

Chapter 8

THE PROSPECTS OF EXPANSION IN EUROPEAN PRODUCTION

1. INTRODUCTION

The problems encountered in adapting the European economy to the changes in post-war trading relationships, both among European countries and between them and overseas countries, have increasingly drawn attention to the problem of Europe's development. At the same time, there is a certain tendency, in western if not in eastern Europe, to regard present economic programmes as a non-recurrent and exceptional effort rather than as an initial and integral part of a continued economic growth over a longer period. This tendency involves the risk that current problems will get out of focus ; if they were viewed in the perspective of long-term expansion, they would in many cases assume quite different proportions. For example, investment in housing, transport, heavy industries and public utilities needs to be planned on a different scale for a growing economy than if the potentialities for economic development are considered to be narrowly limited ; and what on a short view appears as a danger of over-production may in the long run be a necessary step in the continuing progress towards higher levels of production and consumption. Similarly, plans for expanding the social services, or for a more efficient organization of agriculture, or for dealing with problems of international trade and payments, may also assume different proportions if considered in the perspective of long-term developments.

In other parts of the world, rapid economic progress is expected. In the Soviet Union, for example,

according to long-term plans, the aim is to treble industrial output within about twenty years.¹ In the United States, national income is expected to rise by about a quarter in only five years to a total of \$300 billion.² In many European countries, on the other hand, discussion has tended to be concentrated on the obstacles to expansion, which arise largely from the greater dependence of the area on foreign trade.

In this chapter an attempt has been made to assess the broad magnitudes of the potentialities for development in the European economy. One main purpose has been to show certain long-term trends in earlier decades which have a bearing on future development, and to examine the relation of these trends to present plans and tendencies. In the analysis, estimates have been made of the possible expansion of production that might take place in the next ten years if Europe's resources of man-power and capital are fully utilized. The object of the analysis has been to indicate certain broad alternative patterns of development rather than to make forecasts of the probable course of events, since actual developments will depend very much on the policies adopted. For this purpose, a number of different estimates have been made on the basis of varying assumptions.

In the latter part of the chapter, the implications of the projections are discussed in relation to certain current problems.

2. PAST INDUSTRIAL TRENDS AND TENDENCIES

Production

In the last forty years, two world wars and one major depression have left deep traces on the development of industry. As a result of the short-term fluctuations in industrial activity which these disturbances caused, it is difficult to distinguish any long-

term trends ; this may be illustrated by the development of manufacturing production in the three leading industrial countries—Germany, the United Kingdom

¹ See the speech by Premier Stalin to his constituents in Moscow, 9 February 1946 : *Soviet News*, No. 1370, 11 February 1946.

² See *Economic Report of the President*, United States Government Printing Office, January 1950.

and France.¹ Together they accounted for about two-thirds of total European industrial commodity output immediately before the war ; Germany alone accounted for almost one-third.

In France, industrial production in the 1920's rose to a level 30 per cent higher than in 1913, but only recently, after a period of nearly twenty years, has this level been regained. In the recovery after the depression of the early 1930's, the highest point reached was only 20 per cent above the 1913 level.

In Germany, industrial production has fluctuated widely. It fell short of the 1913 level by about 50 per cent during the crisis after World War I and again by about 30 per cent in the great depression. On the other hand, the 1913 level was exceeded by 20 per cent in the boom of the 1920's and later by about 40 per cent during the armaments boom just before the last war. Since the war, Germany's industrial production has remained far below the level of the immediate pre-war years and has probably not exceeded that of the late 1920's.

Industrial production in the United Kingdom in the 1920's was probably not much higher than in 1913 ; in the depression it fell by about 20 per cent. In later years, however, considerable progress was made ; the home-market boom in the latter half of the 1930's raised production about a third above the level of the late 1920's. The production drive since the end of the war had, by 1949, resulted in another increase of about 25 per cent.

In some of the smaller countries—Austria, Belgium, Switzerland—as in France, the tendency was towards stagnation. It was only in the remaining group of “younger” industrial countries—Italy, the Netherlands, the Scandinavian countries and especially Finland—that a relatively high rate of progress was maintained. The eastern European countries (Czecho-

slovakia, Hungary, Poland) held an intermediate or low position, with a very uneven rate of progress in the different decades.

The striking feature of this general picture is that progress since 1913 has not only been slow but also spasmodic. The development has been dominated by violent fluctuations, a new recovery sometimes reaching or passing the last boom level and at other times failing to do so. The pre-1914 pattern of relatively limited short-run fluctuations about a rising trend obtains only in northern Europe and the Netherlands.

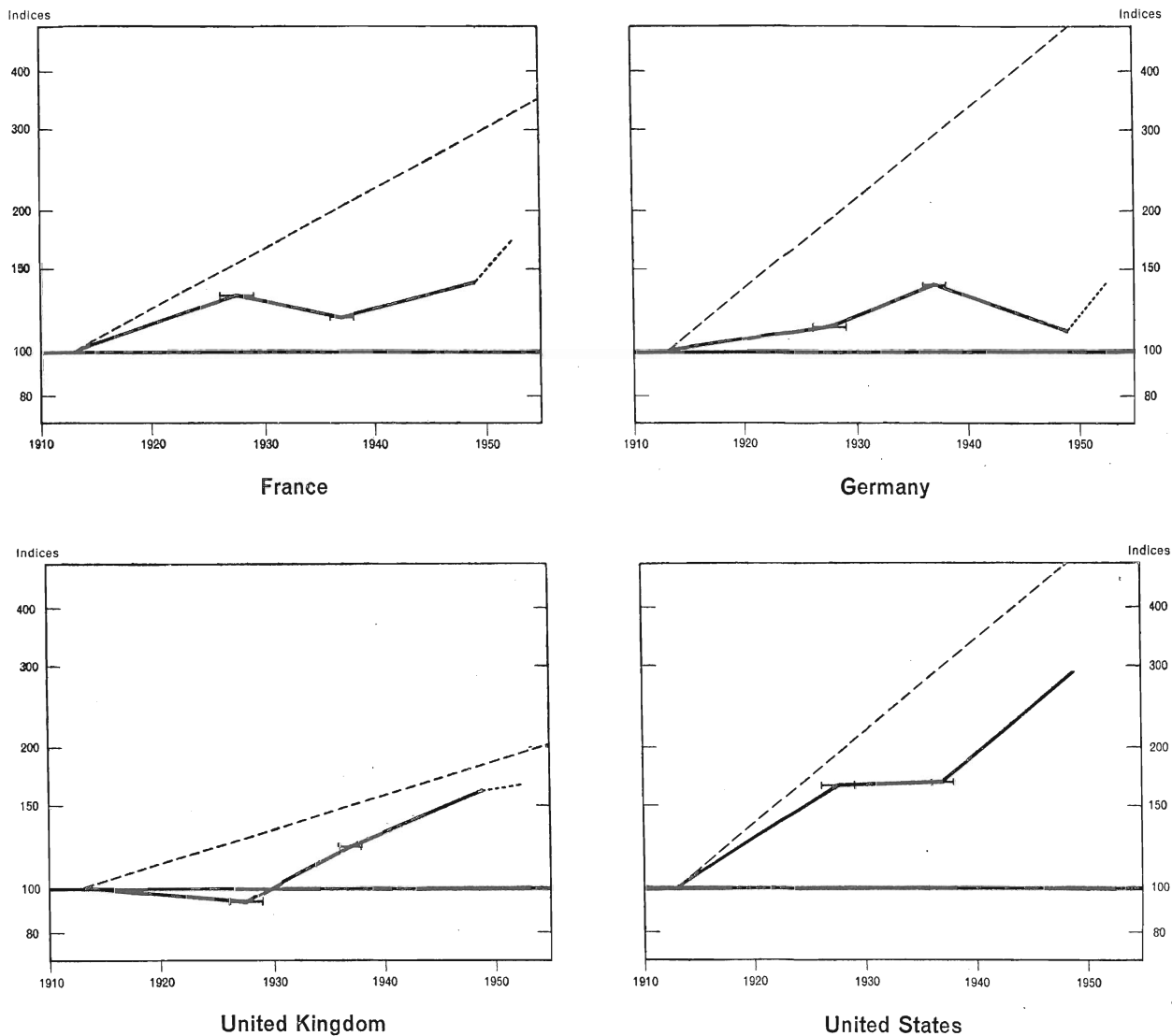
By contrast, in the three preceding decades (1880–1913) there was a general trend of growth from one decade to another with variations only in the rate of progress between different countries and decades. The statistics on manufacturing production available for this period are less reliable than for later years, but the average rate of progress in different countries before 1914 can be estimated and is shown in Charts 5A–5C below : they indicate in a general way the long-run perspective in which the development since 1913 should be examined.

One generalization can be made from a comparison between the trends in production before and after 1914 : the long-term rate of progress was greater, and in most countries much greater, before 1914. In the twenty-five years after 1914, Finland and Sweden were the only countries where production in manufacturing industry increased by more than 100 per cent. In the previous twenty-five years, production rose by more than 100 per cent in all countries for which records of industrial production exist, with the sole exception of the United Kingdom. In Germany and Italy, as in the United States, an increase of 100 per cent occurred in less than fifteen years, and in Finland, Russia and Sweden in little more than a decade.

It may well be argued that the pace of industrialization should diminish as each country approaches a stage of relative industrial “maturity”. In particular, industrial development in those countries which had a late start might have been expected to slow down as they caught up with the older industrial countries and became more dependent on general technological developments. In the early stages of industrialization, the transfer of man-power from handicrafts to factory industries forms a fairly easy part of the industrialization process and, in some cases, involves little technical change. The transfer of labour from handicrafts is, however, only one aspect of industrialization ; there

¹ Index numbers of production in manufacturing industry, 1913–1939, in some cases from 1880, have been brought together by F. Hilgerdt in *Industrialisation and Foreign Trade*, League of Nations, 1945 ; these index numbers have been combined with data for later years and with the targets given in national plans. The uncertainties of such computations are well known. The material, especially for earlier years, and for some countries, is less reliable. In particular, it is possible that the increase of production in the long run is somewhat under-estimated because the influence of new products and industries may not have been fully taken into account. Because of the wide short-term fluctuations in relation to the long-term growth in the period after 1913, any trend line fitted to the actual year-to-year series of index numbers would be arbitrary within wide limits. In diagrams 5A–5C, the procedure has instead been to indicate the growth or decline of industrial production between the years 1913, 1926–1929, 1936–1938 and 1949, which in most countries were years of high employment.

Chart 5 A
PRODUCTION IN MANUFACTURING INDUSTRY
Index numbers — 1913=100
Logarithmic scale



Sources: The data are derived from *Industrialisation and Foreign Trade*, League of Nations; *Economic Survey of Europe in 1948*, Economic Commission for Europe, and Table 1, Chapter 1.

NOTE.—Averages for 1926-1929 and 1936-1938 are indicated by horizontal lines. These averages, indices of volume for 1913 and 1949 and targets for 1952/53, are connected by straight lines. The line starting at 1913, which indicates the "pre-1914 rate of increase", rises at the same annual rate as the production indices of the respective countries between 1881-1885 and 1911-1913.

