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Employment and Compensation of Employees in Selected Privatized Polish and German Enterprises**

The analysis of employment and compensation of employees was made on the basis of empirical data from the period 1989 to 1994, derived from 16 Polish and 8 German privatised companies. Among the Polish organisations we can distinguish 6 units that, as a result of privatisation, were controlled by a strategic investor (foreign or domestic), 4 companies controlled by managers and 6 companies controlled by employees. Among the German companies in question were 4 companies controlled by the strategic investor and 4 by managers.

The basis for the analysis were specific numbers from official documents of the companies, estimates made by their managerial staff, as well as answers given to the „quality” questions that were included in the survey questionnaire form. The analysis was to help out in identifying the scale and sources of the changes in the size and structure of employment, as well as compensation in Polish and German companies in the period prior to privatisation (1989-1991) and after it (1992-1994). Its objective was to verify the preliminary research hypotheses formulated as follows:

1. Privatisation of enterprises supports efficiency of management and rationalisation of employment and it leads, amongst others, to:

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- better adjustment of the size of employment to the level of output under given technical environment and under the given volume of demand for the company's products;
 - selection of a more favourable structure of employment.
2. Privatisation processes force liquidation of excess employment.
 3. Private enterprises prefer more entrepreneurial employees and these whose qualifications correspond to the actually carried out tasks.
 4. As a result of the privatisation of enterprises a relative reduction of the number of clerks can be expected.
 5. Private enterprises prefer compensation systems that stimulate productivity of labour.
 6. It can be expected that the key role in shaping wages is played by the economic criteria allowing for the complexity of labour and its effects, for the capabilities and financial results of the enterprise, for the situation on the labour market and the level of compensation offered by competitors.
 7. In private enterprises a higher disparity of wages can be expected between particular jobs.

1. Size of employment

To illustrate the size of employment in particular types of the investigated companies in the years 1989-1994, average employment per a given type of company was calculated. The data on this subject are shown in Table 1.

**Table 1. Average employment in particular types of companies covered by the survey
(average per company) in the years 1989-1994**

Companies	1989	1990	1991	1992	1993	1994
Polish: controlled by	1594	1449	1365	1303	1227	1162
- strategic investor	2221	2046	1943	1833	1709	1503
- managers	2037	1786	1635	1583	1505	1562
- employees	488	464	455	445	427	430
German: controlled by	5837	4118	2522	2051	1427	1220
- strategic investor	11522	8087	4963	4024	2771	2357
- managers	153	149	81	79	83	83

Data in Table 1 show that average size of employment in all types of companies was higher in the period before privatisation (years 1989-1991) than in the period following it (i.e. 1992-1994). Particularly large differences can be spotted among the German companies, especially those controlled by strategic investors.

Throughout the sample period average employment in the companies was declining, but in the Polish companies controlled by managers and employees and in German companies controlled by managers the decline was arrested in 1994. One of the reasons for this may have been the general improvement of business conditions.

The Polish companies controlled by the strategic investor and managers were characterised by a similar size of average employment per company. A completely different situation was found in both types of German companies. The differentials between the sizes of average employment were quite considerable among them, for example by almost 30 times in 1994. It is also worth noting that the average number of employees almost three times higher in 1989 in German companies than in Polish companies was largely reduced in the next years, going down by 1994 to almost the same level as in Polish companies.

2. Dynamics of employment

During the whole period (1989-1994) employment in all distinguished types of Polish and German companies showed a downward trend (see table 2). Only in a few single cases the situation was different. In the Polish companies employment dropped on average by 10%, to approximately 30%, and in the German companies the drop was relatively heavier and ranged from 30% to almost 80%.

The survey confirms the existence of the trends in the dynamics of changes in average employment that marked in the whole Polish economy and in the industrial sector (see Table 3). In the years in question the total employment and in all industry showed a steady decline, although slowing down from 1993.

