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# CHAPTER 1

## The Economic Background

### *General Development*

THE years 1871 to 1945 encompass a dramatic history—the rise and fall of the German Empire. At the beginning of this period Germany was a newly industrialized, enterprising young nation, embarking on a career of economic and political expansion. Toward the end, a mature German economy was rallying its resources for the conquest of Europe. And by 1945, a defeated Germany emerged from this venture with a reduced and crippled population, with destroyed, outworn, or dismantled industry, with its political and economic unity lost. Between the birth and the death of the Reich were seventy-five turbulent years.

Although the primary concern in this study is with wages, we must begin with a background sketch of the major changes in the national economy and in the labor market. Let us first take note of the important shifts in the area and the population of Germany, particularly during the latter part of the period under observation.

#### AREA AND POPULATION

In the early years, between 1871 and 1913, there was one insignificant change in area: the little North Sea island of Heligoland was incorporated into the Reich. But after the defeat of Germany in World War I its geographic scope was reduced several times, resulting in a territorial loss of 13 percent and a population loss of 10 percent, or about 6.5 million people.<sup>1</sup> Among the areas ceded in accordance with the Treaty of Versailles were Alsace-Lorraine and parts of Upper Silesia, the province of Posen, and large parts of western and eastern Prussia. The Saar, with its important coal mines, was to be administered by France until 1935, when a plebiscite was to be held. After 1922 there was an interlude of twelve years during which there were no further shifts of German territory. But following Hitler's rise to power, the Saar was reincorporated into the Reich in 1935. Then came a series of annexations by the National Socialist regime: in 1938 Austria and the Sudetenland; in 1939 the Memel area, Danzig, and the Wartegau. These acquisitions expanded the Reich's territory by 45 percent and increased its population by 30 percent, or more than 20 million.<sup>2</sup> With the launching of World War II, a new wave of annexations resulted in the addition of Alsace-Lorraine, Luxemburg, parts of Yugoslavia, and a few other areas. Toward the end of the war even distant areas such as the North Italian provinces of Trento and Bolzano

<sup>1</sup> *Statistisches Jahrbuch für das Deutsche Reich* (hereafter cited as *Jahrbuch*) 1928, p. 28.

<sup>2</sup> Computed from data in *Jahrbuch* 1939-40, page a.

also were taken into the Reich.<sup>3</sup> Other territories, parts of Poland and Czechoslovakia, were administered by Germany but were never officially incorporated. There are few industrial nations with a similar record of territorial contraction and expansion during a brief quarter century.<sup>4</sup>

Such, in brief, is the recent record of the shifts in land area and in the population of Germany.<sup>5</sup> It is a record that bears heavily upon German economic development, since the losses and gains quite naturally affected the relative position of that country as an industrial power. Moreover, they influenced the structure of the German economy.

The present study is concerned only with the German territory and population encompassed by the Kaiserreich from 1871 to 1918, and later with the Weimar Republic and the unexpanded Third Reich (with the exclusion or inclusion of the Saar). No attempt will be made to present data for the areas incorporated into the Reich under National Socialism, except in the few cases where data for "Germany proper" are not available.

Major population changes in the German Reich are shown in Table 1. Population within the shifting Reich boundaries (column 1) more than doubled between 1871 and 1945, increasing between 1871 and 1913 by 26 million, and between 1913 and 1945 by 22 million. However, while population growth before World War I was largely independent of area changes, after 1913 it was deeply affected by such changes. The table indicates also that the reduction in the "current Reich area" population between 1913 and 1929 occurred despite natural population growth. Obviously too, the greater portion of the increase in "current area" population between 1929 and 1945 was due to territorial expansion under the National Socialist regime. Population growth within constant territory tended to slow down.

#### NATIONAL INCOME AND PRODUCTION

A comprehensive picture of Germany's economic development is provided by the course of national income expressed in marks of constant

<sup>3</sup> The problem of a changing Reich area did not exist during World War I. At that time occupied territories were put under German administration but were not incorporated into the Reich.

<sup>4</sup> After World War II, frontier adjustments and partitioning brought still more extensive changes. The conquered areas were freed, Austria was declared independent, Germany east of the rivers Oder and Neisse was brought mainly under Polish administration (a small part was annexed by Russia). In 1946, the remaining territory was about one quarter smaller than the Reich before the war, excluding Austria. The population loss was less serious since most Germans in the area under Polish administration migrated west. In 1949, the reduced rump area of Germany, once divided into four zones of occupation, was transformed into the western *Bundesrepublik*, and the eastern *Deutsche Demokratische Republik*, under Communist administration. In 1950 West Germany accounted for about three-fourths of the area and population of the two republics. (See *Statistisches Jahrbuch für die Bundesrepublik Deutschland*, 1953, pp. 13, 21, 31, and 561).

<sup>5</sup> German statistics are far from uniform in the treatment of these changes. They refer sometimes to a constant Reich area of given (but not always the same) dimension, sometimes to a changing Reich area. The reader must therefore take note of the territorial coverage of any economic measures dealing with the period 1913-45.

TABLE 1  
Population Changes in Germany, Selected Years, 1871-1945  
(millions)

Year	Currently Changing Reich Area (1)	Constant Reich Area of 1925 <sup>a</sup> (2)	Reich Area of Dec. 1937 <sup>b</sup> (3)
1871	41.0	—	—
1890	49.2	—	—
1913	67.0	59.6	60.4
1929	64.7 <sup>b</sup>	64.0	64.7
1939	79.5	—	69.3
1945	88.6 <sup>c</sup>	—	67.0

<sup>a</sup> Excludes Saar.

<sup>b</sup> Includes Saar.

<sup>c</sup> Estimated for 1945. Population of Alsace, Lorraine, and Luxemburg (during their census years of 1935 or 1936) was added to the 1940 Reich total as given in *Jahrbuch 1939-40*, p. 9. The rate of population change 1940-45, as experienced in the Reich area of December 31, 1937, is applied to the result.

SOURCE, by column:

(1) *Jahrbuch 1939-40*, p. 9.

(2) "Das deutsche Volkseinkommen vor und nach dem Kriege," *Einzelschriften zur Statistik des Deutschen Reichs*, No. 24 (Berlin 1932), p. 66.

purchasing power. According to Table 2, real national income more than tripled from 1871 to 1913 in the Kaiserreich area; thereafter, from 1913 to 1939, it increased by 50 percent.<sup>6</sup> On a constant area basis this would mean a more than fivefold gain over the whole period 1871 to 1939. The figure for 1939 is by far the highest during the post-1913 era; undoubtedly it reflects the incorporation of the Saar (1935) as well as preparations for war. By contrast, in 1929 one of the best years of the interwar period prior to the rearmament boom, real national income stood at only 8 percent above 1913 levels. For the "normal" years 1925-32 (post-inflation, pre-Nazi) it averaged 99 percent of 1913, and for all the interwar years 1925 through 1939 for which figures are available, it averaged 7 percent above 1913. These averages certainly do not indicate a continuation of the economic growth of the Kaiserreich period. They raise the question whether after World War I the German economy ceased to be a progressive economy and just maintained itself as a going, but not a growing, concern. Before we look for answers to this question, it will be useful to consider as additional evidence the index numbers of industrial production presented in Table 2 and Appendix Table A-1.

The production indexes of the Institut für Konjunkturforschung<sup>7</sup> are given in Table 2 for selected single years and are averaged for certain periods. They cover manufacturing, mining, and building construction.

<sup>6</sup> The average annual rate of increase was 3.1 percent from 1871 to 1913 and 1.6 percent from 1913 to 1939.

<sup>7</sup> Hereafter referred to as IKF.

TABLE 2  
Real National Income and Industrial Production in Germany,  
Selected Years, 1871-1939  
(1913 = 100)

	Real National Income (1)	INDUSTRIAL PRODUCTION		
		Producers' goods (2)	Consumers' goods (3)	Total (4)
		REICH AREA OF 1913		
1871	28	16	35	21
1890	63	35	56	40
1913	100	100	100	100
		REICH AREA OF 1925 <sup>a</sup>		
1913	100	100	100	100
1925	94	89	101	92
1929	108	118	109	114
1932	82	53	86	66
1939	150	164 <sup>bc</sup>	128 <sup>bd</sup>	148 <sup>bc</sup>
Average for period:				
1925-29	103	103	104	103
1925-32	99	92	101	95
1925-39	107	106	105	105
1919-39 <sup>e</sup>	103	n.a.	n.a.	93

n.a. = not available.

<sup>a</sup> Includes Saar from 1935 on.

<sup>b</sup> Includes Austria and Sudetenland.

<sup>c</sup> Six-month average.

<sup>d</sup> Three-month average.

<sup>e</sup> Data for 1919-22 do not apply strictly to 1925 area, since production of ceded areas was included before their cession.

SOURCE, by column:

(1) Paul Jostock, "The Long-Term Growth of National Income in Germany," *Income and Wealth* (International Association for Research in Income and Wealth, Series v, 1953), p. 118. Year 1871, linear interpolation between 1870 and 1877.

(2 and 3) 1871-1928, *Konjunkturstatistisches Handbuch* 1936 (Berlin), Institut für Konjunkturforschung), p. 47. Hereafter referred to as *IKF Handbuch*. For 1928-39, League of Nations, *Statistical Yearbook* 1939-40, p. 169 (postwar series spliced in 1928). Shifted to base 1913=100. The 1913 data for Reich area of 1925, *Sonderheft des Instituts für Konjunkturforschung* (Berlin, Institut für Konjunkturforschung, 1935), No. 31, p. 37. Hereafter referred to as *IKF Sonderheft*.

(4) 1871-1929, *IKF Sonderheft* No. 31, pp. 28, 56, and 58. For 1928-38, *Jahrbuch* 1939-40, p. 57 (spliced to earlier series in 1928). For 1939, League of Nations, *Statistical Yearbook* 1939-40, p. 169. Shifted to base 1913=100. The 1913 data for Reich area of 1925 obtained by averaging cols. 2 and 3. For weights see *IKF Sonderheft* No. 31, p. 37.

On a constant area basis, that is, after adjustment for the area changes from 1919 to 1922, total industrial production grew about sevenfold between 1871 and 1939. Such measures of growth are of course very

sensitive to small differences in the estimates for the base period. Moreover, the 1939 production figure happens to be somewhat more affected by the territorial acquisitions of the National Socialists than the real income figure.<sup>8</sup> Germany's rapid industrialization around the turn of the century is reflected vividly in the rise of this index. During this period, substitution of manufactured for home-produced goods accounts, among other things, for the greater increase in industrial production—where these changes are more concentrated—as compared with real national income. The rapid industrialization process is illustrated further by the growth of producers' as compared with consumers' goods. According to the index, producers' goods output increased tenfold from 1871 to 1939; consumers' goods output less than fourfold.