— Actual, 1913-1949 - - - - Planned, 1949-1952/53 ····· Pre-1914 rate of increase

is also the change from agriculture and domestic work to manufacturing industry. All these changes take place more easily in the early stages of a delayed industrialization, which accounts for the higher trends in "younger" industrial countries. Early stages of

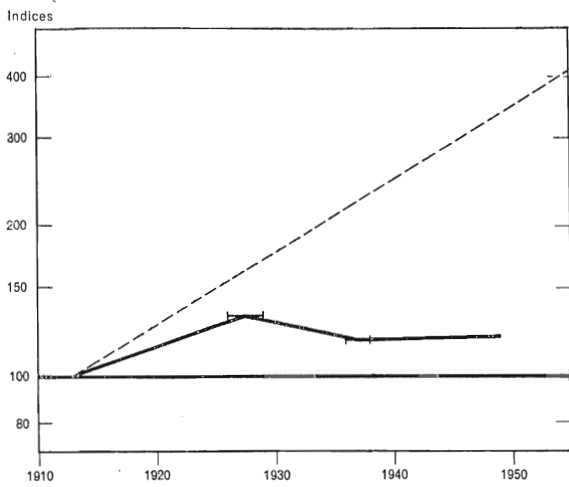
industrialization are also usually accompanied by a rapid growth of population and by ample man-power reserves in agriculture. In later stages, the rate of increase in the population tends to slow down and the man-power reserves in agriculture to be absorbed.

Chart 5B

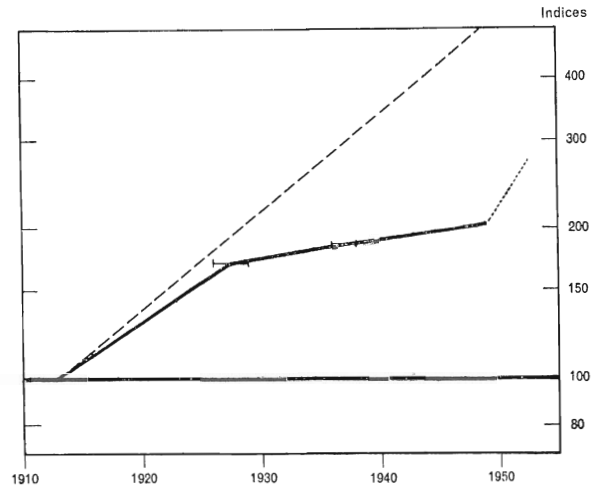
PRODUCTION IN MANUFACTURING INDUSTRY

Index numbers — 1913=100

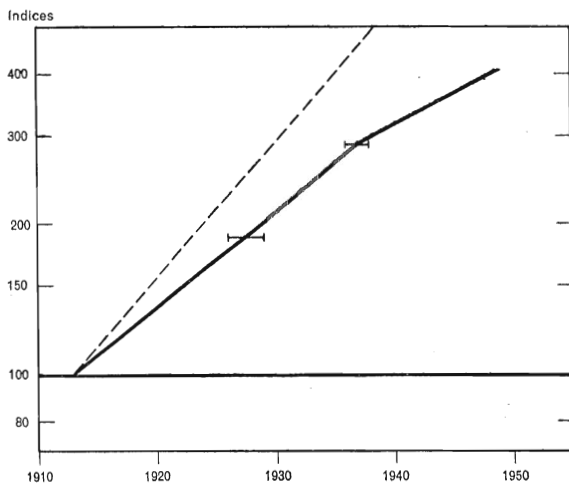
Logarithmic scale



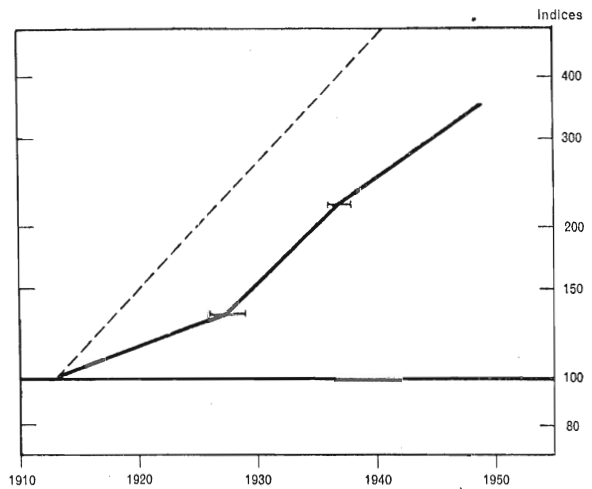
Belgium



Italy



Finland



Sweden

Sources: The data are derived from *Industrialisation and Foreign Trade*, League of Nations; *Economic Survey of Europe in 1948*, Economic Commission for Europe, and Table 1, Chapter 1.

NOTE.—Averages for 1926–1929 and 1936–1938 are indicated by horizontal lines. These averages, indices of volume for 1913 and 1949 and targets for 1952/53, are connected by straight lines. The line starting at 1913, which indicates the “pre-1914 rate of increase”, rises at the same annual rate as the production indices of the respective countries between 1881–1885 and 1911–1913.

— Actual, 1913–1949 - - - - Planned, 1949–1952/53 - - - - Pre-1914 rate of increase

Such changes in the conditions of development may partly account for the general tendency towards a slower development of manufacturing industry in the inter-war period. The greatest slowing-down, how-

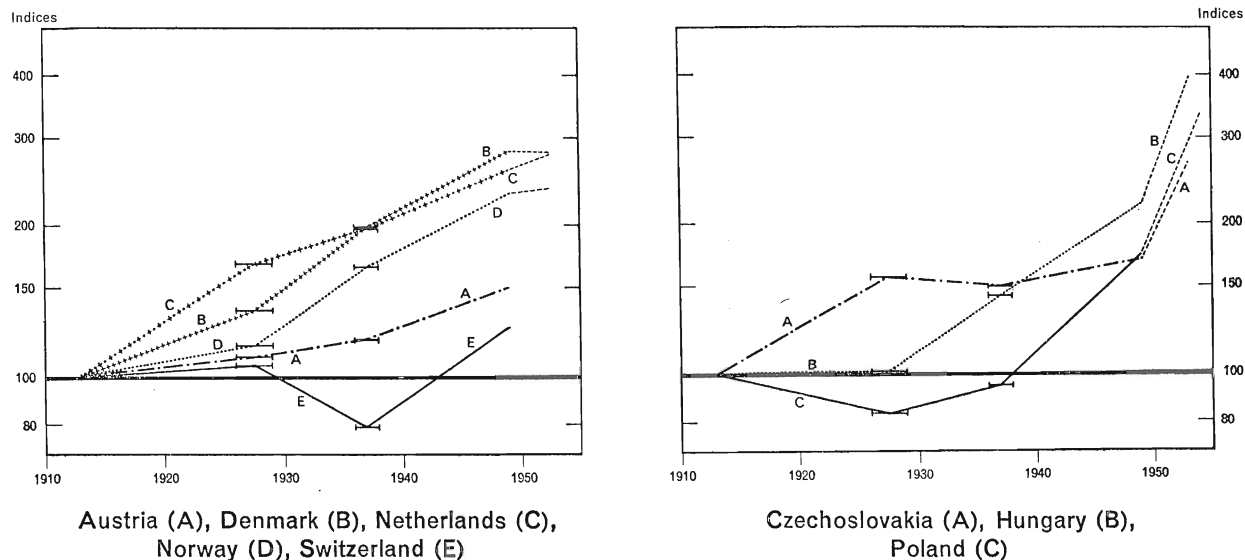
ever, occurred in those countries—Belgium, France, Germany and the United Kingdom—which already held a leading position in industrial development in the final decades of the last century.

Chart 5C

PRODUCTION IN MANUFACTURING INDUSTRY

Index numbers — 1913=100

Logarithmic scale



Sources: The data are derived from *Industrialisation and Foreign Trade*, League of Nations; *Economic Survey of Europe in 1948*, Economic Commission for Europe, and Table 1, Chapter 1.

NOTE.—Averages for 1926-1929 and 1936-1938 are indicated by horizontal lines. These averages, indices of volume for 1913 and 1949 and targets for 1952/53 (1954), are connected by straight lines.

----- Planned, 1949-1952/53 (1954)

Since a relatively mature stage of development had thus been reached in an earlier period in these countries, this suggests that other factors must explain the tendencies towards stagnation in the inter-war period. The most important general factors were clearly those arising from developments after World War I, such as structural changes in world trade, trade and payments restrictions, rigidities in the economic structure and the lack of co-ordination internally as well as internationally.

Instances of rapid industrial progress which could be used for reference in discussing the potentialities for future development are thus extremely rare in the period after 1913; moreover, with the exception of the Scandinavian countries, the greatest progress was generally made in countries such as Finland, Japan and the Soviet Union, which started from a state of "under-development". At the same time, changes in the general economic environment have diminished the relevance, for estimating future trends, of periods of long-term development before 1914.

Capital Formation and Obsolescence

Trends in production and rates of capital formation can be expected to be closely correlated. The role of capital formation is that of both cause and effect. On the one hand, incentives to invest are usually low when production is stagnating; on the other, new investment is a prerequisite for the expansion of production through an increase in employment or in productivity.

The experience of the last few years indicates that, under conditions of extremely high employment involving the risk of inflation, there may be a tendency to re-establish the economic balance of the economy by reducing investment instead of by curtailing consumption. When an economy moves from a condition of "high" employment to one of "over-employment", the result may therefore be a reduction in the level of investment. These changes within the framework of a full employment policy must, however, be kept apart from the changes that occur

when an economy moves from a state of high but balanced employment to one of a low level of industrial activity with large-scale unemployment.

It is self-evident that a low level of employment means lost opportunities of production. It is also well known that unused resources have as a rule been highly concentrated in the capital-goods industries. The capacity of these industries has been developed so as to fulfil the demand for investment goods in boom periods ; the corresponding rate of capital formation in these periods far exceeds the average rate through boom and depression. Periods of stagnation have historically been accompanied by low average rates of capital formation over the whole business cycle, but the capacity to produce capital goods may nevertheless have exceeded what would be needed in order to maintain a quite rapid economic development.

Some indication of how much was lost in the production-goods industries in the 1930's may be obtained from the following index numbers for Europe as a whole :

Production and Consumption of Certain Production Goods in Europe^a

Index numbers — 1929 = 100

Commodity	1929	Lowest level (1932)	Highest level reached at end of decade (1937 or 1938)	Number of years with output below previous peak
<i>Steel</i>				
Production . . .	100	51	105	8
Consumption . . .	100	50	108	7
<i>Manufactured capital equipment</i>				
Production . . .	100	59	114	7
<i>Cement</i>				
Production . . .	100	73	129	6
Consumption . . .	100	76	139	5

^a Including Germany

In the depression, the productive capacity of production-goods industries was probably at least as high as the former peak level. This would imply that, in the decade 1929–1938, two and a-half years' production at full capacity were lost in steel production, one and a-half years in the manufacture of producers' capital goods, and one year in the production of cement.

