to September 1st was 5% greater than a year earlier. The Department of Agriculture states that "with record numbers of livestock and poultry on hand, with milk and egg production continuing substantially above previous levels, with record supplies of feed grains and also of hay and forage in sight and with the best fall pastures since 1915, there seems every reason to expect the production of livestock and livestock products to continue higher than in the past until a new crop and pasture season develops."

On the basis of the August 1st forecasts, total food production in the United States was expected to be 9% larger in 1942 than in 1941 and 25% larger than the average for the five years, 1935-39, truck crops, sugar, meat and livestock products accounting for most of the increase.² These developments conform with the shift from bread cereal production to increased output of other forms of vegetable food and even more of animal food products which has been the

¹ *General Crop Report*, September 1st, 1942, U.S. Department of Agriculture.

² *The Agricultural Situation*, U.S. Department of Agriculture, August 1942: "National Food Supply."

objective of American agricultural policy for several years. The "Food for Freedom" campaign inaugurated in the United States in the summer of 1941 aims at limiting the production of the "basic" crops—wheat, corn, cotton, tobacco—and increasing the production of livestock products, oilseeds and vegetables. As stated in Chapter I, a similar policy has been pursued in Canada. Food requirements are also considerably larger than last year, for civilian and military use and lend-lease exports. Despite the larger production, there was a shortage of meat in certain areas during the summer of 1942 due in part to the military and lend-lease demand and in part to an increase in civilian demand which has been estimated at 20-25%.

In Latin America both bread cereal and fodder cereal crops, the bulk of which is harvested half a year later than in the Northern Hemisphere, were somewhat smaller and the coffee crop considerably smaller in 1941/42 than in the preceding year; but meat and milk production continued to rise, and the oilseed crops were good. Meat production in 1941 is estimated to have been 10% and milk production 8% larger than in 1938. It is as yet too early for any reasonably accurate forecasts to be made for the 1942/43 crops. The total area sown this year to wheat, rye, barley, oats and linseed in the Argentine, however, is reported to be some 10%, wheat alone about 12%, less than last year. This acreage reduction, which may not, in fact, be final, is attributable to the drought affecting almost the whole cereal zone of the country during the ploughing and seeding season.

Food production in Oceania, which was affected in 1940/41 by the poor wheat crop in Australia, was greater in 1941 than in 1938. Meat and milk production on the other hand, which was of record size in 1940, dropped a little in 1941, presumably owing to shortage of shipping space for exports of livestock products.

The 1941 wheat crop in Continental Europe—estimated at 37½ million tons,—though better than in 1940, was over a fifth smaller than in the favourable year 1938 and about one-tenth smaller than the 1933-37 average. During that five-year period the continent's own production was supplemented by annual net imports of some 3½ million tons of wheat and wheat flour. The 1941 crop, therefore, which with such stocks as may have been released and such imports as may have been obtained from Africa had to suffice for the consumption requirements including the requirements of seed corn during the 1941-42 season, only reached about 84% of the average annual consumption during the 1933-37 quinquennium.

According to one source, which takes as its basis of comparison the four years 1935-38, the falling off in the harvest returns in 1941 was heaviest in north-western Europe (Sweden, —53%), in the

Table 2.—Wheat Crops.¹

	Metric Quintals (000,000's)					
	1933-37 Average	1938	1939	1940	1941	1942 ²
Continental Europe ³	412	477	446	338	375 ⁴	(Down)
United Kingdom and Ireland	18	22	19	(22) ⁷	(Up)	(Up)
North America	240	352	346	368	339	435
Latin America	81	124	52	98	80	...
Oceania	45	44	59	25	46	...
Africa	36	38	46	36	40	...
Asia ⁵	160	185	182	(191)	(175)	...
Total ⁶	992	1242	1150	(1078)	(1080)	...

Source: Statistics of the International Institute of Agriculture supplemented by revised national data.

¹ The figures in brackets are rough estimates.

² Excluding Turkey.

³ Including Turkey.

⁴ Excluding the U.S.S.R., China, Iraq and Iran.

⁵ Forecasts.

⁶ Figure published in March by "Rivista Italiana di Scienze Economiche" on the basis of data for Europe including the United Kingdom and Ireland published earlier in some detail by the International Institute of Agriculture in its annual preliminary summary of world wheat crops.

⁷ Figure published in the summer of 1941 by U.S. Department of Agriculture.

extreme south-east (Bulgaria and Greece, —33%), in Spain (—28%) after a marked improvement over 1940, in Hungary, Roumania and Yugoslavia (—25%) and in Poland and the Czech Protectorate (—20%). Available estimates for "Greater Germany" suggest a 15% drop. A similar drop is reported for France and a decline of 10% for the Netherlands and Belgium. The Italian crop is stated to have been but slightly below the average. Wheat stocks in Continental Europe are estimated to have declined by 4-5 million metric tons, corresponding to 10% or more of a normal year's crop, during the 1940-41 season.¹

The 1941 crop of fodder cereals in German-controlled Europe is estimated to have been about 15% short of this pre-war average, the geographical pattern of the decline being very much the same as that for wheat, though Italy's harvest of these cereals was about 20% down.

The potato crop in 1941 is estimated to have shown about the same falling off as fodder cereals. But the Italian crop, which is not very important, is stated to have been larger than before the war, as was also Sweden's. On the other hand, the sugar beet crop almost throughout the continent was good and above the pre-war average; in German-

¹ Cf. "World Wheat Survey and Outlook," Stanford University, September 1941.

controlled Europe it is estimated to have been about 10% above the 1935-38 average.

The increase in sugar production was generally achieved by an extension of the area under sugar beet. The acreage under cereals and potatoes has, however, also been increased so that the yield per acre must have fallen off seriously. Reference has been made above to several factors contributing to this decline, among which the shortage of certain fertilizers is one of the more important. Before the war the continent of Europe was self-sufficient in nitrates and potash, but was dependent on imports for two-thirds of its total supply of phosphates, which came mainly from North Africa and North America. Phosphate imports fell off in 1940 and again in 1941. North African shipments in 1941 are reported to have amounted only to about 35% of the pre-war phosphate consumption of German-controlled Europe. During 1942, however, these shipments have increased. The supply of nitrates for agriculture in 1941 is reported to have been about 25% less than before the war in Germany and the shortage in western Europe to have been still greater. But the supply of potash seems generally to have been well maintained and indeed to have increased in certain countries. The shortage of phosphates is more important than might at first sight appear, for crop yields depend not only on the amounts but also on the proportions of the various fertilizers fed to the soil.

As mentioned earlier in this chapter, the 1942 bread crops in German-controlled Europe are expected to prove lighter than those of 1941. But the production of animal foods has diminished more than the production of cereals and other vegetable foodstuffs. This is partly due to a deliberate switch over to a more vegetarian diet and partly to the fact that Europe was before the war largely dependent on imported feeding-stuffs for the maintenance of her livestock population. The whole agricultural economy of the coastal region from Belgium to Denmark was indeed largely based on such imports; and Sweden, Finland and Switzerland also relied to a considerable though less degree on external sources of supply. The war has cut off most of these imports, and the supply of home-grown feeds has greatly declined not only because of a series of poor harvests but also because land has been used for growing foodstuffs rather than feeding-stuffs. Moreover, a declining proportion of such dual-purpose crops as potatoes and fodder cereals is being fed to animals. In Germany, for instance, the cutting of cereal crops for stock has been prohibited this year and all barley must now be milled in with wheat and rye for bread.

Straw, reeds, potato haulm and cellulose are being extensively used as substitutes for normal forage crops in a number of countries.

These substitutes, however, while sufficient to keep the animals alive, have little fattening value, and the yield of milk has seriously declined.¹ The maintenance of unproductive stock naturally constitutes a drain on such supplies of feeding-stuffs of all kinds as are available and causes the output of livestock products to decline more than proportionally to the decline in total supplies of feed. Such information as is available concerning the production of meat and milk in Europe points to a progressive deterioration.

In Sweden, where the total supply of feeding-stuffs during the 1941-42 season was one-third below normal in spite of certain imports from overseas, the cattle population has been reduced since the war by some 15%, pigs by about 20% and poultry by one-third. In Switzerland the number of cattle had been reduced by the middle of 1942 by 18-19%, and a year earlier the number of pigs had already been cut down by a sixth and of poultry by a third. The decline in the livestock population in Denmark by the summer of 1941 was about one-tenth for cattle, one-third for pigs and almost two-thirds for poultry. In all continental countries for which data for 1941 are available, the decline in poultry is most marked—as much as 75% in Belgium—, which largely accounts for the almost complete disappearance of eggs throughout the continent. The number of pigs has also been very greatly reduced—by one-half in Finland and Spain. Although attempts have been made to keep the reduction in cattle within narrower limits, a decline of one-third in Poland, one-fourth in Spain and one-fifth in Finland is reported. These figures, however, would seem to be exceptional, though the slaughter in Greece has been greater still. The reduction in France, which is probably more typical, is believed to have been roughly 15% by 1941.

While emergency slaughterings temporarily increase the meat supply, their final effect is to curtail it; and when dairy herds are reduced, the effect on the milk supply is of course immediate. But as far as possible dairy herds have been retained in preference to steers. The following figures for Denmark and Sweden illustrate recent tendencies.

It will be observed that the production of milk in both Denmark and Sweden fell off rapidly from the second quarter of 1940. On the other hand, meat production rose in 1940 owing to the reduction of livestock. In 1941 the quantity of veal and pork produced was drastically curtailed, and although cattle continued to be slaughtered on a

¹ In Sweden the production of synthetic fodder (about 475,000 tons during the 1941-42 season) has become the most important line of pulp manufacture and has helped together with the expanding production of pulp for rayon and staple fibre to maintain the activity of the chemical pulp industry despite a drastic fall in the exports and consequently in the production of pulp for paper.

Table 3.—*Animal Products.*

Percentage increase or decrease in each quarter of 1940-42 compared with corresponding quarter of 1939 (=100).

	Denmark				Sweden			
	Milk	Beef & Veal	Pork	All Animal Products	Milk	Beef	Veal	Pork
1940 I	- 2	+ 3	± 0	- 2	- 4	+12	- 5	+10
II	- 7	+25	- 1	- 1	- 9	+15	- 6	+ 1
III	-21	+71	+24	+ 4	-11	+42	+ 8	-17
IV	-26	+ 8	-20	-22	-15	+72	- 7	-22
1941 I	-34	-27	-38	-39	-17	+24	-28	-17
II	-34	+ 2	-43	-35	-18	- 3	-27	-27
III	-32	- 2	-58	-40	-20	+42	-10	-47
IV	-29 ¹	+19 ¹	-56 ¹	-37 ¹	-24	+87	-28	-46
1942 I	..	..	..	..	-28	-10	-53	-41
II	..	..	..	..	-28 ²	-48 ²	-59 ²	-55 ²
1940 average	- 4	+26	± 0	- 5	- 7	+36	- 3	- 7
1941 average	-32	- 3	-49	-40	-18	+40	-23	-35

¹ Oct.-Nov.

² April-May.

large scale during the greater part of the year, the aggregate production of beef, veal, and pork was 33% lower in Denmark and probably 15% lower in Sweden than in 1939. The slaughtering of cattle was greatly reduced in Sweden in the first half of 1942; accordingly, the total production of meat, including horse meat, mutton and goat, during the three months March to May was 37% less than a year earlier.

Total meat production in Norway was estimated at the beginning of this year to have shrunk by at least 40% and milk production by 25-30%. The decline in the French milk production in 1941 would appear to have been of the same order of magnitude. For German-controlled Europe as a whole meat production in 1941 is estimated to have been 30% and milk production 18% below the pre-war average.

In 1941, 7% less butter and 49% less cheese were produced in Sweden and 31% less butter in Denmark than in 1939. But butter production in Germany has been kept up—at the expense of whole milk consumption and cheese production—and would seem to have been larger in 1941 than before the war. On the other hand, the consumption of cream is forbidden, margarine production has been greatly reduced for lack of raw materials, and according to all available evidence, there has been a substantial and progressive reduction in the supplies of pig fat. In German-controlled Europe as a whole, it is estimated that the total consumption of oils and fats was about

a third less in 1941 than before the war. The reduction was greatest in western Europe, where previously consumption had been highest.

It will be seen from Table 2 that an exceptionally large North American wheat crop is forecast for 1942. In the September issue of its "Monthly Review of the Wheat Situation" the Dominion Bureau of Statistics in Canada comments on this as follows:

"Great wars and record-breaking yields of wheat in Canada and the United States would seem to have an affinity. It was during the first world war that North America staggered the agricultural world with the production of an enormous wheat crop. The year was 1915 and the United States then harvested one billion bushels of wheat—a record which still stands—while Canada's Prairie Provinces baffled even the most experienced agriculturists with yields per acre overshadowing anything previously on record.

"History has repeated itself in the second world war. The yield of wheat per acre in both Canada and the United States in 1942 has shattered the 1915 record which stood for twenty-seven years, while Canada has reached new heights in the matter of production. The two countries between them have a wheat crop totalling 1,597,000,000 bushels of which the United States produced 982 million and Canada 615 million bushels. The previous best for Canada was the crop of 566.7 million bushels produced on a larger acreage in 1928, while in the United States the new crop is only some 18 million bushels below the record-breaking crop of 1915.

"Both countries adopted measures in 1942 designed to reduce wheat acreage and thereby limit production, whereas in 1915 the acreage curve went sharply upward as part of the program at that time to produce more wheat. In both cases, however, the weather factor intervened heavily on the side of production and the generous and timely rains experienced during the growing season produced a yield per acre of record proportions. . . .

"Not only has North America produced more wheat in 1942 than the average production of some 26 countries in Europe (excluding Russia), during the ten years preceding the present war, but the combined carry-over of old wheat in Canada and the United States exceeded one billion bushels at the opening of the 1942-43 crop year, making a total supply on this continent of more than two and one-half billion bushels of wheat, a figure difficult for the layman to comprehend. . . .

"Added to the tremendous crops of coarse grain produced in North America this year, this wheat supply removes any fear of a shortage of feeding stuffs in the carrying out of war-time live-stock programs underway in both Canada and the United States. It serves also as a

stock pile from which Russia and other members of the United Nations may be furnished needed supplies of bread grain."

Latest advices regarding the new Australian wheat crop planted on an area some 13% smaller than last year suggest a repetition of the North American performance, weather conditions having been extremely favourable. In the Argentine, the outlook for the new wheat crop, which appeared none too favourable owing to drought at the beginning of the 1942 season, has recently improved.

Thus, all evidence points to a new large increase in the already very heavy wheat stocks held at the middle of 1942 by the four chief exporters.

Table 4. *Wheat Stocks.*

Mid-year¹ Surpluses for Export or Carry-over.

	Bushels ² (000,000's)					
	1937	1938	1939	1940	1941	1942
Canada ³	37	31	110	300	480	424
United States ⁴	83	153	253	282	385	633
Argentine	45	72	230	75	175	(225) ⁵
Australia	41	50	50	130	70	(150) ⁵
Four chief exporters ...	206	306	643	787	1110	1432
Afloat	34	49	48	60	43	(40) ⁵
Total	240	355	691	847	1153	1472

Sources: "Monthly Review of the Wheat Situation," Dominion Bureau of Statistics, Canada; "The Wheat Situation," U.S. Department of Agriculture; "Wheat Studies," Food Research Institute, Stanford University.

¹ The data for the United States refer to July 1st and those for Canada, the Argentine and Australia to July 31st or August 1st.

² 36,743 bushels = 1 metric ton.

³ Figures include Canadian wheat in the United States and exclude United States wheat in Canada.

⁴ Figures include United States wheat in Canada and exclude Canadian wheat in the United States.

⁵ Preliminary figures subject to revision.

As will be seen from the above table, these stocks have grown seven-fold since the low point reached in 1937. The 1942-43 statistical position of the United States is as follows:

	Bushels (000,000's)
Wheat carry-over on July 1st, 1942	633
Total 1942 crop (September estimate)	982
Total Supply	1,615
Estimated home requirements	750
Surplus for export and carry-over	865

Canada's surplus position in the new season is similar.

In the last *Survey* reference was made to the conference of Government representatives of the Argentine, Australia, Canada and the

United States, chief wheat exporters, and of the United Kingdom, principal wheat importer, which met in Washington in July 1941 to consider the problems of the world wheat situation. A preliminary report stressing the need for some form of production control coupled with measures designed to help in solving the problems of post-war reconstruction and relief was submitted to the five Governments in August 1941. The conference was reconvened in October and met subsequently at frequent intervals to elaborate a "Memorandum of Agreement" which was approved by the five Governments and took effect on June 27th, 1942. The Memorandum of Agreement provides for "the convening by the United States when the time is deemed propitious of a conference of all the nations having a substantial interest in wheat, whether as consumers or producers; and there is attached to it for consideration at that conference a Draft Convention prepared by the Washington Wheat Meeting. In the meantime the Memorandum of Agreement requires the adoption and maintenance on the part of the four exporting countries of positive measures to control production with the object of minimizing the accumulation of excessive stocks during the war.

"The Memorandum of Agreement provides also for the immediate establishment of a pool of wheat for inter-governmental relief in war-stricken and other necessitous areas so soon as the international situation permits. It brings into operation the arrangements in the Draft Convention for contributions to a pool as they may be required of 100,000,000 bushels and additional quantities to be determined as the extent of the need becomes known.

"In order to prevent disorganization and confusion immediately after the war and pending the conclusion of a comprehensive international wheat agreement, the present Memorandum provides for bringing into operation for a limited period the provisions of the Draft Convention relating to the control by the four exporting countries of production, stocks and exports and for cooperation by all five countries in stabilizing prices."¹

For the administration of these controls and of the relief pool an International Wheat Council comprising representatives of the five Governments was set up in July and held its first meeting early in August.

Although sugar was generally the first foodstuff to be rationed in Europe, its supply has been better maintained than that of most others. Indeed, it is estimated that sugar production in Europe has increased sufficiently to make good the loss of imports. The increase in production has not, however, resulted in the maintenance of the pre-war

¹ Introduction to the Memorandum.

level of consumption. On the contrary, as is shown in Chapter III, the rations allowed are generally well below the amounts normally consumed in peace-time. This is largely due to the fact that sugar is being extensively used for other purposes, including the manufacture of alcohol to replace motor spirit. In the U.S.S.R. the major part of the sugar beet area was lost as a result of the German invasion, and the supplies available for the 1941-42 season are estimated to have shrunk by over two-thirds in comparison with the preceding season.

Supplies outside Europe and the U.S.S.R. declined in 1941-42 mainly owing to a drop in the sugar crop of India and in production and stocks in Java. The supplies of the Netherlands Indies and the Philippines became inaccessible to the United Nations as a result of the Japanese invasion of these countries early in 1942. Of the 7 million tons of raw sugar annually consumed in the United States before the war, nearly 800,000 tons or 12-13% were imported from the Philippines. Ample alternative sources of supply to meet this loss and the United Kingdom's pre-war imports from the Netherlands Indies (146,000 tons in 1938) exist in the Western Hemisphere and elsewhere. But the diversion of shipping space to more immediate war needs is increasingly affecting the movement of sugar supplies from the surplus areas. The consumption of raw sugar for various purposes has therefore been reduced in the United Kingdom and Ireland during the war, and in December 1941 the United States instituted a partial and in May 1942 a complete system of sugar rationing.

RAW MATERIALS

In Continental Europe, the supply of a number of essential raw materials and of fuels had run very short by the summer of 1941; the situation further deteriorated in the third year of war. Elsewhere the extension of the conflict to the Western Hemisphere and the Far East had immediate and far-reaching effects. The raw material resources of South-Eastern Asia, of which the chief are rubber, tin, tungsten, petroleum, vegetable fats and oils and hemp and certain other textile fibres, are no longer accessible to the United Nations; while the effective exploitation of certain of these resources by Japan has been prevented for some time by the scorched earth policy applied in the invaded territories.

The following table indicates the share of the Far East in the world output of the raw materials referred to above in the years 1936-38. The area covered includes the vast territories whose foreign trade is now under Japanese control, as well as free China, whose ex-

port channels have been almost entirely blocked. Figures excluding (a) and including (b) the whole of China are shown.

	(a)	(b)		(a)	(b)
Rubber	90%	90%	Tin	64%	70%
Vegetable-Oil materials .	16%	28%	Tungsten	39%	66%
Textile fibres	11%	17%	Petroleum	3.5%	3.5%

Almost the entire plantation production of rubber and some two-thirds of the world's normal resources of tin and tungsten are thus no longer accessible to the world market. The proportionate loss of vegetable-oil materials is much smaller and compensatory production can more easily be developed elsewhere, while the loss of natural textile fibres is of relatively minor importance. On the other hand, although the petroleum output of the Netherlands Indies, British Borneo and Burma represented only a small part of the world total, these areas were an important source of supply for British India, Australia and New Zealand.

Published statistics of production, especially of non-agricultural goods, have become increasingly scarce with the extension of the war. For raw materials of agricultural origin, however, estimates are available for 1941 or for the 1941/42 crop year which, even though they are very rough in some cases, still make it possible to illustrate in index form the general direction of the changes in output by continental groups (excluding Soviet Russia). Indices of non-agricultural raw material production up to the end of 1941 can be given for the Western Hemisphere.

Continental and world indices of the production of vegetable-oil materials, natural textile fibres and rubber are given in Tables 5, 6 and 8 below.

While the production of whale oil (omitted in Table 5) is bound to have declined heavily during the course of the war, world production of vegetable-oil materials appears to have been well maintained up to 1941. Significant changes have taken place, however, in different parts of the world. In Continental Europe, which has been deprived, since 1940, of its previous major share in the whale oil production, the shortage of fats was enhanced by the poor yield of olive oil in 1940, a very important item in the Continent's own supplies of vegetable oils. The heavier olive crop in 1941 did not go far to mitigate the shortage of fats. The efforts made under German instigation to push the cultivation of oil seeds and more especially of rapeseed in Germany and soya and sunflower seed in south-eastern and southern Europe only met with partial success and imports from outside Europe into German-controlled Europe were confined after June 1941 to those

Table 5—*Vegetable-Oil Materials and Crude Oils.*¹

Production by Continental Groups.

	Percentage Distribution 1936-38		Indices (1938 = 100) (b)		
	(a)	(b)	1939	1940*	1941*
Continental Europe	14.3	13.5	136	(89)	(111)
U.S.S.R.	5.8	6.0	101	(107)	...
Asia	44.1	45.0	97	(100)	(90)
Africa	12.2	12.4	103	(96)	(94)
Oceania	0.9	0.9	103	101	101
North America	13.3	13.7	114	129	127
Latin America	8.5	8.5	90	106	114
World	100.0 ²	100.0	105	(103)	...
World excluding U.S.S.R.	94.2	94.0	105	(103)	(101)

(a) Including whale oil, (b) Excluding whale oil.

* The index figures in brackets are largely based on provisional data and rough estimates.

¹ For lack of recent production data for whale oil, this product is omitted. In 1936-38 whale oil represented some 3% of the basic value aggregate of all the oil materials then covered by the world index and 14% of the aggregate of those covered by the sub-index for Europe including the United Kingdom.

² Including British whale oil production, 0.9%; the production of vegetable-oil materials being negligible, at any rate in the past, in the United Kingdom and Ireland, this territorial group is not shown separately in the table.

from French West Africa. This shortage of supply forced Germany to reduce fats made available to the soap industry by more than three-quarters.

In the Western Hemisphere, on the other hand, a very marked increase in the production of vegetable oils has taken place which, in conjunction with a more moderate increase in Africa, outweighed the sharp drop in Asia's output, especially of groundnuts in 1941. Copra production in Asia has shrunk steadily since 1938 (probably 30% by 1941). In 1942 production continued to expand rapidly in South and North America according to the latest information available.

The steep decline in the world production of natural textiles in 1941 shown in Table 6 was largely confined to two important crops, namely cotton, principally in the United States, and jute in India. Total cotton crops (excluding the unrecorded crop of the U.S.S.R.) would seem to have dropped by about 8% and the jute crop by no less than 58% compared with 1940, when the jute crop, however, was exceptionally heavy. Latest estimates for 1942 predict another very large cotton crop in the United States far exceeding that of 1940. Including the output of rayon and staple fibre, which was almost doubled between 1938 and 1941, last year's North American textile production was 12% larger than in 1938 and but little smaller than in 1940.

Table 6.—Textile Fibres.¹

Production by Continental Groups.

	Percentage Distribution		Indices (1938 = 100) (b)		
	1936 (a)	1938 (b)	1939	1940*	1941*
Continental Europe	12.8	6.8	107	(103)	(99)
U.S.S.R.	10.2	12.5	107	(97)	...
Asia	29.2	29.3	103	(115)	(101)
Africa	6.0	7.5	103	(108)	(104)
Oceania	6.2	7.8	109	112	112
U.K. & Ireland	2.5	0.8	102	(101)	(100)
North America	25.7	26.2	99	105	95
Latin America	7.4	9.1	103	113	108
World	100.0	100.0	104	(108)	...
World excluding U.S.S.R.	89.8	87.5	103	(110)	(101)

(a) Including rayon and staple fibre.

(b) Excluding rayon and staple fibre.

* The index figures in brackets are partly based on provisional data and rough estimates.

¹ For lack of sufficiently precise information on the output in 1941 of rayon and staple fibre in the principal countries of production in Europe and Asia, these products have been omitted from the series. In 1936-38 they represented some 20% and by 1940 probably almost a quarter of the aggregate value of all textile materials produced in the world. In Continental Europe the share of rayon and staple fibre in the local production of textile materials amounted to 58% in 1936-38 and about 64% in 1940, in the United Kingdom and Ireland approximately 75% and 74%, in Asia about 18 and 17% and in North America 18 and 27% respectively. In the last mentioned area, the share of the synthetic products rose to 32% in 1941. Between 1938 and 1940 the output of rayon and staple fibre rose by some 15% in the world as a whole, by 21% in Continental Europe and in North America by 55% or, up to 1941 inclusive, by 85%. The output of these products is stated to have been falling in Japan since 1937 (by almost one-third up to 1940) and also in the United Kingdom since 1939.

In Continental Europe, the production of raw textiles, including rayon and staple fibre, would seem to have been approximately one-fifth greater in 1941 than in 1938. In spite of this increase, a serious stringency made itself felt owing to the cutting off of imports from other continents which normally covered more than half of the European requirements, and the depletion of reserves. As shown in Chapter III, strict rationing of clothes became the rule all over the Continent in 1941.

Shipments of crude rubber from producing countries during 1941, appear to have increased by some 150,000 tons to a total of about 1.5 million tons (Table 8). Nearly all went to the United Nations and friendly neutrals.

The trend of the figures published up to the end of October 1941 suggests that the stocks held in the United States and in primary producing countries or afloat, by the end of the year, must have amounted to a total of about one million tons. It will be observed

Table 7.—Cotton Production.

In thousands of bales of 478 lbs.

	1937	1938	1939	1940	1941
United States	18,964	11,943	11,817	12,566	10,976 ¹
India	4,788	4,248	4,136	4,841	4,869
China and Manchuria	3,600	2,300	1,883	2,354	2,406
U.S.S.R.	3,700	3,800	4,000	3,000	... ²
Egypt	2,281	1,728	1,801	1,900	1,671
Brazil	2,075	1,089	2,140	2,508	2,073
Argentina, Peru, Mexico	953	1,030	1,050	917	1,035
Anglo-Egyptian Sudan, Uganda	613	516	503	500	... ³
Turkey	299	306	300	218	166
All other countries	1,345	1,240	1,270	1,556	...
World	38,600	29,100	29,000	30,360	28,260 ⁴

Source: U.S. Department of Agriculture: *The Cotton Situation and Foreign Crops and Markets*.

¹ The 1942 crop as officially forecast on September 1st is anticipated to reach 14,028,000 bales, the yield per acre—289.3 lbs.—being the highest on record, exceeding by 7% the previous record yield of 269.9 lbs. in 1937.

² Acreage under cotton approximately the same as in 1940.

³ Information lacking for Anglo-Egyptian Sudan; Uganda 268,000 bales (1940, 272,000).

⁴ Preliminary estimate.

Table 8.—Rubber Shipments from Producing Countries.

Long tons (000's) of 2,240 lbs.

	1938	1939	1940	1941 ¹
Ceylon and India	58.0	70.2	100.4	(90)
Burma	6.7	6.6	9.7	(10)
Thailand	41.6	41.8	43.9	(47)
French Indo-China	59.2	65.2	64.4	(55)
Malaya	372.0	376.8	540.4	(590)
British North Borneo & Sarawak.....	27.3	35.9	52.8	(58)
Netherlands Indies.....	298.1	372.0	536.7	645
Philippines (and Oceania)	2.0	2.1	2.3	(2)
Total Asia	864.9	970.6	1,350.7	(1,497)
Africa	11.9	14.8	17.3	(18)
Latin America	18.1	19.0	21.7	(25)
World	894.9	1,004.4	1,389.7	(1,540)

	Percentage distribution		Indices (1938 = 100)		
	1936-38	1939	1940	1941	
Asia	97.0	112	156		(173)
Africa	1.1	124	145		(151)
Latin America	1.9	105	120		(138)
World	100.0	112	155		(172)

Source: International Rubber Regulation Committee: *Statistical Bulletin*.

¹ Estimates based on monthly data for shipments in January-November and supplementary information.

that the stocks in the producing countries only constituted a minor part of the total, being recorded at 165,000 tons at the end of October (Table 9).

Table 9.—*Rubber Stocks.*
Long tons (000's) at the end of:

	July 1939	July 1940	Oct. 1940	Jan. 1941	Apr. 1941	July 1941	Oct. 1941
1. Stocks in producing countries ¹	138.7	131.6	128.2	149.2	160.7	163.3	165.0
2. Stocks afloat	105.0	245.0	255.0	250.0	270.0	270.0	285.0
3. Stocks in the U.S.A.: ..	165.5	175.4	135.4	309.4	329.8	395.2	454.7
3a. Manufacturers, importers, dealers, etc. .	165.5	111.4	178.2	175.2	152.0	176.4	189.0
3b. Government Barter Stocks .....	...	34.0	53.4	77.2	79.9	90.2	90.4
3c. Government Reserve Stocks .....	...	...	3.8	57.0	97.9	128.6	175.3
Total (1 + 2 + 3) ^{1, 2} ..	409.2	552.0	618.6	708.6	760.5	829.5	904.7

Source: International Rubber Regulation Committee: *Statistical Bulletin*.

¹ Excluding stocks in India and French Indo-China which amounted to some 14,000 tons at the end of 1939 and probably to somewhat less by the end of 1940 when the Indian Stock figures ceased to be made available; publication of those for Indo-China ceased earlier in that year.

² Excluding stocks in the United Kingdom amounting to 77,000 tons at the end of July 1939; stocks in public warehouses and manufacturers' stocks in that country have not been disclosed since August 1939 and May 1940 respectively.

Figures of world shipments and imports, consumption and changes in stocks in the United States in the period from 1938 to October 1941 are given in Table 10.

In the United States, some 800,000 long tons of crude and 250,000 tons of reclaimed rubber are estimated to have been consumed by the manufacturing industry in 1941. Over and above the 455,000 tons of crude rubber held in stock at the end of October, further supplies were received in the next several months. No separate data for the United Kingdom, the second largest consumer of crude rubber, have been made public since early in 1940.

The occupation of most of the rubber producing regions of Asia early in 1942 changed the supply situation. Less than ten per cent of the normal world production—that of Ceylon and India, Africa and Latin America—remained outside Japanese control. Practically all of the producers' stocks shown as item (1) in Table 9 are known to have been burnt in order to prevent their falling into Japanese hands, while nearly 40,000 tons of crude rubber went down in East Indian waters. The current output of French Indo-China and Thailand is believed to satisfy Japan's requirements. As drying installations and refinery equipment were destroyed in other occupied territories, no large-scale exploitation of their rubber resources, which

Table 10.—Crude Rubber.

	Total shipments from producing countries (a)	Afloat at end of period (b)	Net imports into U.S.A. (c)	Ratio of (c) to (a) (d)	Changes in U.S. Stocks:			Absorption by U.S. manufacturers ¹ (h)
					Government stocks (e)	Manufacturers' stocks (f)	Total (g)	
1938	895	8.9	406	45.4	..	-31	-31	437
1939	1,004	15.1	486	48.4	+1	-107	-106	592
1940	1,390	17.6	812	58.4	+111	+52	+163	649
Jan.-Oct. 1941	1,258	22.7	(829)*	65.9	+153	+13	+166	663

* Preliminary figure.

¹ Reclaimed rubber:

	1938	1939	1940	Jan.-Oct. 1941
Absorption by U.S. manufacturers (long tons, 000's)	121	170	190	214
Ratio of reclaimed to crude absorption, %	27.6	28.7	29.3	32.4

account for about 85% of the 1941 world production, is likely to be attempted in the near future.

The prospects of utilizing alternative sources of supply in the United States were set out as follows in the *Survey of Current Business* for February 1942: "Reclaimed rubber can take the place of crude to a limited extent, though it cannot be used for all purposes. Output is now at an annual rate in excess of 300,000 long tons. Estimates of available scrap indicate that an annual output of 500,000 tons can be maintained for about 3 years. This will require a substantial increase in reclaimed plant capacity. At present, production of crude rubber in the Western Hemisphere . . . is quite limited and cannot be quickly expanded. The only large immediate source of new rubber is from synthesis. Output of synthetic rubber in 1941 was about 12,000 tons. A 400,000 ton expansion program has been announced, half of which may be in production early in 1943."

The question of the expansion of synthetic production has since been the subject of much attention and the programme of production has been stepped up, while efforts have been made to develop the natural rubber resources of Latin America. Agreements have been or are being negotiated with various Latin-American countries, providing for United States assistance in this programme and for purchase by the Rubber Reserve Company for five years of all rubber produced above what is required for essential domestic needs.

To conserve supplies for military requirements, rigid restrictions

on the manufacture and sale of rubber products for civilian use, similar to those already prevailing in all European countries, were imposed in the United States towards the end of 1941 and, in February 1942, a drastic rationing and control programme came into effect. According to the report of the Baruch Committee, the stock position on July 1st, 1942, and anticipated requirements of crude rubber in the United States up to January 1st, 1944 were as follows:

	Long tons.
Stock pile on hand, July 1st, 1942	528,000
Estimated imports up to Jan. 1st, 1944	53,000
Total	631,000
Estimated essential demand up to Jan. 1st, 1944	842,000
Deficit to be met by production of synthetic rubber before January 1st, 1944	211,000

Indices of the production of non-agricultural raw materials as a whole for recent years can only be computed for the Western Hemisphere. Such indices, broken down into four main commodity groups, are given separately for North and Latin America in Table 11. Indices of fuel and power production in the same years can be computed for Asia, Africa and Oceania and are given in a footnote to the table for purposes of comparison.

Table 11.—*Non-Agricultural Raw Materials.*

Indices of Production in North and Latin America

	Percent- age dis- tribution 1936-38	Indices (1938 = 100)			(1937 =
		1939	1940	1941	100)
<i>North America</i>					
Wood products	16.9	122	140	156	126
Fuel and power ¹	59.6	108	119	127	113
Metals ²	17.8	135	173	210	133
Non-metallic minerals	5.7	111	122	149	133
Total	100.0	117	133	149	120
<i>Latin America</i>					
(Wood products) ³	(0.6)	(142)	(113)	(136)	(142)
Fuel and power ¹	51.7	106	103	115	114
Metals ²	34.7	95	97	119	118
Non-metallic minerals	13.0	102	105	106	107
Total	100.0	102	101	116	115
¹ Fuel and power: Asia		104	102	99	101
Africa		109	116	123	130
Oceania		114	110	111	109

² Metal content of ores mined; excluding gold and silver.

³ Unrepresentative.

In 1936-38, North America's share in world production of the non-agricultural raw materials here considered was 39% and that of

Latin America 5%.¹ The shares in world production of fuels and power alone were: North America 45.6%, Latin America 5.1%, Asia 8.5%, Africa 0.8% and Oceania 0.7%.²

Under the impetus of rearmament and the lend-lease programme, the North American output of all four categories of raw materials covered in Table II expanded rapidly in 1941. This is also true, as regards metals and fuels, of Latin America, where the initial set-back caused by the disruption of trade relations with Europe was soon overcome thanks to the increase in United States' demand. United States investments in Latin America have been greatly increased and numerous raw material purchase agreements, similar in nature or purpose to the rubber agreements referred to above, have been concluded.

Throughout the old world, the war effort has, with its draining of labour resources and burdening of the transport system, led to shortages of fuel and power.

