

Recent Official Enquiries into Wages and Hours of Work in Various Industries in Germany : IV

The German Federal Statistical Office is continuing its enquiries into conditions of work in various industries, the earlier results of which were briefly analysed in previous numbers of this *Review*.¹ The results of the three most recent enquiries² — for the chemical, metal-working and engineering, and boot and shoe industries — are summarised below; in each case the enquiry was the second for the industry in question, and was carried out three years after the former one.

As on previous occasions, the main purpose of the enquiries is to bring out the difference between wage rates and actual earnings in the industries under consideration. In addition, some interesting comparisons are suggested with the general results of the earlier enquiries, which have already been summarised in the *Review* and can be found in greater detail in the original publications of the Statistical Office. Account must be taken, however, of the important changes that have taken place in recent years, particularly in conditions of employment and the volume of activity in the industries in question. In the case of comparisons with pre-war figures, the same reservations must naturally be made as on previous occasions.

CHEMICAL INDUSTRY

Scope of the Enquiry

The enquiry, which was carried out in June 1931, covered 108 undertakings employing 59,466 workers (48,631 men over 21 and 10,835 women over 20). A comparison between these figures and the 86,269 workers employed in the 110 undertakings covered by the enquiry of June 1928 clearly shows the reduction of the volume of employment in this industry. The geographical scope and the proportionate distribution of the workers over the various districts have remained practically the same, as have the branches of industry included. The most numerous category of workers is that of general workers (men) (*Betriebsarbeiter*), who represent about 60 per cent. of those covered by the enquiry. The normal method of payment

¹ *International Labour Review*, Vol. XX, No. 3, Sept. 1929, pp. 408-419 (textile, wood, and chemical industries); Vol. XXII, No. 6, Dec. 1930, pp. 807-816 (iron and steel, metal-working and engineering, and boot and shoe industries); Vol. XXV, No. 6, June 1932, pp. 827-833 (wood, textile, and building industries).

² "Hauptergebnisse der zweiten amtlichen Löhnerhebungen in der chemischen Industrie, in der Schuhindustrie, in der metallverarbeitenden Industrie", in *Wirtschaft und Statistik*, 1932, No. 6, p. 177; No. 18, p. 576; No. 24, p. 785.

is usually a bonus system, but the different branches of the industry differ very greatly in this respect and time rates are frequently the commonest form.

Results of the Enquiry

Table I summarises the general results of the enquiry for all the branches of the industry.

TABLE I. WAGES AND HOURS OF WORK OF VARIOUS CATEGORIES OF WORKERS IN THE CHEMICAL INDUSTRY IN JUNE 1931

Category of workers and method of payment	Number of workers covered by the enquiry	Average weekly hours of work		Average earnings			Average hourly wage rates	Average hourly earnings (column 5) per cent. of average hourly rates (column 8)
		Total ¹	Paid at over-time rates	Per hour		Per week ¹ (gross earnings) ^a		
				Exclud- ing :	Includ- ing :			
				Payments for overtime and other stipulated allowances				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Skilled workmen (over 21) :				RPf.	RPf.	RM.	RPf.	
Time rates	3,886	44.20	0.90	102.0	107.9	47.70	94.6	107.8
Piece rates	5,127	40.51	0.41	120.5	129.9	52.62	107.4	112.2
Bonus systems	5,055	40.83	0.45	124.8	129.3	52.81	99.1	125.9
Total	14,068	41.64	0.56	116.6	123.3	51.33	—	—
General workers (men, over 21) :								
Time rates	13,795	44.21	0.40	81.4	88.1	38.94	77.8	104.6
Piece rates	3,532	41.53	0.33	104.6	112.9	46.89	90.1	116.1
Bonus systems	17,216	41.49	0.23	95.8	104.1	43.18	79.7	120.2
Total	34,563	42.58	0.31	90.7	98.3	41.87	—	—
All men over 21	48,631	42.31	0.38	98.1	105.4	44.61	—	—
Women workers on productive processes (over 20) :								
Time rates	3,280	43.31	0.36	55.3	57.2	24.79	52.9	104.5
Piece rates	3,479	43.12	0.06	65.6	66.1	28.49	59.7	109.9
Bonus systems	4,076	43.37	0.34	61.5	62.7	27.18	50.7	121.3
Total	10,835	43.27	0.25	60.9	62.1	26.88	—	—
General average for the industry	59,466	42.48	0.36	91.2	97.4	41.38	—	—

¹ Allowing for absences due to sickness or holidays, dismissals, and new engagements during the period covered by the enquiry.