	1989	1990	1991	1992	1993	1994
Polish companies controlled by strategic investors	1500	1450	1400	1350	1300	1250
Polish companies controlled by managers and employees	1200	1150	1100	1050	1000	950
German companies controlled by strategic investors	4500	4000	3500	3000	2500	2000
German companies controlled by managers and employees	1500	1400	1300	1200	1100	1000

**Table 2. Dynamics of employment in particular types of the sample companies
in the years 1989-1994**

Companies	1990	1991	1992	1993	1994	1993	1994
	1989 = 100				1992 = 100		
Polish: controlled by	90,9	85,6	81,8	76,9	72,9	94,1	89,1
- strategic investor	92,1	87,5	82,5	76,9	67,7	93,2	82,0
- managers	87,7	80,3	77,7	73,9	76,8	95,0	98,9
- employees	95,1	93,3	91,2	87,6	88,1	95,9	96,6
German: controlled by	70,5	43,2	35,1	24,4	20,9	69,6	59,5
- strategic investor	70,2	43,1	34,9	24,0	20,4	68,3	58,6
- managers	97,6	52,9	51,4	54,2	54,0	105,1	105,1

**Table 3. Dynamics of average total employment and in industry in the years 1989 -1994
(1989 = 100)**

Employment	1990	1991	1992	1993	1994
Total	93,6	85,6	78,8	75,4	74,9
Industry	94,1	85,5	77,7	76,3	75,6

Source: author's calculations on the basis of Statistical Yearbook 1994, GUS, Warsaw 1994, p. 120 and Statistical Yearbook 1996, GUS, Warsaw 1996 p. 127.

In all types of the companies in question quite considerable reductions of employment occurred in the period prior to privatisation (in the years 1989-1991). In the Polish companies average employment dropped by ca 20% and in the German companies by ca 60%. After privatisation (years 1992-1994) a favourable employment trends emerged. In the majority of the companies the rate of decline of employment was relatively lower (the 1994 average for the Polish companies was ca 10% and ca 40% for the German companies). In some types of companies employment stabilised and even some trend to increase employment showed up, most of all in the Polish companies controlled by managers and by employees and in German companies controlled by managers.

The survey acknowledges the conclusions resulting from other empirical surveys. Also those surveys showed that the downward trends in employment had occurred in the state-owned companies in the first two years of transition (1990-1991), prior to their privatisation, and also during the process. For example, the research (Dąbrowski, Federowicz, Kamiński, Szomburg 1993, p.17) ordered by the Ministry for Transformation of Ownership that used a sample of 61 companies privatised using different methods showed that in an average company

subject to privatisation employment declined by almost 25% in the years 1990-1992. In firms having a worse financial condition employment fell in the same period by 30-70%. In firms enjoying a good financial condition employment declined by less than 10% and in the unique case of one company it even grew. It is generally estimated that in the years 1990-1991 the drop of employment in companies held solely by the Treasury of State amounted to ca 13%, in companies with foreign partners it was over 15%, and in companies sold to domestic investors around 20% (Dąbrowski 1994).

The majority of investigations show some stabilisation of the level of employment in the companies in the period after privatisation. For example, a research (Dąbrowski 1996, p. 43) with the sample of 23 companies privatised by selling them to private owners in the years 1993-1994 showed that compared with its 1994 level, employment in companies with a foreign investor dropped by one point in 1993 and by 4 points in 1994. In companies with the participation of a domestic investor the decline of employment in the same years ranged from 4 to 7 points annually and it was relatively lower than in the period before privatisation (13-16 points). A research in four types of leased companies showed that after a period of falling employment, in 1994 it clearly grew and stabilised in two types of companies, whereas in the other two types the downward employment trend persisted (Szomburg 1996, p. 24).

The results of the empirical data presented coincide therefore with the general conclusions derived from the analysis of employment in the Polish and German companies in question: after the years of quite a considerable decline of employment before the privatisation, a general trend to stabilise and even to increase employment appeared in the privatised companies. That trend was in line with employment trends in the whole economy, where the downward employment trends in the public sector were accompanied by a gradually increasing employment in the private sector („Gospodarka Narodowa” 1996, p. 54-55).

An important role in arresting the decline of employment in companies with the participation of a strategic investor and in some controlled by the managers was played by relevant obligations stipulated in the privatisation agreements. In five from six Polish companies in questions with the participation of a strategic investor and in one company controlled by managers, the privatisation agreements either obliged the future owners to maintain the present level of employment for a period from 12 to 18 months after the privatisation date or prohibited the reduction of employment for the next 1 to 3 years by more than 6 to 10%. Also privatisation agreements of all German companies included in the survey imposed specific obligations on new owners, mostly to keep up the given level of employment for two, three or four years, or not to reduce it during a certain period of time (most frequently 3 years) by more than 50-75%

(2 companies). In one case the privatisation agreement provided for a growth in employment during 4 years by 25%. In the majority of Polish and German companies the obligations were valid to the end of 1994. Of significance was also the improvement of general business conditions in the economy in that period.