As the existing stock of capital continues to deteriorate at a fairly stable rate, it is only natural that net investment will decline even more than gross investment in periods of stagnation. In such periods, the net capital

formation of more prosperous years is often needed to make good the deterioration of capital stock in intermediate years. The tendencies in capital formation in the United States show how highly the net growth of capital is geared to the trends in production and employment. Thus, in the period 1929–1938, net capital formation in the United States fell to 1.4 per cent of national income, compared with 10 per cent in the 1920's and 13 to 16 per cent before 1914. In the same period, gross investment only fell to 13 per cent compared with 20 per cent in the 1920's and 21 to 24 per cent before 1914. It is probable that a similar decline in net investment occurred in those European industries which, in the inter-war period, showed the strongest tendency towards stagnation.

The unique position of the post-war European economy can be understood only if the effects of pre-war stagnation and of World War II on the capital structure are appreciated. The failure to maintain capital equipment in many industries in the past fifteen years is reflected in the top-heavy age distribution of capital equipment and in the extent of its obsolescence.

Varying conditions such as the rate of development before the war and priorities during the war resulted in corresponding differences in the degree of obsolescence between different industries, as the following examples indicate. In the United Kingdom in 1945, the Technical Advisory Committee to the Ministry of Fuel and Power found that deep coal-mining was hardly mechanized and that about 20 per cent of the cutting was done by pick and shovel. In the British cotton industry, a sample investigation showed that already in 1930 about two-thirds to three-quarters of the plant investigated was more than twenty years old and, according to the Working Party Report of 1946, there had been little re-equipment since then. In the British wool industry, the Working Party found that some of the carding machinery in use was over eighty years old, that more than a quarter of the spindles dated from the last century, and that many of the looms had been in use for fifty years or more.

In the French coal mines in 1945, most of the equipment was over thirty years old, whereas replacement should normally be carried out after sixteen years. In the French engineering industry, the average age of the equipment was twenty-five years ; in the iron and steel industry, the plants in eastern and central France were all more than thirty years old and

only those in the north had been built after 1918. In the French textile industry, 56 per cent of the spindles and 58 per cent of the looms had been installed before 1919.

In the coal mines of Belgium in 1947, 7 per cent of the machines had been installed before 1899, 52 per cent before 1919 and 85 per cent before 1929. In the Belgian metal industry, by the end of the war, 12.5 per cent of the machinery was more than thirty years old and 50 per cent was more than twenty years old.

Although further detailed information is lacking, it is known that industrial capital was also badly maintained and seldom renewed in the coal mines of Poland, in the engineering trade of Yugoslavia, in the textile industry of Czechoslovakia and in the building materials industry of Hungary.

Productivity

Many factors influence long-run trends in labour productivity; among the most fundamental are changes in technology, the growing technical skill of workers and improved knowledge of organization.¹ Another basic factor in a progressive economy is the tendency for the unit cost of capital equipment to fall in relation to the unit cost of labour;² this tendency will result in a change of production methods in a more labour-saving and capital-intensive direction. The incentive to introduce labour-saving machinery may also be increased in periods when the profits of business are limited by the availability of labour.

Whatever the ultimate cause of changes in the methods of production, the possibility of raising productivity will generally depend on the level of investment, whether it takes the form of a replacement of old equipment, an extension of capacity, a transition to heavier industries, or an increase in capital per worker, which as a rule takes place in connection with

¹ In this chapter, "productivity" stands for "output per man" or "output per man-hour". An increase in "productivity" does not necessarily imply a more efficient use of all productive resources. There are, however, *a priori* reasons to assume fairly close correlation in the rates of change in these factors over long periods.

² It is generally accepted that, as a result of the long-run increase in efficiency, there has been a rise in the amount of consumers' goods—including durables—that a unit of wages can buy. It is difficult to see why the same tendency should not apply to producers' durable goods. Such tendencies are, however, obscured by changes in design and quality of capital equipment that follow as a consequence of technological development.

replacement. Only the last two kinds of investment would result in an increase of output per worker, if there were no changes in the technical efficiency of capital equipment. To the extent that techniques advance, however, a replacement of equipment or an extension of capacity—neither of which necessarily involves an increase in gross capital per worker—will also lead to an increase in productivity. As a result, the distinction between gross and net investment is less significant for changes in productivity; physically, also, the different types of investment are to a great extent inseparable.

The effect of a given investment on productivity will evidently be closely dependent on the time-lag in the application of modern techniques or of the production methods corresponding to the latest shift in the relative costs of labour and capital equipment. This time-lag finds its expression in the age-structure of existing capital equipment. The process by which capital equipment is replaced and adjusted to the latest technical advantages is slowed down by the interests vested in the old capital structure, whether it is in private hands or nationalized; this delay in replacement may tend to be increased by restrictive private and public arrangements, which reduce the competition from new and more efficient units. The greater the delay, the greater evidently will be the effect of a given investment on the average productivity of industry, whether it is used for replacement or for an expansion of the capital stock.

The delay in the adjustment of the old capital structure to new technical and economic conditions explains why modern techniques penetrate more quickly into the structure of industry in an expanding economy than in a stagnating one. Various statistical studies confirm that a correlation exists between the rise in productivity and the long-term rate of growth of output and employment in industry.³ In particular, there is reason to expect that the transition from periods of progress to periods of stagnation and *vice versa* will involve great changes in the trends of productivity. At the end of a period of expansion, capital equipment in industry is, on the whole, relatively young, while at the end of a stagnation period it is relatively old. Such changes between

³ *World Production and Prices, 1937/38*, League of Nations, Geneva 1938; *Industriarbetets växande avkastning i belysning av svenska erfarenheter*, Studier i ekonomi och historia, Stockholm 1944; "Fattori che regolano lo sviluppo della produttività del lavoro", P. J. Verdoorn, *L'industria* 1949: 1, Milan.

ageing and rejuvenation of the capital structure probably influenced productivity trends in the past periods under review—the progressive decades before 1914 and the inter-war period with its tendencies towards stagnation. They will also have a bearing on the potential increase in productivity over the next decade.

The available statistics do not allow a complete survey to be made of European trends in productivity. Some facts may, however, serve to illustrate the prevailing tendencies. Unfortunately, the technique by which productivity can be measured suffers from serious imperfections: for instance, changes in the quality of the products are usually not fully taken into account. The quoted figures should, however, roughly indicate relative tendencies in different countries and periods.

Special problems of interpretation arise in connection with the length of the working-week, which make it necessary to distinguish output per man from output per man-hour. The main general change in working-hours was the introduction of the 48-hour week after World War I. It seems probable that this shortening of the working-week was not accompanied by a corresponding net decrease in the effective working-hours. The rise in output per man and per man-hour therefore indicates a lower and an upper limit for output per hour of effective working time. Changes in later years, such as from 48 to 42, or 40 hours in some countries, probably resulted to a greater extent in a decrease of effective working-hours. In such cases output per man-hour can be regarded as the best measure of changes in productivity, as the shortening of the working-week probably had an influence on the intensity of work and thus on trends in productivity.

This is one reason for expecting substantial variations in the relationship between the expansion of production and the rise in productivity. Other factors, such as varying technological trends, changes in the methods of organization and in the structure of industry, and the delayed effect of progress in earlier periods, might, in some periods and countries, also create deviations in trends which cannot be explained by different rates of increase in production. It is therefore surprising how closely the relative trends in those countries for which data are available in general conform with expectations.¹

In Germany during a period of rapid expansion, 1870–1907, industrial output per man was doubled; the corresponding annual rate of increase was on the average 2.2 per cent, but in the latter part of the period the rate rose to 2.4 per cent. The war led to a stagnation in productivity, and for the period 1907–1929 when, as indicated above, little progress in production was made, the annual rise in output per man was probably less than 0.5 per cent; however, if the shortening of the working-week is taken into account, the rate of increase per man-hour reached about 1.2 per cent per annum. In the 1930's, the rate of increase in productivity was between 1.0 and 1.5 per cent per year.

In other countries, where production stagnated in the 1930's, productivity rose very little, if at all, and sometimes it even declined. In France, Italy and Poland, output per man in 1937 was below the 1929 level, while the increase in output per man-hour was only slightly higher. Similar tendencies prevailed in Belgium and Czechoslovakia.

In the United Kingdom, on the other hand, the revival of industrial activity in the 1930's, after the stagnation of preceding decades, was accompanied by a more rapid rise in productivity. In the period of slow development, 1907–1924, the annual increase in output per man was only about 0.5 per cent and in output per man-hour about 1.5 per cent, while in later years both rose by about 2.4 per cent per year.

In Sweden, by contrast, the rapid expansion of production in manufacturing industry continued after 1913 and was accompanied by high rates of increase in productivity. The same was true of the United States up to 1929, as is shown by the following figures:

Increase in Output and Output per Man in Manufacturing
(Annual rates of increase in percentages)

	<i>Output</i>	<i>Output per man</i>	<i>Output per man-hour</i>
United States			
1899–1914	4.2	1.6	2.1
1914–1929	4.6	3.0	3.8
1929–1939	0.3	0.8	2.8
Sweden			
1896–1913	4.5	1.6	2.0
1920–1929	5.3	3.5	3.2
1929–1939	5.2	3.2	3.0

years when employment in most countries was high, in order to reduce the influence of variations from boom to depression. Cyclical factors cannot be wholly eliminated, however, and they certainly had some influence, for example, in France where production at the end of the 1930's did not reach the level of the preceding boom.

¹ The sources on which the following estimates are based are indicated in Appendix A. As in the case of the production trends, changes in productivity have as a rule been compared between

These estimates indicate that in the United States, in spite of the war, the average rate of progress from 1914 to 1929 was more rapid than from 1899 to 1914. In the 1930's, the rise in output per man deviated considerably from the rise in output per man-hour, as a result of the shortening of working-hours. The high rate of increase in output per man-hour forms a remarkable exception to the low rates of increase in other countries where production also stagnated ; the effect of shorter working-hours on labour efficiency is probably only a partial explanation.

It will be seen that in Sweden the rate of increase in productivity at the end of the last century and until 1913 was maintained during the inter-war period. At the beginning of the 1920's, productivity was rising rapidly, evidently as a delayed effect of the stagnation during World War I. From the middle of the 1920's to World War II the rise in output per man was fairly stable at about 3.2 per cent per

year. In the same period, the increase of productivity was almost as great in Finland, where industrial output expanded rapidly. A rapid expansion also occurred in the Netherlands between 1908 and 1929, when the annual increase in output per man was 2.3 per cent ; in output per man-hour it was 3.4 per cent.

The experience of the last fifty years thus indicates that, when tendencies towards economic stagnation predominated, industrial productivity rose slowly, if at all. Among the countries more seriously affected by the depression of the 1930's, the United States was the only one where the rise in productivity exceeded 2 per cent per annum. In periods of general expansion, on the other hand, rates of increase in excess of that level were often attained and, in the inter-war period, the annual increase in productivity in countries maintaining a relatively rapid expansion of output approached or exceeded 3 per cent.