² Including all supplementary payments, family allowances, etc., and including also sums deducted for social insurance contributions and taxes.

As compared with the average hourly earnings of skilled workmen, those of general workers (men) are scarcely 80 per cent. and those of women workers slightly over 50 per cent. Within each group the earnings on bonus systems and piece rates are always perceptibly higher than those on time rates. The difference between average hourly earnings and basic time rates of wages is generally about 13 per cent. for workers on time rates, 30 per cent. for workers on bonus systems, and 38 per cent. for workers on piece rates.

The average weekly earnings in the various branches of the industry differ rather widely from the general averages. Taking the most numerous group of workers in each class, namely, skilled workmen on piece rates, general workers (men) on bonus systems, and women workers on bonus systems, it will be seen that the earnings of the first group vary from 46.25 to 58.87 RM. according to the branch, those of the second from 44.00 to 49.38 RM., and those of the third from 27.86 to 31.00 RM. In the three principal branches of the industry — dyes, nitrogen compounds, and artificial silk — weekly earnings varied from 28.00 to 54.62 RM., from 42.50 to 56.98 RM. (for men only), and from 26.17 to 57.13 RM. respectively.

A comparison with the results of the previous enquiry shows that for men hourly earnings had fallen by 3.4 per cent. on the average, and weekly earnings by 17 per cent. ; for women there was no appreciable difference in either. The average level of wage rates was even slightly higher than in 1928, but early in 1932 it suffered from the general reduction to the extent of 14.5 per cent.

A comparison with the pre-war period limited to the wages of men employed on time rates shows that in 1931 average hourly money earnings were 89 per cent. higher than in 1913. As a result of the reduction of nearly one-fifth in hours of work, weekly earnings were only 51 per cent. higher than the pre-war figure. The purchasing power of these average earnings, calculated by means of the official cost-of-living index number, was as follows in June 1931 (base : 1913 = 100) :

	Per hour	Per week
Skilled workmen :		
(a) Without deducting taxes and social insurance contributions	135.0	108.1
(b) Deducting taxes and social insurance contributions	126.4	101.2
General workers (men) :		
(a) Without deducting taxes and social insurance contributions	137.4	110.4
(b) Deducting taxes and social insurance contributions	128.6	103.3

On the average, real hourly wages, after deducting taxes and social insurance contributions, were 28 per cent. above the pre-war level, whereas for real weekly wages the difference was only 2.8 per cent.

METAL-WORKING AND ENGINEERING INDUSTRY

Scope of the Enquiry

This enquiry, which was carried out in October 1931, covered 502 undertakings in 103 centres, with 213,746 workers (174,158 men over 21 years of age and 39,588 women over 18 years). Its geographical scope has been considerably extended since the earlier enquiry in October 1928. A comparison limited to the centres covered by that enquiry shows that the number of undertakings and the number of workers have declined by 21.4 and 45.6 per cent. respectively. The same ten branches of industry were covered: manufacture of iron and steel goods, manufacture of metal goods, machine construction, boiler making and construction of apparatus, iron construction, shipbuilding, construction of vehicles for land and air transport, construction of railway wagons, electro-technical industry, manufacture of optical and precision instruments.

Results of the Enquiry

Table II on the following page summarises the principal results of the enquiry for all the branches and districts investigated.

Piece rates are 10.1 per cent. higher on the average than time rates, taking as a basis the total hourly earnings (99.3 Rpf. for piece workers and 89.3 Rpf. for time workers). The difference is only 9.5 per cent. for skilled workers, but it is as much as 16.3 per cent. for women. If weekly earnings are taken as a basis, the difference falls to 3.3 per cent. on the average, the extreme figures being 0.9 per cent. for skilled workers and 12.6 per cent. for unskilled workers. This is due chiefly to the fact that the average weekly hours of work of time workers are appreciably longer than those of piece workers, as can be seen from the table.

The relation between hourly rates and earnings also varies quite considerably for different kinds of work. For all the workers considered, average hourly earnings are higher than wage rates by 16.9 per cent. for piece work and by 15.1 per cent. for time work. The corresponding percentages for men alone are 17.5 and 15.9. A supplementary comparison shows that actual earnings are higher than basic time rates (*reiner Zeitlohnsatz*) by 19.3 per cent. for time workers and 35.8 per cent. for piece workers.