The British Government announced in June 1942 that "the present rate of production is not yielding enough coal to cover unrestricted domestic and industrial demands. It is therefore necessary that immediate steps should be taken to increase the production, and to eliminate unnecessary consumption of coal."³ Exports, which absorbed about a quarter of British output before the war, have practically ceased, except to Ireland. With a view to increasing output, the Government has assumed full control over the operation of the mines and has set up a Ministry of Fuel, Light and Power, and a National Coal Board. The shortage of labour has been partially met by returning some 11,000 ex-miners from the armed forces and war industry. Parallel action has been taken to reduce industrial consumption without damage to war production by an allocation system. Certain restrictions have also been applied to domestic consumption; but direct household rationing has so far been avoided.

In many European countries, an extreme shortage of fuel has developed. In the face of vastly increased absorption of coal by war industry in Germany and German-occupied countries, and particularly the large amounts required for synthetic products, supplies have dwindled as a result, not only, of the cessation of imports, but also of decline in production, though the production of lignite in Germany has increased. Coal production in the Netherlands is reported to have dropped some 10% since the late autumn of 1941 and Belgian output

¹ Corresponding shares were: United Kingdom and Ireland 6%, Continental Europe 25.1%, U.S.S.R. 11.3%, Asia 9.3%, Africa 2.6% and Oceania 1.1%.

² Corresponding shares: United Kingdom and Ireland 10.4%, Continental Europe 19.7%, U.S.S.R. 9.1%.

³ Cmd. 6364.

is also down. The level of French production appears to have been maintained, having risen in the occupied and fallen in the unoccupied zone. But France used to import about 30% of her coal and French industry is suffering from a coal shortage. Transport difficulties have contributed to create local scarcities. This factor appears to have been the main cause of the 30% drop in German coal deliveries to Sweden between the first half of 1941 and the first half of 1942.

Shortage of labour—the principal reason for the decline in production—and transport difficulties set narrow limits to the effective substitution of wood and wood derivatives for coal and petroleum. The growth of electrical power has only very partially offset the fuel shortage. German output of electricity is reported to have increased substantially since the outbreak of war, but expansion slowed down in 1941 and appears to have ceased in the early part of 1942. Italian production is reported to have been about 20% greater in 1941 than in 1939. The shortage of fuel has had to be met by drastic curtailment of civilian consumption.

In Africa and Oceania, the production of fuel and power has been expanding since the outbreak of the war, but there has been a decline in the output of Asia.

In 1939 the leading steel producers among the countries which later became allied as the United Nations accounted for over 60% of world steel production as shown below:

Production of Steel Ingots and Castings in 1939.

	Metric tons (000,000's)	%
United States	47.9	34.9
British Empire	17.6	12.8
U.S.S.R.	18.8	13.7
Continental Europe	44.7	32.5
Japan, Korea and Manchukuo	6.8	4.9
Other countries	1.7	1.2
World	137.5	100.0

The German steel output representing nearly 60% of that of Continental Europe had been pushed very close to the limit of existing capacity before the war and the plant was being extended. The expansion of Germany's production which took place in 1940 appears to have stopped in 1941, company reports for that year pointing out that output had only been maintained on the level of the preceding year. The reason for this slackening, which led to further restrictions on the use of iron and steel for non-military purposes, is to be sought in the labour and transport factors mentioned above and in the shortage of coke. It may be recalled that in the third year of the last war Germany's pig-iron output had fallen to 70% of the pre-war level.

Steel production in the occupied territories of Western Europe is known to have dropped considerably during the first year of occupation. Though it recovered later and was adapted largely to meet German needs, such information as is available suggests that, in the first half of 1942, it still fell appreciably short of the 1939 level. Total steel production of Continental Europe, therefore, is not likely to be very much larger than in 1939 and this is true also of Japan.

No authoritative information is available concerning the effect of Germany's invasion on the U.S.S.R.'s supplies of industrial raw materials. The invaded territories contained important iron and coal mines and also produced the greater part of Russia's sugar crop. But, as the capacity of previously dormant raw material resources in the Urals and Siberia effectively opened up for exploitation in recent years, has not been made known, it is not possible to gauge even approximately the relative importance of the areas occupied.

The Russian production of steel increased continuously until the destruction of the important steel plants situated in the territories occupied by the German armies. However great the decline in the

Table 12.—Petroleum Production.

	Metric tons (000,000's)			
	1938	1939	1940	1941*
North America	165.2	171.9	183.9	191.0
Latin America	44.3	47.8	45.6	51.4
U.S.S.R.	28.9	29.5	29.7	33.2
Iran, Iraq, India, Arabia, Bahrein Islands, Egypt	16.5	16.9	15.0	13.4
Netherlands Indies, Borneo, Burma ...	9.4	10.0	9.8	8.8
Japan and Formosa	0.4	0.4	0.4	0.4
Continental Europe	8.0	7.9	7.8	7.5
World	272.7	284.4	292.2	305.7

Sources: *Statistical Year-Book* and *Monthly Bulletin of Statistics*, League of Nations; *World Petroleum* (New York).

* Preliminary data.

Note. It will be observed that of the estimated world total for 1941, only 5½% was derived from Continental Europe, Japan and those Asiatic territories which were occupied by Japan in the early months of 1942. The conquest of Netherlands Indies, Borneo and Burma did not appreciably increase Japan's petroleum supply for 1942, as stocks and refinery plants were destroyed and the oil wells were damaged or blocked by concrete before falling into enemy hands. For the same reasons, the recent conquest of certain Russian oil fields by the German armies has had no immediate effect on the petroleum shortage in Continental Europe.

The European production shown above does not include the output of synthetic petroleum. According to the highest estimates available, this production is believed not to exceed 4 million tons for the present year.

Russian output may have been, it is heavily outweighed by the increase in United States production which rose to 75.2 million metric tons in 1941 (60.8 millions in 1940) and promises to approach a total for

1942 of some 80 million tons. In view of these facts and the steady increase in the production of the British Empire, the United Nations probably account at present for about two-thirds of the current world production or twice the Continental European and Japanese output of this essential war material.

The relative distribution of current supplies is even more favourable to the United Nations as regards crude petroleum (Table 12), copper, nickel and most other strategic minerals and metals with two major exceptions—tin (Table 13) and tungsten. In 1939, Canada and New Caledonia alone accounted for 93% of the world's nickel production, the third largest producer being the U.S.S.R. Of the world production of copper in that year, the American continent, Africa, the U.S.S.R., India and Australia accounted for 86%.

Deposits of bauxite, the raw material for aluminium, are very widely scattered throughout the globe. The production of aluminium

Table 13.—Tin Production.¹

	Calendar years:			January-October	
	1938	1939	1940	1940	1941
I. Latin America:					
Bolivia	25.9	27.6	38.5	29.0	34.5 ⁴
Other countries	2.3	2.0	2.0	5	5
II. Africa:					
Belgian Congo and Nigeria ..	18.2	19.4	24.8	16.3	26.3
Other countries ²	3.0	3.5	3.8*	5	5
III. Oceania	3.4	3.6	3.6	5	5
IV. Europe ³	3.5	3.5	3.9*	5	5
V. Asia:					
Malaya and Netherlands Indies	71.6	83.6	130.7	105.3	113.7
Thailand	14.9	17.2	17.7	14.1	13.7
China and Burma	16.3	16.4	14.6*	5	5
Japan and French Indo-China .	3.9	3.2	3.9*	5	5
VI. Unspecified .....	...	...	...	26.5	24.7
World	163.0	180.0	243.5	191.2	212.9

Source: *Statistical Year-Book*, League of Nations; *Statistical Bulletin of the Tin Research Institute* (Greenford, England); *National Statistics*; *Minerals Year-Book*, U.S. Bureau of Mines (up to 1940); *Year-Book and Reports of the American Bureau of Metal Statistics*.

* Partly based on estimates. ¹ Metal content of ores mined. ² Almost exclusively British Empire territories. ³ Almost exclusively the United Kingdom and Portugal.

⁴ Output during the whole year 1941 totalled 42,700 tons. ⁵ Included in Group VI, "Unspecified" (according to the Tin Research Institute).

Note. World production during the first ten months of 1941, according to the preliminary data available was 11% higher than during the same period of 1940. Applying this rate of increase to the complete figure for 1940, a total of about 270,000 tons is arrived at for 1941. Out of this estimated total the Asiatic countries, shown in Group V above, accounted for about two-thirds, the remaining third being derived almost entirely from territories readily accessible to the United Nations in 1942. The latest reported figure for tin stocks was 52,000 tons, at the end of October 1941.

itself continues to increase both in North America and in the continent of Europe at an accelerating rate. But according to the latest reports available, the former area is rapidly outstripping the latter.

INDUSTRIAL ACTIVITY

Industrial activity on the Continent of Europe is now almost completely geared to the requirements of the German war machine. German organization permeates the annexed and occupied territories, the countries allied with Germany, and unoccupied France; and of the few remaining neutrals, Sweden and Switzerland are in a large degree cut off from the outside world by the blockade, and the volume and direction of their production is largely determined by the quantities of raw materials and fuel Germany is willing to release to them in exchange for the commodities she wants to obtain. Thus almost the entire economic activity of the Continent, with a population of nearly 350,000,000 plus some 50,000,000 in the occupied provinces of the Soviet Union, is directed from Berlin; and this direction makes itself felt most strongly in industrial production where expansion or contraction, adjustment to the needs of the war, and even physical displacement are much more readily possible than in agriculture or mining.

Of the main war industries situated in this area (excluding the occupied parts of Russia) some 60% are contained within the pre-1938 boundaries of Germany. Since the beginning of 1941 and in particular since the invasion of Russia, the opportunities for an overall expansion of German industrial production have been narrowly limited by the shortages of labour, fuel and raw materials. Thus, apart from the assistance provided by the exploitation of the resources of the rest of the Continent, main reliance for any possible expansion of the production of armaments has had to be placed on a further reduction in the satisfaction of civilian needs and on increased efficiency. Evidence of the curtailment of consumption is found in the extension of the coupon rationing and buying permit system to the few commodities not previously affected.¹ The proportion of the consumption goods industries in total industrial production declined from 60% before the war to 20% at the beginning of 1942, when a further reduction was still considered necessary.²

Both consumption and war industries have been subjected to a drastic process of concentration and specialization. In the cigarette industry, for instance, it was hoped to save over 40% of the number of workers by the closing down, in the spring of 1942, of all factories with a low output per man, and letting the remaining, mainly the larger ones,

¹ Cf. Chapter III.

² *Kölnische Zeitung*, quoted in *Neue Zürcher Zeitung*, March 6th, 1942.

run 24 hours a day. Many textile mills have been closed down especially in the regions where the workers could easily be absorbed by war industries; and production has been distributed over the other factories in such a way that each produced the particular garment in which it showed the greatest technical skill. "Rationalization engineers" are being sent from one factory to another to compare efficiency and to advise on measures to increase it. Secret production processes are made available for general use by all the factories concerned.

This widespread application of something like the American Taylor system has been accompanied by an imitation of the Russian Stakhanovite movement to stimulate the workers' output. Competitions are organized, and prizes are given to workers whose output is exceptionally high. As explained in Chapter I, the system of price control has also recently been modified so as to benefit firms with the lowest costs and stimulate competition in efficiency. In the spring of 1942 a thoroughgoing reorganization of administrative machinery was carried out in order to eliminate redundant office staffs.

It is impossible to estimate to what extent all these measures have sufficed to counteract the factors tending to reduce productivity. Owing in particular to the needs arising out of the Russian campaign and the losses incurred, industry has been drained of the greater part of its most productive manpower. These men have been replaced, though not fully, by women, youths, older men and foreign workers. All of these are less efficient. In the building industry, for instance, which employs many foreign workers, it was observed that labour productivity declined by some 20% in the course of 1941.¹ The workers' efficiency further suffers from fatigue owing to long hours, inadequate transport facilities from home to work, sub-normal nutrition and lack of sleep owing to air-raid alarms. More workers are needed than before as machinery wears out and cannot be replaced.²

The use of the industrial potential of the occupied and allied countries, though directed to one main aim, has shown a great variety of methods. Germany, always remaining the centre of the administration and the whole territorial organization, has requisitioned and bought stocks of raw materials to keep her own industries going; as a rule, she exports raw materials only to the extent that they are required for the fulfillment of specific German orders, and not for general use in the countries concerned. The "value added" to the raw materials sent is not paid for in any real sense but simply goes to swell the frozen clearing balances. These and occupation costs, in addition, furnish the means for buying any other goods, coming from stocks

¹ "The German War Economy, VI," *Economic Journal*, June-September 1942.

² *Frankfurter Zeitung* quoted by *The New York Times*, August 7th, 1942.

or current output, that Germany may find to buy in the occupied countries. Coal is sent from Holland and Belgium to Germany; but Germany exports coal to Italy, as well as to Sweden and Switzerland. Machinery has been removed from some of the occupied areas, but Germany produces other machinery for export, for instance to Italy, and installs factories in Norway. With respect to labour, however, there seems to have been, up to now, mainly a one-way traffic, though thousands of experts, engineers, price-controllers, etc. are sent all over the Continent to stimulate and control production. The number of foreign workers excluding prisoners of war was about 2.1 millions in September 1941 and February 1942, of which about half were in industrial occupations. Since then, a further increase is reported up to over 2.5 millions in June, and it is estimated that the figure will be well above 3 millions by the end of the year.¹ The potential supply of industrial manpower has recently been increased by a French decree of September 14th, 1942 conscripting all men between the ages of 18 and 50 and all unmarried women between 21 and 35 for "any work the government may judge necessary in the superior interests of the nation."

The flow of workers to Germany has made necessary, and has sometimes been deliberately stimulated by, the closing down of factories. The main impact of the reduction in output of the Continent as a whole has thus come to fall on the periphery of Europe rather than on Germany herself. The reduction in total industrial production has been imposed not only by the absorption of labour in the armies but also by the shortage of raw materials and fuel. In France and even in Belgium the lack of coal has seriously affected industrial production. In both of these countries industrial consumption of coal has been cut by at least a third below the pre-war level. The lack of raw materials is felt in particular in textile production. Before the war, the Continent of Europe could meet only about 25% of its consumption of raw natural textile materials from its own production. This percentage is increased, but to not more than 35%, if yarns from artificial fibres are included. The expansion in the production of artificial fibres since 1939, though considerable in itself, has not been anywhere adequate to keep the textile industries fully employed. This is shown in Table 14, which compares the general index of manufacturing production and some of its sub-indices for those European countries for which relatively recent information is still available.² Activity in the textile industry in the early part of 1942

¹ *Deutsche Volkswirt*, July 17th, 1942.

² Bulgaria also publishes a production index which is shown in Diagram 1, but it is too much affected by the seasonal variation of a few industries to be of use in a comparison as that given in Table 14.

Table 14.—Industrial Production Indices of Certain European Countries, 1940 and 1941

Country	1939 = 100							
	General Index		Metal Industries*		Textiles		All Consumers' Goods	
	1940	1941	1940	1941	1940	1941	1940	1941
Sweden ^c	91	84	105	105	108	92	89	79
Norway	89	88 ^a	101	113 ^a	82	61 ^a	92	85 ^a
Denmark	81	81	79	78 ^a	83	78 ^a	84	78
Hungary	105	105 ^b	111	108 ^b	101	85 ^b	103	104 ^b

* Hungary: heavy industries; Sweden: iron and steel.

^a First eight months of 1941.

^b First three quarters of 1941.

^c Figures for Sweden for the first five months of 1942 show little change from the 1941 average. They are as follows: General index: 85; iron and steel: 110; textiles: 83; all consumers' goods: 80.

was 17% below the 1939 level in Sweden; during the major part of 1941 it was 15% below the pre-war level in Hungary, 22% in Denmark and 39% in Norway. But the reduction was much greater in some other countries. In France, production in the textile industry was only 15% of normal early in 1942,¹ and the number of textile workers employed in Belgium declined by 70% between March 1940 and June 1942.² The paper, leather and rubber industries are also hard hit almost everywhere. On the other hand, the metal and machinery industries have generally been in full activity all over the continent, producing mainly, of course, for the German war requirements. Thus it is reported concerning Hungary that, though steel output was at a record level in the second half of 1941, the output of agricultural machinery had to be reduced. But in France, even the production for German military orders has frequently been interrupted by lack of raw materials or electricity.

The changes in industrial activity occasioned by the war are not merely represented by temporary reduction in one branch and expansion in another. Under German direction, the whole fabric of the European industrial system is being altered in a way which it may be extremely difficult to undo afterwards. As far as possible, Germany concentrates the industries, and in particular the heavy industries, within her own borders, leaving to the outer regions the function of supplying raw materials, semi-manufactured goods or parts. Thus the non-ferrous metals of Norway, the production of which has been considerably expanded recently, are being worked up in Germany, though it would be more economical to do so at the mines with

¹ Alphand, *op. cit.*, p. 16.

² *News from Belgium*, September 5th, 1942.

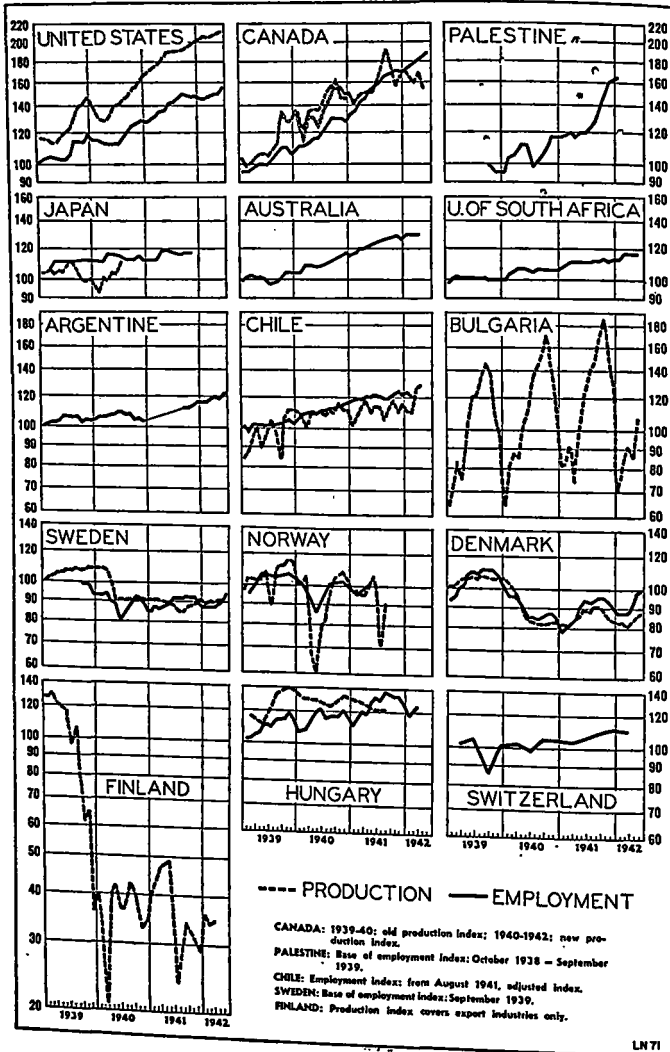
Norwegian hydraulic electricity.¹ The production of munitions in the General Government of Poland is stated to be confined to the making of certain parts, the final stages of production being carried out in Germany. But a great many exceptions to this general principle have had to be accepted, in view of the limitations imposed by the local supply of raw materials and power, and by the acute shortage of transport facilities. The periphery of Europe is also made industrially dependent on Germany by the creation of new industries for which only Germany can supply the raw materials or the technical installation. This has, for instance, occurred in Belgium. Where the dependence of an industry on German supplies is limited, its activities are subordinated to Germany's industrial interests by a great extension of Kartel-agreements, such as the Franco-German dyestuffs agreement concluded in December 1941, and by the purchase of large blocks of shares of the main industries of the occupied countries.

General indices of manufacturing production and employment are shown in Diagram 1 to the extent that these data have been published more or less regularly, that is, for a few of the smaller European countries, as well as for a number of countries outside Europe. The Finnish index refers to the export industries; it brings out clearly the steep fall in activity during the first period of the war with Russia in the winter of 1939/40 and the renewed decline, after one year of moderate recovery, in June 1941. In Hungary, Denmark and Sweden aggregate production was maintained at a relatively stable level during the second half of 1940, the whole of 1941, and, as the figures for the last two countries indicate, the first half of 1942, at a level, however, substantially below that attained during the latter part of 1939. As is brought out by the sub-indices of Table 14, to which reference has already been made, the restriction in activity was mainly concentrated in the consumers' goods industries.

In the two neutral industrial countries of the Continent, Switzerland and Sweden, industrial activity continued to be relatively satisfactory in spite and, in part, because of the shortages prevailing. In Sweden 70,000 to 80,000 more workers were employed in the forestry industry in 1941 than in 1939, additional timber being needed for the production of fuel wood and charcoal to replace coal; alcohol and producer gas to replace petrol; fodder cellulose to replace natural feeding-stuffs; and rayon and staple fibre to replace natural textile materials. The heavy industries are occupied on war orders, on manufacturing plant for the new substitute industries, and on the production of producer-gas equipment for motor cars. These activities, combined with the maintenance of a relatively large army, have created

¹ Malterud, *op. cit.*, page 113.

Diagram 1



a serious shortage of labour. Similar factors have been operative in Switzerland, where employment has continued to increase gradually during 1940 and 1941.

In Spain, a long-range programme of industrialization was initiated by the Government in 1941 with a view to making the country more self-sufficient in manufactured goods. It is reported that at the beginning of 1942, a plan for the investment of 900 million pesetas (some \$80 million) had been drawn up. Nearly one-half of this sum was intended for the chemical and over a quarter for the textile industries. The execution of the programme has, however, been retarded on account of the lack of coal and other factors.

In the United Kingdom unemployment was down to under 150,000 persons in March 1942, having been about 1½ million in the same month of 1939, one million in 1940 and 400,000 in March 1941. The number of industrial women workers has been increased by 4,000,000. During 1941, workers, factory space and machinery were made available for war production by the concentration of the minimum production of consumers' goods in a relatively small number of "nucleus" firms, by the closing down of luxury industries, and by a reduction in the output of other non-war industries to 10-35% of normal. Production for export was greatly reduced after the passage of the Lend-Lease Act in the United States in March 1941; and from May 17th, 1942 the export of cotton goods was prohibited. As a result of all these measures, war production was doubled in the year from June 1941 to June 1942.¹

The most striking increase in manufacturing production during the last two years is to be observed in the United States of America. From May 1940 to May 1941 the production index shown in Diagram 1 increased by 38%; during the next 16 months, it increased by another 20%; and in August 1942, it was authoritatively stated that the American "economy had by no means yet reached its ceiling of output."² The increase in output was rendered possible by a great increase in industrial employment, from 9.7 millions in 1939 to 13.1 millions in June 1942, by an increase in average weekly working hours from 37.6 to 42.6 over the same period, and by a number of other factors such as the shift of workers from industries with a low to those with a high output per head, and the rise in efficiency.

While industrial production as a whole increased by 11% from June 1941 to June 1942, production for war purposes increased by 275%.³ Munitions production, a somewhat more limited concept as

¹ Statement by the Minister of Production, reported in *The New York Times*, June 10th, 1942.

² *Survey of Current Business*, August 1942.

³ Cf. Diagram in Chapter I, page 35.

it excludes the production of consumption goods for the armed forces, equipment for war plant and basic materials to be used for war purposes, was five times as large in June 1942 as in June 1941. According

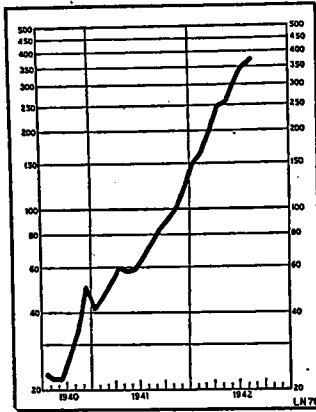


Diagram 2
Index of
Production of Munitions
in the United States

November 1941 = 100.

to an official statement, the munitions output of the United States overtook that of the United Kingdom in June 1942 or shortly before;¹ and since British munitions output is officially stated to have doubled between June 1941 and June 1942, it may be concluded that the armament production of the two countries combined was approximately tripled in these twelve months.

Diagram 2 shows the index of munitions production in the United States as published by the War Production Board. The level of production in November 1941, immediately before the entry of the United States into the war, is taken as 100. Since then, the rate of increase has been on the average 16% per month; and "the big push in war output" was stated to be "just about to get under way in earnest"² by August 1942 as many war plants, both new and converted, were only just getting into operation.

To assure adequate supplies of metal, the production of some of the major durable consumers' goods, such as motor cars and refrigerators, has been stopped, the production of others has been greatly reduced, and the use of a number of critical materials in the production of many other consumers' goods has been forbidden. The production of certain other durable consumers' goods, such as bicycles and stoves, which still continues, is being concentrated in a few firms.

In September 1942 an important change was made in the control of raw material supplies. The War Production Board issued instruc-

¹ Cf. note (1) on page 83.

² *Survey of Current Business*, August 1942.

tions designed to replace the existing system of priorities by a system linking up the distribution of production contracts among the different plants with a corresponding allocation of materials.

According to a statement of the War Manpower Commission, 12½ million workers were engaged in direct war work on July 1st, 1942, as against 6.9 million on January 1st, 1942; an increase of 81% in half a year. During the same period the output of munitions increased by about 140%. To the extent that the two sets of figures are comparable this would indicate an increase in production per man of about one-third in six months. This rapid improvement is to be attributed to the introduction of new processes of mass production and to the return to a longer working week after the partial interruption of production necessitated by the conversion of plant to war purposes early in the year.

Taken over the whole year, however, from June 1941 to June 1942, the number of hours worked per week increased but little: from 41.1 to 42.6 hours for all manufacturing industries and from 43.0 to 45.1 hours for the durable goods industries. Even in the typical war industries, the average working week is still substantially shorter than in industry in general in some of the other belligerent countries, the figures for June 1942 being 42.6 hours in the iron and steel industries, 48.1 hours in the machinery industries and 46.7 hours in the industries producing transportation equipment (aircraft, motor cars, shipbuilding, etc.).

In Latin America, the growing difficulties experienced in the importation of manufactured goods and also to some extent in the exportation of raw materials have tended to stimulate industrial production at home. In the absence of adequate statistical information, it is difficult to gauge the extent of industrial expansion that has taken place. It would certainly have been greater had it not been for the difficulties that the countries in Latin America experienced in obtaining additional plant and in certain cases raw materials. Moreover, though the incentive to expand has been stimulated by the war, it must not be overlooked that almost the whole of this area has been undergoing a rapid process of industrialization during the last twenty years. In Chile, which is the only Latin-American country publishing a monthly index of production, manufacturing activity on the basis of 1938 = 100 was 99 in 1939, 109 in 1940 and 112 in 1941; during the first four months of 1942 it was 10% higher than in the same period of 1941. Industrial employment in the Argentine shows an increase of 11% during the first six months of 1942 as compared with the same period of 1940. The increase is most pronounced in the industries using domestic materials, such as the smelting of lead, tin and other non-ferrous metals (+75%), preparation of meat

(+39%), the production of edible oils (+38%); and there was a considerable decline in the production of motor cars and trucks (-34%) and galvanized iron (-30%).

In many South American countries the textile industry has expanded considerably during the last two years. Thus in Uruguay the industrial consumption of wool increased from 3,000 tons in 1940 to 4,100 tons in 1941; the consumption for 1942 is estimated at 7,000 tons, and the mills are reported to be working 24 hours a day. Uruguay, as well as Brazil, is building up an export trade in textiles. Their main customers are the other Latin-American countries, but considerable orders have also been obtained from the United States.

In Peru industry is reported to be working at full capacity, and the Government is stimulating the establishment of new industries such as those producing condensed milk, glassware, and manufactured iron goods.

Plans have been taken in hand in many countries which will have an important bearing on the later industrialization of Latin America, as they aim at the establishment of heavy industries. In June 1942, a company was formed in Mexico for the production of steel and tin plating, the construction of the plant being expected to start shortly afterwards. In September of the same year, the Peruvian Government signed a contract with United States contractors for the exploitation of iron and coal deposits, the installation of a blast furnace, and steel producing and finishing mills. The establishment of a cement industry using blast furnace slag as one of its raw materials is reported to be under consideration. The Minister of Finance of Brazil stated in March 1942 that the Government intended to create an organization to investigate and promote the development of strategic materials and other natural resources of Brazil. This programme includes, among other things, the construction of a new iron and steel mill which will fill about half of the country's requirements.

These projects will eventually render the Latin-American economy more diversified. Their execution is, however, dependent on assistance from the United States for the supply of machinery and the means to finance the necessary imports. The United States Export-Import Bank has opened substantial credits for the execution of these industrialization programmes: \$100,000,000 to Brazil; \$10,000,000 to Mexico and \$15,000,000 to Peru; and on the occasion of the granting of the first of these loans, the Under-Secretary of State stated that machinery, equipment and other materials would be made available for any project which would "contribute in an important manner to the progress of the American war effort and to the security of the hemisphere."¹ In the early autumn of 1942, a joint technical mission

¹ *The New York Times*, March 4th, 1942.

constituted by the Brazilian and American governments started to work on the conversion of Brazilian plants to war production.¹

India is the natural source of supplies for the Middle East; and with the heavy industries already well developed before the war, considerable advance has been made during recent years. By May 1942 the output of finished steel was 50% higher than before the war, and a large variety of steels is being produced. There has been a large expansion in the production of munitions, army boots and blankets. The production of aluminium sheets and of certain classes of machinery and machine tools is now being undertaken.

A similar development is to be observed on a much smaller scale in Palestine. The employment index for this country, shown in Diagram 1, indicates a very rapid expansion of industrial production, particularly from the middle of 1941. It has been stated that in the middle of 1942 the metal, textile, food and leather industries were providing more than twice as many man-days of work as in 1939.²

In both Canada³ and Australia there has been a great and continuous rise in industrial employment, as is shown by the following indices :

	1938	1939	1940	1941	1942
Australia	100	101	110	123	129 (4 months)
Canada	100	101	120	155	183 (6 months)

In Canada there has been a particularly sharp rise in employment in the war industries. Thus between July 1941 and July 1942, the general index of manufacturing employment increased by 21%. But employment in most consumers' goods industries increased but little, if at all, while a 70% rise was shown in the chemical industries, 45% in the iron and steel industries and as much as 140% in the shipyards.

The number of factory workers in Australia has increased by 30% from 540,000 before the war to 700,000 in the summer of 1942. Of the pre-war number nearly all were engaged in ordinary peacetime production, while in the summer of 1942 only 200,000 were employed in civilian industries.⁴ Production for civilian needs thus appears to have been cut down to less than 40% of the pre-war volume.

¹ *The New York Times*, September 26th, 1942.

² *The Economist*, August 15th, 1942.

³ The index of factory employment appears to give a better indication of the industrial development in Canada than the index of manufacturing production which is partly affected by changes in imports of raw materials and exports of manufactured goods.

⁴ Cf. Budget Speech of the Commonwealth Treasurer, September 2nd, 1942.

CHAPTER III

CONSUMPTION AND RATIONING¹

The supply of foodstuffs and other consumption goods decreased during the third year of war. The decrease was caused by a reduction in agricultural output in many European countries, by the disruption of international trade and by the transfer of a constantly higher proportion of national resources to direct war purposes. Consequently, control of consumption was extended and such control is one of the most important instruments of war economy.

Consumption control assumes two main forms. The first is direct rationing by means of individual cards. It is applied generally to goods—food, clothing, etc.—the consumption of which is essential to the maintenance of health and efficiency. The second, indirect method, uses a number of devices to restrict or eliminate consumption of non-essential goods, and in particular durable consumption goods which most directly compete with war production for men, plant and materials. During the initial stages of the war effort, these measures were chiefly devised so as to restrict final consumers' demand, for instance, by increasing the relative prices of "non-essential" goods, introducing "meatless" days, standardizing qualities, limiting consumers' credit, etc. Such measures have not been abandoned, but they have become subordinated to production control, coupled with direct regulation of import and supply. By this means, production of luxury and "non-essential" goods is drastically curtailed at the source or, in many cases, altogether stopped. These goods therefore tend to disappear from the market, and only exceptionally, as in the case of automobiles, tires and lately of farm machinery in the United States, has it been possible to introduce rationing; even so it is on the basis of proven individual needs and not a general system applicable to all.

The combination of these policies has necessarily led to a situation in which the "essentials" of life—in particular food—represent a larger portion of consumption than before the war.

¹ The present chapter is largely based on the study *Wartime Rationing and Consumption*, League of Nations, 1942. The reader is referred to this study for a discussion of the technical problems of rationing and for more detailed information on rations and consumption.

FOOD

In the absence of direct statistics, a study of present food consumption must be based on an analysis of data on food rations. Such data, however, are often unreliable measures of actual consumption. In some countries, large consumer groups cannot afford to buy full rations; in others, particularly in the occupied areas, rationed articles are frequently not obtainable. Rations, therefore, frequently exceed the average quantities consumed.¹

Table I summarizes the most recent available information on food rations. These are throughout converted into grammes per week and have been arranged into eleven food groups.

As may be seen from the table, rations in one and the same country differ considerably according to the age, sex, occupation, etc. of the consumer. Information on the numerical strength of the different groups is lacking and it is in almost all cases impossible to calculate average consumption by country. This being so it may be convenient to consider first the "normal consumers" as being the most representative single consumer category, and later to study the influence of rationing as a whole on consumption of typical workers' families.

Bread, cereals and potatoes. These foodstuffs are largely interchangeable and supply in western nations the bulk of the body's energy requirements. A decrease in the consumption of other foods, in particular sugar, meat and fats, would normally lead to an increased consumption of bread and/or potatoes.

The United Kingdom, Switzerland, Ireland and Portugal ration neither bread nor potatoes.² The first two countries had high standards of living before the war, and the national diets relied relatively little on these foods; hence as other foods have become scarce, consumption could be increased; in the United Kingdom, it is stated that bread consumption has increased by as much as 20%. In this way the bread consumption in these countries may have fulfilled its normal function as a budget regulator. During the second year of war many countries, including Germany, though rationing bread, still left potatoes unrationed. By the spring and summer of 1942, potatoes were subjected to rationing in most European countries, though this has not been done in Sweden and Denmark. As bread consumption has decreased or become stabilized at pre-war levels, the loss of calories caused by rationing has to be met largely by increased potato consumption. In both Sweden and Denmark, however, the reduction

¹ Cf. *Wartime Rationing and Consumption*.

² Rationing of bread and milk was introduced in Switzerland in October 1942.

Total
Legal Food Ration
(Gramme)

Explanations: r: rationed, amount of ration not known.

Country	Consumer category	Date	Bread & flour	Cereals
United Kingdom:	NORMAL CONSUMER	August 1942	Free	Free
	Children under 6 yrs.		Free	Free
	" 6-17 "		Free	Free
Italy:	NORMAL CONSUMER ¹	Summer 1942	1,050	500-625 ²
	Light worker		1,750	
	Heavy worker		2,450	630-755
	Very heavy worker		3,150	
Germany:	NORMAL CONSUMER	August 1942	2,000	150
	Children under 3 yrs.		900	275
	" 3-6 "		1,200	210
	" 6-10 "		1,700	150
	" 10-14 "		2,600	150
	Young persons 14-20 "		2,600	150
	Night worker		2,600	150
	Very heavy worker		4,400	150
Baltic States:	NORMAL CONSUMER ¹		1,700	150
	Children under 3 yrs.		775	275
	" 3-6 "		1,000	210
	Young persons 6-18 "		2,200	150
	Light worker		2,200	150
	Very heavy worker		3,700	150
Belgium:	NORMAL CONSUMER ¹	Summer 1942	1,570	15
	Light worker		2,020	15
	Heavy worker		2,470	15
	Very heavy worker		2,020	15
	Miners		3,820	15
Bulgaria:	NORMAL CONSUMER	Summer 1942	2,100	250
	Heavy worker		4,200	250
	Very heavy worker		5,250	250
Czecho-Slovakia:	NORMAL CONSUMER	August 1942	2,000	125
	Children under 3 yrs.		900	125
	" 3-6 "		1,200	60
	" 6-10 "		1,700	60
	Young persons 10-20 "		2,600	125
	Night worker		2,600	125
	Heavy worker		3,400	125
	Very heavy worker		4,400	125
2) Slovakia	NORMAL CONSUMER	Summer 1942	1,500	
	Children under 6 yrs.		1,000	
	Heavy worker		1,700	
	Very heavy worker		3,000	

FOOTNOTES: See pp. 94-96.