From the survey it results that in the early period of transition, before the companies in question were privatised, a strong impulse to reduce employment was in a definite majority of the firms excess employment inherited after the previous system, and the necessity to cut down sale and difficult financial conditions of the firms resulting from the general recession. On the other hand, the primary factors shaping the size of employment after the privatisation were: financial results of the company, level of current production, technical manufacturing environment (machinery and technologies applied) and current orders from customers. Less important were factors such as: situation on the local labour market, inability to introduce major changes in employment, long term production plan and long term orders from customers.

In the majority of the German and Polish companies in question employment was found to be at the right level after privatisation. This coincides with the conclusions resulting from other surveys that the level of employment is best fitted to the actual needs in private enterprises, slightly less in the privatised ones, and the worst in the state-owned companies where employment continues to be too high (Krajewski 1994, p. 33).

3. Structure of employment

An important objective in the processes aimed to privatising the state-owned enterprises is rationalisation of employment. This should be perceived not only as the need to cut down redundant employment, but also as the need to restructure employment in a more favourable way from the point of view of attainment of the strategic and growth objectives of the company.

In the years 1989-1994 changes in the structure of employment took place in all types of the Polish and German companies in the sample. To illustrate the changes the average shares of manual and related jobs and non-manual jobs in total employment in the years in question are shown in Table 4.

Table 4. Structure of employment in particular types of investigated companies in the years 1989-1994 (%)

Companies	1989		1990		1991		1992		1993		1994	
	a	b	a	b	a	b	a	b	a	b	a	b
Polish: controlled by	80,1	19,9	80,6	19,4	80,6	19,4	80,9	19,1	80,7	19,3	79,7	20,3
- strategic investor	81,7	18,3	82,7	17,3	83,0	17,0	83,9	16,1	83,8	16,2	81,4	18,6
- managers	77,9	22,1	77,7	22,3	77,8	22,2	77,5	22,5	77,6	22,4	78,5	21,5
- employees	81,9	18,1	82,5	17,5	80,7	19,3	79,6	20,4	78,4	21,6	77,1	22,9
German: controlled by	41,2	58,8	38,5	61,5	39,8	60,2	42,6	57,4	41,9	58,1	45,1	54,9
- strategic investor	41,6	58,4	38,9	61,1	40,2	59,8	43,1	56,9	42,5	57,5	46,1	53,5
- managers	16,1	83,9	16,1	83,9	18,9	81,1	18,2	81,8	20,9	79,1	16,9	83,1

a - average share of manual and related jobs in total employment,

b - average share of non-manual jobs in total employment.

The analysis of the data in table 4 allows drawing several conclusions. Firstly, the share of manual jobs in total employment was generally higher (by over 50%) in the Polish companies than in the German ones, both before their privatisation and after. On the other hand, as regards the share of non-manual jobs in total employment the situation was quite different. This share was definitely lower in the Polish companies (ca 20%) than in the German companies (ca 60%) throughout the sample period. Secondly, in both types of German companies the share of manual jobs tended to grow in the years 1989-1994 (particularly in the companies with a strategic investor) while the share of non-manual jobs tended to decline. Thirdly, the share of manual jobs was higher in the Polish companies in the period before privatisation (1989-1991) than after. The only exception were companies controlled by managers where the share of these jobs grew after privatisation. Nevertheless, the share of non-manual jobs in the Polish companies was higher after privatisation than before, except for companies controlled by managers.

Table 5. Dynamics of manual and non-manual jobs in particular types of analysed companies between 1989-1994

Companies	1989 = 100										1992 = 100			
	1990		1991		1992		1993		1994		1993		1994	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b
Polish: controlled by	91,2	88,4	85,6	82,9	81,7	78,3	75,9	73,7	72,9	75,3	92,9	94,1	89,2	96,1
- foreign investor	94,2	88,5	89,8	83,2	85,5	74,9	78,3	65,9	69,5	72,7	91,6	92,8	81,3	97,0
- managers	87,5	88,2	80,1	80,7	77,4	78,9	73,6	74,7	77,5	74,6	95,2	94,6	100,1	94,5
- employees	91,7	88,5	88,2	95,6	81,5	94,6	73,7	91,9	69,9	94,2	90,3	97,1	85,8	99,6
German: controlled by	66,1	74,2	41,9	44,4	37,1	35,0	25,2	24,6	23,0	19,6	68,0	70,1	62,2	56,1
- foreign investor	65,9	73,7	41,8	44,3	36,9	34,7	24,9	24,0	22,9	19,0	67,6	69,2	61,9	54,7
- managers	97,3	97,7	62,2	51,2	58,1	50,1	70,3	51,2	56,7	52,2	120,9	102,1	97,7	104,1

a - dynamics of manual jobs

b - dynamics of non-manual jobs

4. Dynamics of manual and non-manual jobs

Between 1989-1994 manual jobs tended to drop in the investigated Polish and German companies (see Table 5). This drop was relatively deeper in the German companies (by 60-70% on average) than in Polish companies (by 20-30% on average).