If the results for different branches of the industry are examined separately, it is found that the average gross earnings per week vary from 30.75 RM. for the manufacture of metal goods to 47.63 RM. for shipbuilding. The corresponding figures for the other chief branches of the industry are as follows: machine construction, 38.38 RM.; electro-technical industry, 35.80 RM.; manufacture of iron and steel goods, 34.93 RM.; construction of vehicles for land and air transport, 37.15 RM.

A comparison with the results of the earlier enquiry (October 1928), limited to the centres then covered, shows that average hourly earnings

TABLE-II. WAGES AND HOURS OF WORK OF VARIOUS CATEGORIES
OF WORKERS IN THE METAL-WORKING AND ENGINEERING INDUSTRY
IN OCTOBER 1931

Category of workers and method of payment	Number of workers covered by the enquiry	Average weekly hours of work		Average earnings			Average hourly wage rates	Average hourly earnings (column 5) per cent. of average hourly rates (column 8)
		Total ¹	Paid at over- time rates	Per hour		Per week ¹ (gross earnings) ²		
				Exclud- ing :	Includ- ing :			
				Payments for overtime and family allowances				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Skilled men :				Rpf.	Rpf.	RM.	Rpf.	
Time rates	37,031	40.58	0.51	104.0	105.4	42.77	87.0	119.5
Piece rates	67,684	37.33	0.22	112.9	113.9	42.57	96.6	116.9
Total	104,715	38.48	0.32	109.6	110.8	42.64	92.9	118.0
Semi-skilled men :								
Time rates	16,478	40.26	0.61	84.2	86.0	34.58	74.4	113.2
Piece rates	31,258	36.57	0.18	100.3	101.7	37.26	84.3	119.0
Total	47,736	37.85	0.33	94.4	96.0	36.33	80.6	117.1
Unskilled men :								
Time rates	16,690	39.79	0.37	77.7	79.0	31.41	71.7	108.4
Piece rates	5,017	38.00	0.18	92.3	93.6	35.62	80.9	114.1
Total	21,707	39.38	0.33	81.0	82.3	32.38	73.7	109.9
All men	174,158	38.42	0.32	101.8	103.1	39.69	87.0	117.0
Women :								
Time rates	10,403	40.49	0.31	52.6	53.0	21.45	49.0	107.3
Piece rates	29,185	37.11	0.08	63.3	63.3	23.51	57.3	110.5
Total	39,588	38.00	0.14	60.3	60.4	22.97	55.1	109.4
General average for the industry	213,746	38.34	0.29	94.2	95.3	36.55	81.0	116.3

¹ Allowing for absences due to sickness or holidays, dismissals, and new engagements during the period covered by the enquiry.

² Including all supplementary payments, family allowances, etc., and including also sums deducted for social insurance contributions and taxes.

have fallen by 3.9 per cent. for the workers as a whole (4.8 per cent for piece work and 2.5 per cent. for time work). As average hours of work fell during the same period by 17.7 per cent. on the average (19 per cent. for piece work and 15.6 per cent. for time work), weekly earnings are in general 21 per cent. lower than in 1928 (22.8 per cent. and 17 per cent. respectively). The general ratio of earnings to hourly rates fell from 119.3 to 116.3 from the first to the second enquiry.

Here again, the reduction is more marked for piece workers ; it is considerable for skilled and semi-skilled workers and very slight for unskilled workers, while for women the ratio of earnings to rates is slightly higher in 1931 than in 1928.

The most recent information available shows that in November 1932 average rates of wages were 13.6 per cent. lower than in October 1931, but at the same date average weekly hours of work had increased by 2.5 per cent.

The reduction for taxes and social insurance contributions together represent 12.2 per cent. of hourly earnings, or 11.6 Rpf., of which taxes account for about a quarter (2.8 Rpf.) and insurance contributions a little over three-quarters (8.8 Rpf.). These amounts have increased slightly since 1928, especially for social insurance.

Compared with pre-war wages, the index of average hourly money earnings is 170. Hours of work in 1931 represent only just over two-thirds of those in force in 1913-1914, and consequently the index of weekly money earnings is reduced to 118 on the average. The indexes for time and piece rates respectively are 183 and 163 for hourly money earnings and 133 and 110 for weekly money earnings. An estimate has also been made of the purchasing power of average earnings, allowing for changes in the cost of living ; the resulting indexes are 127.4 and 119.5 for hourly earnings, and 88.7 and 83.2 for weekly earnings, according as the sums deducted for taxes and social insurance contributions are included or excluded. Since the previous enquiry was carried out the index of the purchasing power of hourly earnings has risen by 9.6 per cent., while for weekly earnings it is 10 per cent. below the 1928 level as a result of the reduction of hours of work.