With regard to comparative trends before and after World War I, the production figures bear out the major conclusions derived from the data on real income. Whereas from 1871 to 1913 increases in production levels were extremely rapid (fivefold for total production and more than sixfold for producers' goods), the increases were much more moderate from 1913 to 1939 (48 percent in total production and 64 percent in producers' goods). Average industrial production during 1925-29 was 3 percent above 1913 levels, during 1925-32 about 5 percent below 1913, and during 1925-39 about 5 percent above 1913—findings which are all in close agreement with the national income data. For total production the average level can be computed for all the years 1919 through 1939.<sup>9</sup> The figures indicate that for the interwar period as a whole, industrial production was 7 percent below 1913 levels. We may fairly conclude, then, that Germany's economic growth during the Kaiserreich prior to 1913 did not continue at a comparable rate thereafter. The prewar period was clearly marked by growth. The interwar period, compared to 1913 levels, was not.

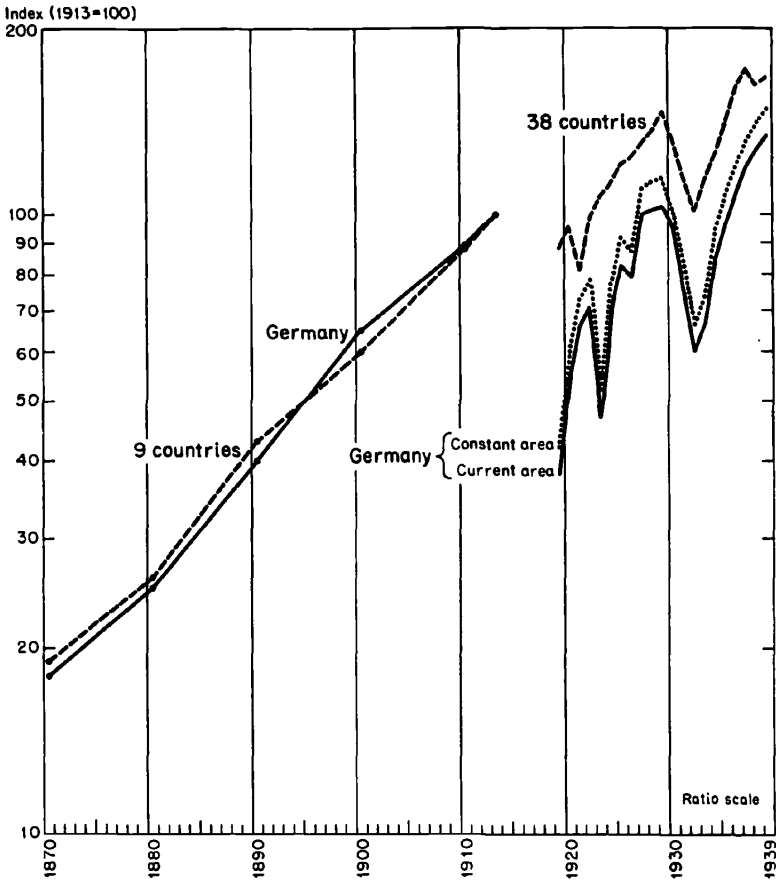
The conclusion that economic growth in the interwar period was of minor significance may seem to contradict data on German production trends during the period 1919-39. Table 3 and Chart 1 do indeed show that a growth trend through these data may rival pre-1913 growth rates. But closer examination reveals that the rapid increase is attributable mainly to two unusual circumstances: the extremely low production levels after World War I,<sup>10</sup> and the rearmament boom from 1936 to 1939. In fact, production did not reach the 1913 level until 1927. Despite the many

<sup>8</sup> See Table 2, footnotes a and b.

<sup>9</sup> This average has a known upward bias because it includes, for 1919-22, the production of subsequently ceded areas. Similarly, Saar production and at least part of Austrian and Sudeten production are included in some of the years at the end of the period.

<sup>10</sup> The movements from 1919 to 1923 are affected by many abnormal events, including the demobilization crisis of 1919. They are said to refer to "current Reich area," that is, they reflect cessions of territory between 1919 and 1922. The effect of these cessions is counteracted in part by industry migration from the ceded areas to the Reich (from Lorraine to the Ruhr area, for instance). The early data are affected further by the inflation and the Ruhr occupation of 1923.

CHART I  
Industrial Production, Germany and Other Countries, 1870-1939



Source: Table 3

abnormal elements in the German development, production trends in the German economy parallel closely the figures selected by the IKF to represent "world" production.<sup>11</sup> Thus, as concerns the *rate* of production growth, Germany's production trends resemble quite closely those of the large sample of nations chosen by the IKF to represent the "world." It is in the *level* relative to 1913 that the striking differences are to be observed. While world production averaged 25 percent above 1913 during 1919-39, German production was 7 percent below 1913 on a constant area basis, and 15 percent below the 1913 production of the Kaiserreich area.

Let us now look at the changes in income and production, as measured

<sup>11</sup> For countries included in "world" figures and for separate data on United States and Great Britain, see Table 3.

TABLE 3

Industrial Production, Germany and Other Countries, Selected Years,  
1870-1913; and All Years, 1919-1939  
(1913 = 100)

Year	Germany	United States	Great Britain	"World"
<i>1913 AREA</i>				<i>9 countries</i>
1870	18	13	43	19
1880	25	21	54	26
1890	40	36	66	43
1900	65	52	77	60
1910	89	85	87	88
1913	100	100	100	100
<i>1925 AREA<sup>a</sup></i>				
	<i>1913 production of:</i>			
	<i>prewar</i>	<i>postwar</i>		
	<i>area = 100</i>	<i>area = 100</i>		<i>38 countries</i>
1919	38	42	112	89
1920	55	61	122	91
1921	66	73	98	57
1922	71	78	126	78
1923	47	52	141	85
1924	70	77	134	91
1925	83	92	151	89
1926	79	87	160	76
1927	100	110	160	100
1928	102	113	168	98
1929	103	114	184	106
1930	90	99	157	99
1931	74	82	132	91
1932	60	66	99	91
1933	67	74	115	97
1934	85	94	127	110
1935	97	107	152	114
1936	108	119	178	123
1937	119	131	199	131
1938	127	140	149	117
1939	134 <sup>b</sup>	148 <sup>c</sup>	189	—

For Germany, manufacturing, mining, and construction; for Great Britain, manufacturing and mining; for the United States, manufacturing only.

<sup>a</sup> Includes Saar from March 1935 on.

<sup>b</sup> Six-month average.

<sup>c</sup> Five-month average.

SOURCE:

Germany: See source for Table 2, col. 4. The 1919-22 data include production of ceded areas before their cession.

United States: 1870-99, Edwin Frickey, *Production in the United States, 1860-1914* (Harvard Economic Studies, Volume LXXXII, 1947,) p. 54. (Spliced to later series in 1899.) For 1899-1939, Solomon Fabricant, *Employment in Manufacturing, 1899-1939* (National Bureau of Economic Research, 1942), p. 331.



Great Britain: Walther Hoffmann, "Ein Index der industriellen Produktion für Grossbritannien seit dem 18. Jahrhundert," *Weltwirtschaftliches Archiv*, Sept. 1934; and *Probleme der Weltwirtschaft*, Vol. 63.

World: 1870-1928, *IKF Sonderheft* No. 31, pp. 28 and 56. For 1928-39, *Statistik des In- und Auslands* (Berlin, Institut für Konjunkturforschung), *passim*. Hereafter referred to as *IKF Statistik des In- und Auslands*. Years 1930 and 1931 interpolated on the basis of unrevised 1929-32 data from *IKF Handbuch* 1936, p. 46. (Spliced to earlier series in 1928.) All data shifted to base 1913 = 100.

For 1870-1913 the countries included are Belgium, France, Great Britain, Russia, United States, Italy, Sweden, Finland, and Canada.

For 1919-39, the series covers 38 countries which, according to the IKF, account for 92 percent of world production.

on a per capita basis. Since population increased throughout the period, albeit at a diminishing rate, the per capita income and production figures must be expected to exhibit more moderate long-term growth than the totals. Table 4 shows that between 1871 and 1939 per capita real income increased about three times, and per capita industrial production three and a half times, whereas per capita consumers' goods production merely doubled. Comparison of the growth before and after World War I demonstrates again the greater contribution of the earlier period to the over-all development. Averages for the period 1925-32 are 6 to 11 percent below 1913 levels and averages for the period 1925-39 are 3 to 5 percent below. These trends are significant with respect to wages. Slow growth in consumers' goods obviously sets limits to real wages. Similarly, a halt in the rise of per capita production and income must affect wage levels. During the early sharp rise in over-all per capita real income, real earnings of wage earners could readily double alongside similar income increases of other social groups. Between 1913 and the interwar period, the situation was radically different; over-all per capita real income dropped. Under these circumstances, even maintenance of 1913 levels of average earnings for wage earners could have been accomplished only at the cost of a substantial reduction in the average real income of other population groups.

We may compare these trends with those prevailing in other industrial countries. Table 5 contains a summary of trends in real per capita national income for Germany, Great Britain, and the United States. The data show that the over-all increase in per capita real income between 1871 and 1939 was almost the same for Germany and Great Britain—roughly two and one-half times. During this period real per capita income in the United States almost quadrupled. Similar relationships are found for the movements prior to 1913. Between 1871 and 1913, German and British real per capita income just about doubled while that in the United States tripled. Between 1913 and 1939, income in all three countries showed increases of the same order—in Germany, 28 percent, in Great Britain, 31 percent, and in the United States 33 percent—and in all three the increases are less rapid than for the period 1871-1913 as a whole.<sup>12</sup>

<sup>12</sup> The German figure for 1939 includes the Saar.

TABLE 4  
 Real Income per Capita and Production per Capita in Germany,  
 Selected Years, 1871-1939  
 (1913 = 100)

Year	Production per Capita		
	Real Income per Capita <sup>a</sup> (1)	Total (2)	Consumers' goods (3)
	REICH AREA OF 1913		
1871	46	34	57
1890	86	54	76
1913	100	100	100
	REICH AREA OF 1925 <sup>b</sup>		
1913	100	100	100
1924	-	74	92
1925	90	88	96
1926	92	82	82
1927	99	104	104
1928	102	106	104
1929	101	106	101
1930	97	92	97
1931	85	76	92
1932	75	61	79
1933	79	68	84
1934	87	85	94
1935	93	95	90
1936	101	105	96
1937	109	115	100
1938	120	122	103
1939	128	127 <sup>cd</sup>	110 <sup>cd</sup>
Averages			
1925-32	93	89	94
1925-39	97	95 <sup>cd</sup>	95 <sup>cd</sup>

<sup>a</sup> National real income divided by population.

<sup>b</sup> 1935 on, including Saar.

<sup>c</sup> Includes Austria and Sudetenland for 1939.

<sup>d</sup> First six months of 1939.

SOURCE: Income and production data, see source to Table 2. Population data, see source to Table 1.

1938 and 1939 are not directly comparable. Production data include "as a rule Austria since the middle of 1938 and Sudetenland since January 1939" (League of Nations, *Statistical Yearbook*, 1939-40, p. 169). Population data, however, are without Austria or Sudetenland.