The numbers of manual jobs declined in the Polish companies in the period before privatisation (years 1989-1991) on average by ca 20%, the least in companies with strategic investors and the most in companies controlled by managers. After privatisation (years 1992-1994) employment downward trends in this group of employees weakened (average decline was ca 10%), and in the companies controlled by managers some stabilisation of employment could be observed. These trends were in line with the dynamics of manual jobs in industry in Poland (in the years 1991-1994 a decline by ca 20% took place) (Rocznik Statystyczny 1994, p. 122; 1996, p.127).

In German companies manual jobs also showed a downward trend, much weaker after privatisation than before (as in the Polish companies). A growth of employment in this group of jobs by almost 30% took place in the companies controlled by managers in the years 1992-1993. As soon as next year it slightly dropped.

The downward trend of non-manual jobs that was marked in the years 1989-1993 was arrested in 1994 (see table 5). In the majority of firms some stabilisation of employment could be noticed. In a few cases employment in this group of workers even grew, for example, in the Polish companies controlled by foreign investors and employees, which must have been partially due to the improvement of the general business conditions. An exception were German companies controlled by the strategic investor. The results of the survey coincide with the employment trends concerning non manual jobs in the whole industry in Poland (Rocznik Statystyczny 1994, p. 122; 1996, p.127).

Many surveys stress that a significant role in rationalising the structure of employment is played by the processes related to internal reorganisation of firms (Dąbrowski, Federowicz, Levitas 1992, pp.1-2; Tulski, Woźniakowski 1992, pp.29-30). Mergers of administration departments in order to simplify the chart of organisation of the firm added to a relative decline of the numbers of clerks and reduction of managerial posts. Many firms liquidated posts related to carrying out a variety of functions within welfare departments. Other organisational changes consisted in setting up and developing new departments as, for instance, sale, quality control, marketing, promotion, advertising, accounting and others. In many companies modern IT systems have been put in place (computerisation) and single processes are monitored, for example, sale, inventories. The above changes

prevailed in companies privatised by selling, especially in these with foreign capital (Dąbrowski 1996, pp. 20-21). Because of the modifications employment declined and the proportions between shop floor workers and the number of clerks and service personnel were changed.

5. Rate of recruitment

The rate of recruitment, understood as the percentage ratio of the number of persons employed in a given year to employment as at the end of that same year, was calculated for the analysed types of Polish companies (except for two companies controlled by employees that did not provide information). For the majority of German companies recruitment data were either lacking or were seriously incomplete, which made it impossible to include the German companies in the analysis.

The information about the rate of recruitment in the Polish companies in the survey is given in Table 6.

The data in the table show that in the years 1989-1993 the rate of recruitment was declining. These trends were arrested in the majority of Polish companies in 1994 but companies controlled by employees. The rate of recruitment was higher before privatisation than after in all distinguished types of companies. On the one hand, this situation resulted from the relatively higher number of newly employed workers in the period prior to privatisation and, on the other, from the relatively sharper drop of employment in firms before their privatisation than after it.

Table 6. Rate of recruitment* in particular types of Polish companies in the survey in the years 1989-1994 (%)

Companies	1989	1990	1991	1992	1993	1994
- Polish: controlled by	11,9	8,8	9,1	8,5	7,4	10,8
- foreign investor	10,5	7,6	7,3	7,8	6,8	7,7
- managers	12,5	10,7	10,1	8,6	8,2	14,7
- employees	17,1	5,8	14,7	12,1	7,3	6,9

*
rate of recruitment = $\frac{\text{recruitment in given year}}{\text{employment as at the end of year}} \times 100\%$

6. Rate of dismissals

The rate of dismissals, understood as the percentage ratio of dismissals in a given year to the end of year employment, was calculated for particular types of Polish companies in the survey (two companies controlled by employees were excluded from the calculation because of missing data). The database obtained from the German firms was so incomplete that also this time they were omitted in the analysis.