BOOT AND SHOE INDUSTRY

Scope of the Enquiry

This enquiry, which was carried out in March 1932, covered 337 undertakings and 38,757 workers over the age of 18 (19,570 men and 19,187 women), as compared with 438 undertakings and 57,003 workers in March 1927. The geographical scope of the enquiry was however extended, and on this occasion separate figures were obtained for various branches of the industry, as well as some new information, in particular concerning the employers' social insurance contributions.

Although piece rates still predominate, the proportion of workers paid in this way has fallen considerably since the previous enquiry. The percentage of time workers has remained more or less stationary, while the number of flow workers has more than doubled. Most of the undertakings and workers covered by the enquiry were engaged in the manufacture of walking shoes, evening shoes, and sports shoes ; next in importance came slippers, house shoes, heavy shoes, and gymnastic shoes, while the manufacture of wooden shoes and other types of footwear was of negligible importance. A certain number of undertakings were of a mixed character, manufacturing several kinds of footwear.

Results of the Enquiry

Table III shows the general results of the enquiry for all the branches and districts investigated.

TABLE III. WAGES AND HOURS OF WORK OF VARIOUS CATEGORIES OF WORKERS IN THE BOOT AND SHOE INDUSTRY IN MARCH 1932

Category of workers and method of payment	Number of workers covered by the enquiry	Average weekly hours of work		Average earnings			Average hourly wage rates	Average hourly earnings (column 5) per cent. of average hourly rates (column 8)	Employers' social insurance contributions per hour
		Total ¹	Paid at over-time rates	Per hour		Per week ¹ (gross earnings) ²			
				Excluding :	Including :				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Men over 21 :				Rpf.	Rpf.	RM.	Rpf.		Rpf.
Time rates	6,220	40.71	0.37	79.8	80.0	32.56	73.7	108.4	6.0
Piece rates	9,175	39.03	0.25	93.1	93.3	36.40	83.0	112.2	6.8
Flow rates	1,506	43.96	0.24	89.6	89.7	39.45	83.2	107.7	6.6
Men from 18 to 21:									
Time rates	1,293	40.91	0.34	58.1	58.2	23.82	58.7	99.0	4.5
Piece rates	1,075	40.64	0.32	64.9	65.0	26.41	66.3	97.9	4.9
Flow rates	301	43.88	0.23	64.7	64.8	28.44	66.5	97.3	5.1
Women over 21 :									
Time rates	4,447	41.45	0.45	57.2	57.4	23.79	55.5	103.1	4.5
Piece rates	8,197	40.75	0.32	62.4	62.5	25.46	62.6	99.7	4.9
Flow rates	831	42.28	0.10	63.5	63.5	26.85	62.6	101.4	4.9
Women from 18 to 21 :									
Time rates	2,173	42.42	0.50	41.6	41.7	17.70	41.4	100.6	3.3
Piece rates	3,014	42.79	0.35	48.4	48.5	20.75	46.8	103.4	3.8
Flow rates	525	41.18	0.08	46.1	46.1	18.99	46.8	98.5	3.6
All time workers	14,133	41.22	0.41	64.7	64.8	26.72	61.4	105.2	5.0
All piece workers	21,461	40.30	0.30	73.1	73.3	29.52	68.8	106.3	5.5
All flow workers	3,163	43.05	0.17	73.5	73.6	31.70	70.5	104.3	5.5
All workers over 21	30,376	40.53	0.32	75.6	75.8	30.71	70.8	106.8	5.7
All workers from 18 to 21	8,381	42.07	0.36	50.6	50.7	21.32	50.3	100.6	4.0
General average for the industry	38,757	40.86	0.33	70.1	70.2	28.68	66.3	105.7	5.3

¹ Allowing for absences due to sickness or holidays, dismissals, and new engagements during the period covered by the enquiry.

² Including all supplementary payments, family allowances, etc., and including also sums deducted for social insurance contributions and taxes.