Table I
in the Summer of 1942^a
per week^b

l.r.: locally rationed; blank: no information

Potatoes	Sugar	Jam, honey, etc.	Meat ^c & meat prod.	Fats ^d	Liquid milk (whole)	Cheese	Eggs (pieces)	Coffee, tea (<i>italics</i>), etc.
Free	225 ³	105	sh. d.					
Free	225	105	• 1/2 ¹	225	1,420 ²	85	I	55 ³
Free	225	105	-/7	225	3,980	85	I	55
		•	1/2	225	1,990	85	I	55
500	115	•						
500	115	•	100-200 ²	95	r	100	I	nil
500	115	•	100-200	95	r	100	I	nil
500	115	•	100-200	95	r	100	I	nil
500	115	•	100-200	95	r	100	I	nil
2,500	225	150	300	205	nil ²	30	0.5 ³	80 ⁴
2,500	225	180	150	125	5,250	30	0.5	nil
2,500	225	180	150	190	3,500	30	0.5	80
2,500	225	230	350	265	1,750	30	0.5	80
2,500	225	230	350	265	1,750	30	0.5	80
2,500	225	150	350	270	nil	30	0.5	80
2,500	225	150	450	225	nil	30	0.5	80
2,500	225	150	600	305	nil	30	0.5	80
4,000 ¹	225	150	850	575	nil	30	0.5	80
l.r.	150	r	250	180		r	r	80 ⁴
l.r.	200	r	125	100	5,250	r	r	nil
l.r.	200	r	125	160	3,500	r	r	80
l.r.	150	r	300	230	1,750 ²	r	r	80
l.r.	150	r	375	190		r	r	80
l.r.	150	r	500	260		r	r	80
l.r.	150	r	725	490		r	r	80
2,100 ²	460	105	140	70	nil ³		nil ⁴	40 ⁴
2,100	460	105	210	135	nil		nil	40
2,100	460	105	280	200	nil		nil	40
2,100	460	105	350	270	nil		nil	40
2,100	460	105	420	665	nil		nil	40
Free		Free	200	200		50	Free	Free
Free		Free					Free	Free
Free		Free					Free	Free
2,000	300	205	300	135	1,750		I	100 ⁴
2,000	300	235	150	125	3,500		I	100
2,000	300	235	150	125	3,500		I	100
2,000	300	235	350	200	3,500		I	100
2,000	300	205	350	200	3,500		I	100
2,000	300	205	450	155	1,750		I	100
2,000	300	205	600	275	1,750		I	100
2,000	300	205	850	545	1,750		I	100
Free	140-185		400	150	1,700		Free	12+7
Free	160-280				5,250		Free	12+7
Free	160-280		600				Free	12+7
Free	160-280						Free	12+7

Table 1
Legal Food Rations
(Grammes)

Explanations: r: rationed, amount of ration not known;

Country	Consumer category	Date	Brcad & flour	Cereals
Denmark:	NORMAL CONSUMER	Summer 1942	2,280	250
	Children under 6 yrs.		1,190	250
	Heavy worker		2,980	375
	Very heavy worker		3,680	500
Finland:	NORMAL CONSUMER	Summer 1942	1,750	1
	Children under 3 yrs.		1,050	
	" 3-7 "		1,400	
	Heavy worker		2,100-2,800	
	Very heavy worker		3,590	
France:	NORMAL CONSUMER	August 1942	1,925 ¹	nil
	Children under 3 yrs.		775	70
	" 3-6 "		1,475	45
	" 6-13 "		1,925	60
	Young persons 13-21 "		2,450	60
	Persons over 70		1,475	nil
	Heavy worker		2,450	nil
Very heavy worker	2,450	nil		
Greece:	NORMAL CONSUMER	Summer 1942	1,480 ¹	
Hungary:	NORMAL CONSUMER	Summer 1942	1,660	100
	Heavy worker		3,050	100
	Very heavy worker		4,450	100
Netherlands:	NORMAL CONSUMER	August 1942	1,800	150
	Children under 4 yrs.		900	275
	" 4-14 "		1,800	150
	Young persons 14-21 "		2,200	150
	Heavy worker		2,700	150
	Very heavy worker		3,600	150
Norway:	NORMAL CONSUMER	Summer 1942	1,820	25
	Children under 2 yrs.		910	25
	Light manual worker		2,275	25
	Heavy worker		2,730	25
	Very heavy worker		3,640	25
Poland: Incorporated Provinces: Poles	NORMAL CONSUMER ¹	Dec. 1941		
	Children under 6 yrs. " 6-14 "			
Government General: Poles	NORMAL CONSUMER	Oct. 1941	1,490	
	Children		1,040	
	Jews		580	
Roumania:	NORMAL CONSUMER ¹	Summer 1942	2,350 ²	
	Heavy worker		4,700	

FOOTNOTES: See pp. 94-96.

Table 1
Legal Food Ration
(Gramme)

Explanations: r: rationed, amount of ration not known

Country	Consumer category	Date	Bread for flour	Cereals
Yugoslavia:	NORMAL CONSUMER	Summer 1942	1,050	70
1) Croatia	Heavy worker	"	2,100	
2) Serbia	NORMAL CONSUMER ¹	Summer 1942	2,000	
Ireland:	NORMAL CONSUMER	Summer 1942	1,390	Free
Spain:	NORMAL CONSUMER	Summer 1942	560-1,050 ¹	r
Sweden:	NORMAL CONSUMER	Summer 1942	2,075	100
	Children under 6 yrs.	"		100
	Young persons 6-18	"		100
	Heavy worker	"	2,750	100
Switzerland:	NORMAL CONSUMER	August 1942	Free	245
	Children under 5 yrs.	"	Free	450
	Young persons 13-18	"	Free	270
	Light worker	"	Free	270
	Heavy worker	"	Free	300
	Very heavy worker	"	Free	300
Japan:	NORMAL CONSUMER			2,310 ¹
	Children under 4 yrs.	"		840
	" 5-9	"		1,400
	Heavy worker	"		3,990

¹ Several countries not given in the table above, ration one or more commodities, namely (grammes per week):

<i>Bread:</i>	Turkey (2,100)	Tangier (2,450)
<i>Rice:</i>	Morocco (60-100)	Tangier (250)
<i>Sugar:</i>	U.S.A. (225)	Canada (225)
	New Zealand (340)	Algeria (125)
	Tunisia (150)	Morocco (125)
	Tangier (125)	
<i>Meat:</i>	Morocco, parts of Tunisia.	
<i>Fats:</i>	Morocco, Algeria, Tunisia, Tangier.	
<i>Milk:</i>	Morocco, Algeria, Tunisia.	

An incomplete list of commodities locally or informally rationed is as follows:

<i>Fish:</i>	Germany, Italy, Belgium, Finland, France.
<i>Fruits:</i>	Germany, Czecho-Slovakia, Italy, Belgium, France.
<i>Vegetables:</i>	Germany, Czecho-Slovakia, Italy, Belgium, France.
<i>Chocolate:</i>	(to children) Germany, France, Sweden.

¹ Weekly rations; calculated on basis of 4.3 weeks per month.

² As purchased, including bone, waste, etc., excluding poultry and game, when not otherwise indicated.

³ Total fats: including butter, margarine, lard, vegetable oil, etc.

⁴ Substitute only.

United Kingdom:

¹ Meat (defined as beef, veal, mutton and pork) is rationed according to value. In the spring

(Continued)
in the Summer of 1942^a
per week)^b

l.r.: locally rationed; blank: no information

Potatoes	Sugar	Jam, honey, etc.	Meat ^c & meat prod.	Fats ^d	Liquid milk (whole)	Cheese	Eggs (pieces)	Coffee, tea (<i>italics</i>), etc.
l.r.	125		150	100				
l.r.								
	150		125					
Free	340	Free	Free	Free	Free	Free	Free	15
r	250 ²		r	200				
Free	430		170 ¹	250	Free	30	0.5	10 or 5
Free	430		170	250	Free	30	0.5	
Free	430		170	250	Free	30	0.5	
Free	430		340	375	Free	30	0.5	
Free	115	r	115	175	l.r.	140	0.5	60
Free	175	r	95	130	l.r.	45	0.5	60
Free	115	r	175	200	l.r.	160	0.5	60
Free	115	r	175	200	l.r.	160	0.5	60
Free	115	r	235	220	l.r.	185	0.5	60
Free	115	r	235	220	l.r.	185	0.5	60
	300		r	r				
	300		r	r				
	300		r	r				
	300		r	r				

of 1942 it was estimated that sh 1/2 d bought at an average 450 grammes per week. In addition bacon was specifically rationed at 115 grammes a week. Total rationed meat thus amounts to about 550 grammes. It should be remarked, however, that some meat products (sausages in particular) were unrationed, and that certain quantities of meat products and fish were obtained under the point rationing system of canned goods.

² From March 1942 dairymen were authorized to allow three (instead of previously two) pints a week to non-priority consumers, and from the last week of May sales were free.

³ Tea only; coffee and cocoa not specifically rationed.

Italy:

¹ Children are reported to receive in general normal adult rations.

² Differing according to locality.

³ Jam rationed; persons under 18 years of age receive 125 grammes a week.

Germany:

¹ Miners only.

² Skimmed milk locally rationed.

³ Rations change according to supply.

Baltic States:

¹ Jam, cheese, eggs, and fish distributed from time to time according to available supplies.

² Up to 14 years of age.

Belgium:

¹ Children are reported to receive normal adult rations.

(Notes continued on next page.)

(Notes to Table 1, continued.)

² Rations reported to be frequently unavailable; in this case bread may be purchased: 500 grammes potatoes equalling 50 grammes of bread.

³ Milk reserved for children; rations reported to be the same as in Germany. Skimmed milk locally rationed.

⁴ Eggs reserved for small children and expectant mothers.

Czecho-Slovakia:

Protectorate of Bohemia and Moravia:

¹ For children up to 14 years only.

² Fat content of liquid milk reduced from 3.6% to 2.5%.

Slovakia:

¹ 140 and 160 grammes respectively in urban, 185 and 280 in rural areas.

Denmark:

¹ Unrationed, but restricted.

² Fat content of cheese legally restricted to 20%.

Finland:

¹ Cereals may be purchased instead of bread.

² Included in fat ration.

France:

¹ Prefects may impose temporary reduction of rations.

² In rural areas; in cities 250 grammes.

Greece:

¹ Athens and Piraeus only.

Hungary:

¹ 60 grammes in rural areas, 260 in Budapest.

Netherlands:

¹ During July cut down to 1,000 grammes.

² 1,750 grammes skim milk. Whole milk in certain districts.

Norway:

¹ Meat too scarce for regular rationing, but small quantities are occasionally made available.

² Rations are frequently unobtainable.

Poland:

¹ Information on rationing in Poland is incomplete and frequently contradictory. The administrative division of the country together with the discrimination with regard to different racial and national consumer groups makes it difficult to obtain a picture of conditions; furthermore, legal rations are often unobtainable. The figures given in the table relate to October and December 1941; later but partial reports indicate further decreases in rations, particularly for bread and meat. Thus, according to the "Polish Feature and News Service," No. 35, the bread rations for Poles in the "Government General" are now about 1,000 grammes per week and meat rations 80 grammes per week.

Roumania:

¹ Bucharest only; local rationing in other towns.

² Of which 1,600 for normal consumer and 3,200 for heavy worker are maize bread.

Yugoslavia:

Serbia:

¹ Belgrade only; local rationing in other towns.

Spain:

¹ Rations vary inversely to income.

² Figures from 1941.

Sweden:

¹ Pure meat, excluding bones.

Switzerland:

¹ Including flour.

Japan:

¹ Rice.

in calorie consumption has been relatively small, and considerably less than could be made good by increased potato consumption.●

Germany, German occupied areas (except Denmark), Italy, Spain and unoccupied France ration bread, cereals and potatoes. Rations for this food group as a whole, therefore, can be compared with corresponding peacetime figures. Estimates for Germany would indicate that calorie consumption in the starch group as a whole has decreased by some 20%.¹ The figures suggest that the decline in the calorie content of the rations in Poland and Italy was between 50 and 60% of the pre-war consumption, in Norway and the Netherlands perhaps between 20 and 25%; estimates for Belgium and Czecho-Slovakia are more doubtful; in both cases, however, the situation appears worse than in the Netherlands and worse than the legal, though not universally available, rations in Norway. The situation is still serious in Spain, in spite of Argentine shipments of wheat; and there is famine in Greece. In all these cases, it should be noted, cereal-potato consumption has been depressed below pre-war levels, leaving no important food free to compensate for the loss of calories following upon the decrease in consumption of other staple foods.

Sugar. The national differences in rations are large, but differences in consumption were very large before the war. Too great a significance should not therefore be attached to the sugar rations as such. In Italy, for instance, consumption may perhaps be higher than before the war when it was exceptionally low, while it has not greatly decreased in Germany. Some reduction has taken place in the United Kingdom, France and Switzerland. Sugar is now rationed in the United States and Canada.

Meat. Meat covers a great many varieties of food and comparable estimates of consumption and rations are difficult. It is frequently reported that legal rations are not obtainable; moreover, absence of meat rationing may, as in Norway, indicate not plenty but such extreme scarcity that regular rationing cannot be maintained. The highest meat rations, though below peacetime averages, are in the United Kingdom. Swedish and German rations have been further reduced and are at present 170 grammes and 300 grammes respectively, or only a fraction of the pre-war consumption.² The level of consumption, though not necessarily the rate of decrease, is lower in Italy and the German occupied areas; quantities available in Norway,

¹ It has been announced that the weekly rations of bread, meat and potatoes in Germany are to be increased, for normal consumers, to 2250, 350 and 4500 grammes respectively, as from October 19th, 1942.

² For Germany, however, *cf.* the announcement referred to in the preceding footnote.

Spain, Greece, parts of Poland and Yugoslavia are tragically low and in some areas practically nil. Fish is generally unrationed; it was important in Scandinavian and British diets, but, except for the Swedish, catches have been generally much reduced owing to the war. Had fish been included with meat, the comparison with pre-war standards would certainly have presented a darker picture.

Fats. As shown by experience during the last war, large decreases in fat consumption have serious effects on health, morale and efficiency. The continent of Europe was dependent to a large extent on overseas imports of feeding stuffs for the production of animal fats, and with the cessation of these imports fats became the most generally and most severely rationed foodstuff. Rations throughout are much lower than previous consumption. The highest rations are found in Denmark, followed by the United Kingdom and Germany; in many of the occupied areas they are almost negligible.

Milk. Milk, the most important single food, is nominally unrationed in Denmark, the Netherlands and Sweden. This, however, does not necessarily imply the absence of scarcities. In Germany and most of the occupied areas, "normal consumers" receive no whole milk, which is reserved for children, expectant mothers, etc.; in the United Kingdom normal consumers receive what remains after priority groups (children, expectant mothers, etc.) have received their full rations.

Cheese and eggs. Consumption of cheese and eggs has almost everywhere been drastically reduced, and in most German-occupied countries these foods cannot be obtained by normal consumers.

Coffee, tea and cocoa. Imports from overseas to the continent of Europe have been practically stopped, and rations of coffee, tea and cocoa are small or non-existent. Tea is rationed in the United Kingdom and Ireland.

Fruits and vegetables. Owing to the uneven supply and the perishable character of fruits and vegetables, it is difficult to include them in a regular rationing scheme; they were rarely rationed during the first years of war. Demand, however, has frequently outrun supplies, leading to shortages and inequalities in distribution. Some sort of informal rationing has therefore frequently had to be introduced. Thus, in Germany, since the late spring of 1942 townspeople are not allowed to obtain fruits and vegetables by direct purchase from producers; the whole output is collected by official marketing organizations. In the towns, rationing is enforced either by coupons or by tying consumers to one particular retailer who is responsible for equitable distribution amongst his customers. In Berlin, for instance, in July 1942, each consumer was restricted to a weekly allowance of

one pound. Scarcities and local rationing are reported also from many of the occupied areas.

While rationing of food is still practised widely only in European countries and Japan, the spread of the war in the Pacific has caused partial scarcities in other parts of the globe. The rationing of sugar in the United States and Canada has been mentioned above, and with the progress of the war, scarcities of other goods have arisen or threaten to arise. In the United States the military demand for meat has caused local shortages of civilian supplies and general rationing is under consideration. Australia, in September 1942, introduced two "beefless" days a week, and Jamaica a little earlier introduced three meatless days a week. The shortage of shipping has also led to scarcities in the United States of coffee, tea, spices, etc. In no case, however, is the general diet affected to anything like the same extent as in Europe.

The above discussion has related to "normal" consumers only. As seen from Table I above, however, rations are highly differentiated according to consumer category. Heavy and very heavy workers generally receive considerable extra rations of the chief energy yielding foods; children, expectant mothers and in many cases sick people and invalids receive preference in the distribution of the chief protective foods, in particular milk, eggs, cod liver oil, fruit juices, etc. Even though the differentiation of rations is generally based on physiological needs, it appears that in terms of relative needs, infants, small children and women are better off than adult males who are normal consumers. As most men live in family groups and actual consumption depends on the total rations of the various family members, it is necessary in order to obtain a more reliable picture of average consumption to study family consumption.¹

In the League of Nations study on "Wartime Consumption and Rationing," peacetime consumption of typical workers' families is compared with the wartime rations of a hypothetical family composed

¹ Significant redistribution of the individual rations may take place within the family group. Thus, according to a study by Mr. F. de Gros Clark, published in a recent number of the *Lancet* (as reported in *The New York Times*, Sept. 14th, 1942) in forty average British working-class families averaging six members, the father received half or more of the family ration of meat and cheese and frequently more than his share of eggs. Children under 5 received little or no meat and children between 5-18, some 70 to 80 per cent of their share. On the other hand children received nearly the entire family ration of milk, in addition to the milk allowance at school. They received their full egg ration. Fish, bread, vegetables and dessert foods were fairly evenly distributed. Thus, the redistribution of food relates chiefly to animal proteins, and the diets which are most likely to be deficient in this respect are those of mothers and children who have left school. In countries where the total rations are below physiological requirements, it may be assumed that the relative position of the housewife is even more serious as regards not only the composition but also the absolute level of her food intake.

of a "normal consumer" husband, a wife and three children. In both cases consumption is expressed in kilogrammes per consumption unit per annum.¹ Certain general conclusions emerging from these data are summarized below.

A practically complete system of rationing covering 90 per cent or more of calories obtained in peacetime from foods now rationed is in force in Germany, the occupied areas (except Denmark) and Italy. The percentage of food rationed is lower in Sweden (75%) and Denmark (65%) and relatively moderate in the United Kingdom (57%) and Switzerland (less than 50%).

The question whether diets are quantitatively sufficient or not depends first on the size of the rationed portion and secondly on the supply of such unrationed foods as may be available. In countries where rationing is practically complete, such additions as can be legally obtained consist mainly of vegetables, fruit, fish, skim milk or poultry, which cannot make up for any serious calorie deficiency as even in normal times they contribute few calories to the average diet. They are, of course, important as sources of other nutritive elements. Moreover, during the spring and summer of 1942, supplies of these foods became increasingly inadequate, and in Germany and many of the occupied areas, subject either to general or local rationing. When legal rations are actually available, and food is not purchased illegally in the black market, rations in these countries would approximate fairly closely to total consumption. In reality, of course, rations, particularly in the occupied areas, are not always obtainable and workers frequently lack the necessary income to buy them. On the other hand, numerous reports testify to a considerable growth of black markets, supplying naturally in the first instance the higher income groups able to pay the often exorbitant prices.²

These facts require to be borne in mind when considering the following rough estimates of the calorie content of the total legal rations in countries with complete rationing. The figures show calories per

¹ The "consumption unit" is represented by an "adult male" and is based on the calorie needs of persons of different age and sex, the needs of women and children being expressed as a fraction of that of an adult male. In order to obtain figures per consumption unit, the consumption of the family is divided by its equivalent number of consumption units.

² It is estimated that of the 1942 wheat harvest in France of six and a half million tons, about a sixth will go into the black market. As regards meat, the 1942 production has been estimated at about a million tons, of which some 300,000 tons or nearly a third is expected to find its way into the black market. (*The New York Times*, Sept. 14, 1942.) In some of the occupied areas it is stated that "the German occupying troops and officials are so liberally supplied with food that . . . they are the principal suppliers to the black market." (Interallied Information Committee, London, 1942. *Rationing Under Axis Rule, 1942*, Vol. 2.)

consumption unit and must not be confused with the figures for the normal consumer which would, of course, be considerably lower.

Germany	Netherlands	Norway	Czecho-Slovakia	
2510	2745	2500	2390	
Belgium	France	Finland	Italy	Poland
2135	1830	1615	1510	1370

These figures should be compared with physiologically recognized requirements of 2400-3000 calories a day per consumption unit, though these requirements change with climate, occupation, etc. It should be recalled also that agricultural and heavy industrial workers (as well as the men in the armed forces) receive extra rations, not included above; the figures, therefore, are throughout lower than they would have been if it had been possible to take this factor into account. But nevertheless they suggest an intake below physiological standards, though perhaps not critically so, in Germany, Netherlands, Norway and Czecho-Slovakia and more or less serious deficiencies in Belgium, France, Finland, Italy and Poland. In comparing the German figures with those of the other countries, it should be observed that rations, according to all reports, are more frequently obtainable in Germany, so that the relative position of German consumers is, no doubt, more favourable than indicated by these figures. The situation in France shows great local variations, conditions generally being much worse in urban areas, although the legal rations may often be supplemented by foods acquired in the black market. The situation in parts of Yugoslavia and Poland, in Greece, and according to available information in occupied Russia, must be characterized as a state of or near famine. During the summer of 1942, the inauguration of regular relief shipments of Canadian wheat to Greece has slightly improved the appalling situation in that country.

It is more difficult to estimate actual consumption in countries which leave one or more of the important staple foods unrationed, for it can be taken for granted that the enforced decrease in rationed foods is accompanied by an increase in the still unrationed foods. The figures below show the calorie value of rationed foods per consumption unit in countries in this category for which it has been possible to make estimates.

United Kingdom	Denmark	Sweden	Switzerland
1325	2090	1840	1030

In Sweden and Denmark, additions of some 900 and 1200 calories respectively of unrationed foods are required to bring the diet up to physiologically desirable levels. In Denmark potatoes, fruit, vegetables, milk and cheese are free, and supplies appear sufficient to maintain the desired calorie levels. In Sweden, the consumption of unrationed potatoes, which has increased by 26%, and of milk, which has increased by 16%, is adequate to maintain consumption even above the 3000 calorie standard. In the United Kingdom the peacetime consumption of unrationed goods is estimated to have amounted to 1580 calories. If this consumption is assumed to have remained unchanged, total consumption would amount to about 2900 calories. In fact, consumption of certain items, fruit in particular, has gone down, but on the other hand bread consumption has gone up by some 20 per cent. On balance, therefore, it seems permissible to assume that consumption from these sources has not sunk below the pre-war standard. In addition, however, meals provided outside the ration in canteens, restaurants, etc., while absorbing a part of the increased bread consumption, may perhaps be assumed to add on an average about 400 calories per consumption unit a day, making a grand total of perhaps as much as 3300 calories a day.

An analysis of the composition of the diet with respect to the nutritional properties necessary to prevent malnutrition is even more difficult. Fats, the most concentrated source of energy, have greatly decreased. Proteins, the main body-building constituents in the diet, are obtained from both vegetable and mineral foods. A serious lack of vegetable proteins is likely only in countries where bread consumption has greatly decreased and potatoes have been substituted, as in Poland. Consumption of animal proteins has been seriously reduced. It remains on relatively high levels in Denmark, Sweden and Switzerland and appears satisfactory in the United Kingdom; but in Germany, the Netherlands, Finland and Czechoslovakia absolute consumption is considerably below pre-war standards; in Norway and Belgium consumption is much lower, and is lower still in Italy, Poland, Greece and Spain.

Deficiencies of dietary phosphorous and calcium have developed where milk and egg consumption has decreased, particularly as it has not been generally compensated for by increased consumption of green vegetables. Serious deficiencies in this respect have therefore developed in continental Europe.

With regard to vitamins, the situation would appear relatively satisfactory—at any rate not greatly more unfavourable than before the war—in the United Kingdom, Sweden, Denmark and Switzerland. In Germany, the diet would appear particularly lacking in vitamins A and D, and the situation in this respect is even more serious

in the occupied areas. By and large, the survey suggests that the composition of diets deteriorates together with the decrease in quantity, and that malnutrition is most serious where the quantity of food has decreased most.

Rationing naturally tends to equalize consumption of the different income groups. The legal rations are larger and better composed in some countries than the actual diets of the poorest income groups before the war. This raises the question of whether or not the poor are able to buy their full rations. Most governments subsidize, in one form or the other, the prices of staple foods, distribute foods—particularly milk—free or at greatly reduced prices to needy families, supply school lunch to the children, etc. Measures of this nature have gone farthest in the United Kingdom, but are important also in such countries as Sweden, Switzerland and France.

GOODS OTHER THAN FOOD

Rationing of clothes is at present as frequently imposed as is food rationing. It is applied in the United Kingdom, Ireland, New Zealand, Australia, Italy, Germany and occupied Europe, as well as in Sweden, Switzerland, Spain and Japan.

Owing to the variety of needs, recourse has been had to group rationing based on the "point" system. Under this system, each rationed article is valued at so many "points," and each individual is given a certain number of points, which he may use according to his own preference within his point income. In other words, total demand is limited while freedom of consumers' choice is maintained. Obviously, however, the total purchasing power is determined both by the number of coupons and the "price" of commodities in points; little significance, therefore, attaches to the number of points issued in different countries. Moreover, the scope of rationing differs from country to country. Thus in the United Kingdom protective garments, hats and clothes for children under four years of age are exempted. In Sweden and Switzerland shoes and garments made of artificial fibre are not rationed. In Germany and occupied Europe, the scope of the group rationing has been progressively narrowed by the wider use of the system of special buying permits (*Bezugs-scheine*). In Germany shoes and certain articles containing a high proportion of wool, linen or cotton can be obtained only after the consumer has proved his need for them. During the winter of 1941/42 the population was even obliged to give up heavy woollens, ski boots, furs, etc. already in their possession.

In the occupied areas the German group system is adopted in principle, but it has an even narrower scope than in Germany, and the rigid system of buying permits, varying according to the degree of

local scarcity, has assumed a more dominant position. Shoes and heavy clothing are often difficult or impossible to obtain even with a buying permit.

Estimates of the effect of clothing rationing on the level of consumption are not generally available. In Germany, however, civilian purchases of clothing during the first half of 1941 are stated to have declined by some 50% in volume as compared with the pre-war level. In the United Kingdom, the "Retail Trade Committee" in its Second Interim Report (January 20th, 1942) estimates that during 1942 "the total quantity of clothes for which coupons—the only legal currency—are available is about one-half of what it was before the war." It estimates too that the total supply of footwear "may be one-third lower than in pre-war days."

The national levels of consumption varied widely before the war. The table below is intended as a rough illustration of the present levels of clothing rations in the United Kingdom, Germany and Italy.

Table 2.—Relative Point Values of Representative Items of Clothing

(Total point values in each country for a period of 12 months = 100)

	MEN				WOMEN				
	Wool- len over- coat	Suit	Cot- ton shirt	Pair of shoes	Wool- len coat	Dresses Wool- len	Cot- ton	Pair of wool- len stock- ings	Pair of shoes
United Kingdom ^a	35	51	10	14	35	22	14	4	10
Germany ^b	132	89	33		132	67	50	7	
Italy ^c	67	63	8	50-63		31	15	2	56-58

^a Rationing period: beginning June 1st, 1942.

^b Rationing period: beginning September 1st, 1941. Heavy clothing and shoes are regularly obtainable only through special purchasing permits. The figures in the above table are ratings relating to the summer of 1941 when these articles were temporarily obtainable on the rationing cards.

^c Rationing period: beginning November 1st, 1941.

Even when full allowance is made for differences in the date and in the scope of rationing, the table suggests that clothes rationing is more severe in Germany and Italy than in the United Kingdom. The need for warm clothes in Italy, however, is of course less than in more northerly countries. The scope of rationing in Sweden and Switzerland is narrower than in Germany and the United Kingdom, and direct comparisons are therefore impossible. On the basis of available data, however, it appears safe to conclude that permitted consumption is higher than in Germany, while it is certain that it is

lower in the German-occupied countries, with the possible exception of Denmark, than in Germany.

The quantitative limitation on purchases has led practically everywhere to an increased demand for goods of high quality. As these generally require a greater outlay of scarce resources, the "price" in "points" has generally been progressively increased for woollen goods, while it has been decreased for the cheaper qualities and goods made of substitute or domestic materials. Indeed, the pricing in points has tended more and more to be based on considerations of real cost.

Economy is enforced also by means of standardization. As a first step, governments limit styles, either "freezing" prevailing fashions or insisting on some changes to economize material. Such measures have been adopted not only in Germany, the United Kingdom and most European countries; but also in the United States. A further step is to prescribe the quality of clothing material produced. In the United Kingdom, standardized materials, "utility" cloth, have been introduced, and it was reported in the spring of 1942 that the trade is gradually concentrating on the manufacture of this material. In Germany, working clothes have been standardized in design, quality and price. The need has been felt, as in the case of food, for a differential system of rationing. Thus in the United Kingdom protective clothing has not been rationed, and in other countries low point values are assigned to this type of clothing. In some countries, the number of points issued to men, women and children differ. Expectant mothers, children and adolescents frequently receive extra points. Reports from practically all countries that apply clothes rationing, nevertheless, indicate that the problem of black markets and trade in "points" is serious.

As mentioned above, it has not proved practicable to apply coupon rationing to durable consumers' goods—automobiles, radios, refrigerators, washing machines, etc.—and the necessary restriction of supply is affected by control of production, the individual special permit system often being applied to retail sale. A different problem, however, is presented by household essentials currently consumed, in particular fuel and light. In Europe the problem of distribution was first generally met by more or less indirect measures; for instance, the supply of hot water was limited to certain days a week or month; a permissible maximum temperature for homes was imposed, and the heating season limited by law. Later, consumers were permitted a certain quota of their consumption during a specified base period. In cases of even more severe shortage, resort was had to direct rationing. Thus in Belgium the coal ration is determined by the size of the family, the *per capita* allocation decreasing with the size of

the family. Germany has introduced a complicated point system dividing the country into climatic zones, consideration being given to the total number of persons and rooms per household. Even in England, which normally has a large export surplus, rationing of coal for household use has been seriously considered. Gas and electricity have become scarce in many European countries owing to the coal shortage. Indirect restrictions on their use are common, but direct rationing has so far been comparatively rare.

Other household goods in common use generally subject to rationing are soap, and other washing and cleaning materials. Soap rations are often almost negligible; in Finland, for instance, the ration is 25 grammes per head for 3 months, but in the United Kingdom, the weekly allowance to each individual is 115 grammes of household soap, 85 grammes of toilet soap, 85 grammes of flakes or chips or 170 to 340 grammes (depending on quality) of soft soap powder.

Motor spirit is scarce everywhere in Europe, and civilian consumption has been restricted to physicians and other persons performing essential public or social services. Since the entry of the United States into the war, local scarcities have arisen in many countries outside Europe, and rationing has been introduced in parts of the United States and South America, and in the British Commonwealth. Tires are now severely rationed even in areas where motor traffic was not already curtailed by lack of fuel, and the United States has stopped the sale of tires to all civilian consumers other than doctors and other specified priority groups. Local rationing boards control the sale to priority users.

The war has also imposed limitations on railway travel. The war effort itself places a heavy strain on the railroads, while the curtailment or cessation of motor travel has tended to increase civilian demand for railway transportation. In Germany and the occupied areas, the purchase of long-distance railway tickets has been made subject to special authorization, which is granted sparingly and only for travel considered to be in the public interest.

A number of articles of common consumption—tobacco, beer, spirits, etc.—have been subjected to increased sales and excise taxes. Because of the reduced possibilities of expenditure in other directions—largely an effect of rationing—even drastic increases in taxation have not been sufficient so to curtail demand as to obviate shortages, even where, as in the case of cigarettes in Germany and the United Kingdom, the amount manufactured is greater than in peacetime. It has become necessary, therefore, to supplement taxation by various

measures of direct though often informal rationing. Increased taxes have also been imposed on amusements—such as cinemas, theatres, races, etc. In the United Kingdom, sports events have been curtailed and limits imposed on the amounts which may be spent on meals in luxury restaurants.

CHAPTER IV

FINANCE AND BANKING

The financial methods of war economy in various countries show a certain uniformity. In order to "make room" for war production, civilian demands must be restricted. In the first place, taxation is increased. There is no instance, however, where taxation alone has solved the problem. The State is obliged to borrow. If it cannot get enough by voluntary loans from the public, three ways are open. The State creates fresh credit by borrowing from the banks, and, by spending it, drives up prices and forces the public to lower its level of consumption. In this war in contrast to the last, war finance through price inflation can hardly be said to have played a dominant role so far, except in China, Italy, Roumania and a small number of other countries.

Another method is to block a part of consumers' incomes by compulsory saving. This device, though introduced in an increasing number of countries, has not so far proved of great importance quantitatively, not even in the United Kingdom where it was first adopted.

The third approach to the problem of Government borrowing is a by-product, as it were, of the direct restrictions on purchases of private consumers and producers of goods for civilian use. Money incomes are maintained or even increased; but outlets for civilian expenditure are closed by rationing, allocation and priorities; and the unspendable funds become available to the State either by direct investment in war bonds or indirectly by way of the banking system. The war economy of today being increasingly characterized by State regulation of prices, production, distribution and labour, this alternative form of "compulsory saving"—enforced by direct controls on the commodity side—has become increasingly important.

To the extent that the funds which the public is unable to spend on goods are held in bank notes, deposits and saving accounts rather than in Government securities, it is the banks—the central, commercial and savings banks—that take up the loans issued by the State. The result is a cumulative increase in the volume of money; and as the public becomes more and more "liquid," so security prices rise and interest rates decline.

In accordance with this simple outline, the four sections of this chapter will deal with the following points: (1) Government taxation and borrowing to meet the mounting volume of war expenditures; (2) the changes affecting the assets of the banking system, the increase in Government loans being chief among them; (3) the corresponding increase in banks' liabilities, that is, in the supply of money; (4) the effects of that increase on the movement of security values, money rates and bond yields. The effects on commodity prices will be examined in a separate chapter.

GOVERNMENT EXPENDITURE, TAXATION AND BORROWING

The course of Government finance in recent years is summarized for 18 countries in Table 1. Differences in accounting methods and in the scope of the national budgets limit the comparability of these figures from country to country. But their general trend is clear enough. As a result of the expenditures arising from the war, the total volume of Government spending shows a steep increase not only in the belligerent but also in most of the remaining neutral states.

The distinction between military and non-military expenditure is of course not always clear and varies in fact in different countries. Taking the figures as given, however, it may be noticed that in 1941, or the fiscal year 1941/42, the share of military in total expenditure was, for instance, 85% in the United Kingdom, 80% in the United States, 79% in Switzerland and 70% in Finland.¹ In Canada the proportion was 71%; but in the financial year 1942/43 the estimated share of war expenditure rose to 82% of total Canadian Government expenditure, largely on account of a contribution made to the United Kingdom in the form of a \$1,000 million gift to cover the United Kingdom's war purchases in Canada. Previously these purchases were financed outside the budget through debt repatriation and accumulation of sterling balances. Lend-lease expenditure is included in the war expenditure of the United States. Among the countries receiving lend-lease aid from the United States, the United Kingdom and Australia exclude it from their budget accounts while India includes it and New Zealand has entered it as a loan of £NZ 10 million in its budget estimates for 1942/43.²

In some cases a part of Government expenditure is financed by special funds and does not appear in the budget accounts as published.

¹ This comparison is obviously affected by the differences in the distribution of non-military expenditure between the central government and local authorities. In a federal state the non-military expenditure of the central government tends to be relatively low.

² For detailed information concerning the lend-lease shipments of the United States, reference should be made to Chapter VI.