Information about the rate of dismissals in particular types of Polish companies covered by the survey can be found in Table 7.

Table 7. Rate of dismissals* in particular groups of companies in the survey in the years 1989-1994 (%)

Companies	1989	1990	1991	1992	1993	1994
- Polish: controlled by	17,6	19,2	13,6	12,5	14,8	13,3
-foreign investor	16,2	15,3	12,4	13,6	15,8	17,1
- managers	19,2	24,6	13,6	11,7	13,6	10,8
- employees	16,9	15,5	20,1	10,4	15,3	6,5

$$* \quad \text{rate of desmissals} = \frac{\text{dismissals in given year}}{\text{employment as at the end of year}} \times 100\%$$

From the data in Table 7 it results that the rate of dismissals was considerably higher in all types of companies in the period before their privatisation than after. This may be explained by two primary factors: (1) the need to liquidate excess employment in the firms during the first stage of the economic transition, and (2) an improvement of the general business conditions that started in 1993.

The major motives of dismissals of employees in the Polish enterprises in the period before transition, according to the management of the sample companies, were: necessity to eliminate excess employment, necessity to introduce changes to the structure of employment and the intention to get rid of unreliable workers. The last two factors plus declining orders from customers were considered by the management of the German companies as the main source of dismissals in the period prior to the privatisation.

On the other hand, the major factors behind dismissals of employees in the period after privatisation included:

- in Polish companies: the need to restructure the workforce in terms of

qualifications, the necessity to adapt personnel to the changes in production and implementations of new techniques and manufacturing technologies;

- in German companies: the need to eliminate excess employment, the wish to get rid of unreliable workers and the need to restructure the workforce (in terms of qualifications).

In addition, the data collected show that the companies in question prefer reliable and innovative workers, as well as those whose qualifications correspond to the actually rendered work. This conclusion coincides with the results of other surveys (Dąbrowski, Federowicz, Kamiński, Szomburg 1993, p. 17; „Prywatyzacja” 1993, p. 2).

7. Personnel turnover ratio

The personnel turnover ratio, understood as the sum of the rate of recruitment and the rate of dismissals, was calculated for particular types of Polish companies for the years 1989-1994. Relevant data are presented in Table 8.

Table 8. Personnel turnover ratio* in particular types of Polish sample companies in the years 1989-1994

Companies	1989	1990	1991	1992	1993	1994
- Polish: controlled by	29,5	28,0	22,7	21,0	22,2	24,1
- foreign investor	26,7	22,9	19,7	21,4	22,6	24,8
- managers	31,7	35,3	23,7	20,3	21,8	25,5
- employees	34,0	21,3	34,8	22,5	22,6	13,4

* Personnel turnover ratio = rate of recruitment + rate of dismissals

In the majority of the Polish companies in question the personnel turnover ratio was higher before privatisation than after it, which was the most visible in companies controlled by employees and the least in companies with strategic investors. This confirms the regularity found by many surveys (Dąbrowski 1996, p. 22; „Ministry For Transformation of Ownership” 1995, p. 183) that the relatively highest adjustments in the privatised enterprises took place still before their privatisation.

Moreover, another frequently formulated hypothesis has been confirmed that in the period after privatisation relatively smallest changes in employment should be expected in the companies controlled by employees. As regards companies with strategic investor (especially foreign) two factors may primarily account for the comparatively low differences between the personnel turnover ratio in periods right before privatisation and after it: the obligation to keep up employment typically stipulated in the privatisation agreements signed with this type of investors and the fact that the strategic investors usually purchased interests (shares) in companies being in good business condition.

8. Compensation

In the years 1989-1994 the changes in employment were accompanied by changes in compensation of the employees in the particular types of the Polish and German companies in question. The analysis of changes in the area of compensation was difficult because of the companies' reluctance to disclose data or the incompleteness of data on the level and structure of wages. This inconvenience concerned three Polish companies (one with the strategic investor and two controlled by employees) and the aforementioned German companies that did not provide compensation data manual and non-manual workers at all, or the data concerning the level of wages in the years 1989-1990.

In the case of the Polish companies net wages for the years 1989-1991 were made gross, because of the reform of the taxation system that had introduced a direct tax on wages on 1 January 1992. The amount of the tax was included in the wages. To make wages gross, we used the grossing ratios given by the analysed companies. In the majority of cases the ratio was 1.20, in one - 1.22, and in four companies - 1.25. Consequently, the category of gross pay per one employee is applied in all the sample years to make data comparable across all the firms in the survey.