For all the groups of workers in question hourly wage rates for piece work and flow work are practically the same, and are from 10 to 12 per cent. higher than time rates. The highest hourly earnings are obtained by piece workers, except in the case of women over 21 on flow work, whose earnings are slightly higher than those of women on piece work. The difference between earnings on piece work and on flow work is not more than 5 per cent., while the difference between earnings on piece work and on time work is from 9 to 15 per cent. The highest weekly earnings, however, are obtained by workers on flow work, except in the case of women between 18 and 21, who earn on the average 9 per cent. more on piece work than on flow work. The difference between maximum and minimum weekly earnings (time rates) is between 11 and 20 per cent. according to the group.

As the table shows, hourly earnings are 5.2 per cent. higher than hourly rates for time workers as a whole, 4.3 per cent. higher for flow workers, and 6.3 per cent. higher for piece workers. On the other hand, it will be noted that for certain categories of workers earnings are slightly lower than rates. A similar comparison between earnings and basic time rates of wages (*reiner Zeitlohnsatz*), i.e. not including in the case of workers on piece rates or on flow work any special allowances or bonuses for such work, shows an average difference of 5.5 per cent. for time workers, 17.5 per cent. for flow workers, and 19.8 per cent. for piece workers.

If the two principal branches of the industry are taken separately, important differences will be found between the various average wages. In the manufacture of walking shoes, etc., average hourly earnings for all workers are 71.4 Rpf., whereas they are only 59.9 Rpf. for the manufacture of slippers, house shoes, etc. The corresponding average weekly earnings are 29.24 and 24.17 RM.; hourly rates of wages 66.9 and 60.8 Rpf.; the ratio of hourly rates and earnings 106.6 and 98.4; employers' social insurance contributions 5.4 and 4.7 Rpf. an hour on the average. Hours of work, on the other hand, are practically the same, and are almost identical with the average for the industry as a whole.

Hourly earnings have fallen by 19.5 per cent. on the average as compared with the results of the previous enquiry. As a result of the simultaneous reduction of hours of work during the intervening period the average decrease in weekly earnings is as much as 23.4 per cent. This decrease has affected chiefly the earnings of flow workers (23.9 per cent. on hourly earnings and 24.5 per cent. on weekly earnings) and piece workers (19.8 and 24.6 per cent.) and is rather less for time workers (17.6 and 21.1 per cent.). The proportions of the reduction due to the various factors involved have also been calculated; for the average weekly earnings of all workers the reduction in wage rates accounts for 10.3 per cent., the reduction of hours of work for 4.5 per cent., and the loss of earnings resulting from a decrease in payments over and above the basic rates (or from work done at less than the standard rates) for 8.6 per cent.; the loss resulting from a decrease in payments for overtime is insignificant (less than 0.05 per cent.).

As compared with the estimated earnings for the years 1913-1914 the levels shown by these recent enquiries are as follows : average hourly earnings for all workers being taken equal to 100 for the pre-war period, the corresponding figures are 204.7 for March 1929 and 164.9 for March 1932 ; as a result of the great reduction in hours of work the corresponding indexes for weekly earnings are 160.3 and 123 respectively. The purchasing power of average earnings, calculated by means of the official cost-of-living index number, has varied as follows (taking 1913-1914 = 100) :

	1929	1932
Average hourly earnings :		
(a) Without deducting taxes and social insurance contributions	133.3	134.7
(b) Deducting taxes and social insurance contributions	127.1	126.9
Average weekly earnings :		
(a) Without deducting taxes and social insurance contributions	104.4	100.5
(b) Deducting taxes and social insurance contributions	99.5	94.6

It should also be noted that while as a general rule the purchasing power of weekly earnings seems to be about 5 per cent. lower in 1932 than before the war, there are considerable differences among the various groups of workers investigated. The average purchasing power of the weekly earnings of piece workers, for example, was almost 13 per cent. higher than before the war, whereas the purchasing power of time workers fell below the pre-war figure by the same amount. The purchasing power of average weekly earnings was more than 11 per cent. below the 1913-1914 figure for men, while for women it was 5 per cent. higher.

The Working of Social Insurance in the U.S.S.R.

The social insurance scheme in force in the Soviet Union is based on the Labour Code of the R.S.F.S.R. of 1922, which came into operation on 15 November 1922 and applies also to the other Republics belonging to the Union. Since its first introduction this legislation has been developed and amended by a large number of Decrees and Orders.

Social insurance in the Soviet Union, which applies to all paid workers, covers all physical risks and until 1930 embraced the risk