3. POPULATION CHANGES AND MAN-POWER DISTRIBUTION

Progress towards higher levels of production can be regarded as the combined result of changes in the distribution of population between different occupations and of increases in productivity within each occupation. For the purposes of this study, the man-power of each country has been divided into three

main occupational groups : agriculture, industry and services.¹ A more detailed study by sub-groups might reveal changes within the main groups, which were of equal importance to the development of production.

¹ For a definition of these groups, see notes to Tables 97 and 98.

Table 96

CHANGES IN THE EUROPEAN POPULATION IN THE AGE-GROUP 15 TO 64, FROM 1920 TO 1960
Millions of persons and percentages

Region	POPULATION (millions)					Increase or decrease in population (percentages)			
	Actual			Projections		Actual		Projections	
	1920	1930	1940	1950	1960	1920 - 1930	1930 - 1940	1940 - 1950	1950 - 1960
Northern and north-western Europe	40.2	43.8	47.2	47.7	48.7	9.0	7.8	1.1	2.1
Western and central Europe (excluding Germany)	42.5	45.9	46.5	47.4	47.4	8.0	1.3	1.9	1.9
Germany	42.4	44.7	47.9	46.7	49.6	5.4	7.2	-2.5	6.2
Eastern Europe	48.7	58.1	64.2	55.6	60.7	19.3	10.5	-13.4	9.2
Southern Europe.	43.7	49.1	53.7	58.4	63.4	12.4	9.4	8.8	8.6
Total	217.5	241.6	259.5	255.8	269.8	11.1	7.4	-1.4	5.5

Sources : The figures have been taken mainly from the *Statistical Year-Book of the League of Nations* ; *Demographic Yearbook of the United Nations for 1948* ; *The Future Population of Europe and the Soviet Union*, League of Nations, 1944, and data supplied by the Population Division, Department of Social Affairs, United Nations. For details, see Appendix A.
NOTE.—The composition of the regions is as follows : *Northern and north-western Europe* — Denmark, Finland, Ireland, Norway, Sweden, the

United Kingdom ; *western and central Europe* — Austria, Belgium, France, the Netherlands, Switzerland ; *eastern Europe* — Bulgaria, Czechoslovakia, Hungary, Poland, Rumania, Yugoslavia ; *southern Europe* — Greece, Italy, Portugal, Spain.
The figures for 1920, 1930 and 1940 refer to pre-war territory ; those for 1950 and 1960 refer to the post-war area.

The effects on production of such changes between sub-groups will, however, be regarded as part of the productivity increase of the main occupational groups.

The trends in total working population and in occupational distribution have been investigated country by country, but, for purposes of exposition, the discussion of trends in this chapter generally refers to consolidated totals for the larger regions indicated in Tables 96 to 98. Inevitably, a regional grouping will conceal certain divergent trends in individual countries, only some of which can be indicated in the text.

Population changes 1920–1960

It may be assumed that changes in the European population between the ages of 15 and 64 indicate the general trend in the working population.¹ For Europe as a whole, the number of men in this age-group and in the working population have, in the last decades, been roughly the same. There were, however, some regional variations resulting from differences in the school-leaving and retirement ages. The working population in most eastern European countries was between 2 and 5 per cent larger than the selected age-group and in Italy the difference was 10 per cent ; on the other hand, in northern Europe, Austria, Belgium, Germany and the Netherlands, the selected age-group exceeded the working population by 2 or 3 per cent.²

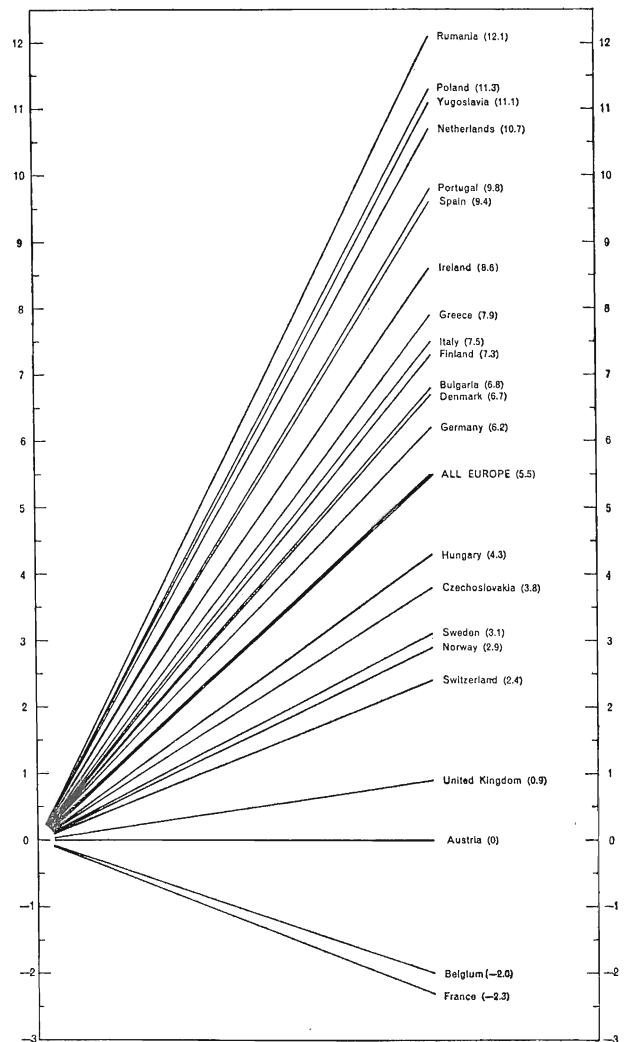
Low birth-rates in the inter-war period and losses of life and territory resulting from the last war have changed the trend in the size of the working population since 1940, compared with the two preceding decades. As is shown in Table 96, the number of people of working-age in northern, western and central Europe (including Germany) will increase by only 4 millions between 1940 and 1960, compared with an increase of 16½ millions in the inter-war period. It is, however, in eastern Europe that the war has made the largest impact on the size of the working population. Between 1940 and 1950, the population of working-age fell by about 9 millions as a result on the one hand of the heavy loss of life, particularly in Poland and Yugoslavia, and, on the other, of territorial transfers from Poland, Rumania and Czechoslovakia, which led to a net decrease of territory and

population in these countries as a whole. A rise of 5 millions in the next decade will still leave the total population aged 15 to 64 well below the 1940 level. Southern Europe is the only region where the increase will be almost as large between 1940 and 1960 as in the inter-war period ; in the four decades 1920–1960 the population of working-age will probably have risen by 20 millions, or by almost 50 per cent.

Of the probable increase of 10 millions in the number of men and women of working-age in eastern and southern Europe during the next decade, at least

Chart 6

**PROJECTED RATE OF INCREASE
IN THE EUROPEAN POPULATION, IN THE AGE-
GROUP 15 TO 64, FROM 1950 TO 1960**
Percentages



Sources: The figures for most countries were based on provisional estimates of the Population Division, Department of Social Affairs, United Nations. For details, see Appendix A.

¹ The sources of the population statistics and the method used in making projections of the size of the working population and its occupational structure are summarized in Appendix A.

² For women, a corresponding comparison cannot be made because of the statistical difficulty of estimating the number of women engaged in agricultural and domestic work.

three-quarters will be available for work in non-domestic occupations. The distribution of this increase in the total labour supply among different occupations will in itself make possible a rapid change in the occupational structure of the population. In the rest of Europe, on the other hand, future changes in the occupational structure will have to be based mainly on the possibilities of transferring people from one occupation to another and of reducing open and "concealed" unemployment, since the population of working-age will increase by only about 4 millions between 1950 and 1960.

As Chart 6 above shows, however, there will be considerable deviation from these regional trends in individual countries. The increase in the population aged 15 to 64 in northern, western and central Europe, for example, is largely concentrated on Germany, where the increase in birth-rates that began in the 1930's will, in the next decade, result in an increase in the working population of about 6 per cent, or about the same rate of increase as in the inter-war period. In the Netherlands, the rate of increase is still greater and approaches the highest rates in eastern Europe. There is also likely to be a high rate of increase in Denmark, Finland and Ireland, but in Belgium and France the working population will probably decline. On the other hand, the rate of increase in Czechoslovakia and Hungary will probably be only slightly higher than, for example, in Norway and Sweden.

Trends in Occupational Distribution 1920-1950

The male population engaged in agriculture in Europe was remarkably stable in the inter-war period, as shown in Table 97. There were, however, some divergent movements. In western and central Europe (excluding Germany), the number of men in agriculture declined by about 8 and 5 per cent in the 1920's and 1930's respectively.¹ In eastern Europe, however, where the pace of industrial development was insufficient to absorb the increase in the working population, agricultural man-power rose by 8 and 5 per cent in the two decades (although the proportion of the total population engaged in agriculture fell). The consequent surplus of labour in agriculture resulted in open unemployment, partly seasonal, but for the greater part it was concealed by an inefficient organization of agricultural production. Similar tendencies were typical of large parts of southern Europe, although emigration partly counteracted the potential increase in the agricultural population.

The stability of the agricultural labour force in Europe in the inter-war period was accompanied by only small changes in agricultural production. The total area under cultivation and the pattern of land utilization remained fairly stable. The total number

¹ In northern Europe, the constant population in agriculture and forestry may be partly explained by the expansion of employment in forestry as a result of the development of pulp and paper industries.

Table 97
MALE WORKERS IN EUROPEAN AGRICULTURE, 1920 TO 1960
Millions of persons

Region	Actual			Projections	
	1920	1930	1940 ^a	1950	1960 (range) ^b
Northern and north-western Europe	4.1	4.1	3.9	3.7	3.7 - 3.4
Western and central Europe (excluding Germany)	7.2	6.6	6.3	5.9	5.9 - 5.5
Germany	4.9	4.8	4.3	(3.5)	(3.5)
Eastern Europe	15.9	17.1	(18.0)	15.5	15.5 - 13.9
Italy	7.1	6.6	6.8	6.9	7.1 - 6.0
Total	39.2	39.2	39.3	35.5	35.7 - 32.3

Sources: The figures have been taken from the *Statistical Year-Book of the League of Nations; Yearbook of Labour Statistics, 1937, 1947/48*, International Labour Office, and national statistics. For details and for the assumptions on which the projections are based, see Appendix A.

NOTE.—"Agriculture" includes forestry and fishing. "Male workers" comprise all men actively engaged in agricultural work as their main occupation.

For the composition of the regions, see Table 96. Figures for 1920, 1930

and 1940 refer to pre-war territory; those for 1950 and 1960 refer to the post-war area. The figures in brackets are tentative.

^a Where no 1940 figures were available, the proportion of the population in the age-group 15 to 64 engaged in agriculture for each country in the latest pre-war year was applied to the population in the same age-group in 1940.

^b The range for 1960 is between the maximum and minimum projections for agriculture described in the text.

of livestock remained unchanged and the increase in crop yield per unit area was, on the whole, slower than in earlier decades : the average rate of increase in cereal yields was only about 0.5 per cent per annum, or less, in all regions, whereas in the preceding fifty years, rates of 1.0 to 1.5 per cent were recorded in a number of countries. The increase in the yields of potatoes and sugar beet was somewhat faster, or about 1 per cent per annum.