However, great differences do emerge if averages for the interwar period are compared with 1913 levels. During the period 1925-32, German real per capita income was 7 percent below that of 1913, British income was 7 percent higher, and United States income 26 percent higher than before

TABLE 5

Real National Income per Capita in Germany, Great Britain, and the United States, Selected Years, 1871-1939  
(1913 = 100)

	Germany (1)	Great Britain (2)	United States (3)
	<i>Reich area of 1913 Including Southern Ireland</i>		
Year			
1871	46	54	35
1890	86	83	69
1913	100	100	100
	<i>Reich area of 1925 Excluding Southern Ireland<sup>a</sup></i>		
1913	100	...	100
1929	101	112	144
1932	75	107	90
1939	128 <sup>b</sup>	131 <sup>c</sup>	133
Average for Period			
1925-32	93	107	126
1925-39	97 <sup>d</sup>	113	121

<sup>a</sup> Note that the basic real per capita income figures for the years after World War I refer to the current area of Great Britain (excluding Southern Ireland) but that the index base consists of the prewar per capita income of Great Britain as it existed in 1913 (including Southern Ireland). Prewar per capita income of the new area is not available.

<sup>b</sup> Includes Saar territory.

<sup>c</sup> Estimated, based on Prest and price deflator; our estimate.

<sup>d</sup> Includes Saar territory from 1935 on.

SOURCE, by column:

(1) Table 4.

(2) A. R. Prest, "National Income of the United Kingdom, 1870-1946," *Economic Journal*, 1948, pp. 55 and 58. Shifted to "factor payment" concept based on Jeffries' adjustment of money income; see James B. Jeffries and Dorothy Walters, "National Income of the United Kingdom, 1870-1952," Report to the International Association for Research in Income and Wealth (preliminary).

(3) From Simon Kuznets' worksheets, prepared for Capital Requirements Study, February 18, 1952 (unpublished).

World War I. For the longer period 1925-39, German real per capita income was 3 percent below 1913, while British income and United States income respectively were 13 and 21 percent above. Although certain allowances must be made for differences in concepts, character of basic data, and estimating techniques used in the income computations for the three countries, it seems clear that German real per capita income levels during the interwar period not only were low in comparison with Germany's own 1913 status, but also showed a less favorable development than those

of Great Britain and, more strikingly, those of the United States. Comparison of the three countries in this respect serves further to emphasize the significance of the break in pre-1913 growth trends for the later development of the German economy.

### *Labor Force: Structure and Organization*

#### CHANGES IN THE LABOR FORCE

For the purposes of the present study, description of general economic trends requires an account of the major changes in the labor market. We shall begin with the German labor force, restricting attention at this point to the broadest trends. Data for the entire period 1871-1945 are not available but information does exist for the census years 1882, 1895, 1907, 1925, 1933, and 1939. Between 1882 and 1939, population in the Reich area (as of 1937) increased from about 40 million to about 69 million—a gain of 70 percent. Members of the labor force during the same period increased from 17 million to 35 million—a rise of more than 100 percent.<sup>13</sup> The more rapid growth of the labor force in relation to the population as a whole (Table 6) is attributable in the main to two factors: the changing age structure of the population<sup>14</sup> and the increase in the number of female workers. Age groups capable of active work outstripped total population in rate of growth, approximating the growth of the entire labor force. Women in the labor force accounted for only a quarter of the female population in 1882 and 1895 but for more than a third after World War I.

The changing industrial composition of the German labor force may be traced in Table 7. Germany in 1882 was still largely agricultural; farming accounted for 7 out of 17 million gainfully occupied in that year. Industry (manufacturing, mining, building, and crafts) took up only 6 million members of the labor force. The remaining 4 million were in trade and services. Between 1882 and 1939, Germany's agricultural workers increased by one-fourth, but all other major groups of the labor force except domestic servants swelled more rapidly. It is not surprising that the number of industrial workers should have increased almost two and one-half times, since the country was undergoing rapid industrialization during that period. In percentage terms, however, the rise in industrial employment was far surpassed by employment rises in public and private services (up 263 percent) and in trade, transportation, and communications (up 325 percent). These developments led to major changes in the industrial composition of the labor force.

The most striking change was the drastic decline in the relative importance of agriculture. In 1882 about 42 percent of the labor force depended

<sup>13</sup> Labor force data in this section refer to the Reich area of 1937, which includes the Saar.

<sup>14</sup> Statistisches Reichsamt, *Deutsche Wirtschaftskunde*, 1933, pp. 40-44.

TABLE 6  
Labor Force and Population, by Sex, Census Years, 1881-1939

<i>Year</i>	<i>Labor Force</i> (millions)	<i>Population</i> (millions)	<i>Percentage</i> <i>in</i> <i>Labor Force</i>
TOTAL			
1882	17.0	40.2	42.3
1895	19.9	46.4	42.9
1907	25.4	55.6	45.7
1925	32.3	63.2	51.1
1933	32.6	66.0	49.4
1939	34.6	69.3	49.9
MALE			
1882	12.0	19.7	60.9
1895	14.0	22.8	61.4
1907	16.9	27.4	61.7
1925	20.7	30.6	67.6
1933	21.0	32.1	65.4
1939	21.8	33.9	64.3
FEMALE			
1882	5.0	20.5	24.4
1895	5.9	23.6	25.0
1907	8.5	28.2	30.1
1925	11.6	32.6	35.6
1933	11.6	33.9	34.2
1939	12.8	35.4	36.2

For Reich area of December 31, 1937 (includes Saar); census classification of 1933, except for 1939.

SOURCE: 1882-1933, *Jahrbuch 1939-40*, p. 29. For 1939, *Wirtschaft und Statistik*, 1941, Sonderbeilage zu Heft 19.

on agricultural pursuits, but by 1939 the comparable figure was only 26 percent. The relative position of the industrial labor force increased but moderately—from 36 percent in 1882 to 42 percent in 1939, despite the fervid industrialization of Germany during that period. The apparent discrepancy is explained by productivity. A great change occurred in relative importance of employment in the trade, transportation, and communications group, which rose from 8 percent in 1882 to 18 percent in 1939, largely because of the development of a national market and the increasing dependence on manufactured goods. Public and private services also claimed a larger proportion of the working force. The marked increase that occurred in this category during the latter census years represents the growing importance of the Nazi government's control functions, and its expansion of military and quasi-military forces. The decline in relative importance of domestic services was undoubtedly a

TABLE 7

Labor Force, by Major Industrial Groups, Census Years, 1882-1939

Year	Agriculture	Manufacturing, Mining, Building Crafts	Trade, Transportation, and Communications	Public and Private Services Except Domestic	Domestic Service	Total Labor Force
NUMBER (thousands)						
1882	7,173	6,050	1,427	991	1,364	17,005
1895	7,218	7,744	2,122	1,385	1,440	19,909
1907	8,597	10,118	3,464	1,726	1,473	25,378
1925	9,807	13,667	5,240	2,208	1,407	32,329
1933	9,388	13,235	5,994	2,725	1,280	32,622
1939	8,985	14,603	6,071	3,599	1,358	34,617
INDEXES (1882 = 100)						
1882	100.0	100.0	100.0	100.0	100.0	100.0
1895	100.6	128.0	148.7	139.8	105.6	117.1
1907	119.9	167.2	242.7	174.2	108.0	149.2
1925	136.7	225.9	367.2	222.8	103.2	190.1
1933	130.9	218.8	420.0	275.0	93.8	191.8
1939	125.3	241.4	425.4	363.2	99.6	203.6
PERCENT OF TOTAL						
1882	42.2	35.6	8.4	5.8	8.0	100
1895	36.3	38.9	10.7	6.9	7.2	100
1907	33.9	39.9	13.6	6.8	5.8	100
1925	30.3	42.3	16.2	6.8	4.4	100
1933	28.8	40.6	18.4	8.3	3.9	100
1939	26.0	42.2	17.5	10.4	3.9	100

For Reich area of December 31, 1937 (includes Saar); census classification of 1933, except for 1939.

SOURCE: 1882-1933, *Jahrbuch* 1939-40, p. 29. For 1939, *Wirtschaft und Statistik*, 1941 Sonderbeilage zu Heft 19.

result of several tendencies: the development of wider opportunities for women in other types of employment; the lessening importance of the German middle classes; the disinclination of women to conform to the traditional subservience of German domestic workers; and for the years after 1939, the efforts of the National Socialist regime to channel the female labor supply into what were regarded as essential occupations.

Also, within manufacturing drastic changes occurred in the industrial composition of employment. Table 8 contains information on major structural changes, for selected years between 1882 and 1939. Note the drastic declines in the relative importance of textiles, clothing, and food, and the growing role of the metal and chemical industries. During the period under review, the share of consumers' goods declined from almost half to little more than a third, and the share of producers' goods increased

TABLE 8

Employment in Major Manufacturing Industries, Mining, and Transportation, Selected Years, 1882-1939

Year	Stone and Metal- Clay working		Chemicals	Building	Textiles	Clothing	Leather	Foods and Tobacco		Wood	Paper and Products		Printing	Railroads	Shipping	Total
	Mining	Clay working						Foods and Tobacco	Paper and Products							
NUMBER (thousands)																
1882	427	307	573	106	372	572	386	70	522	239	85	61	305	58	4,081	
1893	528	504	902	161	854	758	499	96	717	368	124	105	415	68	6,097	
1903	740	642	1,412	237	1,127	874	684	119	865	522	177	167	560	94	8,220	
1913	1,047	650	2,209	327	1,458	995	862	148	1,222	601	243	231	787	125	10,905	
1929	1,064	648	2,482	540	1,482	1,113	878	113	1,203	722	262	313	713	117	11,650	
1939	963	744	4,326	794	2,184	1,355	972	144	1,359	762	312	336	966	133	15,350	
INDEXES (1882 = 100)																
1882	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1893	123.7	164.2	157.4	151.9	229.6	132.5	129.3	137.1	137.4	154.0	145.9	172.1	136.1	117.2	149.4	
1903	173.3	209.1	246.4	223.6	303.0	152.8	177.2	170.0	165.7	218.4	208.2	273.8	183.6	162.1	201.4	
1913	245.2	211.7	385.5	308.5	391.9	174.0	223.3	211.4	234.1	251.5	285.9	378.7	258.0	215.5	267.2	
1929	249.2	211.1	433.2	509.4	398.4	194.6	227.5	161.4	230.5	302.1	308.2	513.1	233.8	201.7	285.5	
1939	225.5	242.3	755.0	749.1	587.1	236.9	251.8	205.7	260.3	318.8	367.1	551.0	316.7	229.3	376.1	
PERCENT OF TOTAL EMPLOYMENT																
1882	10.5	7.5	14.0	2.6	9.1	14.0	9.5	1.7	12.8	5.9	2.1	1.5	7.5	1.4	100.0	
1893	8.7	8.3	14.8	2.6	14.0	12.4	8.2	1.6	11.8	6.0	2.0	1.7	6.8	1.1	100.0	
1903	9.0	7.8	17.2	2.9	13.7	10.6	8.3	1.4	10.5	6.4	2.2	2.0	6.8	1.1	100.0	
1913	9.6	6.0	20.3	3.0	13.4	9.1	7.9	1.4	11.2	5.5	2.2	2.1	7.2	1.1	100.0	
1929	9.1	5.6	21.3	4.6	12.7	9.6	7.5	1.0	10.3	6.2	2.2	2.7	6.1	1.0	100.0	
1939	6.3	4.8	28.2	5.2	14.2	8.8	6.3	0.9	8.9	5.0	2.0	2.2	6.3	0.9	100.0	

SOURCE: F. Grumbach and H. König, "Beschäftigung und Löhne der deutschen Industriewirtschaft, 1888-1954," *Weltwirtschaftliches Archiv*, 1957, Heft 1, pp. 128, 129, 134, 135 (Tables 2 and 4).