Table 9 presents the level of average annual pay per one manual and non-manual worker, respectively, in the Polish companies in question in the years 1989-1994 („old” Polish zlotys).

From the table it results that in the years 1989-1994 nominal wages per one worker (expressed in current prices) grew in all the companies in question, amounting in 1994 for both types of jobs to the level 20-30 times higher than in 1989 and ca twice higher than in 1992. The level of wages received by manual workers was relatively lower than the level of wages for non-manual personnel. The highest compensation in the years in question received personnel in companies controlled by employees, especially those doing non-manual jobs.

Table 9. Average annual gross pay per one manual and non-manual worker, respectively, in particular types of Polish sample companies in the years 1989-1994, (millions of „old” zlotys)

Companies	1989		1990		1991		1992		1993		1994	
	a	b	a	b	a	b	a	b	a	b	a	b
Polish controlled by:												
-strategic investor	2,86	3,49	14,17	17,39	23,26	29,10	31,59	41,77	43,50	62,71	59,92	83,87
- managers	3,18	3,72	16,03	17,18	25,37	27,85	33,05	37,52	43,15	52,19	60,05	76,66
-employees	2,39	4,11	14,17	22,77	24,39	40,32	32,67	50,15	51,89	85,92	73,20	115,84

a) manual and related workers

b) non-manual workers

A significant impact on the evolution of wages in the partnerships was exerted by inflation, and especially its varying intensity in both countries. The rate of inflation in Poland and Germany in the period 1989-1994 is illustrated by the consumer price index (see table 10).

Table 10. CPI in Poland and Germany in the years 1989-1994 (1989 = 100)

Years	1989	1990	1991	1992	1993	1994
Poland	100	653,6	1154,9	1678,4	2297,4	3061,4
Germany	100	102,7	106,3	110,5	115,0	118,5

Source: calculated on the basis of International Financial Statistics, Yearbook, International Monetary Fund, 1995, p. 389.

To make the amounts of nominal wages (in current prices) real we adjusted them for the presented indices of the consumer prices' growth, and thus wages in the 1989 prices were obtained. This is important with view to investigating the dynamics of wages in the sample companies.

Table 11 presents the adjusted level of annual pay per one manual and non-manual worker, respectively, in the Polish companies in question in the years 1989-1994 (1989 prices).

Table 11. Annual pay per one manual and non-manual worker, respectively, in particular types of investigated Polish companies in the years 1989-1994, 1989 prices (millions of „old” Polish zlotys)

Companies	1989		1990		1991		1992		1993		1994	
	a	b	a	b	a	b	a	b	a	b	a	b
Polish: controlled by	2,86	3,49	2,18	2,67	2,02	2,53	1,88	2,49	1,89	2,74	1,96	2,74
-strategic investor	2,68	3,16	1,94	2,57	1,86	2,45	1,80	2,65	1,85	3,02	1,87	2,76
- managers	3,18	3,72	2,47	2,64	2,21	2,42	1,97	2,23	1,88	2,28	1,96	2,50
- employees	2,39	4,11	2,18	3,50	2,12	3,51	1,94	2,98	2,26	3,75	2,39	3,78

a) annual pay per one worker doing a manual or related jobs

b) annual pay per one worker doing a non-manual job

On the basis of the data presented in Table 11 several conclusions can be formulated. Firstly, in the years 1989-1994 in all types of the investigated Polish companies pay per worker doing a non-manual job reached a higher level than in the case of manual and related posts. Secondly, the downward trends of pay per worker on either type of posts occurring prior to privatisation were arrested in the period after privatisation. It is especially visible in the companies controlled by employees where in 1994 the average pay for a manual worker reached the 1989 level. Thirdly, in the years in question the disparity between wages earned by manual and non-manual workers, respectively, was growing. For the investigated Polish companies the disparities were: 1:1.2 in 1989, 1:1.3 in 1992, 1:1.4 in 1994. The highest disparity between these two types of jobs occurred in companies controlled by employees (1:1.7, 1:1.5, 1:1.6 in respective years), and in the companies with strategic investor after the period of their privatisation: 1989 - 1:1.2, in the years 1992-1994 - 1:1.5). The results of the survey acknowledge therefore the preliminarily formulated research hypothesis about the growing disparities between wages earned on particular posts after the period of privatisation of the companies. The increasing disparities between wages in companies with the strategic investor reveals the wages policy pursued in these companies, ensuring higher income to workers employed on non-manual posts, especially the management of the companies (Dąbrowski 1996, p. 24).