During and since the war, trends in agricultural man-power have changed in several countries. Thus, since 1940 there has been a fall of about 14 per cent in the number of men in agriculture, both in eastern

Europe and in Denmark and Sweden. In eastern Europe, the decline was mainly the result of territorial changes, but in Denmark and Sweden it was accompanied by increasing mechanization and efficiency of agriculture. This development in northern Europe suggests that potentialities for reducing agricultural man-power had accumulated during the inter-war period in many parts of Europe where modernization and particularly mechanization were held back by the generally depressed condition of agriculture.

The absence of a rapid industrial development and the existence, for long periods, of mass unemploy-

Table 98

MAN-POWER IN URBAN OCCUPATIONS IN EUROPE, 1920 TO 1960

Millions of persons

Occupational group and region	NUMBER OF WORKERS					INCREASE OR DECREASE			
	Actual			Projections		Actual		Projections	
	1920	1930	1940 ^a	1950	1960 (range) ^b	1920-1930	1930-1940	1940-1950	1950-1960 (range) ^b
<i>All urban occupations :</i>									
Northern and north-western Europe	22.6	25.2	27.9	29.3	30.4 - 31.5	2.6	2.7	1.4	1.1 - 2.2
Western and central Europe (excluding Germany)	20.8	23.3	22.4	23.7	24.8 - 25.5	2.5	-0.9	1.3	1.1 - 1.8
Germany	21.6	23.0	26.7	(24.5)	(26.7)-(27.0)	1.4	3.7	(-2.2)	(2.2)-(2.5)
Eastern Europe	11.6	15.5	(17.5)	16.4	20.2 - 22.7	3.9	(2.0)	-1.1	3.8 - 6.3
Italy	8.0	9.1	10.7	11.4	12.9 - 14.4	1.1	1.6	0.7	1.5 - 3.0
Total	84.6	96.1	105.2	105.3	115.0 - 121.1	11.5	9.1	0.1	9.7 - 15.8
<i>Industry :</i>									
Northern and north-western Europe	11.2	11.9	13.2	14.2	14.9 - 15.4	0.7	1.3	1.0	0.7 - 1.2
Western and central Europe (excluding Germany)	10.9	12.3	11.0	11.9	12.9 - 13.7	1.4	-1.3	0.9	1.0 - 1.8
Germany	13.2	13.3	15.0	(14.0)	(15.7)-(16.5)	0.1	1.7	(-1.0)	(1.7)-(2.5)
Eastern Europe	5.5	7.7	(8.8)	8.7	10.9 - 12.9	2.2	(1.1)	-0.1	2.2 - 4.2
Italy	4.5	5.1	5.4	5.1	6.1 - 7.1	0.6	0.3	-0.3	1.0 - 2.0
Total	45.3	50.3	53.4	53.9	60.5 - 65.6	5.0	3.1	0.5	6.6 - 11.7
<i>Services :</i>									
Northern and north-western Europe	11.4	13.3	14.7	15.1	15.5 - 16.1	1.9	1.4	0.4	0.4 - 1.0
Western and central Europe (excluding Germany)	9.9	11.0	11.4	11.8	11.9 - 11.8	1.1	0.4	0.4	0.1 - 0.0
Germany	8.4	9.7	11.7	(10.5)	(11.0)-(10.5)	1.3	2.0	(-1.2)	(0.5)- 0.0
Eastern Europe	6.1	7.8	(8.7)	7.7	9.3 - 9.8	1.7	(0.9)	-1.0	1.6 - 2.1
Italy	3.5	4.0	5.3	6.3	6.8 - 7.3	0.5	1.3	1.0	0.5 - 1.0
Total	39.3	45.8	51.8	51.4	54.5 - 55.5	6.5	6.0	-0.4	3.1 - 4.1

Sources : The figures are derived from the *Statistical Year-Book of the League of Nations ; Yearbook of Labour Statistics, 1937, 1947/48*, International Labour Office, and national statistics. For details and for the assumptions on which the projections are based, see Appendix A.

NOTE. — "Man-power" includes all men and women gainfully occupied in industry and services. "Industry" includes manufacturing, mining, building and handicrafts. "Services" includes transport and communications, commerce, banking, distribution, civil, military and domestic services and all the professions.

For the composition of the regions, see Table 96. The figures for 1920, 1930 and 1940 refer to pre-war territory, those for 1950 and 1960 refer to the post-war area. Figures in brackets are tentative.

^a Where no 1940 figures were available, the occupational structure for each country in the latest pre-war year was applied to the population in the age-group 15 to 64 in 1940.

^b The range for 1960 and for 1950 to 1960 is between the minimum and maximum projections described in the text.

ment doubtless reduced the incentive to introduce labour-saving methods of production. If modern techniques were now introduced, agricultural man-power in many countries could probably be reduced by 5 to 10 per cent in the next decade, without fundamentally changing the present framework of agricultural organization. If a similar development had occurred in the whole of Europe in the inter-war period, 4 to 8 million more workers would have been available for transfer to urban occupations.

While agricultural population on the whole remained stable in the inter-war period, there was a rapid increase of man-power in urban occupations, equal to the net increase in the working population. As Table 98 shows, in twenty years, Europe's urban working population rose by more than 20 millions or by almost one-quarter.

From 1920 to 1930 the new urban workers were fairly evenly distributed between industry and services. In the 1930's, however, the numbers entering industry declined, while the rate of increase in service occupations was almost maintained, so that the latter accounted for no less than two-thirds of the total increase in urban man-power during the decade. In the inter-war period as a whole, the numbers in services rose by one-third, while the numbers in industry rose by less than one-fifth. This lack of balance in the growth of industry and services is a general feature in the different regions for part of the inter-war period, though in some countries it was already evident in the 1920's. In parts of northern and north-western Europe and in Germany, the slow development of industry in the 1920's was thus accompanied by a rapid expansion in services. Similar tendencies appear in the other continental countries of western and central Europe and in Italy in the 1930's.

A rapid development of services is usually regarded as a normal long-run trend in countries with a rising

standard of living. An unchecked or increased rate of growth at a time when expansion in industry is slowing down may, however, reasonably be explained as partly the result of a lack of opportunities for employment elsewhere. The trends recorded thus support the view that, in some European countries, a surplus of man-power had accumulated in the retail trades and similar service occupations by the end of the 1930's.¹

The figures for eastern Europe are less reliable. The foundation of new States after World War I, however, resulted in a rapid expansion of industry and services in the 1920's, but, on the whole, industrial development slowed down in the 1930's increasing the pressure of population on the land.

Thus, the rate of expansion of European production in the inter-war period was not sufficient to create opportunities for the effective employment of all the available man-power. In some countries, part of the surplus was eventually absorbed by the armed forces and in armament production, and some redundant man-power was concealed in agriculture and in unproductive occupations in services. Nevertheless, in several countries, recorded unemployment remained at a high level even at the end of the 1930's.

As a result of the war, the structure of the European labour market has altered considerably since the 1930's; territorial transfers and population movements have changed the balance between resources and man-power in such countries as Czechoslovakia, Poland and Germany; the level of employment in industry has increased in most countries; north-western Europe has approached a state of full employment. In large areas of southern and eastern Europe, however, the general population pressure has continued to increase; and in several countries of western Europe and in Italy the labour surplus in services has not yet been absorbed into other occupations or ceased to be redundant.

4. PROSPECTS FOR THE PERIOD 1950-1960

The preceding summary of some pre-war trends and tendencies in European production and man-power may serve as a background to a discussion of the potentialities for future long-term expansion. It must be realized, however, that knowledge of past trends and relationships—such as the amount, the composition and the effects of capital formation—is limited. Moreover, even if such relationships could

be established for the past, it cannot be assumed that they will remain stable; the conditions for economic

¹ These tendencies should be compared with the trends of production in manufacturing industry indicated in Charts 5A-5C. A detailed analysis of the lack of balance between services and other occupations is given in "Progrès technique et répartition professionnelle de la population", Alfred Sauvy, *Population*, Nos. 1 and 2, 1949, Paris.

progress in any one period of time are always, to some extent, unique. In any case, inferences from past experience contain a wide margin of uncertainty. Moreover, within a wide field, the development will be governed by economic policy, both national and international, which can be developed on alternative lines.

For these reasons, a discussion of future trends must be based on certain assumptions about the main determining factors. The choice of these assumptions—which must always to some extent be arbitrary—may be related to past trends, present economic structure, current tendencies in economic policy and post-war plans. In view of the wide margin of uncertainty and the range of possible economic policies, the assumptions have to be stated in the form of alternatives which indicate a range of possibilities. By combining such assumptions with some known trends in the European economy, an indication can be given of the potentialities for future development. The discussion will in this way be centred on the problem of inter-relations in the future development, rather than on the actual trends. The procedure has been to make alternative assumptions about the occupational distribution of the working population, to introduce alternative assumptions about the rate of capital formation, and to combine these two main factors into a discussion of possible developments in productivity and production.

A. *Prospects for Development in Northern, North-Western, Western and Central Europe*¹

Man-power

The potential growth of the population aged 15 to 64 in northern, north-western, western and central Europe during the coming decade has been discussed in section 3 of this chapter. As indicated in that section, trends in the German population deviate from the average for the region and will therefore be considered separately. In the rest of the region, the working population will, in the next decade, increase by only 1 million or by about 1 per cent. Owing to this very small increase, any change in the occupational distribution of the labour force will have to come mainly from shifts between different occupations.

The need for man-power in agriculture will mainly be determined by the speed of mechanization, an

The problem of European man-power and production trends has to be approached on the national level, since differences in population trends, rates of saving, the need for investment and productive capacity, are not evened out through the working of international market mechanisms. This sectionalism has tended to increase, partly as a result of new forms of national planning. This characteristic of the European economy has been accepted as a starting-point in the discussion of perspectives for the next decade. Accordingly, estimates of future trends in European man-power and production have first been made for each individual country; the resulting totals have then been aggregated for each region. In general, the intention has been to indicate the order of magnitude of the problem that Europe faces with its present political structure. Some of the problems of capital formation are, however, discussed within a rather wider regional framework.

For several reasons—similarities in population trends, political systems and economic organization—the prospects of development in the next decade are considered separately for three regional groups. The first group includes northern, north-western, western and central Europe; within this group Germany is dealt with separately, although in a more summary way. Eastern Europe forms the second group, while the third is southern Europe where attention is mainly concentrated on Italy.

increase in which is envisaged in most national programmes. In the last decade, the number of tractors in five countries² in this region has grown from 100,000 to 470,000; the number is expected to rise to 600,000 in 1952/53. It may be assumed, as a result of this development, that the agricultural population in northern, north-western, western and central Europe will in any event not rise in the next decade; past experience suggests that the number of men in agriculture will fall by as much as 10 per cent in certain countries where the conditions for such a reduction are particularly favourable.³ The resulting decrease in male working population in agriculture in the region as a whole would be nearly three-quarters of a million, or about 7 per cent. The corresponding migration

¹ The regional composition is as follows: northern Europe—Denmark, Finland, Norway, Sweden; north-western Europe—United Kingdom and Ireland; western and central Europe—Austria, Belgium, France, Germany, Netherlands, Switzerland.