The employment estimates are based on the number of workers covered by accident insurance, adjusted for variation in statutory coverage.

correspondingly.<sup>15</sup> This reflects, of course, the process of Germany's internal industrialization and her growing participation in the world export of machinery and chemicals.

Let us examine the numerical role of the wage earner in Germany's growing economy. Table 9 shows that in 1882 wage earners formed about

TABLE 9  
Labor Force, by Socio-economic Status, Census Years, 1882-1939

Year	<i>Independent Proprietors and Higher Officers</i>	<i>Unpaid Family Members</i>	<i>Salary Earners</i>	<i>Wage Earners</i>	<i>Domestic Servants</i>	<i>Total Labor Force</i>
NUMBER (thousands)						
1882	4,359	1,692	1,192	8,406	1,356	17,005
1895	4,649	1,804	2,129	9,892	1,434	19,909
1907	4,779	3,799	3,333	12,012	1,457	25,378
1925	5,129	5,477	5,499	14,886	1,339	32,329
1933	5,338	5,354	5,570	15,131	1,229	32,622
1939	4,816	5,676	6,548	16,237	1,340	34,617
INDEXES (1882 = 100)						
1882	100.0	100.0	100.0	100.0	100.0	100.0
1895	106.7	106.6	178.6	117.7	105.8	117.1
1907	109.6	224.5	279.6	142.9	107.4	149.2
1925	117.7	323.7	461.3	177.1	98.7	190.1
1933	122.5	316.4	467.3	180.0	90.6	191.8
1939	110.5	335.5	549.3	193.2	98.8	203.6
PERCENT OF TOTAL						
1882	25.6	10.0	7.0	49.4	8.0	100
1895	23.3	9.1	10.7	49.7	7.2	100
1907	18.8	15.0	13.1	47.3	5.8	100
1925	15.9	16.9	17.0	46.1	4.1	100
1933	16.4	16.4	17.1	46.4	3.7	100
1939	13.9	16.4	18.9	46.9	3.9	100

For Reich area of December 31, 1937 (includes Saar); census classification of 1933, except for 1939.

SOURCE: 1882-1933, *Jahrbuch* 1939-40, p. 29. For 1939, *Wirtschaft und Statistik*, 1941, Sonderbeilage zu Heft 19.

half, and by 1939 a little less than half, of Germany's labor force. This remarkable stability contrasts both with the rapidly increasing proportion of salary earners and the decline of self-employed persons and domestic servants. Wage earners are, of course, found in all major segments of the economy—agriculture, industry, trade, services, and the like. Industrial wage earners, with whom this study is primarily concerned, form only a

<sup>15</sup> Since Table 8 contains also employment in mining, transportation, etc., the share of producers' goods is not simply the difference between that of consumers' goods and 100 percent.



portion of the larger group. In 1925, for instance, there were about 10 million of them, compared with almost 15 million wage earners in general. The rate of their increase was quite different from that of wage earners as a whole. While the number of all wage earners about doubled between 1882 and 1939, those attached to industry more nearly tripled. And while wage earners at large declined in relative importance during this period, industrial workers increased their proportion of the labor force from about a quarter to about a third. The absolute and the relative changes in the number of industrial workers are set forth in Table 10. It is this group,

TABLE 10

Total Labor Force and Wage Earners in Industry, Census Years, 1882-1939

	<i>Total Labor Force</i> (millions) (1)	WAGE EARNERS IN INDUSTRY	
		<i>Number</i> (millions) (2)	<i>Percent of</i> <i>Total Labor Force</i> (3)
1882	17.0	4.1	24.1
1895	19.9	5.6	28.1
1907	25.4	7.8	30.7
1925	32.3	10.5	32.5
1933	32.6	10.1	31.0
1939	34.6	11.2	32.4

For Reich area of December 31, 1937 (includes Saar); census classification of 1933 except for 1939.

SOURCE, by column:

(1): See Table 9.

(2): 1939, *Wirtschaft und Statistik*, 1941, Sonderbeilage zu Heft 19. For 1933 and 1925, *Jahrbuch* 1939-40 p. 31. Area and census classification of 1933. For 1907, our estimate, based on percentage increase between 1907 and 1925, using 1925 area and 1925 census classification (*Statistik des Deutschen Reichs*, N.F. 402, p. 226). For 1895 and 1882, our estimate, based on percentage increases between 1895-1907 and 1882-95, using 1907 area and 1907 census classification (*Statistik des Deutschen Reichs*, N. F. 211, p. 76\*).

plus a small number of industrial entrepreneurs and managers included in the "independent" group, that make up the industrial labor market with which this study is concerned and which will be described further.

#### ORGANIZATION OF WORKERS

As German industry developed during 1871-1945 the structure of the labor market underwent profound changes with respect to the organization of both sellers and buyers of labor. At the beginning of the period this market was virtually unorganized, with a few workers' or employers' associations operating only on a local basis. There were no labor contracts, and the government played an altogether insignificant role. Toward the end of the period, regulation of the labor market was compulsory and

a function of the government. Both workers and employers were members of the same organization, and wages and working conditions were determined centrally by an all-powerful totalitarian regime. We shall now trace the course of this development.

Two years before the formation of the Reich, the *Gewerbeordnung* (industry code) of the North German Federation had revoked the anti-coalition law. Workers in the young Reich of 1871 could not only congregate in *Vereinen* (clubs) with educational and cultural objectives, as they had previously done; they could also form organizations for the explicit purpose of increasing their strength in the labor market—that is, band together in trade unions. The early 1870's witnessed the creation of many such organizations—on a local level and within a single occupation. Characteristically the organizations were founded largely along ideological lines, by groups as much interested in political or religious aims as in unionism for its own sake. The German trade unions began at their very inception as “liberal” or “socialist” or “Christian,” distinctions which continued right up to their destruction by the Hitler regime. One reason for the development of several unions, each moving along its own ideological path, was the political backwardness of Germany itself. Social reforms were urgent issues for all workers, but the schemes for such reforms varied in their appeal to religious and political groupings. This differentiation prevented the growth of a unified trade union movement like that of Great Britain. However, sponsorship of political reforms by the German unions undoubtedly helped to speed their growth.

Union activities in Germany did not begin with the freedoms proclaimed by the *Gewerbeordnung*. The various educational, cultural, social, and insurance associations of workers played a role in wage demands, strikes, and strike support. In several industries, for example printing and tobacco products, workers' organizations existed on a national scale. But only during the late sixties came the first attempts to unite the local or national organizations of different industries into broad federations. A Congress held during September 1868 in Berlin, under Lassalle's auspices, engaged in the organization and coordination of union activities. In the same year Karl Hirsch, under the auspices of the *Fortschrittspartei* (Progressive Party) organized the Hirsch-Dunker Unions. And the Socialists Liebknecht and Bebel called for and supported the organization of unions at their party's Congress at Eisenach, in 1869. In the course of these various attempts, many national unions were founded—some before and some after the Franco-Prussian War.

The Hirsch-Dunker group, or *Deutsche Gewerkvereine*, was a central organization of unions founded in 1869. The membership of the Hirsch-Dunker Unions was small in the first decade, between 10,000 and 20,000 workers, but it grew to about 100,000 around the turn of the century and remained near that level until the outbreak of World War I. This organization was liberal and patriotic—in contrast to the socialist and

internationalist persuasion of the groups that were later to form the Free Trade Unions. The Hirsch-Dunker Unions sought to cooperate with employers and to attain betterment of wages and working conditions by predominantly peaceful means, although in principle strikes were not ruled out. Their program was modeled largely upon that of the early British trade unions, with emphasis on economic rather than political aims.

The most important German union organization was strongly political, the *Sozialistische Gewerkschaften*, or *Freie Gewerkschaften* (Socialist Trade Unions, or Free Trade Unions). Many of these unions were founded largely as a result of the activities of the *Sozialdemokratische Partei* (Social Democratic Party), which had adopted the development of trade unions in all industries as a major interest since its founding. Although the Free Trade Unions were formally independent organizations, they were always closely linked to the program and leadership of the Social Democratic Party. Many union leaders were party members; they embraced the ideologies of the party, including its tenets on the class struggle and its anticlerical orientation.

Our first estimate of the strength of the Free Trade Unions dates from 1877. In that year total membership was given as 49,000.<sup>16</sup> In spite of the numerical insignificance of the Free Unions and of the Social Democratic Party in those early years, the rulers of the new Reich regarded them as sufficiently dangerous to existing institutions and to the central authority to warrant suppression. Bismarck's *Sozialistengesetz* (anti-Socialist law) of 1878 declared the Social Democratic Party illegal and suppressed, in rapid succession, one after the other of the Socialist Trade Unions. The law remained in force until 1890. In the years following its enactment vigorous prosecution threatened to destroy whatever organizational strength the free unions had built up. Severe and persistent persecution led to dissolution or isolation of local organizations, imprisonment or inactivity of union leaders, and demoralization of members.<sup>17</sup> However, during the later years of the law, the development of so-called *Fachvereine* (occupational organizations with ostensibly educational aims) served to maintain the organizational continuity of the Free Unions and to preserve their aims. Six weeks after revocation of the law in 1890 a union congress was convoked and the so-called *Generalkommission* was established as a national federation and organizational center for the recently legalized

<sup>16</sup> Original estimate by Geib, in *Pionier*, January 26, 1878. Quoted from Karl Zwing, *Geschichte der Deutschen Freien Gewerkschaften*, Gewerkschafts-Archiv Bücherei, Bd. 5 (Jena, 1926), pp. 52-53.

<sup>17</sup> About the effects of the Anti-Socialist Law on the carpenters union see Josef Schmöle, *Die Sozialdemokratischen Gewerkschaften in Deutschland seit dem Erlasse des Sozialistengesetzes*, Zweiter Teil, Erste Abteilung (Jena), 1898. The author describes, among other things, the effect of the law on wages, working time, and morale. According to Schmöle, "the hair-raising wage cuts and the increasing working time in 1879 and 1880 were usually accepted without any resistance." (p. 16.)