Table 1.—Government Expenditure, Tax Receipts and Borrowing

National currencies (000,000's)

(For notes see p. 112)

Country Currency Fiscal Year	Fiscal Year	Expenditure		Tax Receipts (c)	Increase or Decrease (—) in Domestic Debt		
		Total (a)	Of which War Exp. (b)		Total (d)	Long & medium (e)	Short term (f)
				□			
BELGIUM	1938	14482	.	11131	1287	740	547
Franc	1939	14291E	.	11710E	2676	297	2379
Jan.-Dec.	1940	26246E	.	11685E	12178	882	11296
	1941	32226E	.	12173E	19408	9476	9932
	1942	...	.	14607E	10760 ^a	3809 ^a	6951 ^a
				□			
BULGARIA	1938	7207	1870	7659	369	—126	495
Lev	1939	8290	2833	8405	1357	—128	1485
Jan.-Dec.	1940	9571	3378	9431	3217	—84	3301
	1941	16424	6791	13778	3577	61	3516
	1942	17800E	7860E	14402E	4141 ^b	4897 ^b	—756 ^b
				□			
FINLAND	1938	4839	.	5035	102	221	—119
Markka	1939	8056	.	5512	*1302	...	...
Jan.-Dec.	1940	*21200	.	6719	9421	...	...
	1941	*20000	*14000	8058	9630	...	...
	1942	...	...	*8800E	2781 ^c	...	...
FRANCE	1938	89078	.	46963	*57573	.	.
Franc	1939	*193097E	.	57630E	25187 ^d	14369 ^d	10818 ^d
Jan.-Dec.	1940	*269832E	.	66057E	429383 ^e	24185 ^e	405198 ^e
	1941	*273194E	.	57018E	72385 ^f	6846 ^f	65539 ^f
	1942	*258444E	.	66305E	...	...	...
GERMANY	38/39	.	.	17712	11222	7463	3759
Reichsmark	39/40	.	.	23575	21240	5723	15517
Apr.-March	40/41	.	.	27221	37608	17888	19720
	41/42	.	.	*31944	52393	23074	29319
	42/43	.	.	*35000E	14781 ^g	5969 ^g	8812 ^g
JAPAN	38/39	8084E	6007E	1814E	4588	4548	40
Yen	39/40	8952E	6468E	2247E	5666	5563	103
Apr.-March	40/41	10034E	6764E	3168E	7435	6983	452
	41/42	20253E	15730E	3868E	...	10639	...
	42/43	24311E	18079E	5767E	...	...	...
SWEDEN	38/39	1578	234	1105	204	98	106
Krona	39/40	2880	1289	1369	991	423	568
July-June	40/41	3878	2069	1597	1545	1206	339
	41/42	4314E	2510E	1714E	979 ^h	427 ^h	552 ^h
	42/43	*3833E	*2041E	*1858E	...	...	...
SWITZERLAND	1938	675	.	539	95	—11	106
Franc	1939	1038	392	603	332	287	45
Jan.-Dec.	1940	1665	1127	795	972	725	247
	1941	1776	1309	872	953	736	217
	1942	1819E	1310E	703E	...	...	...
UNITED KINGDOM	38/39	1068	400	896	152	74	78
£	39/40	1821	1141	1017	782	213	569
Apr.-March	40/41	3884	3220	1359	2467	1143	1324
	41/42	4788	4085	1962	2566	2067	499
	42/43	5286E	4500E	2361E	429 ⁱ	314 ⁱ	115 ⁱ

Table I.—Government Expenditure, Tax Receipts and Borrowing
(Continued)

National currencies (000,000's)
(For notes see p. 112)

Country Currency Fiscal Year	Fiscal Year	Expenditure		Tax Receipts (c)	Increase or Decrease (—) in Domestic Debt			
		Total (a)	Of which War Exp. (b)		Total (d)	Long & medium (e)	Short term (f)	
UNITED STATES \$	38/39	8707	1206	5480	3278	3970	—692	
	39/40	8998	1657	5652	2526	2349	177	
	July-June	40/41	12711	6301	7754	6008	5062	946
	41/42	32397	26011	13382	23443	16307	7136	
	42/43	80044E	74000E	22065E	53021E	...	...
CANADA C. \$	38/39	553	.	436	86	54	32	
	39/40	681	118	468	403	395	8	
	Apr.-March	40/41	1250	752	778	870	824	46
	41/42	1895	1352	1361	1791	1666	125	
	42/43	3900E	3200E	2040E	...	...	...
AUSTRALIA £ A.	38/39	97	14	74	18	14	4	
	39/40	138	55	90	47	46	1	
	July-June	40/41	252	170	125	74	61	13
	41/42	415	319	179	162 ¹	83 ¹	79 ¹	
	42/43	550E	440E	219E	...	...	...
NEW ZEALAND £ N.Z.	38/39	36	3	32	14	—	14	
	39/40	42	7	35	18	9	9	
	Apr.-March	40/41	62	27	50	26	21	5
	41/42	88	52	57	41	32	9	
	42/43	165E	133E	67E	...	...	...
INDIA Rupee	38/39	1305	521	746	.	.	.	
	39/40	1301	503	813	178	124	54	
	Apr.-March	40/41	1583	748	779	1334	1266	68
	41/42	1892E	1038E	954E	811	376	435	
	42/43	2287E	1350E	1147E	...	...	...
SOUTH AFRICA £ S.A.	38/39	64	2	33	16	7	9	
	39/40	68	4	34	8	8	—	
	Apr.-March	40/41	122	60	50	53	36	17
	41/42	132	72	64E	83	83	—	
	42/43	*144E	*80E	*64E	...	...	...
ARGENTINE Peso	1938	1278	253	795	.	.	.	
	1939	1460	227	754	361	390	—29	
	Jan.-Dec.	1940	1320	223	715	437	148	289
	1941	*1367	246	680	603	347	256	
	1942	*1243E	*291E	*730E	...	...	...
BRAZIL Milreis	1938	4144	.	3880	960	500	460	
	1939	4335	.	3795	906	833	73	
	Jan.-Dec.	1940	4630	.	4037	1216	1131	85
	1941	*4881E	*1207E	*4125E	...	...	...
	1942	*5026E	*1488E	*4389E	...	...	...
CHILE Peso	1938	1664	443	1394	—13	—35	22	
	1939	1777	449	1378	411	201	210	
	Jan.-Dec.	1940	2202	556	1597	219	71	148
	1941	2761	676	*1892	254	—9	263	
	1942	2631E	...	2043E	...	...	...

Notes to Table I—Government Expenditure, Tax Receipts and Borrowing.
E: Estimates. *Provisional figures. □ Including revenue other than tax receipts.

^a Dec. 31st, 1941-June 30th, 1942. ^b Dec. 31st, 1941-June 30th, 1942. ^c Dec. 31st, 1941-March 31st, 1942. ^d Jan. 1st, 1939-August 31st, 1939. ^e Sept. 1st, 1939-Dec. 31st, 1941. ^f Dec. 31st, 1941-May 31st, 1942. ^g March 31st, 1942-June 30th, 1942. ^h June 30th, 1941-Dec. 31st, 1941. ⁱ March 31st, 1942-June 30th, 1942. ^j June 30th, 1941-March 31st, 1942.

General. For more detailed information on budget accounts and public debt see the *Statistical Year-Book of the League of Nations 1940/41* and *1941/42* (in preparation). This volume may be referred to in particular for the absolute amounts of internal public debt and also for data on external debt, not shown in Table I. Where significant changes have occurred in the external debt, these are mentioned in the notes below.

Belgium. Cols. (a)-(b): Including occupation costs in 1940 (4,600 million) and 1941 (15,150 million). Excluding advances to public undertakings and food subsidies. With these included, total expenditure in 1941 was 36,640 million.

Bulgaria. Col. (c): In 1942, including extraordinary receipts from loans and surplus from preceding year.

Finland. Col. (d): Changes in external debt: -358, +545, +1,961 and +547 million respectively in 1938, 1939, 1940 and the first 11 months of 1941.

France. Cols. (a)-(b): Including special credits for national defence up to June 1940 and occupation costs thereafter. Col. (c): Excluding receipts of the Amortization Fund. Col. (f): Including debt to Bank of France on account of occupation costs.

Germany. Col. (d): Including tax certificates, advances by the *Reichskreditkassen* and, since January 1942, industrial non-interest-bearing deposits with the Treasury against tax facilities after the war.

Japan. Cols. (a)-(c): General Account *plus* Special War Account, with adjustments for transfers between the two accounts.

Sweden. Cols. (a)-(b): Current and capital expenditure and, in 1941/42 and 1942/43, special budget for national defense.

Switzerland. Col. (c): Including a part of the Exchange Equalization Fund allocated to the Federal Government (250 million for military expenditure and 75 million for public works).

United Kingdom. Cols. (a)-(b): Excluding lend-lease supplies.

United States. 1942/43: Revised estimates of October 3rd, 1942.

Canada. Cols. (a)-(b): Including in 1942/43 \$1,000 million gift to the United Kingdom. Col. (c): Including in 1942/43 \$95 million of tax receipts refundable after the war. Col. (d): Changes in external debt: -82, -78 and -170 million in 1939/40, 1940/41 and 1941/42 respectively.

Australia. Cols. (a)-(c): Consolidated Revenue Fund and Loan Fund *plus* expenditure from excess receipts of previous years. Col. (d): Including debt of the states. Changes in external debt: +2, -1 and +11 million in 1938/39, 1939/40 and 1940/41.

New Zealand. Cols. (a)-(c): Consolidated Fund *plus* War Expenses Account, with adjustments for transfers.

India. Cols. (a)-(c): Revenue Accounts *plus* Capital Outlay. According to an official statement, the sum shown in col. (b) represents only a fraction of the total being spent in India on the war; expenditures effected under the financial settlement with the United Kingdom are estimated at 4,000 million rupees in 1942/43. Col. (d): External debt: -265, -976 and -1,649 million rupees in 1939/40, 1940/41 and 1941/42 respectively.

Union of South Africa. Cols. (a)-(c): Consolidated Revenue Fund *plus* Loan Fund. Col. (d): Changes in external debt: +5, -8 and -38 million in 1939/40, 1940/41 and 1941/42.

Argentina. Col. (a): Excluding capital expenditure in 1942.

It is for this reason that Denmark, for example, is omitted from Table 1. Denmark's budgetary expenditure in 1941/42, amounting to 917 million kroner, was more than covered by 933 million of current revenues; but an extra-budgetary fund was created in 1941 with authority to borrow up to 600 million kroner for the financing of public works; and expenditure from this fund has not been disclosed.

A comparison of Government expenditure with national income cannot usefully be attempted here for two reasons. First, lack of data makes it in most cases impossible to render such national income estimates as are available sufficiently comparable. Secondly, as the economic war effort is intensified, an increasing share of it is derived from the disinvestment of existing capital resources through depletion of stocks, failure to maintain plant and equipment, etc. Foreign contributions have also become increasingly important in some cases. In other words, a growing part of war expenditure is met not out of current national income or output but by drafts on national capital and by foreign resources. A comparison of war expenditure with total resources, and not merely national income, is given in Chapter I for the United Kingdom and the United States, where comprehensive and authoritative estimates of the kind required have been published. Such data as are available for Germany concerning national income, disinvestment and external contributions will be referred to later in this section.

On the basis of the figures given in Table 1, the proportion of Government expenditure covered by tax receipts in 1941 or 1941/42 appears to have been less than 20% in Japan, 40% in Finland, 41% in the United Kingdom and the United States, 50% in Switzerland, 65% in New Zealand, 70% in the Argentine. In Italy, a country which for lack of data is not included in Table 1, the proportion is reported to have been less than a third.¹

Tax receipts have nowhere kept pace with the growth of expenditure. Yet they have shown a considerable increase in most countries, reflecting the increase in tax rates combined in varying degrees with a rise in money income and turnover. The composition of the tax revenue in some of the countries included in Table 1 is shown in Table 2; and from this it appears that direct taxation has risen most, while the share of customs and excise duties has tended to decline with the reduction in private trade and consumption. In some countries, however, taxes on individual and corporate incomes have been pushed up to such an extent that the more recent tax increases have been confined to indirect taxation. Thus in the United Kingdom the budget for 1942/43, while leaving the income tax unchanged, raised

¹ *Neue Zürcher Zeitung*, December 8th, 1941.

Table 2.—Government Tax Revenue

Millions of national currency units. E: Budgetary Estimates.

Country	1938/39	1939/40	1940/41	1941/42	1942/43
UNITED KINGDOM: (£)					
	Fiscal years: April to March				E
Income Tax and Surtax	398	460	609	845	991
National Defence Contribution ..	22	27	24	22	} 425
Excess Profits Tax	—	—	72	247	
Estate Duties	77	78	81	91	90
Stamp Duties	21	17	14	14	15
Motor Vehicle Duties	36	34	38	38	34
Excise	114	138	224	326	367
Customs	226	262	305	378	438
Miscellaneous	2	1	1	1	1
Total	896	1017	1359	1962	2361
AUSTRALIA: (£A)					
	Fiscal years: July to June				E
Income and War Company Tax .	12	16	43	86	116
Land Tax	2	2	3	4	4
Estate Duty	2	2	2	3	3
Sales Tax	9	12	20	27	30
Excise	16	19	} 54	31	40
Customs	31	35		25	22
Miscellaneous	2	4	3	3	4
Total	74	90	125	179	219
CANADA: (\$C)					
	Fiscal years: April to March				E
Income tax on Individuals and Corporations	132	123	207	375	} 810
National Defence Tax	—	—	28	107	
Tax on Dividends and Interest ..	10	11	13	28	28
Excess Profits Tax	—	—	24	135	465
Succession Duties	—	—	—	7	15
Sales Tax	122	137	180	236	218
Excise	75	88	192	327	273
Customs and Other Taxes on Imports	94	106	132	143	231
Miscellaneous	3	3	2	3	...
Total	436	468	778	1361	2040
NEW ZEALAND: (£NZ)					
	Fiscal years: April to March				E
Consolid. and War Exp. Accounts:					
Income Tax	9	12	18	19	22
National Security Tax	—	—	6	10	15
Land Tax	1	1	1	1	1
Stamp and Death Duties	3	4	5	6	5
Highway Taxes	3	3	2	2	2
Sales Tax	4	4	6	7	10
Customs and Excise	12	11	12	12	13
Total	32	35	50	57	67
UNION OF SOUTH AFRICA: (£SA)					
	Fiscal years: April to March				E
Income Tax	17	18	25	28	28
Mines Contribution	—	—	5	7	7
Excess Profits Duty	—	—	3	7	8
Stamp and Death Duties	3	3	2	2	3

Table 2.—Government Tax Revenue (Continued)

Millions of national currency units. E: Budgetary Estimates.

Country	1938/39	1939/40	1940/41	1941/42	1942/43
Excise	3	3	4	3	7
Customs	9	9	10	12	10
Miscellaneous	1	1	1	1	1
Total	33	34	50	64	64
UNITED STATES: (\$) ^a					
	Fiscal years: July to June				E
Income Taxes	2189	2125	3470	7960	12031
Social Security Taxes	740	833	925	1186	1830
Other Internal Taxes	2232	2345	2967	3847	3959
Customs	319	349	392	389	245
Total	5480	5652	7754	13382	18065 ^a
ARGENTINE: (Peso)					
	Fiscal years: Jan. to Dec.				E
Income Tax	108	112	126	127	161
Inheritance Tax	17	18	15	21	23
Land Tax	30	32	32	32	32
Stamp Duties	63	63	64	66	70
Sales Tax	34	37	37	40	42
Excise (Unified Taxes)	166	172	170	177	187
Customs	377	320	271	217	215
Total	795	754	715	680	730
FRANCE: (Franc)					
	Fiscal years: Jan. to Dec.				E
		E	E	E	E
Direct Taxation	9248	14107	15480	15800	18370
Registration and Stamp Taxes ..	6608	6816	4735	6105	7904
Taxes on Bourse Operations and Capital Yields	6008	6911	5374	5583	6868
Customs Receipts	8823	10401	15290	2150	2426
Indirect Taxes	5122	5744	4749	7052	6017
Business Turnover Tax	9844	11872	11673	12980	16035
Armament Tax	—	—	7020	—	—
Tax on Transactions	—	—	—	6500	7090
Sugar and Monopolies Taxes ...	1310	1779	1736	848	1595
Total	46963	57630	66057	57018	66305
SWEDEN: (Krona)					
	Fiscal years: July to June				E
Income and Property Tax	368	355	464	453	...
Defence Tax	—	158	266	265	...
War Profits Tax	—	—	21	35	...
Stamp and Death Duties	70	64	49	55	...
Motor Vehicle Duties ^b	130	138	58	35	...
Turnover Tax	—	—	74	220	...
Duties on Spirits, Wines, Tobacco, etc.	301	389	458	438	...
Duties on Artificial Fats, Coffee, Silk, etc.	29	57	79	48	...
Tax on Commodities	—	—	—	25	...
Customs	207	208	128	140	...
Total	1105	1369	1597	1714	1858

^a Excluding tax increases voted in October 1942.

^b Including additional duty on gasoline.

the duties on beer, spirits and tobacco and doubled the purchase tax on a long list of non-essential goods from $33\frac{1}{2}\%$ to $66\frac{1}{2}\%$ of their wholesale value. In Germany a number of excise duties were sharply increased in November 1941. In Japan, also, the tax increases effected in November 1941 and again in January 1942 were confined to indirect taxes.

Methods of direct taxation have been changed in various ways to make them more effective. Collection at the source, for example, tending to eliminate the lag between earnings and tax payments, has become more wide-spread. Canada, while increasing her income-tax rates very substantially, adopted a system of this sort in April 1942, following to some extent the methods applied earlier in the United Kingdom. Centralization of fiscal powers is another tendency of which there are recent instances. Following the policy introduced in Canada in 1941, the Australian Commonwealth Government took over the collection of income tax (including company tax) from the state governments in July 1942. Under this arrangement, which was limited to the duration of war, the states were compensated by grants from the Commonwealth budget. In China, the National Government took over the provincial land taxes in the latter part of 1941.

In April 1941, a scheme was introduced in the United Kingdom whereby a part of the income tax, especially in the case of the lower incomes, was made refundable, without interest, in the form of post-war credit certificates. The yield of these "compulsory savings" (included in the revenue return in the total yield of income tax) was estimated at about £125 million in 1941/42 or about 5% of total Government revenue. Similarly, a part of the Excess Profits Duty was made refundable after the war. This principle was subsequently adopted in a number of other countries. In South Africa, 10% of all income-tax payments after March 1942 were credited to the taxpayers on savings accounts repayable after the war. In India, an increase in income tax in the same month was coupled with a provision by which certain low-income groups were given the alternative of either paying the tax or depositing $1\frac{1}{4}$ times the amount due in a special savings bank account. At the same time, one-tenth of the excess profits tax was made refundable on condition that the taxpayer deposited twice the refundable amount in a reserve fund to be released for the re-equipment of industry after the war with 2% interest. Under the Canadian budget of June 1942 the rate of income tax was sharply increased, but one-half of the tax, within limits of \$800 and \$1,000 a year for single and married persons respectively, was made refundable after the war with 2% interest, and a similar provision was applied to the excess profits tax. The refundable por-

tions of the income tax and the excess profits tax are estimated at \$70 million and \$25 million respectively in 1942/43.

Brazil, after her entry into the war, issued a loan in October 1942 of which all taxpayers had to purchase amounts equal to their last income-tax payments.

According to regulations enforced in Italy in 1942, any excess profits not directly taxed away must be invested in Government securities on blocked accounts. At the same time the Italian Government effected a reduction in its cash expenditure by paying a part of the allowances to soldiers' dependants into accounts that are to remain blocked till after the war. It may be mentioned that in the United Kingdom and Australia a part of Government expenditure—namely, a part of the pay of the armed forces—has similarly been defrayed not in cash but in post-war credits.

Germany introduced a scheme of "iron savings" in November 1941, under which wage earners were relieved of part of their direct tax obligations if they deposited regularly a part of their income in blocked accounts repayable after the war with $3\frac{1}{4}\%$ interest. A man earning 300 marks a month, for instance, had his monthly tax bill reduced by 11 marks if he undertook to save 26 marks a month; but once he had joined the scheme, the saving became compulsory and was regularly deducted at the source by the employer. The yield of the "iron savings" campaign was estimated at 1,000 to 2,000 million marks a year. A similar method was applied to the funds accumulating in business firms as a result of their inability to replace their plant and commodity stocks. Such funds were to be deposited at the Treasury free of interest in return for a promise of tax concessions after the end of the war.

Thus the building up of post-war purchasing power has become an integral part of the fiscal system in a great number of countries. But the same process results on a much wider scale from Government borrowing financed by credit expansion and accompanied by direct restrictions on private spending; for in these circumstances the counterpart of the war-time reduction of consumption and disinvestment of capital is an accumulation of purchasing power which, if unspendable for the present, remains in existence as a claim on the future.

This accumulation of "blocked" purchasing power has been characteristic especially of German war finance from the very outset. In the fiscal year 1941/42, German Government borrowing amounted to some 52,000 million marks, most of which was taken up by the banking system. The approximate total of German Government expenditure in that year can be indirectly arrived at by adding up the volume of borrowing (52,000 million marks), the tax revenue (estimated at

32,000 million), other internal revenues (about 6,000 million) and the occupation costs paid to Germany by other countries (approximately 10,000 million¹). Of the total of about 100,000 million marks, some 12,000 million represented transfer expenditure, such as allowances to soldiers' dependants, etc. After deducting this, Government expenditure on goods and services appears to have been about 88,000 million, of which probably 10,000 million was required for non-military purposes, leaving more than 75,000 million for war expenditure.

This volume of expenditure, however, does not reflect Germany's own effort alone. To obtain an estimate of the expenditure covered from domestic sources, foreign contributions must be deducted. These have been estimated at some 17,000 million marks,² consisting not only of the 10,000 million of occupation costs, but also of some 7,000 million of German Government borrowing financed outside Germany by three principal methods: by the acquisition of German Government paper by central and commercial banks in the German-controlled countries; by the growing clearing balances which Germany owes to these and other countries and which the German Clearing Office invests in German Government loans; and by the issue of "occupation marks."³ Government expenditure financed by domestic resources thus amounted to approximately 70,000 million marks in 1941/42. Germany's national income is stated to have been 115,000 million marks in 1941, but probably some 20,000 million of indirect and other taxes entering into the market value of output, though not into individual and corporate incomes, should be added to this sum in order to obtain the national income at market prices. In addition, disinvestment of domestic capital resources is reported to have taken place in 1941 to an extent of some 5-10,000 million marks.⁴

Italy's war expenditure, on the basis of an official statement has been estimated at an annual rate of 60,000 million lire in the latter part of 1941, or 8,000 million marks at the official conversion rate. This amount equals little more than one-tenth of Germany's total war expenditure and about one-half of what the occupied and other countries contributed to Germany.

¹ Including the contribution imposed on the Czech Protectorate.

² This amount represents, for the most part, contributions out of current production; it does not take into account supplies obtained without the medium of money, consisting largely of pre-existing commodity stocks, armaments and capital assets taken over in the occupied areas.

³ The *Reichskreditkassen* issue these notes against a "short-term advance" to the Reich, which is included in the public debt return.

⁴ *Bank-Archiv*, February 15th and May 1st, 1942.

EXPANSION OF BANK CREDIT

Government borrowing has come to dominate the banking situation in all the belligerent and many of the neutral countries. In this section we are concerned with the movement of banking assets, that is, with the factors underlying the war-time expansion in the volume of money; and the increase in bank holdings of Government paper will be considered first. Significant changes in other items among banks' assets will be noted later.

A few examples will suffice to illustrate the large part of Government borrowing taken up by the banking system. In Germany, where the internal public debt increased by 81,000 million marks in the two years 1940 and 1941, it has been estimated that only 10,000-11,000 million of this, or about 13%, was taken up by private investors. The remaining 87% was acquired mostly by banks and partly by institutional investors such as insurance companies.¹ In Bulgaria and Finland, over 80% of the increase in domestic public debt in 1941 was absorbed by the central bank alone. During the first half of 1941, the latest period for which figures are available, the Japanese commercial banks increased their holdings of Government bonds by an amount equal to 84% of the increase in the total volume of these bonds during the same period.

In the United States the increase in the public debt since the end of 1940 has been distributed as follows:

Changes in Holdings of U.S. Government Securities.^a

\$(1,000,000,000's)

	Dec. 31st, 1940 to June 30th, 1941	June 30th, 1941 to Dec. 31st, 1941	Dec. 31st, 1941 to June 30th, 1942
Federal Reserve Banks	—	0.1	0.4
Commercial banks	2.3	1.7	4.3
Savings banks	0.2	0.3	0.2
Insurance companies	0.1	1.0	1.0
Other private holdings	-0.2	0.6	1.2
Total marketable issues ^b	2.4	3.7	7.1
Non-marketable issues ^c	1.1	4.3	4.5
Federal Government agencies ^d	0.9	1.0	1.1
Total public debt	4.4	9.0	12.7

^a Including securities guaranteed by the Federal Government.

^b Including insignificant amounts of non-marketable issues held by banks and insurance companies.

^c Mainly savings bonds held by private investors.

^d Represents mainly social security taxes invested in special Government issues.

Commercial banks' purchases of U.S. Government securities fell off in the second half of 1941, when a sharp increase occurred in the

¹ Cf. *Bank-Archiv*, June 15th, 1942.

sale of savings bonds to the public. In the first half of 1942 purchases by commercial banks increased, and the Federal Reserve Banks also added a substantial amount to their holdings. These two groups together absorbed about two-thirds of the increase in marketable Government securities and nearly two-fifths of the growth in the total debt in that period.

Similar figures are not available for the United Kingdom; but it may be useful to compare the increase in the national debt with certain bank holdings consisting largely of Government debt:

United Kingdom: Increase in National Debt and in Certain Bank Holdings.

	£(000,000's)	
	June 30th, 1940 to June 30th, 1941	June 30th, 1941 to June 30th, 1942
Internal Government debt	2,709	2,391
Bank of England: Securities ^a	31	160
London Clearing Banks: Securities and short-term assets ^b	512	342

^a As shown in last weekly return of the month.

^b Call loans (mainly to the discount market for investment in Treasury bills), discounts (mainly Treasury bills), Treasury Deposit Receipts, and "Investments."

The decline in Government borrowing in the United Kingdom was due, of course, to the partial exhaustion of dollar assets and the passage of the United States lend-lease bill. Even if it is recalled that the eleven clearing banks are not the only commercial banks in the United Kingdom, and that a decrease probably occurred in the amounts of non-government paper included in some of the items chosen to represent their Government loans, it would seem that the proportion of Government borrowing met by the banking system has been smaller in the United Kingdom than in the United States. A special factor accounting for this is the liquidation of foreign assets, more particularly the re-investment in domestic Government securities of the funds received by private investors in exchange for the foreign securities they have had to surrender to the Government. Moreover, large amounts of the floating debt have been taken up by sterling area central banks.

The proportion of total borrowing taken up by the banking system clearly tends to depend on the public's preference to hold money rather than Government securities. The distribution of Government borrowings as between the central bank and the commercial banks, in turn, depends on the extent to which the public prefers to hold bank notes rather than deposits. In countries where the public is less accustomed or less willing to hold deposits than bank notes, the Government will have to do more of its bank borrowing at the bank of issue,

as has been the case for example in Bulgaria and Finland. The part played by the central as compared with the commercial banks in the financing of Government loans is consequently reflected in the increase in note issues as compared with commercial bank deposits, which will be shown in the next section (see Diagram 1).

In countries such as the United Kingdom and the United States, where the public is accustomed to hold its money mostly in bank deposits, the increase in central banks' Government securities, while meeting demands for currency in circulation, has been mainly designed to keep up the reserve balances of the commercial banks at their traditional or legal ratio, so as to enable them to take up Government loans. In this way the cash ratio of the London Clearing Banks has been maintained at the traditional level of 10-11% in spite of the large increase in deposits resulting from their purchases of Government paper. As these purchases have consisted largely of short-term paper (particularly Treasury Deposit Receipts), their ratio of "quick assets" to total deposits has increased from the traditional 30% to over 40%; and in order to ensure a smooth and adequate supply of cash—the most liquid of the "quick assets"—a system of direct transactions in Government paper has been adopted between the Bank of England and the Clearing Banks without the traditional medium of the discount market.

In the United States, excess reserves of the member banks declined from nearly \$7,000 million at the beginning of 1941 to little more than \$2,000 million in July 1942, the two main reasons being the drain of cash into circulation and the increase in the legally required reserves due to the expansion of deposits. In order to ease the reserve position, the Federal Reserve Banks bought \$400 million of Government securities in the first half of 1942, and a further \$800 million in the following seven weeks. Moreover, the reserve requirements against demand deposits in the central reserve cities—New York and Chicago—were reduced from 26% to 24% on August 20th and again to 22% on September 14th. It was in these two centres that excess reserves had declined most, as the funds raised there by Government borrowing and taxation were largely spent in other parts of the country.

The movement of central bank assets in 47 countries is shown in detail in *Money and Banking 1940/42*,¹ and only a brief commentary is needed here. Among central bank assets other than Government securities, commercial discounts and advances have generally tended

¹ League of Nations: *Money and Banking 1940/42*, Table II: "Principal Assets of Central Banks." Reference may also be made to the special table entitled "Central Banks: Advances to Governments and Government Security Holdings" in the *Monthly Bulletin of Statistics* (League of Nations), March 1942.

to decline with the increased liquidity resulting from Government loan expenditure. Gold and foreign exchange reserves, on the other hand, have in certain countries greatly contributed to the expansion of credit.

The gold reserve of the United States, after growing enormously for many years, stopped increasing in 1941. The highest level was reached in October 1941, after which there was a slight decline. Owing to the rise in working costs and the shortages of labour and equipment caused by the war, world production of gold (outside the U.S.S.R.) declined by over 5% from the first half of 1941 to the first half of 1942. Even so, output remained very considerable, and the United States continued to be the chief buyer of the newly mined metal. The United States, however, passed it on to other countries. Among the countries that gained gold, Sweden and Switzerland did so by converting their existing dollar balances,¹ while a number of Latin-American countries, as observed earlier, increased their reserves as a result of their favourable balance of payments.²

As was shown in Chapter I, the central exchange reserves of certain sterling area countries—particularly India, Iraq, Egypt and Ireland—increased considerably during 1941 and the early months of 1942. Gold reserves in the sterling area outside the United Kingdom showed practically no change, except in South Africa where they fluctuated continually but rose only slightly on balance.

The most striking increase in central banks' foreign assets has occurred in certain European countries, as may be seen from the following examples :

Foreign Exchange Reserves of Central Banks.

(National currencies, 000,000's)

	End of: 1940 (1)	1941 (2)	Latest month 1942 (3)	Col. (3) as % of note circulation on same date
Belgium (franc)	4,338 ^a	12,919	15,161 (March)	29%
Bulgaria (leva)	2,314	10,696	14,356 (June)	104%
Denmark (krone)	423	876	983 (May)	118%
Netherlands (guilder)	15	930	1,036 (May)	45%
Roumania (leu)	7,260	19,664	13,395 (March)	14%

^a January 2nd, 1941.

Needless to say, these assets represent almost exclusively German Government borrowing and consist of German Treasury bills and

¹ From June 1941 to June 1942, the Swedish Riksbank reduced its foreign exchange reserve from 803 to 543 million and increased its gold stock from 424 to 681 million kronor, while the Swiss National Bank reduced its foreign exchange from 1,311 to 143 million and increased its gold reserve from 2,283 to 3,442 million francs.

² See Chapter I, page 48 above.

clearing balances. The last column is intended to illustrate their contribution to the expansion of currency; and it will be seen that in Bulgaria and Denmark they have come to exceed the amount of notes in circulation. In Bulgaria, however, the rise in the note circulation has partly been concealed by the issue of Treasury notes. In Denmark the rise in the central bank's German clearing balances and in advances to the occupation authorities ("other assets," not included in the figures given above) has had its counterpart in an increase in commercial banks' cash reserves even more than in the note circulation; and to some extent it has been offset by a decline in domestic assets: commercial discounts and Government securities. In the balance-sheet of the National Bank of Hungary an item called "advances to foreign countries" made its appearance in 1941 and rose steadily thereafter equalling 16% of the note issue in May 1942.

In the conditions obtaining in the occupied countries, the distinction between foreign and domestic central bank assets has often become quite indeterminate. When the local Government borrows from the central bank to finance its payments to Germany, the process is hardly different from German borrowing direct from the local bank of issue. In the spring of 1942 the local administration at The Hague took over a part of the Netherlands Bank's German Treasury bills in exchange for its own Treasury bills. In Roumania, the reduction in "foreign assets" in the first quarter of 1942 was accompanied by an increase in "other assets," indicating a similar bookkeeping transfer. "Sundry assets," indeed, have become an increasingly important item in central banks' balance-sheets in the occupied countries, not only in Roumania and Denmark, as already mentioned, but also in Bulgaria, "Bohemia and Moravia" and "Slovakia."¹ At the end of 1941, practically four-fifths of the total assets of the National Bank of Bohemia and Moravia consisted of "other assets," an item which is known to contain "floating claims in respect of German liabilities."

In France, "advances for occupation costs" is the item that corresponds to "foreign assets" in some of the other countries under German control. More than half of France's tribute to Germany was financed by these central-bank advances in the first five months of 1942; and Germany not only spent the whole of the funds thus obtained but also began to draw heavily on its accumulated balances at the Bank of France, and thereby contributed further to the expansion of currency. As was mentioned in Chapter I, Germany, being unable to spend all the francs received, accumulated an idle deposit at the Bank of France. This unused balance, after reaching a peak level of 64,580 million francs at the end of 1941, was reduced to

¹ See Table II, *Money and Banking 1940/42*.

39,900 million seven months later, so that nearly 25,000 million additional francs were put into circulation by this means alone.

Government borrowing has been the principal factor in the expansion of commercial-bank as well as central-bank credit. For reasons of space, a full statistical analysis of commercial-bank assets cannot be given here. As in the case of central banks, the reader is referred to *Money and Banking 1940/42*, where a table will be found (Table V) summarizing the quarterly movement of commercial-bank accounts in 43 countries since the middle of 1939.

In most of the countries involved in the war, commercial banks have had to absorb not only short-term Government loans, so far as these have not been taken up by the central bank; but they have also been called upon to acquire large amounts of the long-term bonds issued by the Government. In the United States, the member banks took up over half of the Treasury bonds issued in the twelve months to June 1942. In the United Kingdom, the clearing banks' "investments," rising from £880 million to £1,058 million during that period, became by far the largest of the assets of these banks. The Government-bond holdings of the New Zealand trading banks rose by 31% in 1941, while those of the South African commercial banks rose by 36%. In Canada, where great efforts were made to place Government bond issues among the public, the rise in the holdings of the chartered banks was less marked, amounting to 16% during 1941. The Argentine commercial banks, on the other hand, practically doubled their security holdings during the year.

In Germany, the Treasury bonds and Reich loans held by the five leading commercial banks constituted 56% of their total assets at the end of 1941, as against 28% in 1939; and in addition these banks held large amounts of Treasury bills. One of them has stated that Government paper of all kinds accounted for 69% of its total assets at the end of 1941. In France and the Netherlands, Government borrowing from the commercial banks has been entirely on short term. The bill portfolio of the four leading French banks, the great bulk of which now consists of Treasury bills, was equal to three-fourths of the total assets of these banks at the end of March 1942. On the same date the five principal joint-stock banks in the Netherlands held 70% of their assets in Treasury bills.

The security holdings of the Swedish commercial banks doubled during 1941 and those of the Swiss and the Danish banks increased by a quarter.

In the great majority of countries, Government loan expenditure has rendered private business increasingly liquid, while Government controls have tended to enforce a reduction in physical working capital by preventing private traders and industrialists from replen-

ishing their stocks. In consequence, as was noted in last year's *Survey*,¹ the increase in commercial banks' Government holdings has been accompanied by a decline in their commercial advances, which, however, has offset only a small part of the creation of credit for Government purposes.

But there was a large group of countries where the banks' commercial loans increased during 1941, a group which includes practically all the Latin-American republics. An expansion in commercial loans occurred even in the Argentine and Mexico, where the banks increased their security holdings. On the whole, of course, Government spending was less important in Latin America than elsewhere; similarly, Government controls were less extensive; and the rise in prices and in private business activity naturally led to an increased demand for bank advances.

In the United States the increase in member banks' loans stopped at the end of 1941 and gave way to an appreciable decline in the first half of 1942. At the same time, a growing proportion of total loans—about a third in the spring of 1942²—went to finance war production. In this part of their business the banks have had to consider not so much the financial condition of the borrowing firms as their ability to perform their war production contracts, payment by the Government being dependent on the satisfactory fulfillment of contract requirements.³ In the United Kingdom, bank finance for war production contracts has been furnished largely against "progress certificates" issued after physical examination by inspectors of the Ministry of Supply, a system which provides both a check on the efficiency of production and a security for bank loans.⁴

Commercial-bank advances have shown a marked decline in Australia and South Africa. In the United Kingdom, they have declined to less than 25% of the banks' total assets. In Germany they have declined to less than 20%. Though the percentage share of commercial loans continued to fall in Germany in 1941, there was, in contrast to 1940, some increase in absolute amount, the reason being that the Treasury stopped making advance payments on Government contracts.