² Denmark, France, Norway, Sweden and the United Kingdom.

³ A summary of the basis on which alternative projections of the future occupational structure have been made are given in Appendix A.

of women will probably result in a total increase of the urban working population by over a million.

The proportion of women to men in urban occupations at present varies from 56 per cent in northern Europe to 48 per cent in the United Kingdom, western and central Europe ;¹ as the ratio has so far been fairly stable within each country, it seems unlikely that the change in the next decade will be very large. In one of the projections for 1960, however, the ratio of women to men has been assumed to rise by about 5 per cent in most countries. This would mean an over-all increase of almost 2 millions, or about 9 per cent, in the number of women in urban occupations. In view of simultaneous changes in age distribution and in income levels among wage-earners—factors which might cause tendencies in the opposite direction—this assumption may be on the high side. As a lower alternative, the ratio of women to men has been assumed to remain stable during the decade.

The combined result of these projections would be that, between 1950 and 1960, the man-power available for employment in urban occupations would rise by at least 2 millions and at most by 4 millions, compared with a net increase of 5 millions in the 1920's and 2 millions in the 1930's. Thus, if all reserves of man-power were absorbed, the rate of increase would be almost as high as in the 1920's, while the minimum increase would be the same as in the 1930's.

Pre-war experience indicates that the expansion of services will be correlated with rates of industrial growth. A rising commodity output will probably increase the demand for services. On the other hand, it has been suggested above that, on the Continent, a surplus of man-power has accumulated in service occupations. It has therefore been assumed that the numbers in services will grow in proportion to industry only in northern Europe while, in the various countries of western and central Europe, the numbers in services will grow at less than half that rate or even remain stable. The growth of the service sector between 1950 and 1960 would, according to these assumptions, be less than 1 million, while industry would grow by 1½ to 3 millions.

The following general conclusions emerge from this survey of trends in industrial man-power in

¹ Figures showing the changing ratio of women to men in urban occupations are given in Appendix A.

northern, north-western, western and central Europe (excluding Germany). Industrial employment in the region could rise by about 10 per cent, in the next decade, if man-power reserves were extensively mobilized ; this would correspond to the rate of increase in northern and north-western Europe in the inter-war period. On less favourable assumptions, however, the increase might only be about half as great.

As already indicated, the above projections do not include Germany. In this country, industrial employment could rise much faster in the next decade than before the war. Industrial man-power in Germany has, however, declined in the last ten years, so that the increase compared with the pre-war level will be about the same as for the rest of the region. The increase in the German birth-rate can thus be said to have compensated for the losses due to the war.

Capital Formation and Productivity

By 1949, capital formation in northern, north-western, western and central Europe had reached a level which, even including Germany, was considerably higher than before the war. In relation to 1938, which was a year of high employment and capital formation compared with the average for the 1930's, gross investment had risen by nearly 20 per cent and net investment by about 35 per cent.² In most countries, gross investment in 1949 exceeded 20 per cent of gross national income and, though there are differences of definition between one country and another, the rates also seem to compare favourably with those of developing countries in earlier periods. In the half-century before 1930, for example, which was a progressive period in American economic history, the average level of gross investment in the United States in each decade was about 20 per cent of the gross national income ; and in Sweden, where the period was also one of rapid development, the figure fluctuated between 15.5 and 17.5 per cent.³ In both these countries, population was growing rapidly, and the need for investment in transport, housing and general urban development was correspondingly great. In northern, north-western, western and central Europe the population will, on the whole, be rising much more

² Figures by countries are shown in Table 29, Chapter 2.

³ See *National Income, a summary of findings*, S. Kuznets, National Bureau of Economic Research, New York, 1946 ; *National Income of Sweden 1861-1930*, Stockholm Economic Studies, Stockholm, 1937.

slowly. The countries in this region should, therefore, be able to devote a relatively high share of total capital formation to industrial development. It follows that an important condition for rapid industrial development will have been created, if the present high rate of total capital formation in relation to national income can be maintained.

The problem of capital formation, however, requires a more detailed examination in the light of the supply of man-power that is likely to be available. This discussion will be limited to a group of ten countries ; two of the large countries in the region : France and the United Kingdom ; four small Continental countries : Austria, Belgium, Netherlands and Switzerland ; and the four countries in northern Europe : Denmark, Finland, Norway and Sweden. In view of the complicated political and economic situation in Germany, it has not been possible to discuss its problems in a similar way.

Following the general approach of this chapter, it has been assumed that, within this group of ten countries, it will be possible to maintain employment at a high level throughout the coming decade ; presumably, this would also result in high levels of capital formation. On the other hand, a decrease in foreign assistance or a continuing trend towards equality of income might tend to lower the level of investment. In order to cover a range of such possibilities, two alternatives have been chosen as a basis for the discussion : (a) that the ratio of capital formation to total commodity output is maintained at its present level ; (b) that the present absolute level of gross investment will be maintained. In a progressive society this would mean that investment falls in relation to national income. Gross investment in manufacturing industry (excluding public utilities) and mining in this region is at present running at a level of approximately \$3 billion per year (in 1938 prices) out of a total investment of \$10 billion.¹ It will be assumed that the same proportion of total investment will be allocated to these branches of industry in the next decade. On these assumptions, total investment in manufacturing and mining in the next decade will amount to about \$30 to \$35 billion.²

In the group of ten countries, about 17 million people are now engaged in manufacturing and mining. This number may, according to the lower man-power alternative, be assumed to increase by about 1½ millions, or 9 per cent, in the next decade. On the basis of post-war data for some of these countries, the capital needed for this extension of industry would amount, at present standards of capital equipment, to \$4 to \$5 billion.³ Net investment in manufacturing and mining in these countries can be roughly estimated at \$1½ billion a year, so that at the present rate only 30 per cent of net investment will be required during the decade to take care of the increase in the number of industrial workers. On these assumptions, therefore, the greater part of industrial investment will be available for replacement and increasing capital per worker.

The extent to which this will enable industrial plant and buildings to be modernized may be seen from the following illustrations. The gross value of the existing stock of industrial capital in the ten countries may be estimated at about \$50 billion. Thus, if gross capital per worker remained constant, after providing for the increase in the number of workers, between one-half and two-thirds of existing capital equipment could be replaced within the next decade. If, on the other hand, replacement of old capital took place only at a normal rate,⁴ gross capital per worker could be increased by some 15 to 25 per cent. These are two extreme alternatives ; in practice, some middle road would be chosen combining a more extensive replacement than corresponds to depreciation, with some increase in gross capital per worker. How far replacement should be extended in order to get the greatest possible increase in

³ On the basis of estimates for the Netherlands and Sweden, which could be compared with estimates which are available for North America, it has been assumed that gross capital per worker in manufacturing and mining amounts on the average to about \$2,750 to \$3,000 in the group of ten countries. Comparisons of motive-power per worker in the different countries have been used for the purpose of interpolation. *De industrialisatie gedurende het afgelopen jaar*, A. Winsenius, Rotterdam, 1950 ; "Der svenska industrins kapitalinvesteringar åren 1948-1950", *Kommersiella meddelanden*, Stockholm, 1950 ; *Investment and Inflation with special reference to the immediate post-war period*, Department of Trade and Commerce, Ottawa, 1949.

⁴ The average rate of depreciation has been assumed to be 3.3 per cent per annum over all industrial capital, which is consistent with the figures in the national accounts for the group of ten countries as a whole, though not necessarily for them individually. This would correspond, for example, to an average life of twenty years for machinery and of sixty years for building, with a proportion between these parts of fixed capital of 1 : 1.

¹ These figures and all other investment figures in this chapter are given in 1938 dollar prices.

² The higher figure is based on assumptions of a rise in industrial output of 50 per cent and in agricultural output of 30 per cent over the decade.

productivity and general efficiency will depend on how great the advantages of modernization are in different sectors of industry.

The discussion has so far been based on the lower of the two man-power alternatives for industry, which were established earlier. A further increase in industrial employment would somewhat reduce the possibilities of modernization and the development of more capital-intensive industries. As, however, the increase in the labour supply is assumed to lie within rather narrow limits and as the provision of capital for it will absorb only a small proportion of gross investment, the conclusions would not have to be greatly modified.

An estimate of the increase in net capital might give a better idea of the changes that would result from the assumed level of industrial investment. To arrive at this, it would strictly be necessary to know the age-structure of the existing capital stock, about which the available information is insufficient to give a reasonably complete picture, though some indications of the extent of obsolescence have been given in Section 2 of this chapter. An example, however, will illustrate the conclusions that would follow from a given set of assumptions about the present age-structure of capital and the future rate of capital formation.

It is assumed that there was a normal age-structure of capital in 1930 ; that one-third of normal replacement was, on the average, neglected in the following fifteen years (1931–1945) ; that in 1946 and 1947, gross investment was just sufficient to maintain the age-composition of capital, but that from 1948 on it has been and will continue to be twice as high. On these assumptions, all abnormal obsolescence could be eliminated by 1952–1953 if the whole of gross investment were concentrated on replacement ; and, by 1960, the net value of industrial capital would have risen to a level almost 50 per cent higher than in 1930 and 90 per cent above the low level in the immediate post-war years. This very great rise in net capital value would result from the high degree of obsolescence at the beginning of the decade and the high proportion of young capital at the end, which would in turn be a consequence of the transition from a stagnating to an expanding industry. Gross capital would, at the same time—in accordance with the earlier estimates—be increased by 20 per cent.

It is difficult to find a safe basis for comparison of these rates of growth with past trends in those countries which have been used for reference in the

discussion of productivity. One particular difficulty is to make estimates of changes in capital values which are comparable in real terms. The most reliable reference material is probably that derived from studies of American manufacturing industry in the period 1904–1937 ;¹ this indicates a growth of net capital per worker over the whole period of only 12 per cent per decade. The net increase of industrial capital in the United States was, however, fairly limited during the 1930's. The growth of capital may therefore be assumed to have been concentrated in the period 1904–1929. On this assumption, the rate of growth was close to 20 per cent per decade ; and, as already mentioned, output per man-hour rose by nearly 3 per cent per annum.

These estimates and comparisons suggest that continued investment at the present rate will, in a transitional period as long as a decade, result in a large net increase of capital, as the age-structure is changed from abnormal obsolescence to a less-than-normal age of capital. Even if this change did not involve any increase in gross capital per worker, it would in itself make possible an exceptional increase in productivity. The transition from a period of progressive ageing to a period of progressive modernization of capital should result in high rates of productivity increase compared with periods of more continuous expansion. For the very reason that the rate of increase in productivity was less than normal, by perhaps 1 to 2 per cent per annum over most of the last two decades, it may be greater than normal in the next decade.