TABLE 11  
 Membership of German Workers in Three Largest Unions, 1891-1931  
 (thousands)

<i>Year</i>	<i>Free Unions</i> (1)	<i>Christian Unions</i> (2)	<i>Hirsch-Dunker Unions</i> (3)	<i>Sum of Big Three</i> (4)
1891	278	...	66	344
1892	237	...	45	282
1893	224	...		285
1894	246	...	67	313
1895	259	6 <sup>a</sup>	67	332
1896	329	8 <sup>a</sup>	72	409
1897	412	21 <sup>a</sup>	80	513
1898	494	34 <sup>a</sup>	83	611
1899	580	56 <sup>a</sup>	87	723
1900	680	77 <sup>a</sup>	92	849
1901	678	84	65	827
1902	733	85	103	921
1903	888	91	110	1,089
1904	1,052	108	112	1,272
1905	1,345	188	117	1,650
1906	1,690	247	119	2,056
1907	1,866	274	109	2,249
1908	1,832	265	106	2,203
1909	1,833	271	108	2,212
1910	2,017	295	123	2,435
1911	2,340	341	108	2,789
1912	2,553	345	109	3,007
1913	2,574	343	107	3,024
1914	2,076	283	78	2,437
1915	1,159	176	61	1,396
1916	967	174	58	1,199
1917	1,107	244	79	1,430
1918	1,665	405	114	2,184
1919	5,479	858	190	6,527
1920	7,890	1,077	226	9,193
1921	7,568	986	225	8,779
1922	7,895	1,049	231	9,175
1923	7,138	938	216	8,292
1924	4,618	613 <sup>a</sup>	147	5,378
1925	4,156	588 <sup>a</sup>	158	4,902
1926	3,977	532 <sup>a</sup>	163	4,672
1927	4,150	606 <sup>a</sup>	168	4,924
1928	4,654	647 <sup>a</sup>	169	5,469
1929	4,906	673 <sup>a</sup>	169	5,470
1930	4,822	659 <sup>a</sup>	198	5,679
1931	4,418	578 <sup>a</sup>	181	5,177

<sup>a</sup> End-of-year figures.

SOURCE: M. Bergmann and others, *Handbuch der Arbeit*, pp. 46-50, 199, 254-57.

unions. The number of workers involved in this effort was about 350,000,<sup>18</sup> representing a sevenfold increase over the 49,000 estimated Free Trade Union members as of 1877, the year before the anti-Socialist law was put into effect.

An attempt to organize workers outside the domain of the socialist unions was started later by the so-called *Christliche Gewerkschaften* (Christian Trade Unions). The foundation of these organizations must be largely attributed to the animosity of the Free Unions toward the Church. The Christian Unions were formed around 1900 from several separate occupational organizations (miners, textile workers, etc.), located mainly in the Catholic regions of western Germany. They held their first congress in 1899 and established a General Secretariat in Cologne in 1903 under the leadership of Adam Stegerwald. At that time, the Christian unions had close to 100,000 members. Between 1903 and the beginning of World War I they more than tripled their membership, which numbered 343,000 in 1913. The aims of the Christian unions were rather similar to those of the Hirsch-Dunker organization, except for their religious slant.

The large-scale expansion of the trade unions and the growth of their power in the labor market began about two decades before World War I. Table 11 shows that membership of the three large unions reached a combined total of more than 1 million in 1903, 2 million in 1906, and 3 million in 1912. The phenomenal growth of the unions during these years enabled them to become decisive participants in the determination of wages and working conditions. During the early years of World War I, union membership dropped sharply—a loss of almost two-thirds. Induction of workers into the army, loss of a number of the prewar gains of labor, and disappointment of many members with the position the unions had taken toward the war must have contributed to the decline.<sup>19</sup> In the latter years of the war, the unions regained some of their importance. The gradual recovery after 1916 is explained in part by the influx of female labor into factories and unions. By 1918 union membership had climbed again, surpassing the 2 million mark.

The immediate postwar period saw the peak of union strength in Germany. In 1919 the *Allgemeine Deutsche Gewerkschaftsbund* (ADGB) was formed as the central organization of the Free Trade Unions, succeeding the *Generalkommission*. Membership of the Big Three in that year was more than double the prewar total. Between 1919 and 1923 the German unions constituted the largest national labor movement in the world,<sup>20</sup>

<sup>18</sup> Maurycy Bergmann and others, *Handbuch der Arbeit*, Vol. III (Jena, 1931), p. 37.

<sup>19</sup> The criticism came from two directions. The radical Left resented the *Burgfrieden* (national unity) policy of the unions. The extreme Right criticized the union leaders for their former international orientation and for insufficient enthusiasm toward the government's war aims.

<sup>20</sup> See Leo Wolman, *Ebb and Flow in Trade Unionism* (National Bureau of Economic Research, 1936), Appendix Table XII.

TABLE 12  
 Union Membership of German Workers and White-Collar Employees, by Affiliation, 1922, 1929, and 1932  
 (thousands)

	1922			1929			1932		
	Wage Earners	White- Collar Employees	Total	Wage Earners	White- Collar Employees	Total	Wage Earners	White- Collar Employees	Total
(1) Free trade unions	7,817	997	8,814	4,867	421	5,288	4,104	466	4,570
(2) Christian unions	1,031	850	1,881	764	502	1,266	689	594	1,283
(3) Hirsch-Dunker unions	231	447	678	204	361	565	181	393	574
(4) Cooperationists	222	62	284	...	67	67	123	...	123
(5) Communist and syndicalist unions	247	...	247	72	...	72	36	...	36
(6) Confessional unions	40	11	51	...	...	...	...	...	...
(7) Other independent unions	92	1,262	1,354	43	261	304	62	287	349
(1) + (2) + (3)	9,079	2,294	11,373	5,835	1,284	7,119	4,974	1,453	6,427
Total	9,680	3,629	13,309	5,950	1,612	7,562	5,195	1,740	6,935
Free unions (1) as percent of total	80.8	27.5	66.2	81.8	26.1	69.9	79.0	26.8	65.9
Big Three as percent of total	93.8	63.2	85.5	98.1	79.7	94.1	95.7	83.5	92.7

SOURCE: 1922, *Reichsarbeitsblatt* 1924, Nr 1-2 p. 21\*. For 1929, *Wirtschaftskunde*, 1933, p. 301. All figures refer to beginning of *Jahrbuch* 1930, p. 575. For 1932, Statistisches Reichsamt, *Deutsche* year.

with a membership of about 9 million. From 1922 to 1926, however, union membership declined steadily. The largest losses, of close to 3 million, occurred during 1923-24, reflecting partly the ineffectiveness of the unions in their attempts to protect real wage standards during the inflation, their inability to prevent infringement of the eight-hour day, and their failure to assure acceptable wage levels during the period of currency stabilization. The splitting of the Free Trade Unions into a social-democratic majority and a communist-dominated minority contributed effectively to the weakening of the movement. The low point was reached in 1926, when the Big Three counted only 4.7 million members. From 1926 to 1929 there was another rise in union membership, which increased to 5.7 million but then began to decrease—in rough conformity with the ups and downs of general business conditions.<sup>21</sup> Total union strength is not to be measured solely by membership in the three large centralized organizations. Table 12 presents a complete enumeration of union membership for 1922, 1929, and 1932 as given by the Statistische Reichsamts. In the three selected years organized manual workers accounted for about three-fourths of all organized employees, and white-collar workers for the remaining fourth. Within the organization of wage earners proper, the Free Trade Unions represented about 80 percent and the Big Three well over 90 percent of all organized workers. The situation was different, however, in the case of white-collar workers. In this category, the free unions took in only some 30 percent, whereas the Big Three had between 60 and 85 percent. The relative strength of the non-Socialist unions thus should not be judged on the basis of their wage earner membership alone.

During the Great Depression union strength was reduced. In view of the limited ability of the unions to protect the interests of their members effectively in this period, it is surprising that union affiliation held up as well as it did. Workers' membership in the Big Three declined from 5.8

<sup>21</sup> An indication should be given of the degree of organization reached in the course of union development. A comparison of workers organized by the three big unions and total number of wage earners counted in the nearest census year is presented below:

	<u>Union Members</u>	<u>Workers</u>	<u>Percentage</u>
	<i>Big Three</i> (000's)	<i>Census Years</i> (000's)	<i>Organized in</i> <i>Unions</i>
	(1)	(2)	(3)
1907	2,249	13,311	17
1922	9,175	...	57 <sup>a</sup>
1925	4,902	16,024	31
1929	5,748	...	36 <sup>a</sup>

<sup>a</sup> Related to 1925 census count. According to the census count of 1933, there were 16,158,000 workers in the comparable Reich area. Substitution of this figure would not affect the percentage of workers organized.

SOURCE: Col. 1 is from Table 11; Col. 2 from *Handbuch* 1928-40, p. 31 (Reich area of 1934).

million in 1929 to 5.0 million by the end of 1931, and probably somewhat further in 1932. Membership of white-collar workers in the Big Three even showed an increase—from 1.3 million in 1929 to 1.5 million in 1932. A partial explanation of the mildness of the decline of total union membership is that unemployed members could stay in a union, paying no fees or only token fees; unemployed persons were even accepted as new members. However, apart from this technical aspect of membership rules, the sustained loyalty of the workers to their organizations remains an important fact of the chronicle. Incidentally, even during this severest of all depressions, the Communists were not successful, to any important extent, either in splitting the old-time unions or in organizing unions of their own. And during the period of the Weimar Republic the factory organization of the National Socialists, NSBO, made scarcely any attempt to assume union functions or to compete with the organizations then existing.

When the National Socialist regime came to power in January 1933, one of its early acts was the destruction of the trade unions. A new organization, the German Labor Front, was formed and declared to represent all gainfully occupied persons, whether they were employers, employees, independent craftsmen, businessmen, or professionals. Practically everyone, except farmers and government employees, was to be included in the Labor Front. Numerically, the Labor Front grew rapidly into a tremendous organization. In 1939 it included about 20 million individual members in Germany proper and an additional 3 million members in Austria, Sudetenland, Danzig and the western territories of Poland. To these figures should be added 10 million so-called collective members—persons in agricultural, professional, and cultural organizations.

The German Labor Front differed from the old unions in composition, organization, and functions. In the first place, it was not exclusively an employees' organization. Second, it was not a voluntary, democratically run association, but a compulsory organization ruled by the representatives of the National Socialist dictatorship. Third, and most important, the function of the Labor Front was not to represent employee interests in the determination of wages and working conditions, but to maintain tranquillity in the labor market within the framework of National Socialist institutions. A part of this job was political and economic pacification of the workers with deviating ideological and organizational traditions. That this pacification could be successfully attained in a relatively short time remains one of the sociologically most interesting—albeit disquieting—proofs of the instability of political attitudes in a modern industrial society. Finally, the Labor Front amassed a huge fund from contributions of its members, a fund providing important resources for the Government. The role of the Labor Front in influencing conditions of work was an indirect one: it prevented the existence of any kind of labor organization independent of Nazi control and thus permitted effective realization of Nazi directives affecting wages and other working conditions.



ORGANIZATION OF EMPLOYERS<sup>22</sup>

During the long period 1871-1945, great changes took place in the development of large enterprises; these changes profoundly affected the labor market. In 1875 there were only 115 industrial establishments employing more than 1,000 workers; in 1939 there were 1,344. In the latter year these enterprises constituted less than 1 percent of all business establishments but employed 23 percent of the labor force. In the same year there were 9,064 establishments that employed more than 200 workers (compared with 1,549 in 1875). These accounted for about 5 percent of all industrial units, but employed 44 percent of all workers.<sup>23</sup> Aside from the labor market organization brought about by the growing number of larger firms, we must consider also the effect of organizations formed to control product markets (cartels, syndicates, etc.), or to influence tariffs, export policy, taxes, and other measures of interest to business. Although these groups claimed no direct concern with the labor market, their organizational ties were not without influence in this sphere.