Elsewhere in Europe, commercial-bank loans declined in 1941 in Belgium, Denmark, the Netherlands and Sweden. They increased, on the other hand, in Italy, Roumania and Finland, countries where Government controls have remained comparatively incomplete and where prices have risen rapidly.

¹ *World Economic Survey 1939/41*, pp. 105 and 106.

² *Federal Reserve Bulletin*, September 1942, p. 882.

³ Cf. Roy A. Foulke: *Credit Problems in a War Economy* (Dun and Bradstreet, New York, 1942).

⁴ Cf. "The Finance of Supply," in *The Banker*, March 1942.

THE VOLUME OF MONEY

The world-wide expansion of currency and credit² is illustrated in Diagram*1, showing notes in circulation and deposits with commercial banks in 28 countries in percentages of the pre-war level. It may be useful to summarize the data by setting out in tabular form the net percentage increase from the middle of 1939 to the latest month available for 1942 and also the net percentage increase during the last twelve months (1941/42). The table includes some countries which for lack of continuous figures, or for lack of space, are not shown in the diagram. The countries are arranged in the order of the increase in note circulation since July 1939:

Note Circulation and Commercial Bank Deposits

Countries	Latest month in 1942 ^a	Percentage increase from July 1939 to latest month in 1942:		Percentage increase in last 12 months:	
		Notes	Deposits	Notes	Deposits
Greece	May	980	.	255	.
Bulgaria	July (May)	378	.	47	21
Finland	June	266	52	31	34
Iraq	May (March)	214	120 ^b	93	91
Turkey	July (March)	183	46	21	26
Canada	July	170	26	39	20
Egypt	March	163	.	39	.
India	May (March)	158	37	69	19
Hungary	July (April)	156	49	27	21
Belgium	July (March)	156	41	41	19
Roumania	June	150	.	27	.
France	June (May)	147	123	29	16
Netherlands	July (May)	136	75	44	20
Germany	June	133	100 ^a	35	26 ^c
Portugal	June (April)	117	209	42	68
Japan	April (Feb.)	117	69	35	21
Bolivia	March	112	.	33	.
Australia	June	110	23	49	8
Peru	June (May)	107	60	42	20
Denmark	July (June)	97	45	14	19
Chile	June (April)	93	24	32	12
Mexico	June	86	.	31	.
Un. of South Africa	May	84	60	26	16
United States	June	74	37	27	5
Sweden	July (June)	66	7	18	13
Czecho-Slovakia ^d	June	63	.	47	.
New Zealand	June	62	35	17	9
United Kingdom	June	56	46	25	11
Ireland	July (March)	54	25	22	10
Brazil	June (Feb.)	52	43	30	21
Colombia	May	35	40	16	13
Argentina	June	32	31	18	15
Switzerland	July (June)	29	9	6	-1

^a Months in brackets refer to deposits.
^b Increase from the end of 1939.
^c Five Berlin Banks: increase from the end of 1938 to the end of 1941 and from the end of 1940 to the end of 1941 respectively.
^d "Bohemia and Moravia."

Nearly everywhere the note circulation has increased much more than the volume of deposits, not only over the whole period since July 1939 but also in the last twelve months from 1941 to 1942. This change in the composition of the money supply has shown itself not only in countries where notes are the chief means of payment, as for example in France, Belgium, Bulgaria and Roumania, but also in countries such as the United States, Canada, Australia and the United Kingdom, where deposits constitute by far the greater part of the total volume of money. In the latter countries a given percentage increase in note circulation represents, of course, a smaller proportionate addition to the total than in the former. The relative importance of notes and deposits in a large number of countries is shown in *Money and Banking 1940/42* (Table I: "Currency Composition and Movements") and need not be dwelt upon here.

The reasons for the shift from deposits to notes are various and apply in different degrees to different countries. The movement of population arising from military mobilization, the establishment of war industries or evacuation of civilians has been among the factors tending to increase the need for currency in the hands of the public. The growth in employment and in the share of the national income going to low-income groups has been an important factor in Canada, the United States, the United Kingdom and other countries. The decline in interest rates may also have played some part since it has compelled banks to reduce their deposit rates or even to impose service charges on their customers' cheque accounts. In some countries, currency hoarding may reflect simply a general nervousness and fear of unforeseeable emergencies.

Especially in German-controlled Europe, a further strong motive for holding cash rather than bank deposits is the desire to conceal illegal transactions. Apart from barter, only cash is an acceptable means of settlement on the "black market"; and the increasing turnover on that market requires increasing amounts of currency. Conversely, the desire to suppress the black market has been one of the motives for the constant campaign of prohibitions, threats and punishments by which the authorities in the German-controlled areas have tried to stamp out currency hoarding. In Germany, hoarding was made a criminal offence at the outset of the war, and the same line was taken in the occupied countries. The decree issued by the French Government in November 1940, prohibiting the use of currency notes for payments above a certain amount,¹ was reinforced in the occupied zone by the German authorities. In June 1942, the military commander issued a severe order against note hoarding in Belgium and Northern France.

¹ Cf. *World Economic Survey 1939/41*, p. 102.

Diagram 1

• Note Circulation and Commercial Bank Deposits

A: Note Circulation B: Demand Deposits C: Total Deposits
July 1939 = 100

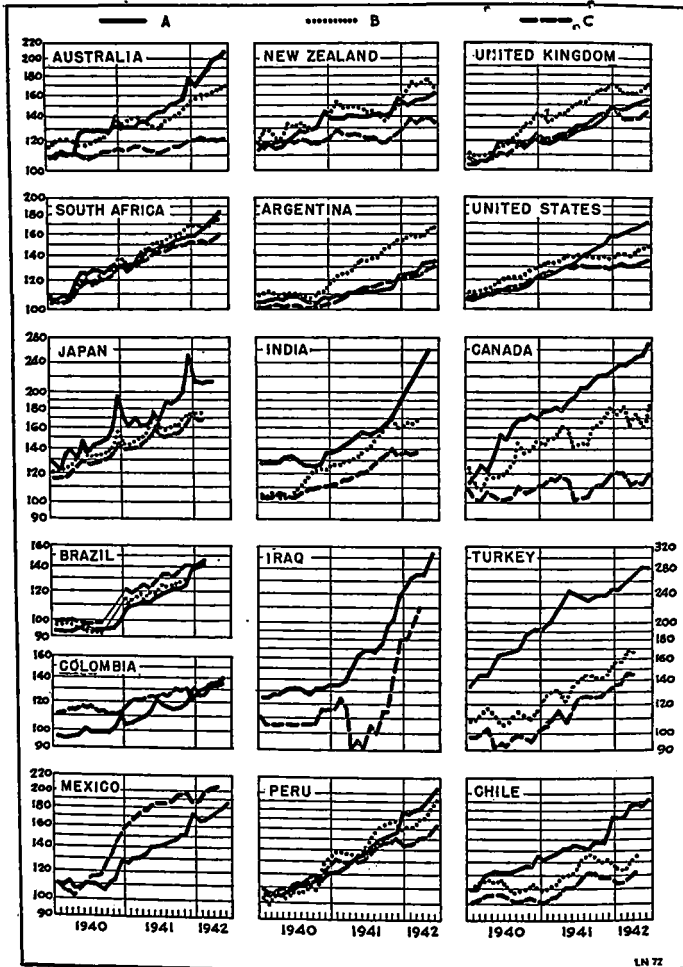
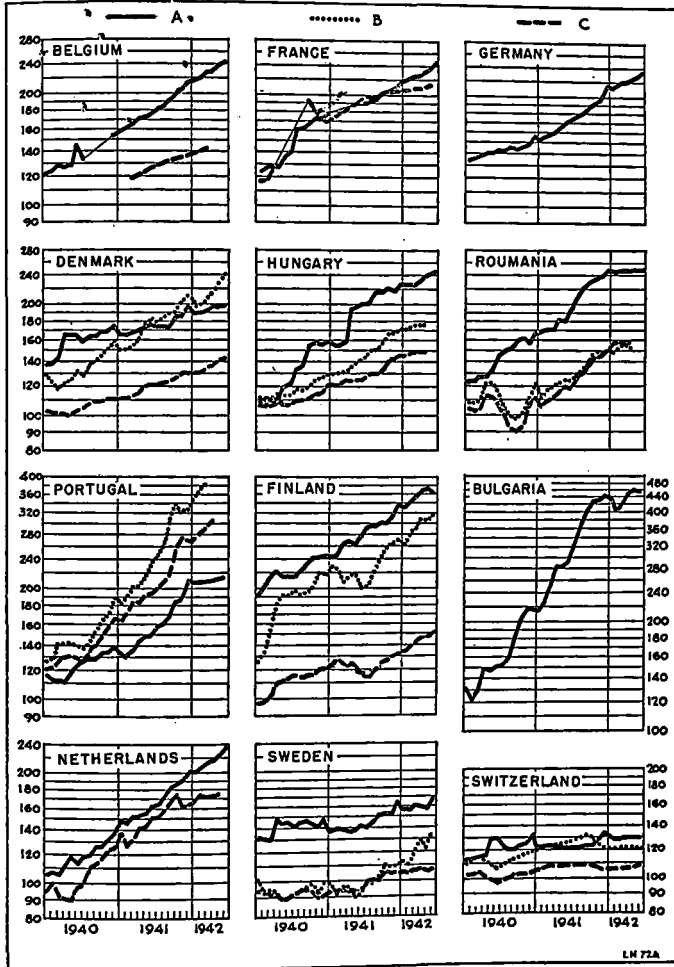


Diagram I (continued)
Note Circulation and Commercial Bank Deposits,
A: Note Circulation B: Demand Deposits C: Total Deposits
July 1939 = 100



The figures for some of the occupied countries in Europe understate the rise in note circulation. In the first place, they do not include the *Reichskreditkassenscheine* issued by the German authorities. At the beginning of 1942 there were about 5,000 million of these "occupation marks" in circulation, an amount equal to one-fourth of Germany's own note circulation. Their geographical distribution has not been made public, but it is known that in Western Europe they have been largely withdrawn, in exchange, of course, for additional amounts of local currency. In Belgium, where the occupation marks remained in circulation longer than elsewhere in this area, they ceased to be legal tender in the spring of 1942. The great bulk of these notes now circulate in occupied Russia and south-eastern Europe. In the Ukraine the Germans set up a new bank of issue in June 1942 and introduced a new currency unit, the *Karbovanetz* (equal to one Soviet rouble or one-tenth of a mark), which was placed in circulation alongside the occupation mark, the Soviet rouble being withdrawn.

In some of the occupied countries, moreover, measures have been taken to conceal the rise in the domestic note circulation. In Bulgaria, under a decree of February 1942, large amounts of Treasury notes were issued in small denominations and people were urged to use them as means of payment. The supplementary currency thus created did not figure in any published return. The published note circulation of the National Bank rose from 6,500 to 13,500 million leva during 1941, and not much more than 1,000 million of the increase is estimated to have been due to the accession of territory. In Belgium the authorities have made their payments in Treasury bills since October 1941 in order to keep down the published note circulation; and similar devices have been adopted elsewhere in Europe. Lastly, there is a group of countries, including Italy and Norway, where the note circulation is not published at all. The only statistical indication of credit inflation in Italy is a 33% increase in deposits with three commercial banks during 1941,¹ a figure which by no means represents total bank credit in Italy. The note circulation in Norway has been estimated at about 1,500 million kroner at the end of 1941 as against 600 million in March 1940; deposits with the Norwegian joint-stock banks in the spring of 1942 were more than twice as large as before the occupation.

No data have become available for China since June 1940. During the preceding two years the Chinese note circulation had increased by 130%; and all indications point to a further increase since then, as the National Government has had to meet its financial requirements for the war against Japan largely by borrowing from its own note-issuing institutions.

¹ Cf. *Money and Banking 1940/42* (League of Nations), p. 53.

Within the total volume of commercial-bank deposits there has been almost everywhere a marked shift from time deposits and savings accounts to deposits payable on demand, due in varying degrees to the public's desire for increased liquidity, to the low or declining interest paid on time deposits, or to an increase in monetary turnover. A glance at Diagram 1 shows that in the majority of cases line B (the index of sight deposits) stands well above C (the index of total deposits) and that the spread between the two has tended to widen.

The controlled and rationed type of war economy prevalent today has entailed significant changes in the functions of money as means of payment. The state has introduced a second kind of "money"—ration cards, coupons and buying permits—distributed according to need, while money in the form of currency and bank deposits continues to be distributed according to earnings from work or property. Private purchases require both kinds of money. Government purchases require only one; and as the volume of currency and deposits created by the banking system and spent by the government increases, while the quantity of goods for private needs is restricted by rationing and allocation, the result tends to be an accumulation of idle funds in the hands of consumers and businessmen, or, in other words, a fall in the "velocity of circulation."

Needless to say, leakages may occur in a system of this sort, as people may try to find some use for their money in illegal transactions. The quantitative importance of such leakages is obviously very difficult to ascertain; but it depends in general not only on the severity of control but also on the disproportion between the rations distributed and the money available. As this disproportion is particularly great in certain parts of continental Europe, "black markets" have become increasingly widespread there. The need for cash rather than cheque payments in the black market was mentioned above. But there is a type of black market where the use of money is abandoned altogether and resort is had to barter. In Germany and elsewhere in Europe, drastic orders have been issued by the authorities in an effort to stop the practice of barter. From these measures and from other indications it seems, however, that illicit barter transactions have become increasingly common, especially among the peasants, who often find that there is little or nothing to buy with the money received for their products. The spread of barter means, of course, a further decline in the average velocity of circulation.

A rough indication of the rate at which money is turned over may be obtained by comparing the volume of deposits with the movement of bank clearings. The indication is of limited value since it takes no account of the note circulation,—an increasing and in many countries a preponderant part of the total supply of money. Where the turnover-

rate of deposits has declined, that of notes may well have declined even more, as the expansion in notes has been greater than in deposits. Nevertheless it may be of interest to consider the figures given in the adjoining table, showing the ratio of bank clearings to (a) demand deposits and (b) total deposits in each quarter since the beginning of 1940 as a percentage of the ratio in 1938. The indices thus obtained are rough and approximate, and should be taken to illustrate changes in direction rather than in degree.¹

Velocity of Circulation of Commercial Bank Deposits

1938 = 100

A: Demand Deposits. B: Total Deposits.

	Quarter	1940				1941				1942	
		I	II	III	IV	I	II	III	IV	I	II
Argentina	A	98	101	89	94	88	88	93	97	88	83
	B	106	109	94	100	98	104	110	120	111	106
Canada	A	75	82	70	83	71	70	64	78	64	69
	B	88	99	88	106	93	104	101	114	99	109
Czecho-Slovakia ^a	A	115	94	90	.	.	47	42	...	...	...
	B	116	93	90	.	.	51	47	...	...	...
Hungary	A	130	277	191	188	153	176	...	...	...	...
	B	140	156	208	205	172	204	...	...	...	...
New Zealand	A	85	81	71	74	82	69	70	69	71	...
	B	97	93	83	88	101	86	85	83	86	...
Peru	A	85	97	91	83	78	88	94	88	80	...
	B	83	94	89	85	82	91	101	97	89	...
Roumania	A	159	208	195	151	151	165	211	...	...	...
	B	184	240	231	180	176	192	239	...	...	...
Switzerland	A	88	93	66	74	63	72	59	81	70	...
	B	97	102	73	84	72	83	69	94	78	...
Un. of South Africa ..	A	100	89	83	80	79	68	77	76	76	...
	B	104	94	89	88	88	80	91	88	91	...
United Kingdom	A	107	70	76	69	77	92	70	70	...	...
	B	110	99	82	76	87	104	80	82	...	...
United States ^b	A	87	86	83	87	87	89	90	93	90	86

^a "Bohemia and Moravia"; based on deposits and clearings in the first half of 1940.

^b Index of velocity of circulation of demand deposits outside New York City; based on average 1935-39 = 100; adjusted for seasonal variations. Source: Federal Reserve Bank of New York.

The public, if free to do so, usually react to an inflation of prices by speeding up the rate at which they spend their money receipts. It is therefore not surprising that Hungary and Roumania, where government controls have remained comparatively ineffective and prices have risen considerably, should be the only two countries, among the eleven included in the table, which show a marked increase in the velocity of circulation of commercial-bank deposits. In most of the other countries the indices show a substantial decline below the pre-war level.

¹ Possible sources of error are, for example, changes in the scope of the clearing figures, incompleteness of the deposit figures, changes in the proportion of cheques cleared to cheques drawn, etc.

In view of the close similarity of conditions in Germany and in the Protectorate of Bohemia and Moravia, the figures for the latter may afford some indication also in regard to the Reich. Switzerland is another European country where the turnover of deposits has slowed down appreciably. A significant decline seems to have occurred also in the United Kingdom. In the United States the index remained below the pre-war level throughout the period under consideration, showing a rise from the third quarter of 1940 to the end of 1941 and a decline thereafter. It would of course be rash to attribute the decline in the average turnover-rate of the growing volume of deposits in the United States or in such countries as New Zealand, Peru and South Africa wholly or even largely to restrictions on private spending; the public of their own accord have probably been content to leave some of the new money unused.

INTEREST RATES AND SECURITY PRICES

As a result of the growing liquidity due to monetary expansion and government controls, the decline in interest rates described in last year's *Survey* continued in many countries during the period here reviewed. As may be seen from Diagram 2, long-term interest rates as reflected in the yield of government bonds declined from the middle of 1941 to the middle of 1942 in a number of countries, including the Argentine, Canada, Sweden, Switzerland, France, Belgium and the Netherlands. In the United Kingdom, government-bond yields in the first half of 1942 were lower than at any time since 1936.

This decline in yields, reflecting a rise in market quotations, occurred in spite of the continued increase in the amount of government bonds outstanding. It enabled governments not only to issue new loans on cheaper terms but also, in a number of cases, to float conversion loans with a view to reducing the interest on their pre-existing debt. Such conversion operations, during the year under review, were carried out notably in the Argentine, France, Germany and the Scandinavian countries, either by governments or by other public bodies.

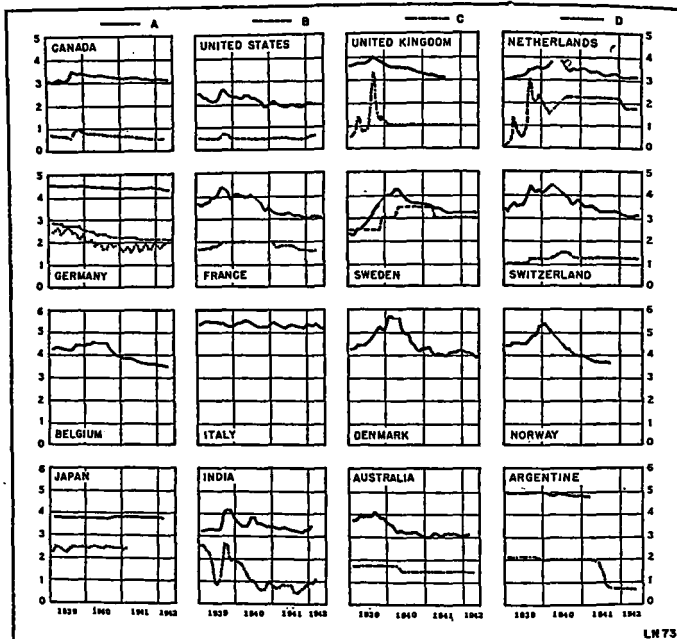
Short-term money rates, though frequently "pegged" at stable levels agreed upon by the banks, have also shown a continued downward tendency in some countries, including Germany, France and the Netherlands (see Diagram 2). The only changes in central-bank discount rates since the middle of 1941 have been reductions in New Zealand (from 2% to 1½% in July 1941), Greece (from 6% to 5% in March 1942) and the United States (from 1½% to 1% in ten of the twelve Federal Reserve districts in March and April 1942).

The only country shown in Diagram 2 where interest rates have not declined is Italy. The high level of long-term rates in that country is reflected not only in the yield of outstanding bonds as shown in the

Diagram 2

Bond Yields and Money Rates

- | | |
|------------------------------------|---------------------|
| A Government bonds. | C Treasury bills. |
| B Commercial bills or acceptances. | D Day-to-day money. |



diagram, but also in the terms at which the Government has had to borrow on the domestic capital market. Most of its borrowing from the market, as distinct from the central bank, has been in the form of 5% Treasury bonds issued at 97½% of the redemption value and repayable in 9 years. Apart from Italy, interest rates have remained high also in Roumania, where Government bonds still yield over 7%, and in Finland. These three countries have this in common that rationing and other government controls have only been partially effective there, and that monetary expansion has consequently led to a great rise in commodity prices and not simply to an increase in liquid funds.

In the three countries just mentioned, shares have increased in price in common with goods, a natural development in conditions of inflation. But a great rise in share values has also occurred in other European countries where price and commodity controls have been more comprehensive and more strictly enforced. No doubt the pressure of unspendable funds has tended to raise share values as well as bond prices. But the rise in the former in some German-controlled countries has been so considerable that it can only be accounted for by a fear of price inflation, in the future if not in the present. In the belligerent countries outside continental Europe, on the other hand, share prices have tended to decline under the influence of war-time taxation, price and profit restrictions, etc. The contrast between the two groups of countries, with neutral Sweden and Switzerland in an intermediate position, is brought out clearly in the following table.

Prices of Industrial Shares

A: Percentage change from July 1939 to June 1942 (or earlier month in 1942, as indicated).

B: Percentage change during last twelve months (1941/42).

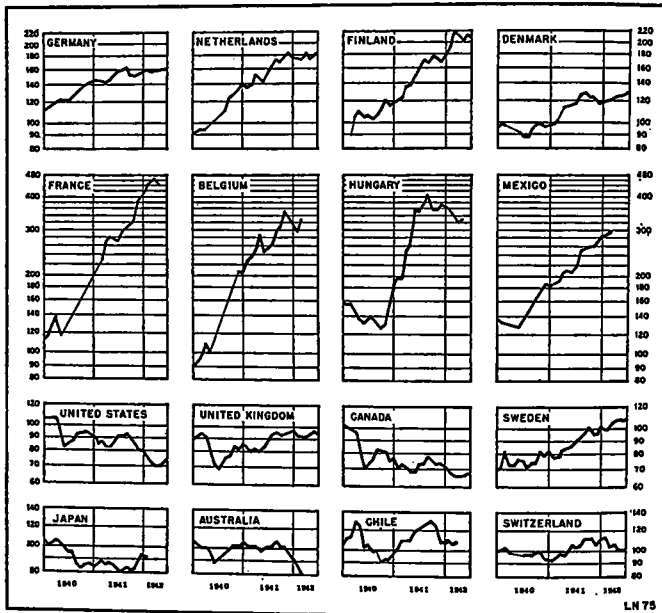
	A	B		A	B
France	+341%	+62%	Sweden	+7%	+26%
Belgium ^b	+224%	+30%	Switzerland	+2%	-4%
Hungary ^c	+224%	+16%	United Kingdom ...	-4%	+16%
Finland	+114%	+48%	Australia ^a	-20%	-21%
Netherlands	+80%	+27%	United States	-26%	-15%
Germany	+60%	+4%	Canada	-33%	-2%

^a March ^b April ^c May

The rise in share prices in continental Europe is all the more remarkable in view of the various government measures taken against "speculation." In Germany such measures have been particularly drastic, including compulsory declaration, registration and price control of securities. In fact, as may be seen from Diagram 3, the rise in values, which had brought down the yield of shares below that of Government bonds, was stopped in the latter part of 1941. New measures were taken in the first half of 1942 to stem the "flight into real assets." Thus the sale of real estate was prohibited except by special permission; and as share quotations were recovering from the setback they had suffered at the end of 1941, a decree was issued in June by which the sale of shares was also prohibited, unless they were first offered to the Reichsbank. The Reichsbank was empowered to take them over, at the prices quoted on December 31st, 1941, in exchange for Treasury bonds which were blocked for the duration of the war and remained in the Bank's own possession. The decree ap-

plied to all share holdings acquired since the beginning of the war exceeding a value of 100,000 marks. As this "free" amount could be lowered at any moment, the buying of shares even within that limit was effectively discouraged.

Diagram 3
Prices of Industrial Shares
July 1939 = 100



Italy decreed a compulsory registration of shares in September 1941. This led to a decline in values, but according to press reports of market quotations, the rise was resumed later in the year. Norway, Belgium and the Netherlands are among the countries where restrictions on dividends and stock exchange dealings have recently been imposed; but even though in some cases the rise has been checked since the end of 1941, prices have remained abnormally high. In France, attempts have been made, in conjunction with maximum price

regulations, to curtail the private demand for shares on the stock exchanges by methods akin to rationing. As Germany has been making purchases of industrial equities in France and other occupied countries, financed by occupation levies or otherwise, the measures taken in those countries to curb the rise in share prices have obviously suited Germany's interest.

CHAPTER V

PRICE MOVEMENTS AND PRICE CONTROL

PRICE MOVEMENTS

A glance at Diagram 1 on pages 140 and 141 will show that prices continued to rise everywhere during the last year.¹ Important changes are, however, to be noted in the rate at which prices advanced in various parts of the world. Table 1 brings into relief the more significant changes in wholesale price movements. In this table two major areas are segregated, (I) Europe and the Near East and (II) the rest of the world; within both groups the countries are arranged according to the rate of price increase during 1941. In the former area prices had been rising during 1940 at a rate of between 20 and 40% in most countries. In 1941 a pronounced divergence of the rate of increase became evident. Owing to increasingly rigid control, the advance of prices in Western and Central Europe remained within moderate proportions and in fact below the rate of increase during 1940. In Eastern and Southern Europe, on the other hand, as well as in the Middle East, prices appear to have been rising at an increasing rate. In countries such as Greece, where the official cost-of-living index rose by 155% in ten months, Yugoslavia and Roumania, price inflation seems to be in full swing.

No regular indices are available to illustrate the movement of prices in France² and Italy; but there is no doubt that the movement was

¹ Any price-indices in war-time contain a certain arbitrary element. When a certain commodity ceases to be regularly available, either a nominal price is used or the item is dropped from the index. When the quantity of a commodity consumed is severely restricted, for instance by rationing, its weight in the cost-of-living index is sometimes reduced (Sweden). The presumption is probably correct that such procedures usually tend to lower the indices; but the magnitude of their effect should not be overestimated. The accuracy of price indices is, of course, much more dubious in countries where "black market" trade is of great importance.

² Weighted indices of wholesale prices and the cost of living have recently been computed by M. J. Dessirier and published in *La Conjoncture économique et financière*. They are as follows:

	August 1939 = 100							
	1939		1940		1941		1942	
	Dec.	June	Dec.	June	Dec.	March	May	
Wholesale prices	128	137	162	173	196	199	200	
Cost of living	111	119	130	142	150	153	154	

However, since these indices are entirely based on official prices "which sometimes bear no close relationship to the prices at which business is actually done" they are of limited value in gauging the real price development in France.

Table 1.—Percentage Increase in Wholesale Prices in Certain Countries (December to December)

	1940	1941		1940	1941
<i>I. Europe and Near East</i>			<i>II. Other Countries</i>		
Germany	3	1	Venezuela	5	3
United Kingdom	21	5	Australia	10	4
Portugal	24	10	New Zealand	14	9
Denmark	34	10	Japan	0	11
Sweden	21	12	Canada	4	11
Norway	26	16	Union of S. Africa	9	12
Slovakia	.	17	Mexico	-1	13
Finland	29	18	United States	1	17
Switzerland	31	21	Costa Rica	-6	19
Spain	21	24	Peru	9	27
Hungary	22	26	India	-13	29
Bulgaria	25	28	Netherlands Indies	-1	32 ^a
Egypt	15	29	Argentina	2	37
Turkey	25	41	Chile	5	37
Iran	11	45	China	65	113 ^b
Palestine	25	48			
Roumania	53	56 ^c			
Yugoslavia	58	60			
Iraq	26	74			
Greece	10	153 ^d			

^a November 1940-November 1941. ^b September 1940-September 1941. ^c June 1940-June 1941. ^d January 1941-November 1941 (ten months). * Increase in cost-of-living index.

inflationary. An inquiry made by a French newspaper late in 1941 showed the cost of a "food basket" for a worker's family in occupied France to be three times as high as in 1939.¹ At the end of 1941, it was estimated that as much as half of all trade was transacted in the "black market," and the lack of confidence of the population in the currency manifests itself in an increase in barter trade.² There are many indirect indications of the rise in prices in Italy. It is significant of the popular anxiety concerning the future value of savings that a former Minister of Finance recently suggested that the Government issue bonds, the interest and capital of which should be adjusted on the basis of a wage or price index.³ General dissatisfaction with the rise in prices during 1941, which forced the Government to relax the "wage-stop," led to the authority over price control being transferred to the Fascist party. Notwithstanding a general order to reduce prices by 20% and large subsidies to maintain or raise the prices paid to farmers, control by the party did not prove successful and in January 1942 authority was given to the Ministry of Corporations to fix prices and wages.

¹ *Petit Journal*, December 30th, 1941.

² *Neue Zürcher Zeitung*, December 21st, 1941.

³ *Neue Zürcher Zeitung*, April 17th, 1942.

Diagram I
Wholesale Prices and Cost of Living
First half of 1939 = 100

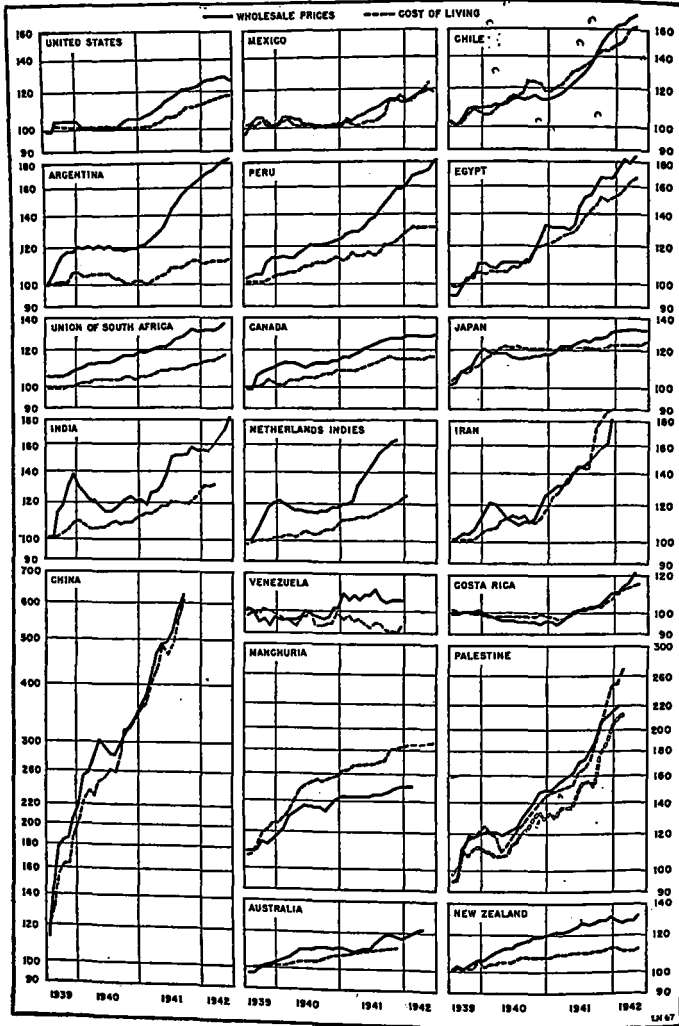
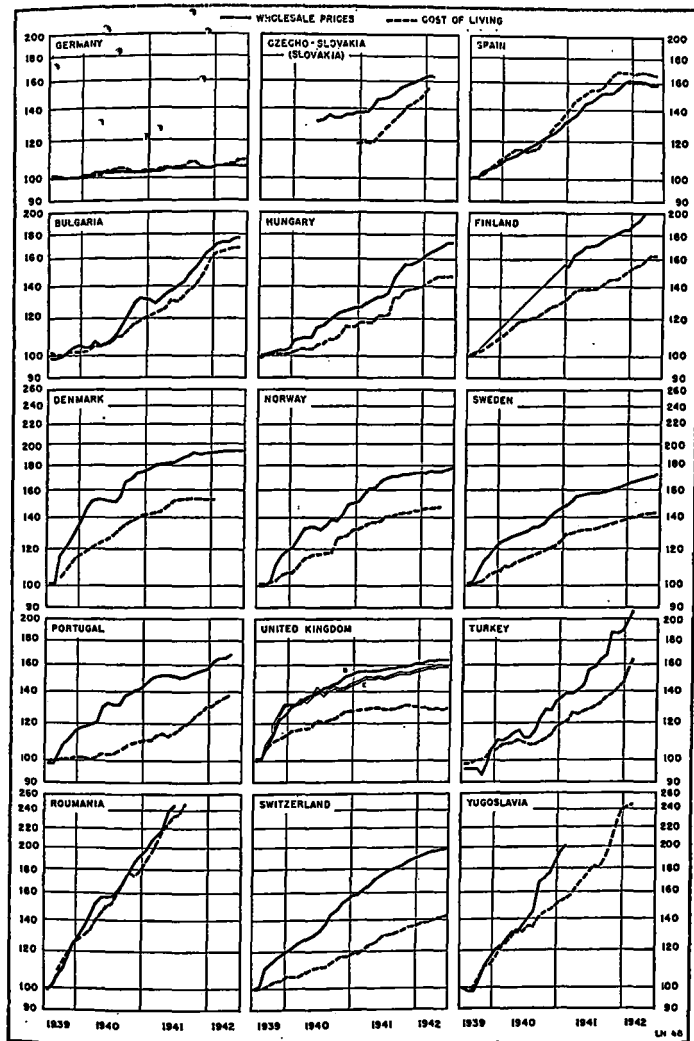


Diagram 1 (continued)
Wholesale Prices and Cost of Living
First half of 1939 = 100



All over Europe, prices of agricultural products and incomes of agricultural producers continued to rise in comparison with other prices and incomes. Thus, in Hungary, owing to the rise in agricultural prices during 1941, farmers attained a better relative position than before the great depression; agriculture in Switzerland was stated to have received a greater share of the national income in 1941 than in 1940; and from April 1941 to April 1942 wage rates of agricultural workers in Great Britain increased by 24%, reaching a level of 73% over August 1939, while the rates earned by all workers together increased by 7% over the last year to a level 26% over August 1939.

It will be noticed that the rise in prices in Germany was much less than that in the surrounding countries. Nevertheless, as shown by Table 2, certain of the latter countries suffered a further loss during 1941 in the terms at which they exchanged their national products

*Table 2.—Indices of Prices of Imports and Exports
in Certain Countries*

I—Import price index. E—Export price index.
R—Ratio of export price index over import price index.
1938 = 100

		1939	1940	1941	First quarter 1942*
Bulgaria*	I	101	140	173	185
	E	111	113	127	157
	R	110	81	73	85
Denmark	I	110	177	209	218
	E	102	130	178	182
	R	93	73	85	83
Finland	I	102	161	200	...
	E	97	123	143	163
	R	95	76	72	...
Sweden	I	111	165	212	232
	E	97	123	132	145
	R	87	75	62	63
Switzerland	I	.	.	181	209
	E	.	.	131	159
	R	.	.	72	76

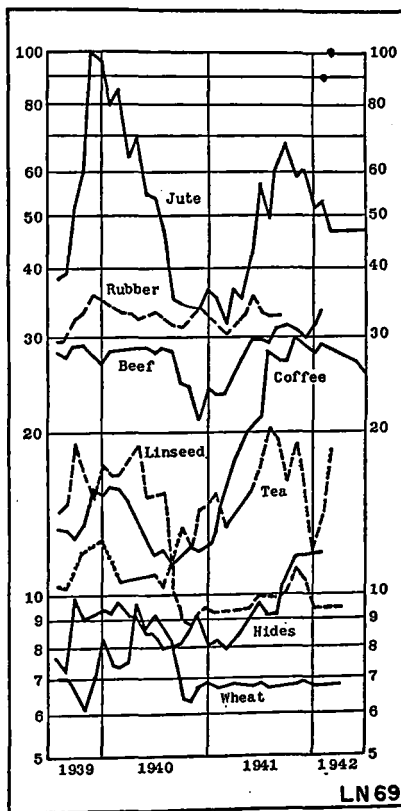
* Provisional.