The experience of progressive countries also indicates that technological progress has been maintained in the last decades ; differences between new and old equipment will therefore, on the whole, be considerable. Nor does there seem any reason, since efforts to promote both research and its application in industry have been intensified, to expect that the rate of technological progress will slow down.

Increases in productivity during the early post-war period have been high, partly as a result of the progressive elimination of limitations on production, such as bottlenecks in raw materials and disorganization in the labour market. The recent high rates can, however, probably also be interpreted as the first results of post-war modernization. In the United Kingdom,

¹ *Employment in Manufacturing 1899–1939*, S. Fabricant, National Bureau of Economic Research, New York, 1942.

industrial productivity reached its pre-war level rapidly after the war and a high rate of increase has since been maintained, the annual increment between 1948 and 1949 being about 5 per cent. The rate of increase seems, however, still to be partly influenced by temporary and special factors, such as the decreasing importance of raw-material difficulties. Some decline in the rate of growth is therefore expected in the next two years. In France, output per man-hour has recently reached the 1938 level, while the level of output per man has risen to about 13 per cent above pre-war. In the next three years, a continued rise of 4 to 5 per cent per annum is expected. In Sweden, the level of output per man-hour is now about 17 per cent above pre-war. In 1950 it is expected to increase by 4 per cent—that is, at about the same rate as in recent years.

There may well be some decline from these high rates of increase in productivity during the next few years. If, however, the present high rates of capital formation continue, previous experience suggests that it might be possible to maintain a rate of increase of 3 per cent per annum; a rate of increase of 2 per cent would, on the other hand, in the light of earlier experience, appear to be on the low side.¹

Germany has not been included in the preceding discussion. The present economic and political disintegration and the consequent uncertainty about future development provide no basis for a well-founded choice of assumptions about future development. Germany will, however, face a very serious man-power problem. As indicated earlier, the working population will grow at a rapid rate over the next decade, making possible an increase of employment in industry by half-a-million to 1½ million workers,

compared with pre-war. The rise from the present level of employment would be much larger, as man-power in industry has declined by about 1 million in relation to pre-war and as about 2 millions are at present unemployed. In 1949 the level of output per man in the three western zones was about 75 per cent of pre-war. A return to the pre-war level of productivity would in all zones represent a considerable improvement, and would, if a high level of employment were attained, result in an increase in production from the 1949 level of 60 to 70 per cent. The rise above the pre-war level would not, however, exceed 10 per cent.

Industrial Production

The conclusions about the development of industrial production in northern, western and central Europe in the next decade cannot be more than a combination of the above conclusions on man-power and productivity, which are related to a number of specific assumptions.

Combining on the one hand all the unfavourable and, on the other hand, all the favourable alternatives which have been discussed, a range of increase in production from 40 to 60 per cent can be derived.² The former rate of increase corresponds to French and Belgian experience in the period before 1914, and the latter rate exceeds American and approaches Swedish development in the same period. The higher alternative assumes a large-scale mobilization of labour reserves, combined with an increase of productivity by 3 per cent per annum. A combination of the lower man-power alternative with the same productivity increase would result in an increase of industrial production by about 50 per cent.

*B. Prospects for Development in Eastern and Southern Europe*³

Eastern Europe

The analysis of trends in eastern Europe is complicated by the large war losses and the extensive territorial and population transfers. Changes in the

¹ When extending these assumptions from manufacturing and mining to the whole of industry, thus including building and handicrafts, two circumstances have to be taken into account: (a) the growth of productivity in the latter fields will probably be slower; (b) a shift in the proportions in the direction of manufacturing will increase the average output per man. These factors will probably tend to compensate each other.

organization of the economies also make comparison with pre-war trends less relevant. On the other hand, several countries have established long-term plans covering periods of up to five and six years which indicate the general tendency of their economic policies. All these plans provide for large-scale

² Production in 1949 has been used as a basis for this estimate of the increase in a ten-year period.

³ The regional composition is as follows: eastern Europe—Bulgaria, Czechoslovakia, Hungary, Poland, Rumania and Yugoslavia; southern Europe—Greece, Italy, Portugal and Spain.

industrialization, partly based on the transfer of population from agriculture to industry. These industrialization plans do not appear to be based on expectations of an extensive capital inflow, but rather on the countries' own resources.

The rate of investment in eastern European countries is at a relatively low level compared with western Europe. On the other hand, eastern European countries plan to spend a larger part of total investment on the development of industry; the share of gross investment allocated to industry in the long-term plans amounts to about 40 per cent. In addition, in eastern European countries—other than Czechoslovakia—industry at present accounts for a smaller part of the national resources than in western Europe, owing to its relatively slow development in previous periods. For the same reasons, eastern European countries generally start from an industrial structure with a low standard of capital equipment. Thus, even a low rate of investment may result in relatively rapid development.

The development plans of eastern European countries are based on the expectation that a rapid cumulative development will take place in much the same way as in other countries in the early stages of industrialization. An extension of industrial production would raise the national income; this development would increase the capacity to invest and a still larger extension of industrial production could thus be achieved. The process could in this way be accelerated from year to year. It should be noted that, in such circumstances, much will depend upon a successful start. In the first stage it might be difficult not only to reach a sufficient level of investment, but also, with the present obstacles to international trade, to obtain the type of capital equipment which is most needed.

In other respects also, the economic development of these countries must be carefully balanced. During the first phase, man-power is unlikely to be a limiting factor. Working populations are rising rapidly, and in most countries some man-power can be transferred to industry from agriculture. In all the countries of eastern Europe, reserves of man-power in agriculture can, moreover, be mobilized by a reduction of seasonal fluctuations in employment or by modernization and mechanization. According to present plans, the stock of tractors and other farm machinery will increase considerably. As industrialization proceeds further, the transfer of additional farm labour to industry

will, however, tend to require increasing capital investment in farm construction and equipment, and might tax investment resources to such an extent as to slow down the rate of industrial expansion. Assuming that there is little inflow of capital from abroad, this balance between industrial and agricultural development will impose certain limitations on the process of industrial expansion. Similar problems of allocation will also arise in relation to transport and social investment, of which housing forms the main part.

The long-term plans of the three relatively more developed countries in the region—Czechoslovakia, Hungary and Poland—are based on a rise in industrial productivity of about 5 to 7 per cent a year. While this increase will come in part from the general expansion of industry and a certain shift in a more capital-intensive direction, it appears that it will also depend heavily on the results expected from the reorganization of industry. The plans attach a special importance to such factors as standardization, specialization within industry, the extension of piece-rate wages, the Stakhanovite movement and “work competition”. Owing to the complex and partly unique character of these changes, it is not possible to estimate the future trends in productivity on the basis of earlier experience, nor do tendencies in eastern Europe in the last few years give much guidance.¹ In any case, the trends in productivity will depend on the capacity to train both skilled industrial workers for a rapidly growing industry and also more qualified personnel.

In order to indicate the magnitude of the problems involved in industrialization in eastern Europe, estimates of the future pattern of development have been made for the three countries mentioned above (Czechoslovakia, Hungary and Poland) for which information about past trends and future plans is more complete than for other countries in the area. Even in the case of these countries, knowledge of the relevant conditions for development is to a great extent inadequate. The discussion can therefore only indicate some outlines of the problem and even this might have to be revised in the light of fuller information. The analysis, as in the case of western Europe, must be based partly on assumptions which can only serve

¹ Czechoslovakia and Poland, for which some indications of productivity are available, did not get back to the pre-war level of productivity until 1948. Up to that year, the aftermath of the war probably played a dominant role in trends in productivity.

to indicate possible alternatives. In addition, a simplifying assumption has been made by treating the manpower and the capital markets of these three countries as a single entity. This further emphasizes the very general and approximate nature of the analysis.

According to the national plans of Czechoslovakia, Hungary and Poland, employment in industry will be expanded rapidly in the next five years. If this development continued at the same rate up to 1960, from 1½ to 2 million new workers would be absorbed in manufacturing and mining during the next decade ; the number of workers in manufacturing and mining would then be increased by more than 50 per cent, and employment in the building industry could also be expected to expand.¹ Employment in services in these countries is on the whole very low compared with western Europe. It would remain at a low level even if it were increased at half the rate planned for industry. On this assumption, the total increase in the working population within the decade would be absorbed into urban occupations ; at the same time, the agricultural labour force would have to be reduced by about 10 per cent. If such a development were realized, the problem of rural over-population would be largely solved.

Such an extension of employment in industry and service occupations would raise considerable problems of capital formation. The basic data on current investment, its allocation and the present level of capital per worker in industry, are in some respects uncertain. It is possible, however, to examine some broad tendencies in this field in order to demonstrate the order of magnitude of the problems involved.

¹ Such a rate of increase would fall short of the development in the Soviet Union in the inter-war period. In this country, between 1926 and 1939, there seems to have been a threefold increase in the working population in industry. The population engaged in service occupations was more than doubled, the main part of this increase taking place in public administration and social services. Urban occupations absorbed not only the increase in the total labour force of about 10 millions, or over 15 per cent, but also a part of the agricultural labour force, which was reduced by more than 6 millions, or about 15 per cent.

As a result of this development, the proportion of the population occupied in agriculture, forestry and fishing had in 1939 declined to about 55 per cent from a level of about 75 per cent in 1926. Development in the Soviet Union thus started from a more extreme agrarian structure of the economy in the middle of the 1920's than that which, in 1950, forms the starting-point for the eastern European development in the next decade. At the present time, eastern Europe as a whole has largely the same occupational structure as the Soviet Union attained at the end of the inter-war period. The three selected countries are even more urbanized, with about 50 per cent of the population in agriculture, forestry and fishing in Hungary and Poland, and only 30 per cent in Czechoslovakia.

The main issue will be whether the rate of investment will be sufficient to provide the capital equipment needed to absorb new workers into industry at the same time as an increase in the amount of capital per worker takes place through the modernization of industry and the development of heavy industries. The available information indicates that gross capital per worker is, on the average, lower than in western Europe.² A long-term increase in efficiency would therefore probably require a considerable increase in capital intensity.

In order to examine the possible developments, two assumptions have been made. First, that as production rises, the proportion of the total output of commodities devoted to investment will remain constant ;³ and secondly, that the share of total investment allocated to industry will not be reduced below the present high proportion of 40 per cent. The latter assumption implies considerable sacrifices in other fields, particularly housing and social investment. The need for investment in these two sectors will increase with the expansion of industrial population, while at the same time the corresponding reduction in the agricultural labour force will probably need to be accompanied by increased investment in agriculture.

On these assumptions, it would be possible to create the necessary capital equipment for the new workers in industry only if the replacement of existing equipment were restricted to normal depreciation and if the development of heavy industry were relatively limited.

However, a salient feature in present plans is the emphasis laid on the development of heavy industry. If this tendency persists and is combined with a more extensive modernization of old equipment, the rate of investment would need to be increased above the present level. On the assumption that capital per worker in industry is raised within the decade by about one-third, thus bringing it closer to levels in western Europe, the proportion of national income allocated to investment would probably have to be increased to the level prevailing in western European countries. Alternatively, if this assumption as to the increase in capital per worker were to be fulfilled at

² Gross capital per worker has been assumed to be about \$1,500 in 1938 prices. This figure is estimated on the basis of available data on capital stock and investment plans.