The dynamics of average annual pay per employee in particular types of the companies in question in the years 1989-1994 is shown in Table 12.

In all the Polish companies analysed wages per employee were declining before privatisation. They dropped on average by 25-35%, relatively the most in the companies controlled by managers and the least in companies controlled by employees. Our survey confirms the trends characterising the dynamics of average real wages that occurred in the whole Polish economy. Recession that accompanied the first period of reforming Polish economy and related heavy inflationary processes produced in the years 1990-1991 a very deep fall of the real wages (by 25% in 1990) (Rocznik Statystyczny 1996, p. 146).

The heaviest drop of wages per employee in the respective Polish and German companies took place in the period of their privatisation, and the rate of decline of wages was relatively higher in the Polish companies. The only exception were German companies controlled by managers where employees were receiving twice higher wages compared with the period prior to privatisation.

Table 12. Dynamics of annual pay per employee in particular types of Polish and German companies in 1989-1994, 1989 prices

Companies	1990	1991	1992	1993	1994	$\frac{1994}{1992}$
Polish: ^{a)} controlled by	73,4	70,8	66,4	68,4	70,1	105,5
- strategic investors	74,5	71,3	70,6	74,5	74,5	105,6
- managers	75,8	68,3	61,3	59,5	62,8	102,5
- employees	64,4	83,7	72,9	84,4	84,4	115,7
German: ^{b)} controlled by			91,4	96,4	96,4	105,4
-with strategic investor			87,7	92,1	90,7	103,5
- managers			223,3	224,2	268,5	120,2

a) 1989 = 100

b) 1991 = 100

An important effect of the privatisation were raises of wages in the Polish and German companies. In the year 1994 wages per employee grew in the companies on average by more than 5% in relation to the privatisation period. The highest increase in wages per employee took place in the German companies controlled by managers (by 20%) and in the Polish companies controlled by employees (by ca 16%). The survey revealed that these were the only companies where real incomes grew after 1992. The growth of wages per employee was relatively the smallest in the Polish companies controlled by managers (by 2.5%) and German companies with the strategic investor (by 3.5%). In these companies

real incomes were marked by downward trends. It can be presumed therefore that the growth of wages in particular partnerships depended on the improvement of their financial result.

Other surveys (Dąbrowski 1996, p. 23; Pinto, Belka, Krajewska, Krajewski, Sierhej 1993, p.9-10) acknowledge the growth of wages in the companies after privatisation, especially high in these privatised by selling (e.g. in the period 1990-1994 average net wages grew five times), whereas slightly smaller in the leased companies. The smallest dynamics of wages could be found in the state-owned companies because of insufficient financial resources to be allocated to the raises of pay and the obligation to pay the tax on wages if these exceeded a prescribed level.

An important role in the pay raising process in the period after privatisation is ascribed to pay obligations stipulated in the privatisation agreements. In the case of the Polish and German sample companies, the obligation of the new owners regarding the growth of wages could be found in privatisation agreements of only five companies (four Polish: two with strategic investor and two controlled by the employees, and in one German company with a strategic investor). The benefits derived from the agreements were evaluated by the companies as significant.

Among the major factors determining the average level of wages in Polish companies in the period before their privatisation, the managerial staff of the sample companies listed: results of business operations, increased living cost, volume of output and taxes paid by the company, as well as the demands of the trade unions and workers' councils to raise wages. The last three factors were considered by the managerial staff of the German sample companies as the major determinants of the average level of wages in the period prior to privatisation.

On the other hand, the main factors shaping the average level of wages in the period after privatisation comprised:

- in the Polish companies: business results of the enterprise, productivity of labour, company's own financial resources, and entrepreneurship of the management;
- in the German companies: business results of the enterprise, productivity of labour, company's own financial resources.

So, there is a great convergence of the opinions issued by the management of both Polish and German companies as regards the factors that shape the average level of wages in the period after privatisation. The results obtained point to a considerable growth of the role of the economic criteria in setting the level of wages, as well as to the fact that the companies prefer pay systems stimulating productivity of labour (with the resulting significance attached by the management to such factors as productivity of labour and entrepreneurship of the

management). Moreover, the wage determinants presented are commonly accepted by both theoreticians and politicians as important determinants of the level and dynamics of wages in a market economy, where private ownership dominates (Prawo do płacy godziwej 1994, pp. 8-10 and on).