Certain combinations were formed for the express purpose of furthering employer interests in the labor market. These associations of employers were usually created to neutralize or defeat the forces of organized labor. As early as 1871-73 there sprang up numerous local associations of employers, usually within the same industry, to deal with workers' demands for higher wages and shorter hours. After the crash of 1873, employment declined, prices fell, labor organizations became quiescent, and most of the associations of employers disappeared. For the next few decades the few remaining employers' organizations were relatively inactive and limited to a few trades.

It was a strike of textile workers in Saxony, in the year 1903, that revived employers' interest in banding together. To combat the solidarity of the Free Trade Unions, employers in several industries cooperated to provide support for the textile industrialists. This activity resulted in two permanent associations of employers, which in 1913 were fused into one, the *Vereinigung Deutscher Arbeitgeberverbände* (Federation of German Employers Associations) or VDA, jointly employing about 1.8 million persons in that year.<sup>24</sup>

Under the Weimar Republic the VDA was a highly centralized, efficient

<sup>22</sup> For a general description of the development and policies of employer organizations see Adolf Weber, *Der Kampf zwischen Kapital und Arbeit* (Tübingen, 1954). A radically critical treatment of the topic is found in Jürgen Kuczynski's *Studien zur Geschichte des Deutschen Imperialismus* (Berlin, 1948), Vol. 1, Chapter 2.

<sup>23</sup> For the 1939 data see *Handbuch 1928-44*, p. 245. For the 1875 data see *Statistik des deutschen Reichs*, No. 35 (Berlin, 1879), p. 853.

<sup>24</sup> Employer organizations grew more or less in proportion to union membership. In 1904, when the three big unions had 1.3 million members, the employers' organizations covered 1.1 million workers. By 1913, the three unions counted 3.0 million members, and the employers' association covered 1.8 million workers. In 1920, when the three unions reported 9.2 million members, the employers' associations covered about 8 million.

association, consisting of two organizations, one functioning on an industrial and the other on a regional basis. Depending upon the problem of the hour, either one of these organizations, or both together, could take action. A separate corporation, the *Deutsche Streik Schutz*, provided strike insurance. Apart from labor market activities proper, VDA also entered into arrangements with nonindustrial employer associations for exchange of information and cooperation in legislative efforts and other matters of common interest. It maintained ties with industrial organizations like the *Reichsverband der Deutschen Industrie* in order to coordinate actions affecting general economic policy. During the years 1920-32, VDA and its affiliated associations wielded great power in the labor market.

The reorganization of German business under the Nazis affected employer representation in a radical manner. The VDA dissolved shortly after the destruction of the old trade unions. A law of February 27, 1934, designed to promote an "organic structure of the German Economy," gave the Ministry of Economics broad authority to reshuffle trade associations, extend their membership, and recognize them as exclusive representatives of their industry. The leadership principle was to permeate the functioning of these organizations. In the course of executing this law, many of the business organizations that had flourished during the Weimar Republic were incorporated into a new structure of "groups" and "chambers," without drastic changes in personnel. On the other hand, their policies were, of course, fitted into the patterns decreed by the Nazi administration.<sup>25</sup> Since, after the abolition of collective bargaining, wages and working conditions were no longer to be determined by independent labor market factors, collective representation of employer interests was declared obsolete. Ideologically, the separate representation of employer interests ran counter to the National Socialist tenet that there were no "class" interests, but only a national interest.

#### DETERMINATION OF WAGES AND WORKING CONDITIONS

During the early decades of the Reich, wages and working conditions were determined largely by the employers, whose prerogatives in this respect were regarded as property rights flowing from ownership of their establishments. These were the years when the labor market most nearly approached the state of "perfect competition," so that short-term changes in wages resulted only from abundance or scarcity of workers at the posted rate. The *Gewerbeordnung* (industry code) of the *Norddeutsche Bund* (North German Federation) of 1869 permitted coalition in unions, but restricted this right to industrial workers. It also limited the unions' freedom to recruit and to strike, by invoking penalties where such activities might be coercive. After the foundation of the Kaiserreich, the *Gewerbeordnung*

<sup>25</sup> On the organization of business under National Socialism see Franz Neumann, *Behemoth* (Oxford University Press, 1942), pp. 240-47; and L. Hamburger, *How Nazi Germany Has Controlled Business* (Brookings Institution, 1943).

was applied to the whole of Germany. The government tolerated unions in principle, but in actual cases of labor strife the local police authorities frequently prevented the workers' organizations from exercising their new rights. Agitating, organizing, demonstrating, and striking were often regarded as violations of the law-and-order provisions of the *Allgemeine Landrecht*. Also, unions were frequently closed down when public prosecutors started procedures against union leaders for violations of the old Prussian *Vereinsgesetz* of 1850—a law plainly superseded by the *Gewerbeordnung*.<sup>26</sup> In spite of these vexations, organizational activity continued and strikes did occur; they must have affected wages and working conditions to some degree. On the whole, collective action on the part of workers was usually local and spontaneous, except in the printing trades.

Bismarck's anti-Socialist laws (1878-90) established the right of the police to suppress subversive institutions and publications, and to exile persons responsible for subversive activities. Originally directed primarily against Socialists, it led to intense persecution of union leaders and to the dissolution of unions. Only local, strictly vocational associations were tolerated. At the same time, however, the state supported legislation favorable to labor. Thus during the period of the anti-Socialist laws, a workers' insurance system was built which became a model for other industrial nations. In 1883 nation-wide sickness insurance was established, in 1884 accident insurance, in 1889 disability and old age insurance. However, the government took little positive action on working conditions and wages. The industry code contained some elementary provisions for the protection of women and children, and for the inspection of industrial enterprises to insure minimum standards of hygiene. But there was no regulation of maximum hours or minimum wages.

The great era of social legislation for the protection of labor and the improvement of working conditions started after 1890, under the leadership of the Prussian Secretary of Commerce, von Berlepsch. In 1891 a far-reaching revision of the *Gewerbeordnung* was instituted, which provided for Sunday rest in industry and not more than five hours' Sunday work in trade; effectively prohibited the truck system;<sup>27</sup> set minimum standards for the protection of health and maximum hours for work in certain industries dealing with noxious materials; and established legal limits to working hours for women and youths. The revised *Gewerbeordnung* did not, however, set minimum wages, establish general maximum hours, or affect the prevailing methods of wage determination.

Toward the turn of the century, union leaders worked toward general

<sup>26</sup> The *Vereinsgesetz* required registration and supervision of workers organizations; it forbade extension of organization beyond the local level. In Prussia, all social and insurance groups were supervised and on occasion prosecuted under this law. Only in 1900 did federal law specifically permit broader than local organization and legitimate union activities—notwithstanding existing state law.

<sup>27</sup> Under this system part of the workers' remuneration was given in kind.

acceptance of collective bargaining as a basis for the determination of wages. Collective agreements were not, at that time, altogether a novelty. The book printing trades had concluded local wage agreements as early as the middle of the nineteenth century, and after 1873 had negotiated nation-wide agreements on wages, hours, and other conditions of work. Aside from the book printing trades, however, even local collective agreements were rare; none are reported until the late 1880's.<sup>28</sup> Collective bargaining and conclusion of union contracts became increasingly important after 1900; by the beginning of 1914 there were in effect about 10,900 contracts covering 1,399,000 workers.<sup>29</sup> But even with the multiplication of agreements, the German trade unions did not succeed in obtaining legal recognition of their role as representatives of labor in collective bargaining up to the outbreak of World War I.

The war led to increased state activities in the field of labor relations. These were not always to the advantage of labor. For example, protection of women and children in industrial plants tended to be ignored, and general compulsory labor for men was introduced in 1916 by the *Allgemeine Dienstpflicht Gesetz* (Auxiliary Service Law). At the same time the importance of labor's cooperation in the prosecution of the war was clearly recognized, resulting in increased recognition of the trade unions as the workers' representatives. Unions were assured that they would cease to be treated as political organizations, subject to the restrictions imposed on the latter. In the spring of 1918, a provision affording legal protection to strike breakers was revoked. During the last months of the war the attempt to assure labor's cooperation led to the organization of a central board of employer and employee representatives.

The decisive change in the official status of labor came with the Revolution of 1918. Though not "radical" with regard to basic changes in economic institutions, the revolution brought far-reaching political changes and, at least for a while, did not lack in dynamic impetus. During several months, radical Workers' and Soldiers' Councils, patterned after Soviet models, attempted to gain power and threatened both industrialists and unions. A provisional Socialist government was established to hold office until the election of a parliament. A few days after the outbreak of the Revolution, the Provisional Government proclaimed complete freedom of association, extending this right to farm workers, domestics, and civil servants. On November 15, 1918—that is, within a week after the founding of the Republic—the famous Stinnes-Legien Agreement was concluded and the so-called *Zentralarbeitsgemeinschaft* (Central Board for Industrial Cooperation) was set up. The agreement, drafted and signed by representatives of the three major unions and by representatives of the Federation of Employers' Associations, was of far-reaching importance,

<sup>28</sup> For details see Robert Kuczynski, *Arbeitslohn und Arbeitszeit in Europa und Amerika, 1870-1909* (Berlin, 1913), pp. 403, 498, 527, 534, etc.

<sup>29</sup> See Table 14.

for it not only formulated the principles along which labor relations were to develop during the following decade and a half, but also embodied the basic compromise upon which the Weimar Republic was founded—the parity of capital and labor. By the agreement unions were recognized as the official representatives of labor; wages and working conditions were to be determined by collective bargaining between employers and union representatives; arbitration was to be invoked in case of conflict; and work councils, formed to enforce the provisions of the collective agreements, were to function in all but the smallest factories.

The Stinnes-Legien Agreement was soon implemented by legislation. Within two weeks government decrees provided that written collective agreements were to have the force of legal contracts, in some instances applying to entire industries. Another decree established techniques of arbitration, with awards that could be made binding even if they ran counter to the desires of the conflicting parties. A further decree established the 8-hour day.

It was the aim of the Weimar Republic to foster permanent compromises between capital and labor, mainly through collective bargaining. To this end labor had to be represented on all levels. Labor representatives were to participate in a supreme economic advisory board, the *Reichswirtschaftsrat* (Reich Economic Council). Special labor legislation was to provide the conditions under which the system of collective democracy could function. Trade unions were to bargain with employers for satisfactory wages and working conditions in various industries or industry sections. Only where agreement could not be achieved through direct negotiation between workers and employers, could government officials issue binding awards which had the effect of imposed contracts. On the plant level, the interests of labor were to be represented by *Betriebsräte* (works councils) which were to have a large share not only in the establishment and administration of factory rules and in the execution of the collective agreements, but also in the supervision of the general management of production, finances, and the like.<sup>30</sup> Representatives of unions as well as of employers' organizations served as judges in labor courts.<sup>31</sup>

<sup>30</sup> The original concept of the works councils' functions was rather sweeping. Although some antecedents of works councils had existed in former shop committees, the establishment of the councils in the early years of the Republic was due largely to radical demands for the establishment of a German *Rätesystem* patterned after the Russian soviets. Alternative schemes for combining the *Rätesystem* with democratic institutions were advanced by the non-Communist wing of the German labor movement. As a compromise between the various factions, a clause was incorporated in the Weimar Constitution providing for works councils as the lowest level of a structure of joint economic administration. Near the top of the structure stood the *Reichsarbeitsrat* (Reich Labor Council), which in turn would form part of the top Reich Economic Council. See S. W. Halperin, *Germany Tried Democracy* (Crowell, 1946), pp. 161-65. See also Boris Stern, *Works Council Movement in Germany*, Bureau of Labor Statistics, *Bul.* 383, 1925.