* The rise in prices of imported goods is underestimated since goods which can no longer be imported are entered in the index at the prices at which they were last imported.

Diagram 2

Wholesale Prices¹ of Certain Primary Products

Jute: Calcutta, rp. per 400 lb.
 Rubber: Bañavia, gold cents per ½ kg.
 Beef: Buenos Aires, pes. per 100 kg.
 Coffee: Rio de Janeiro, reis per 10 kg.
 Tea: Calcutta, annas per lb.
 Hides: Buenos Aires, pes. per 10 kg.
 Linseed: Buenos Aires, pes. per 100 kg.
 Wheat: Buenos Aires, pes. per 100 kg.



against imports.¹ This loss reflects a gain in Germany's terms of trade since Germany accounted for the bulk of the foreign trade of each of these countries. The figures available for the first quarter of 1942 would seem to indicate that the terms of trade of the countries in Germany's economic orbit have not further deteriorated recently, and in the agreements concluded by Germany in the latter part of

1941 with Italy, Sweden and Hungary the two parties undertook not to raise prices in their mutual trade. Germany also accepted, in January 1942, to pay the increase in mark prices corresponding to the appreciation of the Danish krone² without raising her export prices; and she prevented exporters to Holland from charging more than the German maximum price as from May 1st, 1942.³

¹ Hungary, which in the absence of a continuous series of figures is not included in the table, paid 15% higher prices for her imports (mainly from Germany) during the first nine months of 1941 than in 1940; export prices were only 10% higher.

² See Chapter I.

³ The corresponding prohibition of exports from Holland to Germany at prices higher than those in the former country had been introduced in August 1941.

In the countries shown in Group II in Table 1, with the notable exception of China,¹ the rise in prices during 1940 had been very moderate, as the prices of many world staples, after a short speculative flurry in the autumn of 1939, had sagged to low levels. (Diagram 2.) During 1941, however, these prices, with the exception of that of wheat, showed a considerable rise. At the same time goods which were normally imported became scarce and, on this account and on account of high freight rates, expensive. In certain countries of Latin America, the consequential rise in the wholesale price indices during 1941 was greater than in Western Europe. The upward movement in the prices of some of their export products came to an end in the autumn of 1941, largely because of the restriction on exports imposed by the shortage of ships. A number of products, however, were in great demand in the United States and were exported in increasing quantities under long-term buying agreements concluded with the United States; and as prices of imported goods continued to advance, the general level of wholesale prices increased further by about 8% in the Argentine and Chile in the first four months of 1942 and by 10% and 7% in Peru and Mexico respectively in the first five months of the year.

For a few other South American countries only cost-of-living indices are available. They show the following movement:

	First half of 1939 = 100.	December:	
	1939	1940	1941
Bolivia*	.	115	155
Brazil	102	108	122
Colombia	94	89	91
Uruguay	104	107	105

* January 1940 = 100.

In Europe the price tendencies outlined in the preceding pages persisted during the first half of 1942 (See Diagram 1). In Western Europe wholesale prices rose but little. In fact, in Denmark, the index remained for the first time stable for a period of four months, owing partly no doubt to the appreciation of the krone in January of this year. The German wholesale price index also continued to be rigidly stable; but the cost-of-living index showed a rise of 4% in spite of increased subsidies on agricultural products, particularly fats.² No recent figures are available for Eastern Europe, except for Bulgaria and Hungary where prices continued their steady increase.

¹ The index shown for China refers to prices in Shanghai. According to a statement of the Director of the Commodity Administration of the Chinese Ministry of Economic Affairs, prices in Free China in February 1942 were about 29 times as high as in the summer of 1937. (See *China at War*, March 1942.)

² The costs of these subsidies were recently estimated at 1,000 million marks (*Deutsche Volkswirt*, July 21st, 1942).

PRICE CONTROL

Important changes have been brought about during the past year in the scope and methods of price control in Canada, the United States and Germany. In the first mentioned country, where the rise in prices had been relatively moderate, a "ceiling" was applied to the prices of goods and services at all stages of production and distribution in November 1941. In the following eight months, the indices of wholesale prices and cost of living advanced by only about 2%.

A somewhat similar policy was adopted in the United States in April 1942. In that country, prices had been advancing rapidly during the preceding twelve months. The rise of the general index was mostly due, as is evident from Diagram 3, to the rise in farm prices under the triple stimulus of increased domestic demand, lend-lease deliveries and Government support. This rise was in sharp contrast with the relative stability of metal prices, made possible, notwithstanding an almost unlimited potential demand, by selective price control from the spring of 1941 and an elaborate system of priorities and allocation of supplies. A more extensive control of prices was introduced by the General Maximum Price Regulation of April 28th, 1942, under which sellers of any commodity or service were prevented from charging more than the highest price charged during March 1942. It was not expected that this would completely rule out further increases in indices of wholesale prices or the cost of living, since, apart from some exceptions of minor importance, all raw farm products were exempt from the ceiling.¹ In fact, under the then existing legislation, no maximum could be imposed on the prices of any farm products which would be lower than (1) 110% of its "parity price"² or (2) its market price on October 1st, 1941 or (3) its market price on December 15th, 1941 or (4) its average price in the period of 1919 to 1929.³

The maintenance of a rigid ceiling over selling prices when all cost factors are not brought under control at the same time may remove all profits in the production of certain commodities and thus

¹ It has been estimated that these exemptions cover about 40% of the expenditure on food of a working class family (United States Department of Labor, *Monthly Labor Review*, July 1942).

² The "parity price" is the price which gives the farmer the same purchasing power over non-farm commodities as he obtained during the base period August 1909 to July 1914.

³ However, Congress passed an important amendment to the Emergency Price Control Act on October 2nd, 1942 on the strength of which the President, by an executive order of October 3rd, established maximum prices for farm commodities and the products manufactured therefrom at the level of September 15th, 1942.

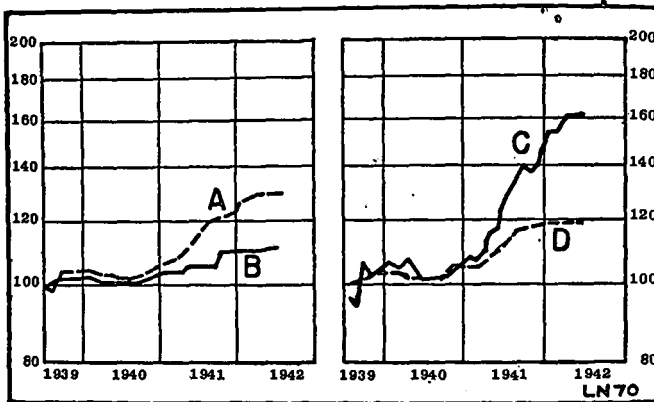
The new legislation also provides for crop loans of 90% of parity up to two years after the war for cotton, corn, wheat, rice, tobacco, and peanuts with a view to preventing an abrupt post-war price fall.

Diagram 3

Wholesale Prices in the United States

First half of 1939 = 100.

- A—General index
- B—Metals and metal products
- C—Farm products
- D—Commodities other than farm products and foodstuffs



impede supply. In Canada, strains of this nature were felt owing to the rise of the prices of imported commodities; in the United States such strains were mainly due to the possibility left for a further rise of farm prices and wages. An endeavour was made in both countries to have the rise in costs absorbed at any earlier stages of production where profits were considered sufficiently large. This "rolling back of the squeeze," however, has not always been possible. In such cases, the Canadian price control system provides for the payment of Government subsidies. Since the price control authorities in the United States have no power to grant subsidies,¹ they allowed the ceiling to be pierced in a few instances, such as canned fruits, shortly after its imposition.

The system of subsidies to stabilize the price level has found its most general application in the United Kingdom. During the last year the policy announced by the Chancellor of the Exchequer on April 7th, 1941 to prevent the cost-of-living index from rising above

¹ The Reconstruction Finance Corporation is, however, absorbing a loss on certain domestic and imported materials such as gasoline, scrap, sugar and molasses.

125-130% of the pre-war level has met with success (see Diagram 1). This success has been achieved at the cost of £70 millions in subsidies in 1940 and £139 millions in 1941.¹ The latter figure represents over ten per cent of the country's estimated total consumption expenditure on food in 1941.²

There is a general tendency for price control to spread over into other fields of war-time control. This development has perhaps gone furthest in Germany, where the Price Commissioner has gradually acquired very wide powers. He can lower indirect taxes in order to stabilize prices; he compels producers to maintain a certain proportion of cheap lines; he promotes the concentration of production on the most efficient enterprises; and he has also wide discretion in the allocation of raw materials, fuel and labour.³ German price control has been particularly concerned with the promotion of efficiency in production. In the civilian sector of production main reliance seems to be placed on the "competition of the price control officials. The official who finds no further scope for price reduction risks his reputation and his job."⁴ In production for the Government a system of "target prices" was introduced in November 1941, whereby public contracts are based on the costs of an efficient firm. This system, which led to great losses for high cost producers, was refined in February 1942 when different "target prices" were set for different groups of producers of the same type of output. Special inducements were given to those enterprises which chose to enter the lowest price group. They are to have priority in the procurement of raw materials, etc., and whatever excess profits they are able to make at the price set for this group are not subject to excess profits taxation.

In Canada the price ceiling has also been a starting point for further economic controls. Thus much emphasis is placed on the concentration of industries and trade, the simplification of products and the elimination of unnecessary lines of production as measures to enable producers to sell at the ceiling prices without incurring losses. Foreign trade has also come under the power of the price control authorities as imports of commodities which are considered luxuries or which can be suitably replaced by goods produced in Canada are not eligible for subsidies to meet a rise in their price abroad.

In Australia, prices of goods and services were "frozen" at the

¹ "An analysis of the sources of war finance . . .", Cmd. 6347.

² Such expenditure was estimated at between £1285 and £1385 millions in the Bulletin of the Oxford Institute of Statistics, Vol. 4, No. 6.

³ In the spring of 1942, however, some of the powers of the Price Commissioner were transferred to other controllers.

⁴ *Frankfurter Zeitung*, quoted from *Economic Journal*, April 1942, page 18.

level prevailing on April 15th, 1942. Provision was made, however, for adjustments in cases of subsequent changes in costs; and exemptions were accorded to certain primary products and to goods and services supplied by the state governments or other local authorities.

WAGES AND WAGE CONTROL

The adjoining table gives some information concerning the development of money wage rates or earnings per hour,¹ the cost of living and "real" wages. In the interpretation of the last series it should be borne in mind that an index of "real wage rates" does not by any means reflect the amount of consumption goods a worker can buy with his income. In the first place, his total money income depends also on the degree of employment, overtime, etc. His spendable income is affected by taxes, savings (voluntary or compulsory) and in some countries by "voluntary contributions." Finally the amount of goods the net income will purchase depends on the availability of goods and the system of rationing.

Notwithstanding these qualifications it is of interest to compare the movement of "real" wage rates in various countries. From June 1940 to June 1941, real wages generally continued to fall on the continent of Europe, and rose elsewhere. Since June 1941, however, in the period for which figures are available—up to June 1942 in some countries and December 1941 in others—real wages have shown a remarkable stability at various levels ranging from about 25% below pre-war in Norway to about 10% above in the United States.² The only important change occurred in the United Kingdom, where a considerable rise in money wages, combined with a stable cost of living, brought the index of real wages back to the pre-war level.

The restriction of wage increases, be it by legal means as in Germany and Canada, by collective contract as in Sweden, or by a tacit understanding as in the United Kingdom, is an essential condition for the effective control of prices. Inversely, wages cannot be stable if the price movement gets out of control. An extreme example of this is found in the case of Greece, where the Government ordered a rise in wages varying from 110 to 140% between July and No-

¹ The figures shown are *index-numbers* of wages, and generally these indices are constructed in a way which understates the rise in *average* wage rates resulting from the transfer of workers from low-wage industries to the metal and machinery industries which usually pay higher wage rates. Thus in Germany average hourly earnings increased by 5% between the third quarter of 1940 and the third quarter of 1941, while the index shown on Table 3 rose by only 1%. (See "The German War Economy, V," *Economic Journal*, April 1942.)

² Real wages in Switzerland, for which country no regular wage statistics exist, were estimated to be about 15% below pre-war in the autumn of 1941.

Table 3.—Hourly Money Wages, the Cost of Living and Real Wages^a

MW—Money Wages. CL—Cost of Living. RW—Real Wages.
First half of 1939 = 100

	June				June		
	1940	1941	1942		1940	1941	Dec. 1941
U.S.A.:				Australia:			
MW	105	115	131	MW	104	112	114
CL	102	106	118	CL	104	109	112
RW	103	108	111	RW	100	103	102
U.K.:				Germany:			
MW	111	120	130	MW	100	101	101
CL	122	129	129	CL	104	106	106
RW	91	93	101	RW	96	95	95
Sweden:				Hungary:			
MW	109	115	126	MW	100	115	130
CL	115	133	143	CL	107	123	140
RW	95	86	88	RW	93	93	93
France:				Denmark:			
MW	113 ^b	113	.	MW	114	121	123 ^b
CL	(119)	(142)	(150)	CL	127	151	152
RW	(95)	(80)	.	RW	90	80	81
Belgium:				Norway:			
MW	105	118	.	MW	106	106	106
CL	110	173 ^c	.	CL	116	140	144
RW	95	68	.	RW	91	76	74

^a Source of MW and CL series: *International Labour Review* and League of Nations *Monthly Bulletin of Statistics*, except as noted below: Sweden, MW: collective contracts. Belgium, CL: 1941: *Neue Zürcher Zeitung* May 9th, 1941. Norway, MW: figure for June 1940 maintained through 1941 in view of rigorous "wage-stop." Hungary, MW: Based on prescribed wage increases. France, MW: *Conjoncture Economique et Financière*, 1941; CL: Figures from page 138, note 2.

^b October.

^c May.

vember 1941.¹ In other countries on the continent of Europe the Government, during the last year, had to relax the wage stop (Italy, France) or to order a general wage increase (Hungary, Belgium). On the other hand, the "wage-stop" decreed after the occupation seems to have been rigidly maintained in Norway and the Netherlands. The same applies to Germany.

An almost complete stability of income rates has been achieved in Canada since the autumn of 1941. In that country wage rates, salaries and directors' fees are frozen at the level of November 15th, 1941. Wages are to be adjusted to changes in the cost-of-living index, but this index was practically stable and no adjustment had to be made until August 1942, when a bonus of 2.4% was granted.

No general system of wage control, except in "essential occupations," has as yet been introduced in the United Kingdom, though

¹ The official cost-of-living index in the latter month was over three times as high as in January 1940.

it is understood that wage rates will not, in general, be increased as long as the Government maintains the stability of the cost-of-living index. In the United States the War Labor Board—a tripartite body which had no jurisdiction over voluntary wage adjustments—announced in July 1942 that it would not grant wage increases, except in the case of “sub-standard” wages, which would raise “real wages” above the level prevailing in January 1941. Wage-earners whose rates had not increased by 15% since that date—that is, by the same percentage as the cost-of-living index—were declared “entitled to have their peace-time standards re-established.”^{1, 2}

¹ In fact, average rates had increased as much as 18.9% between January 1941 and April 1942 but some groups of workers had not fully shared in this rise.

² Since this was written, the authority of the War Labor Board has been increased by an executive order of the President of October 3rd, 1942 to cover all changes in wage rates, and the Board has been directed not to approve any increase above the rates prevailing on September 15th, 1942, “unless such increase is necessary to correct maladjustments or inequalities, to eliminate substandards of living, to correct gross inequities, or to aid in the effective prosecution of the war.” At the same time, any increase in salaries which were in excess of \$5,000 a year was made subject to the approval of the Economic Stabilization Director.

CHAPTER VI

INTERNATIONAL TRADE

In the past year, as the hostilities spread over a wider area, international trade, as well as other economic activities, was mobilized in almost all major countries for the conduct of war, and was gravely affected by the hazards of war.

Traditional trading channels were further disrupted. While during the second year of war the world was split into two great trading areas separated by blockade lines—Continental Europe and the rest of the world—the Japanese conquests during the early part of 1942 implied the establishment of a third area in eastern and south-eastern Asia. As this area produces various primary products which cannot be obtained in adequate quantities elsewhere, its severance from the rest of the world created difficult supply problems, particularly for the United States. The loss of trade was felt so much the more as a considerable portion of the goods obtained from this region were paid for not by exports but from the yield of investments accruing to the United Nations.

Transport difficulties added to the disturbances of trade. Tonnage losses in the first half of 1942 are reported to have been heavy,¹ and an increasing amount of mercantile tonnage and in Europe of railway rolling stock was required for the transport of troops and war material. The lack of transport facilities necessitated a drastic curtailment of "normal" commercial transactions.

As trade ceased to meet normal requirements, additional strain was placed on the countries within each of the three regions referred to above. Germany and Japan in the areas they dominated endeavoured to shift this strain onto the countries under their control. Within the area of free nations, international collaboration tended to distribute the burden according to each country's capacity. British purchases continued to relieve certain debtor countries of unexportable surpluses of primary goods, at the same time as they helped them to repatriate outstanding debts and reduce their annual interest payments. The United States also extended its policy of large scale purchases of primary goods, and expanded her lend-lease aid to allied and other friendly nations.

¹*Cf.* Chapter VII.

Table 1. The World except Continental Europe: Quarterly Merchandise Imports
In U.S. \$(000,000's). Special Trade.

Country or Group	Quarterly average				1941				1942	
	1938	1939	1940	1941	1	2	3	4	1	2
<i>Africa</i>	362	.	.	.	.	.	.	.	.	.
Algeria, Tunis, French Morocco.	62	.	.	.	.	.	.	.	.	.
Union of South Africa	112	98	99	.	88	.	.	.	.	.
Egypt	45	38	30	.	.	.	.	.	9	9
Gold Coast	9	8	7	6	5	5	6	7	.	.
Mozambique	5	4	4	4	3	4	5	5	.	.
Other countries	129	(117)	.	.	.	.	.	.	.	.
<i>North America</i>	664	(756)	(888)	(1,144)	(972)	(1,143)	(1,179)	(1,280)	(1,126)	.
United States	488	569	635	806	695	817	804	907	747	627
Canada, N.F.L. and other countries	176	(187)	(253)	(338)	(277)	(326)	(375)	(373)	(379)	.
<i>Mexico and Caribbean</i>	157	.	.	.	.	.	.	.	.	.
Mexico	27	30	31	47	39	44	50	54	.	.
Curacao	53	.	.	.	.	.	.	.	.	.
Other countries	77	(77)	(72)	84	(76)	(84)	(84)	(90)	.	.
<i>South America</i>	301	(264)	(275)	(266)	(204)	(244)	(299)	(319)	.	.
Argentina	111	88	99	85	59	77	100	106	95	89
Brazil	74	65	63	70	58	62	79	82	74	.
Venezuela	24	26	23	(19)	12	17	22	(25)	.	.
Chile	26	21	26	27	22	25	28	32	28	33
Peru	15	12	13	14	12	12	15	17	12	12
Other countries	51	(52)	(51)	(51)	(41)	(51)	(55)	(57)	.	.
<i>Asia</i>	856	(897)	(936)	.	.	.	.	.	.	.
India, Burma, Ceylon	177	167	156	(167)	154	187	(175)	(152)	.	.
British Malaya	78	80	97	.	97	.	.	.	.	.
French Indo-China	14	22	(12)	.	.	.	.	.	.	.

Netherlands Indies	07	03	00	.	40	05	73	.	.	.
Philippines	33	30	33	.	31	37	(44)	.	.	.
Japan, Korea, Formosa, Man- churia	285	311	(317)	.	.	.	.	.	.	.
China	69	105	150	.	177	203	182	.	.	.
Other countries	133	(119)	(111)	.	.	.	.	.	.	.
<i>Oceania</i>	190	(159)	(172)	(169)	(132)	(161)	(195)	(187)	.	.
Australia	128	107	127	122	95	112	143	135	.	.
New Zealand	54	44	37	39	20	42	43	43	34	.
Other countries	8	(8)	(8)	(8)	(8)	(7)	(9)	(9)	.	.
<i>Non-continental Europe</i>	1,103	990	1,154	.	.	.	.	.	.	.
United Kingdom	1,049	939	1,103	.	.	.	.	.	.	.
Ireland, Iceland	54	51	51	36	36	34	34	41 ^a	42	48
U.S.S.R.	66	.	.	.	.	.	.	.	.	.
Total	3,699	.	.	.	.	.	.	.	.	.

For Note to Table 1, see page 156.

Table 2. World except Continental Europe: Quarterly Merchandise Exports
In U.S. \$(000,000's). Special Trade.

Country or Group	Quarterly average				1941				1942	
	1938	1939	1940	1941	1	2	3	4	1	2
<i>Africa</i>	274	.	.	.	.	.	.	.	.	.
Algeria, Tunis, French Morocco.	61	.	.	.	.	.	.	.	.	.
Union of South Africa	36	34	36	.	25	.	.	.	.	.
Egypt	36	37	62	.	.	.	.	.	.	.
Gold Coast	14	14	14	13	14	15	13	10	15	6
Mozambique	3	1	2	2	2	2	2	2	.	.
Other countries	124	(114)	.	.	.	.	.	.	.	.
<i>North America</i>	1,011	(1,012)	(1,264)	(1,636)	(1,568)	(1,475)	(1,624)	(1,877)	(2,012)	.
United States	764	781	984	1,255	1,294	1,078	1,193	1,453	1,551	1,811
Canada, N.F.L. and other countries	247	(231)	(280)	(381)	(274)	(397)	(431)	(424)	(461)	.
<i>Mexico and Caribbean</i>	171	.	.	.	.	.	.	.	.	.
Mexico	47	44	44	37	33	35	36	43	.	.
Curaçao	46	.	.	.	.	.	.	.	.	.
Other countries	78	(77)	(70)	(92)	(78)	(105)	(90)	(93)	.	.
<i>South America</i>	362	(376)	(348)	(395)	(339)	(416)	(407)	(419)	.	.
Argentina	110	117	108	110	97	122	109	112	136	132
Brazil	74	77	66	85	69	87	88	97	93	.
Venezuela	68	75	63	70	58	65	79	78	.	.
Chile	35	34	35	39	31	40	44	43	37	48
Peru	19	18	17	20	20	19	21	18	20	19
Other countries	56	(55)	(59)	(71)	(64)	(83)	(66)	(71)	.	.
<i>Asia</i>	853	(908)	(958)	.	.	.	.	.	.	.
India, Burma, Ceylon	216	220	225	(244)	203	211	(275)	(287)	.	.
British Malaya	81	94	133	.	131	.	.	.	.	.
French Indo-China	24	24	(24)	.	.	.	.	.	.	.

Netherlands Indies	92	102	125	.	130	125	148	.	.	.
Philippines	37	38	39	.	40	.	45	.	.	.
Japan, Korea, Formosa, Man- churia	249	294	(264)	.	.	.	.	.	.	.
China	38	28	29	.	33	45	44	.	.	.
Other countries	116	(108)	(119)	.	.	.	.	.	.	.
<i>Oceania</i>	(198)	(168)	(187)	(177)	(183)	(181)	(174)	(170)	.	.
Australia	130	105	120	112	112	114	113	110	.	.
New Zealand	57	52	56	54	61	56	50	49	67	.
Other countries	(11)	(11)	(11)	(11)	(10)	(11)	(11)	(11)	.	.
<i>Non-continental Europe</i>	608	524	458	.	.	.	.	.	.	.
United Kingdom	575	491	418	.	.	.	.	.	.	.
Ireland, Iceland	33	33	40	41	35	35	35	60	46	40
U.S.S.R.	62	.	.	.	.	.	.	.	.	.
Total	3,539	.	.	.	.	.	.	.	.	.

For Note to Table 2, see page 156.

TRADE OUTSIDE CONTINENTAL EUROPE

The statistical information on trade has become increasingly scanty, and the figures for total trade values summarized in Tables 1-2 fail to give a comprehensive picture. The figures are nevertheless interesting, suggesting as they do that, as a general rule, trade has tended to increase rather than decrease in value, though it may have fallen in quantum. As this tendency is noticeable in exports as well as imports, it cannot be attributed solely to the rise in transport costs (included in the import figures of the majority of countries).

More and more, in the course of the war, the United States has come to occupy a key position in trade. With the expansion of her armament production, she has absorbed various strategic materials in growing quantities. Detailed information on United States trade, available only up to September 1941, shows the resulting change in the composition of imports (see Table 3).

The countries of eastern and south-eastern Asia, with which trade was discontinued as the result of the war with Japan, had accounted

Table 3.—United States Imports, January-September 1939-1941

	\$(000,000's)			Lb.(000,000's)		
	1939	1940	1941	1939	1940	1941
Copper unworked	1.0	6.3	67.2	12	58	695
Tin, unworked and tin ore (tin content)	45.7	93.3	137.2	100	206	293
Lead unworked .....	.1	.4	15.9	4	15	450
Nickel and alloys	19.8	29.8	39.0	90	133	187
Rubber	119.4	223.7	311.3	761	1,282	1,711
Wool, raw	34.6	56.6	163.3	177	236	666
Wood, sawmill products	13.4	16.8	32.4	*488	*522	*970
Hides and skins, raw	33.7	37.6	56.9	238	252	438
Jute, including yarn, burlap, etc.	26.4	44.1	43.8	454	512	563
Manila hemp	2.5	4.1	8.2	66	92	1,477
Total	296.6	512.7	875.2			
Percentage movement (1939 = 100):						
Above articles	100	173	295			
All other goods	100	102	109			

* Milliard board feet.

Note to Tables 1, 2 and 9. Where not otherwise indicated, the figures represent special trade in merchandise only, even in the case of countries which are producers and major exporters of gold.

The figures refer to U.S.A. dollars according to the 1934 parity, equalling 0.88867 gramme of fine gold, or 59.06% of the "old" gold dollar employed in certain earlier publications. Conversion from national currencies has been made in accordance with the principles stated in *Review of World Trade, 1938*, Annex I (pp. 58-59). The difficulty of making international comparison of trade values increased very much during the war owing to the adoption of exchange control in almost all countries and to blockades. Account should be taken of the fact that, particularly from the middle of 1940, trade was conducted on a higher price level in Continental Europe than elsewhere.

The figures given in brackets are partly estimated.

for over two-fifths of the United States imports of raw materials and semi-manufactures. Almost the whole supply of rubber—which represented a higher share in United States imports than any other article—was cut off, as was that of tin, silk, manila hemp, kapok and quinine; and a substantial portion of the imports of articles such as chromite, manganese ore, tungsten, sugar, coconut oil and copra was also affected. Imports from south-eastern Asia continued, in fact, on a large scale during the early months of 1942; but the menace to trade with this region, occurring at a time when the demand for industrial raw materials was rapidly increasing, precipitated measures to develop domestic and Latin-American supplies of the articles concerned. An extensive programme of inter-American collaboration was outlined, and at the Pan-American Conference in Rio de Janeiro in January 1942 the American republics virtually agreed to organize their economy for the support of the war effort of the United Nations.

Agreements concluded since May 1941 with various Latin-American countries provide for the purchase by United States government agencies of practically the entire Latin-American output of numerous strategic materials, in particular non-ferrous metals and rubber. Moreover, the United States has agreed to purchase from certain Latin-American countries their production of various materials of little strategic importance (for instance, cotton) even when shipment to the United States may not be possible under prevailing conditions or is not intended in the future. These arrangements have the character of financial assistance and meet the same purpose in Latin America as the British purchasing agreements in certain other areas.

Other agreements recently concluded with Latin-American countries aim primarily at promoting their economic development by loans granted through the United States Export-Import Bank. The principal recent borrower is Brazil, who in March 1942 negotiated a credit of \$100 million in addition to \$120 million previously raised for the exploitation of her natural resources. The chief projects to be financed by these credits are the opening up of the Amazon Basin and the exploitation of the iron ore deposits in Minas Geraes. Bolivia has been granted a credit for road and railway construction; and the Argentine, for the acquisition of railway material. Other Latin-American credits have been granted for public works, for the purchase of industrial machinery, for developing rubber production, etc. Certain of the credits have been extended by Government agencies other than the Export-Import Bank. Further, private United States investments have been made with a view to increasing the production of strategic materials. Finally, the following up of the United States trade agreements programme resulted in new agreements with the Argentine (effective November 15th, 1941), Cuba (supplementary

agreement effective January 5th, 1942), Peru (July 9th, 1942), and Uruguay.¹

As the following figures show, United States trade with Latin America was expanding rapidly even before the emergency situation arose late in 1941.

Table 4. United States Trade with Latin America

	January-September		
	1939	1940	1941
Imports (general) from Latin America:			
in \$(000,000's)	390	490	760
percentage of total imports	24.0	25.2	31.8
Exports (including re-exports) to Latin America:			
in \$(000,000's)	423	580	662
percentage of total exports	19.3	19.2	19.9
Import (—) or export (+) balance with Latin America	+33	+90	—106

The increase in imports was far greater than in exports, and in 1941 the previous export surplus to Latin-American countries was replaced by an excess of imports. While the United States demand for Latin-American goods was very heavy, exports to Latin America were hampered by the increasing domestic demand, by lend-lease aid to the United Kingdom and elsewhere, and by transport difficulties. Delivery on Latin-American orders placed in the United States was thus delayed. In these circumstances a rapid utilization of the credits put at the disposal of Latin-American countries could hardly be expected. The following figures show the approximate amounts of the Export-Import Bank's outstanding commitments on account of credits to Latin America, and the extent to which these credits have been utilized:

	\$(000,000's)	
	Credits authorized	Credits utilized
March 1941	220	34
December 1941	320	92
June 1942	660	150

United States trade with the Old World was to an increasing extent dominated by the lend-lease aid supplied to countries "whose defense the President deems vital to the defense of the United States." The basic principles of such aid were established by the first "organic" Lend-Lease Act passed on March 11th, 1941, which in addition authorized the shipment of defense articles in stock or procured from earlier appropriations to the extent of \$1,300 million. The Defense

¹ Agreement signed July 21, 1942, effective thirty days after exchange of instruments of ratification and proclamation.

Aid Supplemental Appropriation Act of March 27th, 1941 appropriated \$7,000 million to carry out provisions of the "organic" Lend-Lease Act and gave the President power to reimburse those departments and agencies which disposed under the Lend-Lease Act of defense articles procured from appropriations made prior to March 11th, 1941.

Later appropriations have increased the amounts of possible lend-lease aid very considerably. The second Lend-Lease Appropriation Act, passed on October 28th, 1941, made available to the President an additional \$5,985 million. From the entry of the United States into the war, the financing of lend-lease aid was changed in that funds appropriated to the President are used only for non-military aid (for instance, foodstuffs and raw materials employed by armament industries). The third lend-lease appropriation, amounting to \$5,425 million and approved on March 5th, 1942, provided only for such aid. Military equipment, on the other hand, is being transferred from appropriations which have been made directly to the Army, Navy and Maritime Commission; the total of such appropriations, up to the beginning of September 1942, amounted to \$44,535 million. The total of all appropriations available for lend-lease aid thus reached the enormous sum of \$62,945 million. Total lend-lease aid actually rendered up to that date was little more than a tenth of this amount, or \$6,489 million, but expenditure in the middle of 1942 was at a monthly rate equivalent to \$8,000 million a year. The rapidity with which the aid has increased is illustrated by Table 5, showing lend-lease expenditure by quarters and distribution by principal categories of goods and services. Over the whole period covered, goods exported exceeded half the total aid rendered. Attention should be paid to the rapid expansion in lend-lease exports that occurred early in 1942.

A measure of the relative magnitude of the lend-lease aid is afforded by comparison with United States exports. As the last line of Table 5 shows, exports other than under lend-lease at least up to March 1942 were maintained at a value of about \$1,000 million quarterly. From then on, however, the rise in lend-lease shipments was accompanied by a fall in other exports. In the quarter ending May 1942 such exports represented only 74% of lend-lease exports and 40% of total lend-lease aid (including services and lend-lease goods not yet exported). The diagram on page 161 helps to visualize certain of the values set out in Table 5.

Complete information on the geographical distribution of lend-lease aid is not available, but the last official report on lend-lease operations indicates that, at first, lend-lease exports went primarily to the United Kingdom, to help in the battle of Britain and that, as the war spread, aid was sent to Africa, the Middle East, Australia, China and,

Table 5. United States Lend-Lease Aid, in \$(000,000's)

Type of aid	March- May 1941	June- Aug. 1941	Sept- Nov. 1941	Dec. 1941- Feb. 1942	March- May 1942	June- Aug. 1942	Total March 1941- Aug. 1942
Goods:							
Exported	23	167	405	505	1,038	1,387	3,525
Transferred but not exported ^a	52	4	72	183	152	64 ^c	527
Increase in goods awaiting transfer or in process of manufacture ^b	166		66	384	456	288	1,360
Services:							
Services: } Servicing and repair of ships ^c	75		172	47	31	253 ^e	1,077
Rental of ships, ferrying of aircraft, etc. ^d				151	128		
Production facilities in the United States				95	113		
Facilities for supplying bases abroad, etc.				3	9		
Total lend-lease aid ..	118	369	715	1,368	1,927	1,992	6,489

For comparison:

Goods exported other than lend-lease	1,079	944	1,130	1,079	771		
---	-------	-----	-------	-------	-----	--	--

^a Inventories of finished articles at points of export, ships, etc.

^b "Articles in process of manufacture" include expenditures for items such as ships, upon which payment is made by the Government as the work progresses. The amounts do not include the great majority of lend-lease articles in process of manufacture, which are not paid for until delivered.

^c Cost of repairing, servicing and reconditioning ships of lend-lease countries in United States ports.

^d Cost of transporting lend-lease cargoes to foreign countries.

^e Approximate figures.

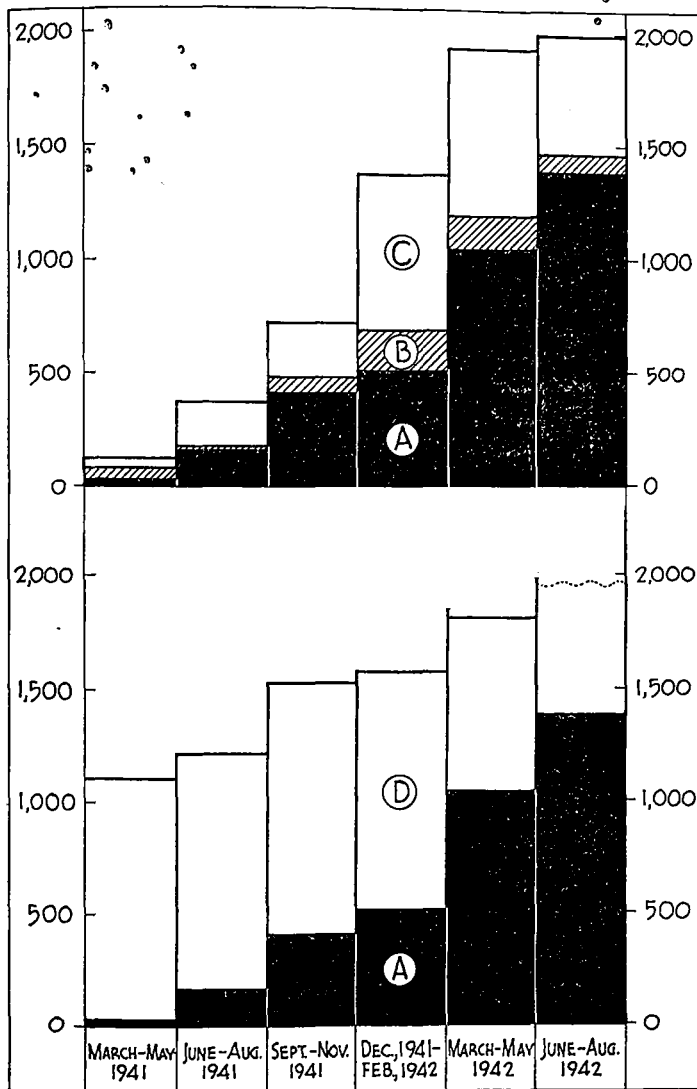
from October 1941, to the U.S.S.R. "Currently, about 35% of lend-lease exports are going to the United Kingdom, 35% to U.S.S.R., and 30% to the Middle East, Australia, and other areas."¹ The list of nations now eligible for lend-lease assistance includes the members of the British Commonwealth of Nations and 35 other nations:

British Commonwealth	Cuba	Haiti	Panama
Argentina	Czecho-Slovakia	Honduras	Paraguay
Belgium	Dominican Republic	Iceland	Peru
Bolivia	Ecuador	Iran	Poland
Brazil	Egypt	Iraq	Turkey
Chile	El Salvador	Mexico	U.S.S.R.
China	France (Fighting)	Netherlands	Uruguay
Colombia	Greece	Nicaragua	Venezuela
Costa Rica	Guatemala	Norway	Yugoslavia

¹ Sixth Report to Congress on Lend-Lease Operations for the Period Ended September 11, 1942, pages 8-9.