³ In estimating the increase in the total output of commodities, it has been assumed that the net output of agriculture will rise by 40 per cent in the next decade.

present rates of investment, probably less than one million new workers could be absorbed into industry. If the number of workers absorbed into services increased at a correspondingly lower rate, the labour force in agriculture would be left at the same level as at present. These estimates indicate that an industrial development which involved a considerable rise in capital per worker, as well as a more extensive absorption of agricultural man-power, would require a substantial increase in national savings, assuming there is no inflow of capital from abroad.

Even without such an increase in the rate of investment, a very rapid expansion in production would appear to be possible in the next decade. Whether the assumption that capital per worker will remain constant is combined with an increase in productivity of 3 per cent, or whether the assumption that there will be an increase in capital per worker is combined with an increase in productivity of 5 per cent, the result would be an expansion in total industrial production of almost 90 per cent in the next decade. In manufacturing and mining alone (excluding building and handicrafts) the rate of increase would probably be still higher.

As already indicated, the development problems of the other eastern European countries (Bulgaria, Rumania and Yugoslavia) are more difficult to solve, mainly as a result of the lower level of industrialization, the larger surplus of man-power in agriculture and the more rapid increase of population. The problem of financing development in these countries on a scale sufficient to absorb all available man-power is therefore much greater, especially if compared with the income levels of these countries. For lack of more detailed information, no analysis of the capital formation problem on the above lines can be made for these countries.¹

Southern Europe

Southern Europe suffered relatively small population losses during the war and, as a result, its working population has continued to grow. Only a minor part of this growth has been absorbed by industry; a surplus has therefore accumulated either

as open unemployment or as hidden reserves in agriculture or services. The order of magnitude of the employment problem in southern Europe has been indicated in Chapter 3. During the next decade emigration can make only a partial contribution to its solution, which must lie mainly in economic development within the countries themselves.

Detailed information about the trends in occupational structure and production are available only for Italy. As far as population pressure and industrial development are concerned, conditions in Italy are similar to those in the more advanced countries in eastern Europe. On the other hand, owing to its different political structure, the analysis of its long-term problems of development cannot be related to a long-term over-all national plan.

As was shown in Chapter 3, Italy has at the present time considerable reserves of man-power, with a total open and concealed unemployment outside agriculture of between 1½ and 2 millions. During the next decade, a further 1¾ million workers will enter the labour market. Land reclamation and irrigation in southern Italy, desirable and necessary though it is, probably cannot do more than absorb a part of the present hidden man-power reserves in agriculture; at least 3½ million workers must therefore be absorbed into urban occupations during the next ten years, or will have to emigrate.

In recent years, Italy has been able to devote about 20 per cent of gross national income to gross investment, or about the same proportion as other countries in western Europe. About one-third of the total has been invested in manufacturing industry. The solution of Italy's employment problem in the next decade pre-supposes that the level of investment would be increased in proportion to a rising output of commodities, in the same way as has been assumed in some eastern European countries. This estimate has been based on the following assumptions: that half-a-million people at present unemployed could be absorbed by a more intensive use of existing capacity; that replacement takes place only at a normal rate; and that industrial development is directed not towards the expansion of heavy industries but towards a widening of industry to increase employment. Even under the very cautious further assumption that productivity will increase by only 1 per cent per year, employment in industry could then be increased by 3 million workers, thus eliminating open unemployment

¹ The projections of occupational distribution in 1960 in these three countries are based on the alternative assumptions that: (a) man-power in agriculture will not increase, and (b) that it will decrease by about 10 per cent. Tables 97 and 98 thus, in this respect, indicate man-power potentialities which have not been related to the availability of capital.

without recourse to emigration. The result would be an increase of industrial production by about 90 per cent during the decade.¹

This solution would, however, still leave great areas of Italian industry in a state of low efficiency or with a low level of capital per worker. It is also doubtful if it could be carried through without an influx of capital from abroad ; loans and gifts from abroad at present correspond to about 10 per cent of total investment and it is unlikely that an increase of investment in proportion to commodity output would be matched by an increase in savings. A rapid industrialization would also require increased imports of raw materials and foodstuffs, for which Italy is exceptionally dependent on foreign supplies. A far-reaching industrial development must therefore be accompanied by a rapid expansion of export markets, if balance-of-payments difficulties are not to become a bottleneck. It may, however, be difficult to make Italian industry competitive in foreign markets without a more extensive modernization which, especially in some parts of the engineering industry, is urgently needed, though a reduction in concealed unemployment would itself lower costs. As in eastern European

countries, there will also be a great need for social investment which will compete for the capital resources available. The solution of the employment problem along these lines would thus, in the absence of continued capital imports, run the risk of being hampered by bottlenecks in investment or exports. As a result of the low standards of capital equipment and the need to improve the competitive position of the export industry, the standard of living would probably not rise at a rate that would be desirable.

If the Italian problem is to be solved at all within the next decade and if the standard of living is to be raised at a satisfactory rate, either or both of two conditions must evidently be fulfilled : large-scale emigration and finance from abroad. To develop employment opportunities within the country, a greater supply of funds from abroad than is now being received will be required for at least a decade. A solution of the employment problem on the basis of domestic financial resources would—if combined with more extensive modernization and some development of heavy industry—leave a big surplus of man-power which would either have to emigrate or remain unemployed.²

5. PROBLEMS OF A SUSTAINED ECONOMIC GROWTH

The conclusion which emerges from the preceding analysis is that the general slowing-down of economic progress which Europe experienced during the inter-war period need not be repeated and that, given appropriate policies, the potentialities exist for a large and sustained increase in production and a more efficient utilization of growing man-power resources.

Although the estimates are based on a large number of simplifying assumptions, they provide a basis for stating that, given appropriate policies, an increase in Europe's total industrial production by about 50 per cent could be achieved in the next decade. Starting from a much narrower industrial base, the rise in eastern and southern Europe could be relatively faster and would tend to balance a somewhat slower increase in northern and western Europe. The general growth in the European economy would thus approach the rate of expansion which prevailed during the several decades preceding World War I.

¹ Agricultural output is assumed to increase by 30 per cent. Gross capital per worker is estimated to be \$1,800.

In the analysis, the development of industry has been regarded as the determining factor upon which the solution of Europe's man-power problems and the general expansion of activity will depend. Although detailed estimates have not been given, the possibilities for a substantial expansion in agriculture also appear to exist. During the inter-war period, agriculture, like industry, made little progress in Europe. A preliminary analysis based on past rates of progress achieved in different countries and on present plans indicates that it should be possible to raise the net output of agriculture by 20 to 30 per cent in northern, western and southern Europe and by 40 to 50 per cent in eastern Europe within the next decade. This pre-supposes that increased production of farm machinery, fertilizers and other requisites will be provided by industry ; the rise

² Assuming an increase of capital per worker from \$1,800 to \$2,200 and, as a result, an increase of industrial productivity by 3 per cent per year, employment in industry could be increased by about 1.5 million workers or by 35 per cent, and production in industry by about 80 per cent. About 2 millions of the working population would then be left to emigrate.

in incomes from agriculture would, in turn, support the expansion of industrial capacity.

These increases in industrial and agricultural production are estimated to be possible in spite of the slowing-down in the growth of Europe's working population and even if there should be no further increase in the share of national income allocated to capital formation above the present rate. In manpower, the stagnation tendencies of the inter-war period have resulted in an accumulation of reserves, especially in agriculture in eastern and southern Europe and in services, such as retail trade, in a number of western European countries. These reserves can be absorbed if more efficient employment opportunities are provided by the expansion of industry. In capital equipment, the growing obsolescence before and during the war means, of course, that Europe's present productive capacity is lower than it would be with a more normal age distribution of capital, but it also means that, apart from further industrial expansion, the mere renewal of the existing capital stock with modern equipment should help to cause a more rapid rise in productivity than during the inter-war period. In this sense, therefore, the very stagnation of the past may help to bring about a more rapid increase in production in the future.

The development of Europe's resources of manpower and capital equipment will necessarily depend on economic policy. The present analysis has not attempted to consider these issues, which involve many complex questions varying according to the form and structure of different national economies. The critical points of policy centre, however, on the questions of the level of employment and capital formation. A basic assumption underlying the perspective of a more rapid growth in the future is that it will be a steady and cumulative development. A return to the uneven levels of employment and investment of the past would certainly delay the attainment of these possibilities and, in some countries, might have permanent repercussions on the whole process of economic development.

In some of the southern and eastern European countries with low incomes and rapidly expanding populations, for instance, a failure to provide now the savings necessary for increased investment might retard the rise in incomes out of which progressively higher rates of capital formation could be provided in the future.

In western European countries, the critical questions of the immediate future concern their close dependence on overseas imports and the deficits in their overseas balances of payments. The preceding chapter has stressed the necessity for undertaking now the further adjustments in production and trade required by the ending of extraordinary dollar assistance in the near future. If these adjustments have to be made suddenly as dollar funds are depleted, the sudden curtailment of essential supplies would cause a widespread dislocation of production with retarding effects on future development.

If these immediate difficulties are successfully surmounted, the flexibility of the European economy can be expected to increase in the long run. Adjustments in production and in foreign trade which cannot be carried through within two or three years can be more easily made over a longer period. Here also, however, advance preparation will be required to prevent the appearance of shortages in particular branches of industry that would restrict general economic expansion. The risk of such shortages concerns principally the basic industries on which other lines of production depend, and which require considerable time to develop—as illustrated by the difficulties which have been experienced in some countries owing to the past failure to develop electric power resources adequately. It is particularly necessary to judge future requirements in such basic industries in the perspective of long-term developments. In steel, for example, the immediate prospect is that the present expansion of capacity may lead to a considerable surplus within the next few years, but this surplus could probably be absorbed soon after the middle of the coming decade if the tempo of industrial expansion is maintained.

The problem of achieving a balance in Europe's overseas trade without the necessity for continuing severe restrictions may not be solved within the near future and will require an attempt to harmonize long-term import requirements and export capacities. Here, too, greater possibilities of adaptation should emerge in a longer period. The expansion which has been suggested in agricultural production, for instance, could probably take place without the necessity for large increases in imports of feeding-stuffs. Dependence on imports of mineral oil and a number of important industrial materials is also, within limits, more flexible in the long run because of the possibility of substitution between different commodities.

It is not intended to suggest, however, that the European economy can be isolated from the world market. Its dependence on overseas supplies will remain substantial and will tend to grow as its own production expands, particularly if an increase of the order envisaged for the next decade is achieved. The possibility of such a growth will be conditioned by economic trends in overseas countries both with regard to the outlets which foreign markets provide for the products of European industry and with

regard to the possibility of obtaining increased supplies of primary goods not available in sufficient quantities within Europe. Europe's own prospects are therefore closely dependent on economic development and expansion abroad. At the same time, however, the possibilities of expansion which have been sketched indicate that Europe should be able to participate increasingly in that development overseas through the provision both of capital equipment and of financing.