<sup>31</sup> For a description of the role of union representatives in German labor courts see Frieda Wunderlich, *German Labor Courts* (University of North Carolina Press, 1946).

Such was the pattern of collective industrial democracy in which capital and labor were to rule jointly, the function of the state being merely to act as arbiter.<sup>32</sup>

In actual fact, however, many of the provisions for such joint rule remained on paper only. Some of the articles of the Weimar Constitution concerned with the *Rätesystem* were not followed by specific laws and thus never became effective. The Social Democratic support of a national constituent assembly put an end to any political prospects for the work councils; the *Betriebsrätegesetz* limited the functions of the work councils largely to those of ordinary shop committees. The intermediate councils, designed to be the link between factory organizations and central administration, never materialized. The Reich Economic Council did not determine economic policy, nor did labor participate in the supervision of management in industrial undertakings. What did work was the collective bargaining aspects of the plan, at least in times of prosperity, so that for many years wages were actually determined by free negotiations between representatives of industry and labor. Table 13 shows that the number of

TABLE 13  
Collective Agreements in Force during Selected Years, 1913-1928

Jan. 1 of Year	Number (in thousands) of:			Establishments per Agreement	Workers Covered per Agreement
	Agreements	Establishments Covered	Workers Covered		
1914	10.9	143	1,399	13	128
1920	11.0	272	5,986	25	544
1924	8.8	813	13,135	92	1,493
1929	8.9	998	12,276	112	1,379
1931	9.1	1,068	11,950	117	1,313

SOURCE: 1914-20, W. Woytinsky, *Die Welt in Zahlen* (Berlin, 1925) Vol. II, p. 153. For 1924-29, *Reichsarbeitsblatt*, Sonderheft 55, p. 5\*. For 1931, Statistisches Reichsamt, *Deutsche Wirtschaftskunde*, 1933, p. 299; data for 1931 not strictly comparable with earlier data.

workers covered by collective agreements jumped from about 1.4 million at the beginning of 1914, to nearly 6.0 million in 1920, and to 13.1 million in 1924. They stood at about 12.3 million at the beginning of 1929. The table shows also that a declining number of agreements tended to cover an increasing number of establishments and workers. This is a reflection of the ever-widening scope of collective agreements. While in 1913 almost half of all agreements covered a local trade or a single establishment, this

<sup>32</sup> For a detailed discussion of the subject see Nathan Reich, *Labor Relations in Republican Germany; an Experiment in Industrial Democracy, 1918-1933* (New York, Oxford University Press, 1938).

type amounted to only 10 percent of all agreements in 1929. In that year, 90 percent were regional or national in scope—covering a still higher percentage of workers.<sup>33</sup>

The mechanism for collective agreements worked tolerably well as long as the economy ran relatively smoothly, but headed into difficulties with the Great Depression. In the course of the depression, the conflict between the basic aim of trade unions (to keep up and improve the workers' standards of living) and the desire on the part of employers to reduce labor costs (in order to maintain or restore profitability) became increasingly sharp. Under such tensions no amount of bargaining could lead to agreements, especially since union leaders understandably preferred not to agree voluntarily to wage cuts. The state had then to carry out its function as arbiter. Now this function had worked out to the advantage of the trade unions as long as business conditions were good and as long as the Social Democratic Party participated in the government. In fact, the unions had become rather dependent on "their" government in the settlement of disputes.<sup>34</sup> When, in March 1930, the Social Democratic Party left the coalition government, it escaped direct responsibility for the unpopular deflationary measures, but at the same time deprived the unions of their most important instrument for influencing economic policies. As the depression continued, compulsory arbitration became more and more important, and the decisions, under the changed economic and political circumstances, tended more and more to reduce labor costs and to defend profit. Voluntary collective agreements gradually disappeared, and resort was had increasingly to arbitration. Of the 7,541 wage agreements in effect by the end of 1931, about one third had been achieved through arbitration. These arbitrated agreements covered as many as 6.6 million of the 8.3 million workers under collective contracts.<sup>35</sup> On December 8, 1931, Reich Chancellor Brüning, in his Fourth Emergency Decree,<sup>36</sup> ordered an across-the-board reduction in wage rates to the level of January 10, 1927, regardless of existing collective agreements. This was the beginning of wage determination by fiat. Thus wage determination by agreement was the first victim of the emergency rule which ultimately was unable to preserve either the economic or the political institutions of the Republic.

<sup>33</sup> For 1913, see Wladimir Woytinsky, *Die Welt in Zahlen* (Berlin, 1925), p. 156. For 1929 see *Reichsarbeitsblatt*, Sonderheft 55, p. 6\*.

<sup>34</sup> Frieda Wunderlich describes how workers started to lose interest in their unions when wages were "fixed by the state." See "Labor under German Democracy," *Social Research*, 1940, Supplement II, p. 86.

<sup>35</sup> *Jahrbuch* 1933, p. 317.

<sup>36</sup> Article 48 of the Weimar Constitution provided for emergency legislation by the President, in extraordinary circumstances. Theoretically, the Reichstag had the constitutional power to repeal such legislation but made scant use of this right, because of difficulties in agreeing on substitute measures. The repeated use of the emergency decree by Brüning led to the serious abridgement of democratic processes. It was widely regarded as signifying a transition to government by dictatorship.

It was but a small step from wage setting by compulsory arbitration and emergency decree to outright administrative determination of wage levels. When, in 1933, the National Socialists took power they abolished collective bargaining and fixed minimum wage rates at existing rock-bottom levels. The National Labor Law of January 20, 1934<sup>37</sup> created the office of a supreme Reich Labor Trustee. He and his deputies had the power to determine *Tarifordnungen* (collective rules) covering entire industries, and setting minimum wage rates. The rules permitted individuals to be paid at higher rates than the established minimum wages—as under the Weimar Republic. This arrangement worked well enough, from the government's point of view, as long as unemployment kept wage rates close to minimum levels. But by the end of 1934 the revived metal-working industry was beginning to offer rates well above the minimum and, when the rearmament program got into full swing, industries connected with war production had to raise wages. Thus, in June 1938, the labor trustees were empowered, at their discretion, to fix wage maxima in addition to the minima. At the same time, permission had to be obtained for any adjustment of existing rate schedules. Circumventions of these provisions were frequent,<sup>38</sup> but no new wage measures were introduced before the outbreak of World War II.

The War Economy Order of September 1939 brought a host of wage regulations. It required the labor trustees to fix wage maximums for all sectors of the economy. Premium rates were abolished for overtime, night, Sunday, and holiday work, and provisions for holidays with pay were suspended. Special permission had to be obtained for any changes in rates, and infringement of the new rules was to be punishable by fines, imprisonment, or forced labor.

Modification of these rules was soon necessary. Before the year 1939 was out, holidays with pay, and higher rates for night, Sunday, holiday, and overtime work were partially restored.<sup>39</sup> In order to control average hourly and weekly earnings and at the same time to stimulate increased output, the government also introduced a new system of "efficiency wages." Workers were classified into eight skill grades for which base rates were set. According to his output, each worker received an efficiency number

<sup>37</sup> On the destruction of the trade unions and the formation of the Labor Front, see Hans-Gerd Schumann, *Nationalsozialismus und Gewerkschaftsbewegung: Die Vernichtung der deutschen Gerwerkschaften und der Aufbau der Deutschen Arbeitsfront*, (Hanover and Frankfurt a/M, 1958). On the early phase of wage policy under National Socialism see P. Waelbroeck and I. Bessling, "Some Aspects of German Social Policy under the National Socialist Regime," *International Labour Review*, February 1941.

<sup>38</sup> They consisted of upgrading jobs; increasing family allowances; granting special allowances for housing and traveling; increasing contributions toward insurance, pension funds, and income taxes. See René Livchen, "War-time Development in German Wage Policy," *International Labour Review*, August 1942, p. 139.

<sup>39</sup> Under the restoration decree overtime payments by the employer began after the eighth hour, overtime wages for the employee after the tenth hour. The overtime payments for the ninth and tenth hour went to the government. Full restoration of prewar conditions took place in September 1940. See *ibid.*, pp. 143 and 146.



which determined his pay below or above the base rate, but as average productivity increased, the base rates could be lowered at will by the government. Thus only earnings differentials, but not necessarily earnings levels, were affected by increased effort of workers. This system operated in most of the larger enterprises in the building and metal industries, and to some extent in the coal mining and textile industries.<sup>40</sup> Coupled with the official determinations of wage rates and the cost of living, the system of controls set up by the National Socialists represented the most pervasive power over wages, whether monetary or real, ever effected in modern German industry.

### *Trends in Hours of Work*

One of the momentous changes in labor conditions during the period under discussion was the reduction of working hours. Such reductions occurred, of course, in all major industrial nations, though the German situation differed in some important respects from that of other countries. Since Germany was a latecomer to the industrial field, German workers at the time of the Reich's foundation were still subject to the long hours customary in agricultural work and common in early industrialization. Further, when the eight-hour day was finally established, it came literally "overnight," as one of the first administrative decrees of the young Weimar Republic.

Hours are, next to wages, the most important aspect of working conditions. Furthermore, changes in hours have a direct effect upon daily and weekly earnings; and, through their influence on premium payments for overtime, night work, and the like, they also affect hourly earnings. Any discussion of wages, therefore, must take into account the concurrent changes in daily and weekly working hours. What were the major trends in hours of work during the period 1871-1945?

In Germany during the early 1870's, the 12-hour day was probably most frequent, though workdays varied considerably in length. Building workers in Berlin and printers and cabinetmakers in large cities were already working under 10-hour maximum arrangements, whereas textile workers in Silesia worked 14 and 15 hours a day. In many industries, especially in the smaller communities, the workers had still to win recognition of the 12-hour day as a maximum.<sup>41</sup> The demand for shorter

<sup>40</sup> John P. Umbach, "Labor Conditions in Germany," *Monthly Labor Review*, March 1945, p. 511.

<sup>41</sup> For the development of hours, see "Arbeitszeit" in *Handwörterbuch der Staatswissenschaften*, 1923 edition, pp. 896-97; "Arbeitszeit" in *Handwörterbuch der Arbeitswissenschaft*, p. 426; "Geschichtliche Entwicklung des Achtstundentages im In- und Ausland," in *Reichsarbeitsblatt* 1919, pp. 386 ff. and 456 ff.; and Robert Kuczynski, *op. cit.*, *passim*. Estimates of the trend of average hours in large cities, before 1913, are given by Paul Jostock, "The Long-term Growth of National Income in Germany," *Income and Wealth* (International Association for Research in Income and Wealth, Series v, 1955), p. 99.

working hours was widespread and an active concern of all workers' organizations.