United States: Lend-Lease Aid and Exports, in \$(000,000's)

- A: Lend-lease articles exported.
- B: Lend-lease articles transferred but not exported.
- C: Lend-lease articles awaiting transfer, services, etc.
- D: Exports other than lend-lease (not available for June-August 1942).



The distribution of lend-lease aid by commodities may be shown by the following figures referring to the period from March 1941 to May 1942 inclusive. Total lend-lease expenditure on commodities (including commodities not yet exported) for this period amounted to \$3,673 million (*cf.* Table 5); of this sum, \$3,507 million¹ were distributed as follows:

	\$(000,000's)
Ordnance and stores	394
Aircraft	690
Tanks and other vehicles	348
Miscellaneous military equipment	73
Watercraft	475
Agricultural and industrial commodities	1,527
Total	3,507

The "agricultural and industrial commodities," representing 43% of the total, consisted largely of meat and dairy products, raw tobacco, mineral oils, iron and steel and non-ferrous metals. The farm products transferred for lend-lease shipments over the period just considered total 2.3 million tons with a value of \$701 million distributed as follows:

Farm products:	\$(000,000's)
Dairy products and eggs	224.4
Meat, fish and fowl	211.6
Fruit and vegetables	54.9
Grain and cereal products	27.7
Lard, fats, oils	56.1
Other foodstuffs	5.1
Non-foodstuffs	121.4

Several of the articles in question had earlier not been exported in large quantities. Figures concerning the "transferred" quantity of certain of the more important non-military items during the period up to the end of February 1942—that is, for almost one year—may be compared with total exports of the same items during 1938 (Table 6).

It will be observed, for example, that the transfer of meat and fish products was nearly three times, and that of milk products over fourteen times the 1938 exports. The high proportion of concentrated foodstuffs, such as dairy products, meat and fats, in lend-lease shipments is due to the scarcity of shipping space. The export of foodstuffs under lend-lease was still increasing rapidly in the summer of 1942; thus the quantity shipped in June (187 million lb.) was more than twice the figure for May.

The lend-lease programme should be regarded as an expression of

¹ The difference (\$166 million) between this sum and the total expenditure on commodities appears to have represented chiefly military and naval equipment.

Table 6. *United States: Quantities of Certain Lend-Lease Articles Transferred March 11th, 1941-February 28th, 1942, as Compared with Exports of the Same Articles in 1938*

Commodity	Unit	I Lend-Lease transferred up to Feb. 28th, 1942	II Exports in 1938	I as percent- age of II
Meat and fish products.....	Million lb.	815	276	295
Milk products	"	664	47	1,418
Egg products	"	129	335	38 ^a
Fruits and vegetables	"	814	2,660	31
Grain and Cereal products	"	1,019	16,175	6
Sugar and related products	"	23	335	7
Cotton linters	"	35	154	23
Raw cotton	Thousand bales	499	4,316	12
Leaf tobacco	Thousand hogsheads	153	462	33
Petroleum products.....	Million barrels	45	93	48
Fertilizers	Thousand tons	567	427	133
Iron and steel	"	2,099	4,788	44
Non-ferrous metals	"	204	416	49

Note. Owing to discrepancies in the classifications employed, the comparison between I and II is in certain cases only approximately correct.

^a This percentage greatly understates the relative magnitude of lend-lease shipments since the bulk of the eggs exported under lend-lease were dried.

the policy of pooling the resources of the United Nations which in 1942 resulted in the establishment of the combined agencies of the United States and the United Kingdom to which reference was made in Chapter I.

The United States has received lend-lease aid from the nations she has supplied, but has been chiefly a supplier on lend-lease account. The assistance she has afforded has not only eased the exchange difficulties of the receiving nations but it has also implied a more rational use of the scarce shipping facilities of the United Nations, as the distance from the United States to the United Kingdom is much shorter than from most other suppliers of raw materials and foodstuffs.

The maintenance of non-lend-lease exports from the United States at a relatively stable level up to March 1942 (see the last line of Table 5) is remarkable in view of the loss of certain markets and the restrictions placed upon private trade. It is undoubtedly due to increased sales to other countries of the Western Hemisphere, in particular to Canada whose recorded imports from the United States during the financial year ending March 1942 increased 40% over the previous

year, thus reaching the highest figure for any 12-month period on record. Part of the exports to Canada, however, represented lend-lease goods (see below). Non-lend-lease exports to the United Kingdom appear to have continued at a high level in fulfillment of contracts concluded before the adoption of the lend-lease programme.

The trade policy of the United Kingdom was modified when, as a result of lend-lease aid from the United States, the requirements of dollar currency to finance purchases outside the sterling bloc were reduced. While during the early part of the war much emphasis had been placed on the necessity of maintaining British exports to oversea countries, exports were now allowed to decline rapidly. Thus, during the first six months of 1941 exports of iron and steel manufactures fell below the level of 1940 by 51%, of machinery by 46% and of cotton piece goods by 55%.¹ In September 1941 it was announced that the country's export trade was to be restricted "to the irreducible minimum necessary to supply or obtain materials essential to the war effort." Domestic production could thus be more completely utilized for war purposes. There are indications that the balance of trade (excluding lend-lease imports) did not change materially and that the financial sacrifices the United Kingdom assumed in pursuance of the war would not have been reduced had it not been for the assistance received from Canada. The balance of payments deficit (on account of current items), recorded at £55 million in 1938, rose to £750-800 million annually during the early part of the war. It has been officially reported at £759 million in 1940 and £798 million in 1941, and the advance estimate published in April 1942 for the financial year ending March 31, 1943, was £775 million, in which figure, however, the contribution from Canada (£225 million; see below) is included.² It may be of interest to consider the geographical composition of this "oversea disinvestment"—including not only liquidation of oversea assets but also increase in liabilities overseas—of over £2,000 million during the first three years of war.

During the first two years of war, transactions with the United States resulted in a deficit of not far from £700 million, met by the sale of gold (over £400 million), withdrawal of dollar balances (£60 million) and liquidation of long-term investments (over £200 million).³ Owing to the increase in lend-lease aid, the United Kingdom may not have had to draw upon its investments in the third year of

¹ Cf. *Second Report under the Act of March 11, 1941 (Lend-Lease Act)*. Trade returns for the United Kingdom after 1940 have not been published.

² *An Analysis of the Sources of War Finance and an Estimate of the National Income and Expenditure in 1938, 1940 and 1941, Presented by the Financial Secretary to the Treasury to Parliament by Command of His Majesty, April 1942 (Cmd. 6347)*.

³ Cf. *Federal Reserve Bulletin*, December 1941.

war, but any surplus that may have accrued to her would have been absorbed in liquidation of commitments arising from contracts for deliveries of war material concluded before the adoption of the lend-lease policy.¹

The United Kingdom's transactions with Canada resulted in a deficit amounting, from the beginning of the war to the end of March 1942, to £420 million, met by the sale of gold (£56 million), accumulation of Canadian sterling balances (over £190 million) and the repatriation of British-held Canadian securities (£170 million). The deficit with Canada tended to increase, as is obvious from the fact that, of the £420 million just considered, almost 60% arose during the financial year ended March 31, 1942.²

According to information supplied in Chapter I, India increased her sterling balances by £192 million between August 1939 and June 1942 and repatriated government sterling debt of £182 million during the same period. As part of the sterling bonds included in the last-mentioned figure were already in Indian hands, the payment to the United Kingdom may have been less than £182 million; on the other hand, certain private Indian sterling debts have also been liquidated.

Further, there was a deficit with the Union of South Africa (which repatriated Government securities to about £40 million besides purchasing considerable amounts of South African mining shares held in the United Kingdom), as well as with Ireland, British Malaya, Portugal and certain Latin-American countries which have accumulated sterling balances and, in some instances, reduced their long-term debt to the United Kingdom.

This disinvestment of oversea assets has continued in spite of the restriction of imports of consumption goods to the bare necessities of life. But the financial support to the British Dominions and colonies, Egypt, Free French Africa and Belgian Congo in the form of purchases for storage of exportable goods which, in the circumstances, could not be shipped has continued and the value of the stocks of goods held abroad must of course be set off against the losses of financial assets.

Purchases for shipment to the United Kingdom are being largely made through the Government. Thus, in the course of 1941, two Government deals, each concerning the delivery of three million tons of wheat, were made with Canada. In October of the same year, an

¹ The *Federal Reserve Bulletin* for December 1941 anticipated that a surplus would accrue to the United Kingdom providing the means for liquidating the commitments in question before the end of October 1942. There can be no doubt, however, that the extension of the area of war since December 1941 has affected the British balance with the United States unfavourably.

² Cf. *Budget Speech, delivered by Hon. J. L. Ilsley, Minister of Finance, in the House of Commons, June 23, 1942* (Ottawa).

agreement was concluded with the Argentine concerning the delivery of 500,000 tons of frozen meat over a period of 12 months. A later arrangement (in 1942) provides for the purchase by the United Kingdom of Argentine meat for United States as well as her own account until the end of the war.

In pursuing her war effort, Canada expanded her collaboration with the United States and the United Kingdom during the past year. Trade figures, available up to April 1942 inclusive, show a rapid increase in trade with both these countries.

Table 7. Canada: Foreign Merchandise Trade, in \$(1,000,000's)

	Trade during 12-month periods May-April with			
	United States	United Kingdom	Other countries	World
General Imports.				
1939-40	584	126	162	872
1940-41	825	134	220	1,179
1941-42	1,135	180	280	1,595
Domestic Exports.				
1939-40	399	384	222	1,005
1940-41	483	543	231	1,257
1941-42	683	721	473	1,877
		1940-41	1941-42	
* Of which: Egypt		14	127	
India		20	68	

Imports from the United States rose most while exports expanded in various directions; but particularly to the United Kingdom. The difficulty of financing the import surplus from the United States, owing to the fact that cash payments on account of the export surplus to the United Kingdom (and to other countries for the account of the United Kingdom) could not be obtained,¹ was partly solved by the extension of lend-lease assistance for component parts and materials used in the equipment and munitions which Canada is producing for the United Kingdom, as arranged by the so-called Hyde Park Agreement between the United States and Canada of April 1941. Steps were taken to reduce the heavy claim on the United Kingdom that had arisen in spite of the liquidation of all but about \$1,000 million of the British investments in Canada, which before the war exceeded \$2,500 million. Thus, \$700 million of Canada's sterling balances (totalling \$900 million in June 1942) is being converted into a long-term loan, free of interest until the end of the war; moreover, a contribution of \$1,000 million granted to the United Kingdom

¹ Cf. last year's *Survey*, pp. 231-2.

earlier in the year is estimated to offset the new claims on that country likely to arise up to the early part of 1943.

Australia and New Zealand have been heavily engaged in production for their own defence, and their foreign transactions appear not to have resulted in a large export surplus that could be used in the redemption of debt. Their imports, even from countries within the British Commonwealth, were restricted in 1941. Similar restrictions were also imposed by other members of the British Commonwealth as a means of curtailing local consumption and of rendering funds and productive resources available for purposes related to the war.

Various influences tended to change the pattern of Latin-American trade in 1941 and 1942. The demand for Latin-American products remained very active but continued to shift over to raw materials of strategic value and to animal foodstuffs, while the disposal of other raw materials and certain vegetable foodstuffs, such as grain and bananas, met with difficulties owing to the scarcity of shipping space. The supply of foreign manufactured goods declined as British exports dwindled in the course of 1941 and as, towards the end of that year, imports from Japan were discontinued while production in the United States was increasingly absorbed by war requirements. The considerable sales of goods to the United States and the United Kingdom, and the difficulties of importing essential requirements rendered the trade balance increasingly active. This fact, and the credits received from the United States, tended to create a rather paradoxical situation: on the one hand, the currency difficulties to which most Latin-American countries had long been exposed tended to disappear; on the other, there was a shortage of essential import products. In these circumstances the incentive to industrialization naturally grew stronger, and the trade of Latin-American countries among themselves increased.

The Argentine affords an example of these tendencies. While in 1941 the weight of exports of livestock products (meat, wool, hides, dairy goods) reached the highest level of the past fifteen years, exports of cereals and linseed were the lowest since 1917 and large quantities of maize were stored, lost, or used as fuel. Exports to the United States more than doubled, and though those to the United Kingdom fell off, the Argentine acquired a heavy sterling balance, exceeding 300 million pesos in the early part of 1942. Total imports fell off and the export surplus rose from \$35 million in 1940 to \$98 million in 1941. The currency situation improved rapidly; late in 1941 it was decided not to make use of a credit of \$110 million negotiated with the United States, and in May 1942 the exchange restrictions were lifted in order to encourage imports.

Brazil's export balance rose from \$13 million in 1940 to \$60 million in 1941, Venezuela's from \$160 to \$204 million, and that of the

rest of South America from \$85 to \$153 million. Brazil and certain other tropical countries profited from the high price of coffee, and the mineral-producing countries found a ready market for their products in the United States and the United Kingdom. A plentiful supply of sterling accrued to several of them; in the case of Peru, the deficit with the sterling area was turned into a surplus early in 1942.

The following figures illustrate the increase in intra-Latin-American trade:

Table 8.—Latin-American Republics: Trade with Latin America

	Imports			Exports		
	1938	1940	1941	1938	1940	1941
All (20) republics:						
a. Total trade in \$(000,000's) . .	1,493	1,388	1,467	1,835	1,731	1,991
b. Of which with Latin America	138	166	^a 218	113	120	^a 177
c. b as percentage of a.	9	12	15	6	7	9
Percentage share of Latin America in the trade of:						
Argentina	11	16	25	11	10	13
Brazil	14	15	^b 15	6	11	^b 15
Chile	14	18	^b 13	4	6	10
Cuba	2	2	4	1	1	3
Mexico	1	2	^c 3	1	2	^c 4
Peru	10	11	14	20	25	30
Uruguay	17	27	28	13	8	8
13 other republics	6	8	^a 15	3	3	^a 4

^a Partly estimated.

^b January-November.

^c January-October.

Trade in the Far East was overshadowed by war. The freezing by the United States, the British Commonwealth of Nations and the Netherlands Indies of Japanese assets in July 1941 after the virtual occupation by Japan of Indo-China reduced by about two-thirds Japan's trade with countries outside the "yen bloc." After her attack on Pearl Harbor Japan's trade was, of course, practically confined to the area under her military domination. The scanty information that has become available concerning her commercial relations with the areas she has recently occupied indicates that she is organizing her trade with them on a pattern similar to that of Germany's trade with the invaded areas in Europe. Her commercial agreement with French Indo-China, concluded in May 1941, gave her a factual monopoly in the trade of that country preparing the way for her penetration into its domestic economy, and provided for large purchases of rice on credit. An agreement with Thailand in April 1942 provided for the devaluation of the baht, in terms of yen, by 36%, following upon a less severe devaluation earlier in the year. Japan's barter terms of trade with Thailand were thus substantially improved. But quite apart

from the economic pressure which Japan was able in the circumstances to employ, the countries of south-eastern Asia—and particularly those with highly specialized production for disposal on the world market—must have been seriously impoverished by their incorporation in Japan's "co-prosperity sphere." Japan herself could obtain only limited supplies from the conquered areas during the first months of the occupation. Shipments of goods to Japan from these areas during the four months up to the end of April 1942, facilitated by the use of military transports on their return voyages, were officially reported at 700,000 tons, a figure representing only a fraction of normal peacetime imports from the same area.

The foreign trade of Free China was at first almost stifled when Japan obtained control of the China Sea and the Burma Road. The effectiveness of the lend-lease aid extended to China and the financial aid—represented by the loans granted early in 1942 by the United States and the United Kingdom of \$500 million and £50 million respectively—will naturally depend upon the opening up of alternative routes.

TRADE IN CONTINENTAL EUROPE

Supplies to Continental Europe from the outside world, severely cut during the first two years of war, were reduced to a mere trickle during the third year. There were no more imports from the U.S.S.R. of soya beans and other products of the Far East. Trade advantages which Switzerland granted Germany in July 1941 led to the partial loss of the facilities for importing from overseas which Switzerland had enjoyed: supplies of industrial raw materials were almost stopped, but shipments to Switzerland of foodstuffs and fodder were permitted within certain limits. Sweden's trade with overseas countries, rendered possible by agreement with both the belligerent parties, was discontinued in the spring of 1941 owing to shipping losses suffered but was resumed with greater success in July. For the year 1941 as a whole, this trade is recorded at 221 million kronor¹ of imports and 120 million of exports (13% and 9% of total imports and exports respectively); the figures for the first five months of 1942 are 194 and 84 million respectively. Spain, Portugal and Turkey have also maintained their trade with the non-European world, but no up-to-date statistics are available.² Spain has negotiated a series of

¹ 1 krona = \$0.24.

² Spain's imports and exports during the first half of 1941 amounted to 193.8 and 198.4 gold pesetas respectively (1 gold peseta = \$0.33). Of imports, 21.4% were derived from the Argentine, 8% from Brazil, 7.8% from the United States, 5.6% from French overseas possessions, 4.2% from the United Kingdom and 9.2% from Germany. Of exports, 46.5% went to Germany, 12.2% to the United States, 10.3% to the United Kingdom and 9.4% to Italy.

agreements with the Argentine enabling her to import wheat on credit. A new agreement, signed early in September 1942, provides for the delivery by the Argentine of one million tons of wheat and 3,500 tons of tobacco within 18 months in exchange for ships, iron and steel, and the use of Spanish ships for transporting gasoline to the Argentine.

Trade among European countries was mainly determined by German demand and by the commercial and exchange policy pursued by Germany. Other factors that entered into the picture were the severity of the winter of 1941/42, which added to the transport difficulties; the failure of crops in several countries and the resulting decline in exports of vegetable foodstuffs, particularly from south-eastern Europe; and the general impoverishment that resulted from the depletion of stocks and the deterioration of equipment.

Available trade figures for Continental Europe are shown in Table 9. The conversion of the trade figures into United States dollars does not imply that the values shown for the war years are comparable with those for other areas in Tables 1 and 2. Price discrepancies and exchange controls in fact render any comparison between the trade values of Continental Europe and any other area very uncertain.

The table is admittedly insufficient for an analysis of recent movements of trade in Continental Europe. The countries recording their trade in 1941 represent only about a fifth of the "normal" trade of that area and the information for the early part of 1942 is even more limited. In particular, figures are lacking for the trade of Germany and a number of the surrounding countries occupied by Germany. However, German statements claim that in 1940 the value of both German imports and exports reached its pre-war level and that since then German trade has exceeded that level by a third, the quantum of trade¹ remaining, however, 20% lower than before the war. This statement would imply that the prices of goods entering into German trade have increased, on an average, by over 60%. Imports are known to have risen far less in price than exports. But the surrounding countries, where trade has been absorbed by Germany to an increasing extent, have experienced a deterioration in their terms of trade. The few indices given in Table 2 of Chapter V suggest that at the end of 1941 the import prices of these countries had roughly doubled but that their export prices had risen by only about a half. This change in price relations has resulted not only from fixing the exchange value of the occupied countries' currencies (favouring exports to Germany and rendering imports more expensive) but also from the suppression

¹ A change in the quantum of trade equals the change in value after elimination of the effect of price changes during the period considered.

of German export premia and from the direct control of export prices in occupied countries. Certain of the trade agreements concluded between Germany and other countries regulate the prices at which goods are to be exchanged.

The extent to which European countries have maintained their trade varies within wide limits. From 1938 to 1941, Bulgaria's imports doubled in value while her exports rose by two-thirds; as the prices of the goods constituting this trade increased less, there was a rise in the quantum of both imports and exports. Hungary's imports rose in value over the same period by three-fourths and her exports by almost half. Portugal doubled the value of her exports. Swiss imports as well as exports rose in value but not enough to prevent a considerable decline in the quantum of trade, particularly of imports. Sweden's trade declined over the three years by 25-30% in value and by over half in quantum:

*Quantum of Sweden's Trade (1938 = 100)*¹

	1938	1939	1940	1941	1942
Imports: Year	100	117.7	70.8	45.8	.
January-May	100	121.4	108.5	50.1	39.7
Exports: Year	100	109.6	60.9	54.3	.
January-May	100	105.2	72.6	48.0	32.7

¹ Source: *Meddelanden från Konjunkturinstitutet*.

Finland's exports declined in value by half between 1938 and 1941, and Greece's imports as well as exports fell to a fraction of their normal value.

To an increasing extent the trade of Continental Europe has been dominated by Germany. As is explained in Chapter I, Germany created large claims on the occupied countries under the heading of occupation costs and piled up clearing debts on account of trading transactions which, largely owing to the rates of exchange fixed in the clearing agreements, tended to result in an excess of imports from the occupied countries. With the funds created and credits obtained Germany was able to acquire control of a growing number of industrial and financial enterprises in these areas, and by the control of raw material supplies she could directly affect both production and trade. The raw material priorities granted to factories working for German account coupled with the general scarcity led to the closing down of a number of plants and compelled the workers thrown out of work to seek employment in the export industry or in Germany.

German orders placed in France in 1941 have been estimated at

Table 9. Quarterly Merchandise Trade of Continental Europe
in U.S. \$(000,000's). Special Trade
For Note to Table 9, see page 156.

Country or group	Quarterly average				1941				1942	
	1938	1939	1940	1941	1	2	3	4	1	2
<i>Imports</i>										
Germany, Austria	610	.	.	.	.	.	.	.	.	.
Bulgaria	15	16	21	31	22	18	37	47	22	42
Finland	40	42	25	44	27	58	44	48	33	53
Hungary	30	35	43	53	39	50	57	65	65	.
Italy	146	.	.	.	.	.	.	.	.	.
Roumania	34	41	34	.	21	24	.	.	.	.
Denmark	89	89	66	64	55	74	66	59	37	77
Greece	33	25	20	8	(5)	(5)	(11)	(11)	.	.
Norway	72	79	54	.	47	87	68	.	.	.
Other occupied countries ^a ..	909	.	.	.	.	.	.	.	.	.
Portugal	25	21	22	25	12	26	26	34	16	.
Spain	(38)	(10)	(14)	.	.	.	.	.	.	.
Sweden	131	149	119	100	74	115	99	110	66	113
Switzerland	92	106	105	118	104	109	130	130	107	137
Turkey	30	23	13	.	14	.	.	.	.	.
Total Continental Europe ..	2,300	.	.	.	.	.	.	.	.	.

<i>Exports</i>										
Germany, Austria	567	.	.	.	.	.	.	.	.	.
Bulgaria	17	18	21	28	17	15	26	55	24	42
Finland	45	42	14	21	11	27	24	23	7	28
Hungary	39	43	36	57	44	44	55	85	72	.
Italy	137	.	.	.	.	.	.	.	.	.
Roumania	40	47	46	.	31	47	.	.	.	.
Denmark	84	80	73	62	56	73	58	60	41	69
Greece	22	18	15	7	(12)	(4)	(5)	(5)	.	.
Norway	47	47	35	.	31	41	30	.	.	.
Other occupied countries ^a ..	745	.	.	.	.	.	.	.	.	.
Portugal	13	13	15	27	15	24	29	38	55	.
Spain	(25)	(9)	(9)	.	.	.	.	.	.	.
Sweden	116	113	80	81	52	91	91	88	43	88
Switzerland	75	72	75	85	76	78	86	100	82	86
Turkey	29	25	20	.	35	.	.	.	.	.
Total Continental Europe .	2,001	.	.	.	.	.	.	.	.	.

^a Including the whole of France. Available quarterly averages for the countries in question are:

	Imports			Exports				Imports			Exports		
	1938	1939	1940	1938	1939	1940		1938	1939	1940	1938	1939	1940
France	331	.	.	219	.	.	Poland-Danzig	62	.	.	55	.	.
Belgium-Lux.	191	165	.	181	184	.	Czecho-Slovakia ..	73	.	.	89	.	.
Estonia	7	6	.	7	7	.	Yugoslavia	28	27	34	29	31	38
Latvia	11	10	.	11	11	.	Albania	2	.	.	1	.	.
Lithuania	9	7	.	10	9	.	Total	909	.	.	745	.	.
Netherlands	195	202	117	143	129	77							

The quarterly averages for "Slovakia" in 1939-1941 are, respectively, imports 13, 25 and 30; exports 19, 27 and 27.

RM 1,500 million.¹ German orders placed in the Netherlands from May 1940 up to the end of 1941 are recorded by the German Chamber of Commerce in that country at approximately RM 2,500 million. Dutch exports to Germany, which since the occupation have exceeded imports from that country, increased by 40% in 1941; early in 1942 they were estimated at a monthly rate of 50 million gulden of Dutch produce plus 100 million of "value added" in working up materials supplied by Germany for German war orders. Since then a further increase is likely to have taken place, particularly in view of the abolition in March 1942 of all restrictions on exports to Germany. For exports to other countries a license is required.

Germany's imports from Western Europe are by no means confined to manufactured goods. The Netherlands are exporting very greatly increased quantities of fruit and vegetables to the Reich. Large quantities of French foodstuffs also are being delivered to Germany; heavy demands for such deliveries are reported to have been made in the early part of 1942. Of France's imports from her oversea territories, consisting largely of phosphates, oilseeds, wheat and other foodstuffs from North Africa, the great bulk—according to press reports, usually 60-80%—is being reserved by Germany and Italy. From Norway large quantities of fish are obtained.

The neutral nations were, of course, in a better bargaining position than the occupied territories. A trade agreement which Turkey concluded with Germany in October 1941, providing for the exchange of Turkish ores, olive oil, cotton, etc. against iron and steel, machinery and rolling stock, stipulates that the Turkish goods were not to leave the country until the corresponding German goods had arrived in Turkey. Sweden was able to prevent a further deterioration in her terms of trade with Germany by linking the price of Swedish ore to that of German coal and iron and by raising her export prices on certain other products. The commercial credit she granted Germany² was intended to offset the Swedish clearing claims that accumulated owing to the failure of Germany to deliver the amounts of coal and iron that had been agreed:

German exports to Sweden in
metric tons ('000's) in 1941:

	Agreed	Delivered
Coal	4,000	3,200
Coke	1,700	1,600
Rolled iron	305	230

¹ *The Economist*, February 21st, 1942. Press reports put French imports in 1941 at 24 milliard francs and French exports at 14 milliard francs (RM 1,200 and 700 million respectively at the current exchange rate of 1 RM = 20 francs). It would appear that these figures do not include goods involved in the execution of German war orders.

² Cf. Chapter I.

The agreed figure for German deliveries of coal and coke in 1942 remains unchanged at 5.7 million tons; but during the period from January to July, deliveries amounted to only about 1.5 million tons as against 2 million tons in the corresponding period of 1941. Swiss credits to Germany, much bigger than those of Sweden, have also been granted with a view to maintaining the functioning of the clearing system with Germany.

Italy's trade with Germany rose from RM 547 million in 1938 to 659 million in 1939, 1,232 million in 1940 and over 2,000 million in 1941. Her imports of steel from Germany are reported to have doubled in 1941; those of coal were maintained in that year at approximately the level of one million tons monthly but subsequently fell off. In connection with this shortage of coal deliveries in 1942, it should be observed that in 1941 the general balance of trade between the two countries was rapidly turning in Italy's favour. Remittances from Italian workers in Germany are estimated at over RM 1 million daily.

Finland also imported largely from Germany in 1941. Finland's clearing debts, due chiefly to Germany and Denmark, rose from 25 million markkaa¹ at the end of 1939 to 1,490 million at the end of 1941, and the increase is likely to have continued in view of the heavy import surplus in the early months of 1942. The current account in Finland's balance of payments resulted in a surplus of 450 million markkaa in 1940 but in a deficit of about 3,500 million in 1941.

The rise in the trade values of Bulgaria and Hungary to which reference was made above has been mainly due to the adaptation of the economy of these countries to German requirements. Roumania's sales to Germany appear, however, to have declined. Her total exports of grain in 1941 fell to a fraction of their normal size, owing to the failure of crops:

	Tons (000's)	
	January-November 1940	1941
Roumania's exports of:		
Wheat	379	2.5
Rye	61	.
Barley	41	7.5
Maize	564	117

Roumanian oil exports, having fallen from 4.2 million tons in 1939 to 3.5 million in 1940, dropped further to 3.1 million in 1941 owing to the decline in the yield of the wells. Nevertheless, the foreign assets of the National Bank of Roumania—like those of Bulgaria—increased during the year.² Hungary has had to finance her exports to

¹ 1 markka = \$0.02.

² Cf. Chapter I.

Germany herself; her assistance has recently taken the form of pengö advances to German banks, rising from 71 million pengö at the end of August, 1941 to 377 million on June 23rd, 1942.

If transactions between two countries are settled through bilateral clearing, the formation of a large and growing balance in favour of one of the countries usually leads to stagnation of trade as the exporters of that country have to wait long before being paid. The continuation of Germany's trade with several countries of Continental Europe—neutrals as well as allies and occupied states—has depended upon arrangements by which the claims on Germany have been transferred from the individual exporters to the central banks or special government agencies. In trade amongst other European countries, on the other hand, Germany has supported the principle of multilateral settlement, and the special clearing system she had instituted to achieve such settlement amongst a number of the occupied countries, and between these countries and certain neutral countries, was somewhat extended in the course of the past year. But information that has become available has corroborated the statement made last year that the arrangement did not constitute anything like a general multilateral settlement in Continental Europe. Thus, according to a semi-official German source, the monthly value of the transactions settled through the system amounted to only RM 145 million. Indeed, the occupied countries, owing to the tapping of their resources by Germany, had very small possibilities of trading with other countries.

CHAPTER VII

THE TRANSPORT SITUATION

During the third year of war numerous lines of communication were cut and established trade relations severed. On the other hand, the need for transporting troops, armaments and raw materials for the armament industry over vast distances increased and certain routes of transportation grew much more important than in peace-time. As existing transport facilities became more fully engaged directly in the war effort, tonnage available for other purposes naturally grew scarcer.

THE TRANSPORT PROBLEM OF THE UNITED NATIONS

The outstanding events during the year were connected with the transport situation of the United States. The heavy shipping losses of the United Kingdom during the early part of 1941 and the adoption of the lend-lease programme necessitated a revision of the shipping policy of the United States. The principal provisions of the Neutrality Act of November 1939, which had prohibited the arming of United States merchant ships and barred such ships, as well as United States citizens, from journeys within the combat areas,¹ were revoked in November 1941. Thereafter United States vessels were allowed to travel in any section of the world, and arrangements were made for the arming of merchant ships. Goods could now be exported from the United States to the United Kingdom in American ships and a substantial portion of the merchant marine became engaged in the shipment of lend-lease goods.

Upon the entrance of the United States and Japan into the conflict, the United Nations were faced with new problems of shipping both in the Atlantic and in the Pacific where long supply lines had to be protected. The need for a coordination of British and American shipping led to the formation in January 1942 of the Combined Shipping Adjustment Board.

In the United Kingdom the control of shipping established in the course of the two first years of war has since the spring of 1941 been exercised by the Ministry of War Transport. In the United States the War Shipping Administration, formed in February 1942, is in

¹ For details, see last year's *Survey*, page 253.

charge of the acquisition and operation of ships, while the Maritime Commission, which had previously exercised these functions, remains in charge of the shipbuilding programme. By April 1942 practically all ocean-going ships of the United States merchant marine, and the foreign-flag vessels owned by United States citizens (some 100 vessels, largely tankers, of Panama, Honduras and other Latin-American republics) had been requisitioned by the War Shipping Administration. The ships were returned for operation under government control to private shipping companies which receive a managerial "agents' fee." Freight rates, which now include a variable surcharge in compensation for increases in operation costs incurred since September 1940, are controlled by the War Shipping Administration. Newly constructed ships, though remaining in government ownership, are also assigned to private agents.

Figures concerning the world's merchant marine by the middle of 1939, including all vessels of 100 tons gross or more, were given in last year's *Survey*. More recent complete information of this kind is not available; but the following summary information referring to the beginning of 1940 and 1941, published by the American Bureau of Shipping, is rather more significant since it refers only to ships of 2,000 gross tons or more and thus excludes the majority of the vessels that are not ocean-going.

	Number of Ships at the beginning of :		Gross tons (000,000's) at the beginning of :	
	1940	1941	1940	1941
British Commonwealth of Nations	2,529	2,664	16.3	16.8
United States	1,296	1,150	7.9	7.1
Japan	873	898	4.6	4.8
Norway	698	649	3.9	3.7
Germany	579	517	3.4	3.0
Italy	505	473	2.9	2.7
Netherlands	405	396	2.5	2.4
France	414	364	2.4	2.1
Other countries			8.1	7.7
World	9,161	8,885	52.0	50.3
Of which :				
Combination passenger-cargo ships	1,202	1,116		
Freighters	6,403	6,234		
Tankers	1,556	1,535		

Sinkings during the first half of 1941, together with marine losses, exceeded the production of ships. At the middle of 1941, therefore, the world's ocean-going mercantile marine was rather less than 50 million gross tons, of which total some three-fifths was at the disposal of the United Kingdom, her Allies and the United States.

No figures of war losses have been published since the middle of 1941. It is known, however, that during the autumn of 1941 after the institution by the United States of the Atlantic patrol system and the occupation of Iceland early in July 1941 total sinkings of British, Allied and neutral tonnage declined rapidly. The British Chamber of Shipping puts the total shipping losses up to the end of 1941 at 8,300,000 tons.¹ The last official return gave the losses up to the end of June 1941 at 7,100,000. The Chamber of Shipping's estimate would therefore show a loss of 200,000 tons per month including the exceptional losses incurred during the last fortnight of December in the Far East. The monthly average apart from these losses was 180,000.

As in both 1940 and 1941 the situation deteriorated in the early part of 1942 and in his speech of February 24th the British Prime Minister stated that during the two preceding months there had been "a most serious increase in shipping losses." Many factors contributed to the situation that developed in the first half of 1942: the sinkings and scuttling of ships in the Far East, the losses suffered by United States shipping off the Atlantic coast, in the Caribbean and in the Gulf of Mexico, the exposure of convoys to attack in the wide flung shipping lanes to Iceland, to Murmansk and from time to time through the Mediterranean. It will be observed, however, from Table 1, which gives the war risk insurance rates on cargo for selected routes, that the rates from the Atlantic ports of the United States to the United Kingdom rose relatively little and that rates tended to decline in the third quarter of the year. On certain routes other than those shown in the table the decline set in much earlier. Thus the British rates on cargoes to India's East coast via the Cape, after rising from 8% in the beginning of February to 20% in April, when shipping in the Indian ocean was menaced, fell again to 9% in June. When examining Table 1, attention should be paid to the movement of the rates rather than to their level which obviously greatly exceeded the rate of the actual losses of ships or cargoes as a result of naval action. In trade between the United Kingdom and other countries no general increase in insurance rates of the same order of magnitude as those mentioned occurred.

While on the one hand, therefore, in the summer losses diminished, on the other hand the production of new vessels proceeded at an accelerated pace particularly in the United States.

When the last *World Economic Survey* was written, the United

¹ Not including losses of ships used as naval auxiliaries, estimated by the Chamber of Shipping at 300,000 gross tons, nor marine losses, estimated at about a million gross tons for the world as a whole from the middle of 1939 to the end of 1941 (cf. *Chamber of Shipping of the United Kingdom, 1941-1942, Annual Report*).

Table 1.—United States: War Risk Insurance Rates on Cargo for Selected Routes, as Quoted by Commercial Underwriters^a

	Percentages						
	1941	1942					
	Dec. 1st ^b	Jan. 15th	March 15th	May 15th	July 15th	Aug. 15th	Sept. 15th
From Atlantic ports to:							
United Kingdom (west coast)	7.5	7.5	7.5	10	10	10	10
Egypt	6 ^c	6	6	10	25	30	25
Red Sea ports	2.5	5.5	5.5	10	20	25	20
India (Calcutta)	2	4	10	30	25	30	25
Caribbean	0.075	0.5	4	6	15	15	15
South America south of							
Paramaribo	0.1	1.5	4.5	7.5	20	25	20
Gulf of Mexico (coastal) ..	0.05	0.25	4	6	15	15	15
Australia, New Zealand, via							
Panama	1	4	6	12	20	25	20
From Pacific ports to							
Australia, New Zealand	0.75	4	6	6	7.5	7.5	7.5

^a See current issues of *The Journal of Commerce and Commercial* (New York).

^b United States ships only.

^c Imports (exports 7.5%); foreign ships only.

States Government had decided to increase its construction programme from deliveries of 0.9 million gross tons in 1941 to 2.2 million tons in 1942 and 3.2 million tons in 1943. Since then the programme has been repeatedly revised upwards. In December 1941 the production goal for 1942 and 1943 was set at 8 million gross tons or 12 million deadweight tons,¹ in January 1942 at 18 million, and in February at 23 million, which figure was subsequently raised to 24 million deadweight tons (of which 8 million in 1942 and 16 million in 1943) representing 2,300 ocean-going ships, not counting about 700 smaller craft for which no tonnage figures are given. Some idea of the nature of the ships being built is afforded by the following data, extracted from a table presented to Congress by the Maritime Commission in January 1942. The total in this table, representing in part ships to be delivered after 1943, exceeds 30 million deadweight tons.

It will be noted that the shipbuilding effort is largely concentrated on the production of the "Liberty" ships which has made great strides as a result of the adoption of new methods (assembly lines, prefabrication, substitution of welding for riveting, etc.). The time required for the production of a Liberty ship is officially reported to have de-

¹ Deadweight tonnage is the weight in long tons of cargo, passengers, fuel and stores which can be carried by a vessel when fully loaded (thus, the difference between the weight of a vessel when unloaded and fully loaded). The figure for the deadweight tonnage of average-sized ships exceeds that of the gross (capacity) tonnage by about 50%.

Table 2.—*Shipbuilding Programme of the United States Maritime Commission as of January 31st, 1942*

Type of vessel	Number of vessels	Deadweight tons (000's)
Standard (high-quality vessels of standard design)	598	5,859
"Liberty" (cargo ships of simplified construction suited to mass production)	1,972	20,706
Tankers	261 ^a	4,094
Transports and tenders for Army and Navy	6	42
Concrete barges, ocean tugs	40	134
Harbour tugs, Eureka power boats, wooden barges	686	not given

^a The number of tankers to be constructed was later raised to over 300.

clined from an average of 242 days in September 1941 to 83 days in August 1942 and 70 days in September 1942.

Actual production in the United States, as the following figures show, made rapid headway in the first half of 1942 and by the middle of the year had reached a level about seven times as high as in 1941:

Table 3.—*United States Ship Completions, as Reported by the Maritime Commission*

Quarter	Deadweight tons (000's)			
	1939	1940	1941	1942
I	49	107	197	778
II	92	168	286	1,766
III	109	151	280	2,544 ^a
IV	92	208	326	
	342	635	1,089	(8,000) ^b

Monthly figures for 1942:

	Number	Deadweight tons (000's)		Number	Deadweight tons (000's)
January	16	198	June	66	732
February	26	290	July	71	790
March	26	291	August	68	754
April	36	401	September	93	1,000 ^a
May	58	632			

^a Approximate figures.

^b Planned output.

The check to production in August was due to temporary difficulties arising in supplying the shipyards with steel rather than to lack of construction facilities.¹ In September production rose again, reaching a level not far from that attained during the whole year 1941. In a report made public on September 26th, Rear Admiral Emory S.

¹ According to Maritime Commission schedules, approximately 8 million long tons of steel (6½ million tons in plates and 1½ million in shapes) are required for a planned ship production of 23 million deadweight tons.

Land, the Chairman of the Maritime Commission, stated that the goal of 8 million deadweight tons for 1942 would be attained and that the goal of 10 million tons for 1943 appeared "reasonably certain of accomplishment."

The rate of merchant ship construction in the United Kingdom has been largely determined by the huge naval programme, and the amount of repair work to be done. The output of merchant vessels from the beginning of war up to December 1941 (2 1/3 years) is reported to have amounted to 1 3/4 million gross tons, as against over 1 million tons in the year 1938. Recently, production has been substantially increased; early in 1942 the output during that year was expected to reach 1.2 million gross tons.¹ Canada's production has been stepped up and is planned to include 88 ships of 10,000 tons each and 10 of 5,000 tons in 1942.

Authoritative statements afford some indication of the relationship between the construction and the losses of ships during the past year. On December 9th, 1941, Rear Admiral Land testified before the Appropriations Committee of the United States Congress (House of Representatives) that the shipbuilding programme of the United Nations was forging ahead of losses at sea. The situation changed with the intensification of the submarine warfare in 1942. At a press conference on July 1st, Rear Admiral Howard L. Vickery, Vice-Chairman of the Maritime Commission, stated that production, though increased, was exceeded by sinkings. But in his speech of September 8th Mr. Churchill, after having disclosed a decline in the losses during July and August, and September as far as it had run, stated "during the same months, the line of new buildings of merchant ships by the United Nations has definitely crossed and maintained itself on graphs over the line of sinkings."

Certain of the measures which have helped to stretch the shipping resources of the United Nations during the past year should also be mentioned. A number of the large United States and Canadian merchant vessels operating on the Great Lakes have been transferred to the Atlantic Ocean. Of the ships engaged in coastwise and inter-coastal shipping of the United States—in peace-time representing approximately half of that country's merchant marine—all those suitable to deep sea service have been diverted to transoceanic routes. Fourteen French ships, totalling over 150,000 tons, laid up in United States ports were requisitioned late in 1941 and early in 1942. Various Latin-American countries seized or purchased German and Italian ships laid up in their ports; thus in August 1941 the Argentine Government bought 16 Italian ships totalling 88,000 tons. Ship repairs

¹ *Shipping World*, January 14th, 1942.

have been speeded up, particularly in the United Kingdom, where damaged ships are now being taken care of almost upon arrival whereas in the spring of 1941 hundreds of ships were awaiting repair facilities. Private trade with foreign countries has been regulated through the system of shipping priorities or otherwise with a view to husbanding shipping facilities. In the United Kingdom such regulations were introduced in the early part of the war; in the United States similar measures became fully developed in the first half of 1942. At the time of writing, practically all shipping made available in the United States is used for transports essential to the war effort, non-essential goods (for instance, bananas imported from the Caribbean) being shipped only to utilize spare shipping space at hand. Lend-lease exports of foodstuffs from the United States replace to some extent British purchases of foodstuffs from countries such as Australia or the Argentine which, because of the longer hauls involved, require more shipping. Various foodstuffs are treated so as to require less shipping space, particularly in lend-lease exports. Dehydration (in some cases combined with compression) is used to reduce the volume of eggs, meat and certain other foodstuffs to about 10 to 30% of the normal. In certain countries, low grade domestic ores, which normally cannot be economically utilized, have replaced imported high grade ores.

The strain upon United States ocean shipping affected the important inland transport system of that country in various ways. As coastal shipping traffic was substantially reduced, while industrial activity expanded, the demand for railway transport naturally rose. The quarterly (adjusted) index of freight car loadings during the second quarter of 1942 was a third higher than during the corresponding quarter of 1940:

	Quarter	1940	1941	1942
United States, freight car loadings,	I	109	124	138
combined index (adjusted);	II	107	128	142
1935-39 = 100	III	111	136	.
	IV	115	133	.

A factor contributing to this increase was the curtailment of road transport that began in 1942 as a result of the rubber shortage following the outbreak of war with Japan. From the middle of 1942 road transport was further reduced by the curtailment of petrol consumption in the eastern Atlantic States, caused by the virtual suspension of mineral oil shipments by tanker from the Gulf. Normally 95% of the 1,600,000 barrels used daily in the eastern seaboard region of the United States were transported by tankers. At the beginning of September 1942, shipments other than by tankers had risen to 1,225,000 barrels daily, of which 800,000 were carried by railway tank cars and

the remainder by pipelines and inland waterways; such shipments are expected to reach 1,425,000 barrels by the end of the year.

The U.S.S.R. has had to master difficult transport problems during the past year. After Japan entered the war, the chief supply routes to the U.S.S.R. were the sea-routes to Murmansk and Archangel in the Arctic, the latter not being accessible in winter, and land routes over Iran, India and Afghanistan from the Persian Gulf and the Indian Ocean. The U.S.S.R. became dependent upon these routes not only for her supply of war material from her new allies, but also of sugar and certain other commodities which had formerly been supplied by the Ukraine. The internal transport situation became strained as, in the autumn of 1941, an area including well over a third of the total railway mileage of the U.S.S.R. was occupied by Germany. The evacuation of a large part of the population and equipment of this area presented a stupendous task. The bulk of the railway stock of the occupied zones was saved, however, and was used to increase traffic on railways remaining in Russian control.¹ With the renewed German offensive in the summer of 1942, Russian communications were again threatened, particularly barge shipping on the Volga, through which the central and northern regions of European Russia were being supplied with military equipment, oil, etc.

In China, as in the U.S.S.R., the industrial equipment of large areas threatened by the enemy has been evacuated to safer inland points. The rapid economic development of southern China naturally requires a simultaneous development of the transport facilities, and an effort is being made to extend the system of roads, railways and inland waterways. A special system of "stage transportation," relying upon human or animal traction by relays is being developed; the network of such roads radiating from Chungking alone, that was organized in 1941 and the early part of 1942, includes 7 principal lines and 189 subsidiary lines measuring 8,600 and 29,500 kilometers respectively. Similar transport services are being organized elsewhere in Free China. Japan's military advance has gradually deprived China of her chief means of communication with the outside world. Exit by the sea ports in South China that remain under Chinese control was blocked in December 1941 when Japan assumed full control of the

¹ The following excerpt from an article ("Soviet Railways") in *The Economist* for April 4th, 1942, gives some indication of the nature of the transport problems that had to be solved during the latter half of 1941: "The evacuation of endangered industries was in fact an automatic evacuation of the railway stock. . . . For months, an avalanche of evacuees, machines, raw materials and cattle moved eastwards along the fragile spokes of the Russian railway system, while a steady stream of soldiers, arms and munitions was being carried in the opposite direction towards the front. In spite of interminable delays and constant congestion, particularly on single track lines, transport managed to reach its destination. . . ."

China Sea. The Yunnan railway lost its importance as a supply route with the partial occupation of French Indo-China by Japan in the third quarter of 1940. The Burma Road, linking the Rangoon-Lashio railway in Burma with Kunming in South China was cut in 1942. There remains a road between Central China and the U.S.S.R. (over Sinkiang). A new road now under construction will link south-west China with north-east India.

JAPAN'S SHIPPING DIFFICULTIES

Japan's transport problem is naturally one of shipping. Even before the World War a growing part of Japan's merchant marine had to be diverted from transoceanic service to local trade routes. Out of a total tramp mercantile tonnage of 5.5 million deadweight tons in November 1940, 68% was engaged in coastal and Chinese trade or was under repair, while trade with other Asiatic countries and Australia absorbed 18% and trade with America 14%. After Japan's attack on Pearl Harbor her total mercantile tonnage may have represented about 6 million gross tons plus over 1.5 million tons of sailing vessels. Her shipping losses during the early part of 1942 have been estimated at about 0.5 million gross tons or more, but are likely to have been largely offset by tonnage chartered for Japan in Thailand and Indo-China and seized in China and south-east Asia. Japan's ship-building was stepped up in the late 'thirties and reached a record level of over 0.5 million tons in 1940; but may have been affected later by the discontinuation of imports of steel plates after the middle of 1941. With the extension of the area in which her troops have to be supplied, reinforced and replaced, Japan's shipping resources have had to be stretched to the utmost.

TRANSPORT IN CONTINENTAL EUROPE

Owing to the blockade and war-time shortages of petrol and tires, almost the entire burden of transport in Continental Europe has fallen on the railways and inland waterways. Long distance maritime transport of, for instance, coal from Germany to Italy or oil from Roumania to Germany, has been eliminated, and coastwise shipping has been severely restricted: North Sea coastal traffic is largely confined to ports north of Rotterdam.¹ The reduction in motor transport may be illustrated by the following figures for the Netherlands:²

¹ It is interesting to note in this connection that of the total sea-borne world trade in 1937, viz. 280 million tons, 86 million tons (31%) were carried between ports in Northern and Western Europe and 49 million tons (17%) between the Mediterranean and Northern and Western European ports. (Cf. Johannes Humlum, *Die Grossschiffahrtswege des Welthandels.*)

² *Economisch Statistische Berichten*, January 14th, 1942.

	Percentage of Internal Trade carried by		
	Inland		
	Waterways	Railways	Roads
1937	50	21	29
1939	58	22	20
1941	73	26	1

For the Continent as a whole, the railways carry, even in peacetime, by far the largest share of the total tonnage of the goods transported. It may, therefore, be helpful to an appreciation of the railway situation on the Continent to show the distribution of the rolling stock before the war even though considerable changes in rolling stock have no doubt occurred since.

Table 4.—Continent of Europe: Railway Rolling Stock
Number (000's)

The figures refer mainly to the years 1936-38.

Country	Locomotives	Passenger Cars	Freight Cars
Germany and Austria	23	70	611
France	19	33	503
Poland*	5	12	160
Italy	6	7	127
Czecho-Slovakia	4	9	34
Belgium, Luxemburg, Netherlands, Denmark, Norway	6	14	157
South-Eastern Europe	9	12	172
Finland and the Baltic States*	2	3	40
Total	74	160	1,864
Spain and Portugal	3	5	74
Sweden	2	4	48
Switzerland	1	4	16
Total	6	13	138
Continent of Europe (excl. U.S.S.R.)	80	173	2,002

* Part of the rolling stock of these countries has been evacuated to the U.S.S.R.

No recent figures are available for the U.S.S.R., but the ton-mileage of her railways in 1937 was twice as large as the ton-mileage of all continental European railways combined, the permanent way having been used very intensively in the last ten pre-war years.¹

At present, German carriers are not allowed to accept any merchandise for transport between Germany, the occupied countries of Western and Northern Europe, Sweden and Finland, on the one hand, and south-eastern Europe on the other hand without a permit from

¹ In 1937 the Russian railways transported 4.2 million ton-kilometres per kilometre of track; the comparable figure for the United States and Germany in the boom year 1929 was 1.6 and 1.2 respectively. (*Quarterly Bulletin of Soviet-Russian Economics*, November 1939.)

a transport office in Berlin. This office, which has branch offices in the south-eastern countries, determines the priority of each request for transport, and the means and the route by which it will be effectuated, thus in fact controlling the trade between these various sectors of Europe.

The damage to roadbeds and rolling stock resulting from the campaign in the West was reported to have been repaired by the end of 1941; but rail traffic in various parts of Eastern Europe, for instance between Turkey and Bulgaria, interrupted owing to the destruction wrought during the spring campaign of 1941, was not resumed before the middle of 1942. The 20,000 miles of the Russian railway system which had come under German control by the end of 1941 had to be converted to standard gauge; and the additional lines acquired in the summer of 1942 were reported to have been "completely destroyed."¹ The Russian rolling stock had been evacuated before the areas in question were occupied.

When the war broke out, the German rolling stock, which constituted about 30% of the total stock of Continental Europe, was over-aged, as the normal replacement programme had been much slowed down in the years 1933-1938. A substantial part of Poland's rolling stock had been evacuated to the East at the beginning of the war and had thus fallen into Russian hands. In the first year of the German campaign in the U.S.S.R. many locomotives were put out of order by insufficient protection against frost, and a large number of passenger cars were tied up on the Russian front during the winter to serve as soldiers' quarters. Lack of axle grease has hampered traffic to an increasing extent; and the supply of rolling stock has further been reduced by direct military action, and normal and abnormal wear and tear.

In the face of these difficulties the demand for transport has increased, especially since the summer of 1941. The Russian front is being kept supplied at a distance of from 1500 to 2000 miles from the main industrial regions of Germany. The growing German production of substitute materials requires long hauls of coal and timber. German railway statistics for 1941 show an increase in ton-mileage of 32% over 1940²; and in Sweden, Switzerland, Denmark, Czecho-Slovakia and Belgium there was also an increase over the previous year and, except in Belgium, over the pre-war level.

A variety of measures has been taken to cope with the growing demands on the railway system. The production of railway trucks in Germany in 1941 is reported to have been double that of 1940, and

¹ Address by Reich Chancellor Hitler on September 30th, 1942.

² "The German War Economy, VI" in *Economic Journal*, June-September 1942.

the production of locomotives increased by 65%. During the course of this year, further measures have been taken both in Germany and in occupied territories to expedite the manufacture of rolling stock.

The rolling stock at Germany's disposal has also been enlarged by acquisitions from the occupied countries. By the summer of 1942 Germany was reported to have taken about a quarter of the French locomotives and almost half the number of railway trucks owned in France before the war. Some 60,000 Belgian trucks, more than half of the pre-war stock, were reported permanently outside the country's borders in the summer of 1941. From the Netherlands, 70% of the freight cars and 150 out of 240 of the heaviest locomotives have been requisitioned. Germany also secured a share of the Yugoslav trucks, some 37,000 in number, which were allocated to her and to Italy, Hungary and Croatia in the autumn of 1941. In addition, a certain number of Swiss and Swedish freight cars are permanently employed in Germany. It would appear that from these sources alone the railway trucks at Germany's disposal must have been increased by over 50% in comparison with what she had in the summer of 1939.

The rolling stock left in the occupied countries is of course by no means entirely available for the civilian transport of those countries themselves. In 1941 the tonnage of paying freight moved in Belgium was 30% less than in 1938 while the reduction in the mileage run by freight trains was only 6%; the discrepancy between these two figures is attributed, in the Annual Report of the Belgian Railways, to the large volume of goods transported for the German army.

Measures to increase the manufacture of rolling stock have been complemented by measures to assure the fullest and most economical use of the stock available. Thus the authorized load of German freight cars was increased by up to one ton after the outbreak of war and by a similar amount in the summer of 1942; the total increase is equivalent to about 15%.

To cut down demand for transport facilities, the non-essential use of the railways has been reduced time and again. At present, travelling for pleasure, and in general any travelling without a licence, is prohibited over the greater part of the Continent. All regular passenger traffic in Germany was interrupted for some time during the autumn of 1941, when large troop movements coincided with the exceptionally heavy seasonal demand for transporting the potato and turnip crops. The reduced activity in the industries working to meet civilian demand alleviates the transport situation to a certain extent, and further restrictions on consumption were considered early in 1942 with this end in view.¹ In spite of the difficulties encountered, the heavy

¹ "The German War Economy, VI" in *Economic Journal*, June-September, 1942.

coal traffic from Germany to Italy was maintained during the whole of 1941; though as stated elsewhere¹ there was a falling off in deliveries in 1942. Work on a second tunnel on the St. Gothard route was started early in 1942.²

A considerable amount of freight has been directed to the inland waterways,³ in particular the Rhine and its system of connecting canals, and the Danube. New construction has been undertaken, for instance within the Elbe-Oder-Danube system to improve the water connections between the industrial regions of Germany and south-eastern Europe and to shorten the inland water route from Hamburg to the Black Sea. The Danube is being kept open for long-distance traffic by shifting cargoes for short distances, such as the Regensburg-Vienna haul, to the railways. In order to relieve the traffic congestion on the lower Danube an oil pipe line from Ploesti to the Iron Gates was reported under construction in the autumn of 1941; to obtain the necessary material, the 200-mile French pipe line from Nantes to Paris was dismantled. A large number of barges have been requisitioned in the occupied countries, and economies in the building of new barges have been obtained by the standardization of models.

The unusual severity of the winter of 1941/42, like that of 1939/40, caused additional strain on the continental transport system in spite of the increased use of ice-breakers to keep the canals open.

Transport by road has been greatly restricted since the beginning of the war on account of lack of petrol. Much ingenuity has been spent in the last three years in finding substitutes such as alcohol and producer gas. At first producer gas was mainly obtained from charcoal or wood; but as wood became scarce everywhere except in Sweden and Finland, coal, peat and lignite were also used as raw materials. In Sweden, 60% of all registered motor vehicles were running on wood producer gas by June 1942; but in Germany it was decided in the beginning of 1942 to grant licences for motor lorries only for non-wood burners. Other shortages have also limited the volume of motor transport: the lack of motor lorries and buses and of producer gas units; lack of tires, which has up to now mainly been met by the stripping of laid-up cars; and the shortage of lubricants. At present the use of private motor cars as well as taxi cabs is either suppressed or severely restricted everywhere in Continental Europe.

¹ Cf. Chapter VI.

² Recently, however, the delivery of Belgian coal to Italy has been reported. This transport can go entirely by water, following the Albert Canal, the Rhine-Rhone Canal, the Saone, the Rhone and the Mediterranean coast (*The New York Herald Tribune*, Oct. 4th, 1942).

³ The tonnage of cargo carried by German waterways in 1941 exceeded that of 1940 by 21%, reaching the highest peace-time level.

Producer gas is also being used for water transport, in farm tractors and in stationary engines. In Germany, for instance, Diesel engines on rivercraft were supplied with producer gas units in the spring of 1942. Since July 1942, all tractors sold have to be gas-generated; and machinery for quarrying, brick-making, etc., must now be driven by non-liquid fuel.

Maritime transport has been kept moderately active in the Baltic, and French ships continue to ply between France and North Africa and elsewhere. Since the beginning of 1942, the only regular service between the Continent and the United States is run by a Portuguese company with two sailings monthly in each direction, but several Spanish and Portuguese companies are still providing a highly profitable passenger traffic across the Atlantic. The movements of Spanish vessels have been curtailed by lack of coal: an agreement between Spanish ship owners and the Argentine Government was reported in the autumn of 1941, according to which the Argentine, although herself short of coal, would provide bunker coal for the return voyage of Spanish vessels. Though a number of these vessels have in fact been laid up for lack of coal, a substantial amount of tonnage (140,000 tons) is under construction in Spanish ports, which will offset in part the tonnage lost since the beginning of the Civil War.

A trickle of other inter-Continental traffic has continued to be allowed through the blockade. A restricted number of Swedish ships have been permitted to trade with other continents,¹ and some 35,000 tons of sea-going vessels flying the Swiss flag help to maintain Switzerland's overseas trade. These ships unload in Portugal, Spain or Italy, the goods being further transported by coastal traffic, rail and lorry service.

¹ Cf. Chapter VI.

CHAPTER VIII

“ SUMMARY OF LATEST EVENTS¹ ”

GERMANY AND GERMAN-CONTROLLED EUROPE

Germany's war economy, in the period covered by this *Survey*, has been faced with the twofold problem of supplying the manpower needed on the vast Russian front and of enforcing a further rise in war production at home, in view especially of the rapid growth of military output in the United States after that country's entry into the war.

A thoroughgoing reorganization of industrial controls, as described in Chapter I, was part of Germany's immense effort to meet the situation. The new phase in German war economy is marked by a still more intensive concentration of available resources on war production for immediate needs, regardless of future consequences. Indeed, a decree published in the summer of 1942 expressly prohibits firms and institutions from making post-war plans or from allowing post-war considerations of any kind to influence their present war activities.

The same disregard for the future is manifest in the great scrap collection drive which was started in July 1942 with the object of mobilizing all remaining reserves of iron and steel. In contrast to the salvage campaigns recently undertaken in the United Kingdom and the United States, the collection included not only "normal" iron and steel scrap, but even modern machinery and equipment that was not adaptable for immediate use in armament production. This large-scale destruction of capital affected particularly the installations of closed-down plants in the consumers' industries. Undoubtedly a great deal of labour, coal and transport could be saved by smelting scrap instead of ore; but the advantages gained were obviously temporary.

The administrative simplification which was part of the general reorganization scheme is illustrated by a minor but interesting innovation which came into effect in October 1942, when the previous method of raw-material allocation was replaced by a system of "cheques" for the distribution of iron, non-ferrous metals and textile materials to firms engaged on military orders and to their sub-contractors.

¹ Concluded in October 1942.

During the summer months there was a renewed comb-out of workers for military service, and the labour shortage became even more acute, especially in agriculture. Control of the remaining workers was tightened up further and civilian production was again curtailed. But the chief means of filling the gap was the importation of workers from outside the Reich.

The occupied countries (excluding Germany's allies) do not supply Germany with armies but are instead called upon to replace the German workers withdrawn for military service; and instead of military conscription, they have had to introduce conscription of labour. Thus in Belgium and the Netherlands, compulsory labour was decreed in March 1942; in Norway a compulsory scheme of recruitment was announced in June; and in France conscription of labour was provided for by a decree of September 14th, 1942.

The last official estimate of the Reich Labour Ministry placed the number of foreign workers at 2.5 million in June 1942, as compared with 2.1 million in September 1941. In a speech made on October 4th, 1942, however, Marshal Göring stated that, apart from prisoners of war, 6 million foreigners were working in Germany. Even though a considerable increase is likely to have occurred during the three intervening months (covering the harvesting period), the latter figure is difficult to reconcile with the June estimate and may, in fact, include the non-German residents of incorporated areas, who are not regarded as German citizens.

But even if the exact number were known, it would hardly represent an adequate measure of the productive contribution of foreign workers to Germany's war economy. There is, in the first place, considerable doubt as to the efficiency with which they can be made to work in Germany. The transfer of labour from the occupied countries to the Reich takes place more and more by forcible methods; and there is evidence of widespread resistance to it on the part of the workers. In the second place, it is clear that this transfer, even though it may help to maintain Germany's own output, necessarily reduces the capacity of the occupied countries to produce goods for export to Germany. Faced with the alternative of either placing orders in these countries or demanding their labour, Germany appears to an increasing extent to have adopted the latter course, tending to concentrate still further the Continent's industrial activity within the Reich.

A striking increase occurred in Germany's expenditure in France during the summer months of 1942; but this seems to have been due to special factors and cannot be taken to reflect an increase in French exports to Germany. Up to the end of 1941, the German authorities in France spent less than they received on account of occupation costs, and thus accumulated a large balance at the Bank of France. In the

four months from June to September 1942, however, they not only spent the whole of the 300 million francs of occupation costs per day but also drew so heavily on their unused balance that their total expenditure during this period rose to an average of 500 million francs per day. The main objects of this expenditure, though not officially disclosed, are hardly open to doubt in view of various measures taken in the occupied zone during that time, including, for example, a complete prohibition of all private building activity both in the devastated towns and elsewhere.

As a result of the increase in German expenditure, there was a sharp rise in the rate of increase of the French note circulation.

In Denmark, on the other hand, the monetary expansion due to German spending was at least temporarily arrested by a scheme for the "sterilization" of purchasing power, under which the Government issued loans to the public and transferred the proceeds to an inactive account at the central bank.

The food situation in Continental Europe outside Germany has tended to deteriorate further. Switzerland, which, except for Portugal, was the last continental country to maintain an unrationed bread supply, introduced rationing of bread and milk in October. In Germany, the cut made in April 1942 in the bread ration was restored in October. But the German standard loaf now contains 20% barley and 3% potato flour in addition to rye and wheat.

As regards the 1942 harvest in Continental Europe, there is as yet no fuller information to supplement the general outline given in Chapter II pointing to a less unfavourable harvest than might have been expected but a harvest still below the subnormal one of the preceding year. There is, however, considerable evidence of an intensified drive for the collection of agricultural output as distinct from output itself. Continental Europe is predominantly an area of peasant farming, and the control of many millions of small and scattered peasant holdings presents obvious difficulties. Especially in south-eastern Europe, the peasants, finding little to buy with their money, have been showing a stubborn reluctance to deliver their products to the authorities at the official prices or even to sell them in the black market, and often prefer to use them up in their own households or simply to hoard them.

Practically everywhere in German-controlled Europe the authorities, in order to ensure proper deliveries, have had resort to monetary inducements on the one hand and to force and punishments on the other. In a number of countries, including Germany and Italy, prices of farm products have been increased and special premiums granted for quick delivery, while threshing and other farm operations as well as the peasants' own food and seed requirements have been subjected

to detailed control. Threshing by flails has been forbidden in most areas. To render the control more effective a state of emergency was proclaimed in Poland for the harvesting period in 1942 and special courts were set up in Belgium to deal with infringements of the agricultural regulations; the death penalty for such infringements was introduced in both these countries.

From such information as is available it does not seem that the exploitation of the occupied Russian territories has yet produced any considerable agricultural surpluses for transfer to Germany. Farm production in these territories has suffered a disastrous decline. Such supplies as can be collected are mostly consumed by the army. The army's food requirements have even had to be supplemented to a large extent from other German-controlled areas. The local population in many parts of occupied Russia has had to starve.

JAPAN'S "CO-PROSPERITY SPHERE"

The economic consequences of the Japanese conquests in south-eastern Asia have been referred to before in this volume so far as they affect the rest of the world. Here we may consider the consequences in the occupied region itself, which are now becoming increasingly apparent.

According to the latest estimates, the total population of the six main areas concerned—the Philippines, the Netherlands Indies, Indo-China, Thailand, Malaya and Burma—is approximately 150 million, or greater than that of the United States and twice as large as that of Japan. The welfare of these 150 million people has been very closely dependent on the world market. In 1938, only 6% of the total exports of the six countries went to Japan and only 11% of their imports came from Japan.¹ The Japanese occupation has completely cut them off from the markets and the sources of supply on which their economic life was based. Japan is unable to absorb more than a fraction of their output. She is unable to supply them with the manufactured commodities they need, including the textile goods she used to supply. Incorporation in the "Co-Prosperity Sphere" has brought distress to these countries. Unemployment is widespread, prices of export products are falling and unmarketable surpluses accumulating, while imported goods are becoming increasingly scarce and are rising in price.

Sugar, rubber, tin and vegetable oils, for example, have become surplus products in this area, even though Japan is taking all she can use or all she can ship. Japan has obtained valuable additions to her supplies of, for example, bauxite and phosphates. But her main de-

¹ These figures are based on the net exports and imports of the six countries combined, disregarding their trade with each other, which was relatively small.

ficiencies are in iron, copper, cotton and wool, and of these commodities the area has little or nothing to offer. Malaya and the Philippines have some iron ore, but its exploitation is limited by the shortage of smelting capacity. The natural conditions in this area, apart from Burma, are not suitable for cotton plantation. But Japan's cotton shortage is acute, and she is making great efforts to expand the cultivation of this crop in place of others. In the Philippines, for instance, she is enforcing a change-over from sugar to cotton, in Thailand from rice to cotton. Burma's cotton output is equal to no more than a tenth of Japan's requirements, but prospects for expansion are regarded as favourable. Rice, on the other hand, has become a surplus product in Burma as its principal market—India—is closed and as there are not enough ships to carry it to those occupied areas that are in need of it. Malaya especially, where only one-third of the rice consumed before the war was grown at home, is consequently suffering from a serious food shortage. In the Netherlands Indies, petroleum production appears to be the only important industry that has shown some recovery from the first effects of the invasion. But owing to the lack of drilling equipment, production has had to be concentrated mainly on the shallow oil fields of Borneo.

THE UNITED KINGDOM

In the United Kingdom, the country with the highest war output per capita, a number of measures have recently been taken to raise that output even higher. In July 1942 it was announced that a further concentration of certain civilian industries was being carried out in order to release labour and factory space for the war effort. A "Control of Manufacture and Supply Order" came into effect in August, extending the concentration policy to certain goods previously outside its scope and applying new and more direct methods of control in the civilian sector of industry. The extent to which production has been affected by war requirements is illustrated by an official statement made in September, from which it appears, for example, that 93% of current steel supplies are used for military purposes, and that civilian consumption of textiles has been cut to about 25% of the pre-war level (clothing to 45% and household textiles to 10%). The increase in military traffic necessitated the introduction in September 1942 of various restrictions on private travel, including the withdrawal of long-distance bus services and the suppression of cheap railway facilities. In October, the Minister of Production announced a plan involving far-reaching changes in the allocation of labour and plant so as to secure the most efficient distribution of resources engaged in the war industries.

As was observed in Chapter I, the rise in industrial consumption of coal together with a fall in mining output created a serious shortage of coal in spite of the decline in exports. From June to September 1942, however, the output of coal recovered by about 5% owing partly to the release of a number of miners from the army and partly to a rise in productivity per head as a result of a new system of bonus payments. Steps have been taken to close the "coal deficit" by a further increase in output, by various restrictions on consumption and by an intensive campaign for voluntary saving of fuel.

THE UNITED STATES

By virtue of an act adopted by Congress on October 2nd, the President set up an Office of Economic Stabilization, prohibited wage increases or decreases except with the approval of the National War Labor Board and ordered farm prices to be stabilized at the level of September 15th, 1942. The price ceiling imposed in April was extended so as to cover about 90% of the nation's food consumption instead of about 60% as before; and rent control was applied to areas previously exempt.

These measures placed a check on the further rise of money incomes; but even at the existing income levels, there was a widening gap between consumers' purchasing power and the supply of goods available to the public at the existing prices. Accordingly, a new tax bill was adopted on October 21st, raising the estimated annual revenue by about \$3,000 million to over \$25,000 million. Excise duties on a large number of commodities were increased; but the main increase was in direct taxation. Collection at the source was applied to wages and salaries; and a part of the higher tax was made refundable after the war.

At the same time, restrictions on consumers' spending were increased through rationing. Steps were taken to extend gasoline rationing to the whole country as from November 22nd and to start the rationing of coffee on November 29th. Wholesale deliveries of meat for civilian use in the last quarter of 1942, compared with the last quarter of 1941, were reduced to 75% for pork, 80% for beef and 95% for mutton.

In the early autumn of 1942 more than half of the country's industrial output was for war purposes. But as stocks of most consumers' goods were still at a high level, the increasing concentration of productive resources on the war effort had not yet shown its full effects in the civilian economy.

As a result of the enormous demands of war production and the mobilization of men for military service, a growing shortage of labour was making itself felt not only in manufacturing industries but also

in agriculture. In many parts of the country the harvesting of the record crop of 1942 encountered difficulties owing to lack of labour. In September, the War Manpower Commission designated 12 western states as "critical labour areas," and in certain industries (non-ferrous metals and lumber) workers in those areas were forbidden to change their employment without obtaining a "certificate of separation" from the United States Employment Service. In October, gold mines were ordered to close, and arrangements were made for the immediate transfer of their workers to other occupations.

According to the latest estimates, 54 million persons were employed in August 1942 as against 51 million a year before. Women accounted for over 2 million of the total increase of 3 million. The number of unemployed dropped from 5.4 to 2.2 million during this period. The average working week in manufacturing establishments in August 1942 was 42.8 hours. While the war industries were able to pay for overtime and were in most cases working much longer hours than the average, the legal 40-hour standard in conjunction with the price ceiling tended to make an extension of the working week unprofitable in the industries catering for civilian needs.

With the continuing expansion of war production, the volume of goods transferred and services rendered under the lend-lease programme rose to a new peak of \$643 million in September 1942, exceeding the previous monthly record—attained in July—by about \$50 million.

The lend-lease programme was adopted at a time when the United States was not a belligerent country. Since the entry of the United States into the war the position has naturally changed. In the United Nations' declaration of January 1st, 1942, the contracting governments pledged themselves to employ their full resources in the common war effort. The countries concerned have, in effect, undertaken to pool their supplies for the most efficient prosecution of the war. The United States itself has accordingly received material aid from its allies. In particular, many of the supplies required by United States armed forces abroad have been furnished by other members of the United Nations from their local resources. On September 3rd, 1942, the United States concluded agreements with the United Kingdom, Australia, New Zealand and Fighting France, giving formal expression to the principle of reciprocal aid, in order to ensure that "the war production and war resources of each nation should be used by all United Nations forces in ways which most effectively utilize the available materials, manpower, production facilities and shipping space."¹

¹ *Sixth Report to Congress on Lend-Lease Operations, for the Period Ended September 11, 1942, p. 14.*

The President's Fifth Lend-Lease Report to Congress set forth a principle for distributing the financial burden of the war among the United Nations in accordance with their ability to contribute to the common pool. The following is a quotation from that report:

"The real costs of the war cannot be measured, nor compared, nor paid for in money. They must and are being met in blood and toil. But the financial costs of the war can and should be met in a way which will serve the needs of lasting peace and mutual economic well-being.

"All the United Nations are seeking maximum conversion to war production, in the light of their special resources. If each country devotes roughly the same fraction of its national production to the war, then the financial burden of war is distributed equally among the United Nations in accordance with their ability to pay. And although the nations richest in resources are able to make larger contributions, the claim of war against each is relatively the same. Such a distribution of the financial costs of war means that no nation will grow rich from the war effort of its allies. The money costs of the war will fall according to the rule of equality in sacrifice, as in effort."¹

¹ *Fifth Report to Congress on Lend-Lease Operations, for the Period Ended June 11, 1942*, pp. 22 and 23.