During the 1870's and 1880's the movement for reduction of the working day continued. In 1877 the newly formed Social Democratic Party submitted legislation in the Reichstag for a 10-hour maximum day for men from Monday through Friday and a 9-hour maximum on Saturday. These proposals fell on deaf ears at the time, but they served to make the shortening of the working day one of the most popular demands of the Social Democratic Party and of the labor organizations allied with it. In subsequent years shorter hours were introduced in a number of industries, often as a result of strikes. A working day exceeding 11 hours still prevailed in most factories in 1890 but was regarded by the workers and their organizations as an important object of reform.

About 1890, efforts to reduce the length of the working day attained more organized expression. After the First International Socialist Congress in Paris in 1889, the Social Democratic Party of Germany formally included in its program the demand for an 8-hour day. The limitations on hours worked by women, contained in the 1891 revision of the *Gewerbeordnung*, gave further impetus to the move to reduce hours. In 1892 a commission for labor statistics was formed—largely for the purpose of making inquiries into prevailing working hours. The decades between 1890 and the outbreak of World War I witnessed an appreciable shortening of the working day. An official inquiry of 1897 found the working day to be between 9 and 11 hours. Although no average was stated, it was probably above 10, possible above 10½ hours. From 1908 on, available statistics report the working hours agreed upon in labor contracts; the average length of the working day stipulated for 1913, for example, was somewhat above 9½ hours.<sup>42</sup> During World War I many of the gains of the preceding decades had to be sacrificed to meet the emergency needs of the Reich. Particularly in munitions plants, and especially during the latter part of the war, workdays of 11 hours and more became the rule rather than the exception.

After the German defeat in 1918, one of the first acts of the Weimar Republic was to legalize the 8-hour day in the decrees of November 2 and December 17, 1918. If working hours were unevenly distributed over the week the total could not be more than 48 hours; if half-day work were arranged for Saturdays, the time could be made up on the other workdays of the week. The decrees, originally designed to govern working hours during the period of demobilization, were intended as temporary

<sup>42</sup> However, it must be assumed that organized workers covered by labor contracts commanded better than average working conditions. In 1913 the average day for German workers was in all likelihood about 10 hours, perhaps a bit longer. A day of 10 to 11 hours is given by the *Handwörterbuch der Arbeitswissenschaft*, p. 466. Jürgen Kuczynski assumes "over 10 hours" in *Germany, 1800 to the Present Day* (Vol. III, Part 1, of *A Short History of Labour Conditions under Industrial Capitalism*, London, 1945), p. 146.

measures to be replaced eventually by a permanent law. However, since several government bills introduced in the Reichstag during 1921-23 failed to obtain majority votes, the validity of the demobilization decrees had to be extended again and again. Although the 8-hour law was quite specific, the economic stresses of the inflation led to frequent infractions. Complaints were heard that an economy impoverished by defeat in war and disorganized by the rapidly declining value of its currency could not afford to limit its output by a rigid 48-hour maximum.<sup>43</sup> Thus the decrees were allowed to lapse. On December 21, 1923 a new decree, permitting longer hours in several circumstances, was passed. There is no doubt that, shortly after its enactment and during the expansion up to the middle of 1925, the 8-hour day or 48-hour week was significantly exceeded, especially in smaller communities. For the main industrial centers of the Reich as a whole, the average working time in manufacturing and related industries during the mid-1920's was nearly 50 hours per week, or 8.3 hours for each of six working days of equal length.

In the course of the next few years the trend was toward shorter hours. Table 14 shows a decline in collectively agreed "normal" hours per week from 49.8 in 1924 to 48.8 in 1929. A similar decrease appears also in the results of inquiries by unions which tried to measure hours actually worked. During the subsequent depression, average hours of full-time workers dropped still further with the decline in overtime work. In view of the large number of unemployed, the unions sought in vain to spread the available work by obtaining a legal limitation of the week to 40 hours.<sup>44</sup> According to government inquiries beginning with 1929, the average workweek of employed wage earners amounted in that year to 46 hours.<sup>45</sup> Between 1929 and 1932 the average number of weekly hours per wage earner declined further to 41.5, reflecting the increasing incidence of part-time work during the Great Depression.<sup>46</sup>

During the economic expansion under National Socialism, the length of the working day increased. The official figures on average hours per week in manufacturing show an increase of about 8 hours between 1932 and 1939. The average for the latter year is 47 hours per week. This would imply an average workday of less than 8 hours. It must be remembered,

<sup>43</sup> The arguments are given in detail by Robert Kuczynski, *Postwar Labor Conditions in Germany*, Bureau of Labor Statistics, Bul. 380, 1925, pp. 104-7. See also his analysis of further developments, pp. 107-15.

<sup>44</sup> *Jahrbuch des Allgemeinen Deutschen Gewerkschaftsbundes 1931*, Berlin, 1932, p. 158.

<sup>45</sup> Table 14 shows this to be almost three hours below the normal work week stipulated in labor contracts and the actual hours worked as reported in union statistics. The explanation lies in the character of the official data. While the total number of workers carried on the payroll is used as the denominator, the hours counted are only those actually worked—excluding those lost by sickness, leaves of absence, and at times even by vacations. Part-time workers and their shorter work week are included in these statistics, without any adjustments.

<sup>46</sup> In 1929 part-time workers formed 7 percent of union members; in 1932 more than 24 percent. See *IKF Handbuch 1933*, p. 29.

TABLE 14  
Average Working Hours per Week, 1924-1942

Year	Normal Hours Implicit in Wage Rate Schedules <sup>a</sup>			Union Inquiry into Actual Hours Worked (4)	Average Hours Worked per Worker on Payroll of Manufacturing Industry (5)
	Skilled (1)	Unskilled (2)	Combined (3)		
1924	48.9	51.9	49.8	50.4 <sup>b</sup>	
1925	48.8	51.3	49.5	...	
1926	48.9	51.4	49.6	...	
1927	48.4	50.8	49.1	49.9 <sup>c</sup>	
1928	48.5	49.8	48.9	48.9 <sup>d</sup>	46.0 <sup>e</sup>
1929	48.4	49.8	48.8	...	46.0
1930				48.6 <sup>f</sup>	...
1931					...
1932					41.5
1933					42.9
1934					44.6
1935					44.4
1936					45.6
1937					46.1
1938					46.5
1939					47.0 <sup>g</sup>
1940					...
1941					...
1942					49.2 <sup>h</sup>

<sup>a</sup> Averages of April and October.

<sup>b</sup> Average of one week in May and November.

<sup>c</sup> Average of one week in April and October.

<sup>d</sup> One week in October.

<sup>e</sup> Last six months.

<sup>f</sup> One week in February.

<sup>g</sup> First six months.

<sup>h</sup> Month of March.

SOURCE, by column:

(1, 2) For 1924, computed from data in *Jahrbuch* 1928, p. 371. For 1925-29, computed from data in *Jahrbuch* 1930, p. 299. (Slight change in coverage.) Twelve industries.

(3) Weighted average of cols. 1 and 2. Weights: 2.5 (skilled) + 1 (unskilled), according to number of workers as given in *Vierteljahrshefte zur Statistik des Deutschen Reichs*, 1931, p. 97.

(4) Computed from frequency distributions given in *Jahrbuch des Allgemeinen Deutschen Gewerkschaftsbunds* (Berlin, 1930), p. 221. Open-end classes include at times as many as 20 percent of workers. Mid-points of open-end classes were assumed to be 1.5 hours distant from specified inner class limits. In upper-end classes this is reasonable in view of customary limitations on working hours during peacetime. In lower-end classes, the selection of the probable mid-points is more uncertain, but the frequencies are small and relatively stable (close to 6 percent throughout except for 1924, where they are about 5 percent). Alternative reasonable assumptions about probable mid-points have only minor effects on results. Sample size of investigation varies between 2.4 and 3.1 million workers. Data are for one week in year (seasonally non-extreme).  
(notes continue)

(5) For 1928, estimated from change in average daily working hours 1928-29, *IKF Handbuch* 1936, p. 32. Data for 1929-39, *Jahrbuch* 1939-40, p. 384. Entry for 1942, *Monthly Labor Review*, March 1945, p. 513. Series covers the manufacturing, mining, and building activities of the *Industrieberichterstattung*.

however, that the surprisingly low average is brought about by the large-scale use of part-time workers, especially women, in this period of acute labor shortage.

The outbreak of World War II brought some extension of working hours. The increase was not, however, as spectacular as it would have been if the German economy had not already reached full employment under the rearmament program. The official statistics report an average workweek of only 49 hours in 1942—just 2 hours above 1939 levels. Again the effect of part-time work on these averages must be considered. There is good evidence that the hours of full-time workers were appreciably higher, except in certain civilian industries suffering from materials shortages. In war industries, employees often worked 60 or more hours a week during 1942. Toward the end of the war working hours increased still further. In 1944 the working time was 60 hours per week or 10 hours per day in most industries, and reached 72 hours per week or 12 hours per day in many armament and other factories engaged in war production.<sup>47</sup> The wheel had gone a full circle for the second time. By the end of the war German workers were putting in about the same length of time as they had some three decades earlier, during World War I, or seven decades earlier, at the time of the foundation of the Reich. After the military and political collapse of 1945, the 8-hour day and the 48-hour week again became the rule for German workers.<sup>48</sup>

In the foregoing pages we have scanned those developments in the German economy that seem essential for an understanding of wage behavior. We have followed the transition from the Kaiserreich to the Weimar Republic, with its political crises, and finally to the advent of a totalitarian regime. In the economic sphere we have traced the growth of production and national income during the first four decades of Reich history, the break in growth trends following World War I, the feverish economic expansion, and the subsequent collapse during the Third Reich. Reviewing the changes in the labor market, we have noted the increasing

<sup>47</sup> *Monthly Labor Review*, March 1945, p. 513. The decree on the sixty-hour week of 1944 abolished the former legal limits of weekly hours for men, pointing to the superhuman exertion of German soldiers on all fronts. For women and youths, a maximum workweek of 56 hours was maintained. See *Reichsarbeitsblatt 1944*, Part I, p. 318, and Part V, p. 327.

<sup>48</sup> In Western Germany, the Hours of Work Order of 1938 was still in force at the time of writing. It prescribes the forty-eight-hour week, with overtime payments for additional work. Actual working time was reported to be about 40 hours during the first few postwar years, but closer to 49 or 50 hours in more recent years. See the following articles in *International Labour Review*, "Conditions in Germany, Normal Hours of Work in the U.S. Zone," July 1948, pp. 101-2; H. C. Nipperday, "The Development of Labour Law in the Federal Republic of Germany since 1945," August 1954, pp. 160-61.

importance of industrial wage earners and the trend toward ever tighter organization of the labor market. Finally, we have observed the trend toward shorter working hours, and the fluctuations in hours under varying business conditions and during the several crises through which Germany passed. Against this general background let us now proceed to the primary subject of this book, the analysis of wage behavior.