9. Share of wages in costs

A reliable indicator of the wages policy in the companies is the index of the percentage share of gross wages in the cost of income. In the case of the companies in the survey, the information obtained allowed calculation of the level of that share in the whole period analysed. The data provided by the German companies were not complete. The companies did not provide 1989 data at all, and for 1990 we only had data from 4 companies, consequently we gave up presenting them for that year. So, the shares of wages in the cost of income in the German companies analysed are presented for the period 1991-1994. Information about the share of gross wages in the cost of income for particular groups of Polish and German companies in the survey can be found in Table 13.

When the shares of wages in the income cost are compared, we can see clear differences between the Polish and German companies. These shares are definitely higher (almost twice) in the German companies than in the Polish. This situation was basically shaped by higher average level of wages earned in the German companies. It can be presumed therefore that in the German companies in question, wages were in a sense a protected expense, especially if we consider a generally bad financial condition of these companies. In addition, it can be presumed that an important role was played by the employees' expectations as to the improvement of the relation between their wages and the wages in west German companies after privatisation.

Table 13. Share of gross wages in the cost of income in particular types of Polish and German sample companies in the years 1989-1994 (%)

Companies	1989	1990	1991	1992	1993	1994
Polish: controlled by	15,1	12,1	14,1	17,9	18,4	17,1
- strategic investor	21,4	17,9	21,2	29,7	27,4	24,3
- managers	12,8	9,8	10,9	13,5	14,5	14,4
- employees	10,0	9,5	10,1	12,2	13,9	12,9
German: controlled by			37,9	33,2	33,5	35,0
- strategic investor			38,2	32,9	32,9	34,8
- managers			31,4	38,6	41,8	37,1

In the Polish companies in question we can observe in the years 1989-1994 a growing share of wages in costs. This share was relatively lower in all types of Polish companies in the period before privatisation than after. The growth of the analysed index in the period after privatisation results from the growth in pay per employee in the sample companies. The share of wages in costs increased particularly in the years 1992-1993, the most in companies with strategic investors and the least in companies controlled by employees. However, as early as 1994 the share of wages in costs declined in all types of Polish companies, which to some extent can be explained by a more cautious approach to wages in these companies.

The higher share of wages in the cost of income in the analysed companies with a strategic investor (almost twice higher than in the companies controlled by managers and employees) is, supposedly, an expression of the wages policy in these companies, ensuring high incomes to the top management when good business results are achieved, as well as consequence of pay obligations assumed by investors before privatisation.

A considerable impact on varying the share of wages in costs in the companies exerted also factors such as the character of the industry the companies operated in, and the type of the manufacturing technology and capital assets. This conclusion is acknowledged by the results of other investigations as well.

10. Average wages and labour productivity¹

We used statistical data contained in tables 14 and 15 to build a simple econometric model, in which average wages (measured by real gross wages, per employee - in Table 14) in the examined group of the Polish companies between 1989-1994 are explained by labour productivity (measured by sold production in constant prices per employee - in Table 15).

Table 14. Average wages per employee in particular types of investigated Polish companies between 1989-1994, constant prices of 1989

Companies controlled by	1989	1990	1991	1992	1993	1994
strategic investor	2.79	2.08	1.99	1.97	2.08	2.08
managers	3.31	2.51	2.26	2.03	1.97	2.08
employees	2.70	2.44	2.26	1.97	2.28	2.28

¹ Dr. Jacek Sztudynger is a co-author of this part of the paper

Table 15. Index of labour productivity in particular types of investigated Polish companies between 1989-1994, constant prices of 1989

Companies controlled by	1989	1990	1991	1992	1993	1994
strategic investor	100.0	88.0	93.3	85.2	84.0	105.0
managers	100.0	123.8	126.0	128.0	117.2	127.3
employees	100.0	123.9	151.0	140.3	178.6	206.2

The model was estimated with the help of the ordinary least squares. In the estimation we applied cross section - time series data from the period 1989-1994 and three types of Polish companies (controlled by strategic investor, managers and employees).

As a result of the estimation we obtained the following equation:

$$\ln \text{WAGES} = 0.171 \ln \text{PROD} - 0.019 \text{PRIV} * \ln \text{PROD} + 0.41 \text{U89m} + 0.22 \text{U89sp}$$

37.7 3.3 7.2 5.2

$R^2 = 0.89$

where:

WAGES - average real gross wages per employee in the analysed types of the companies in constant prices of 1989

PROD - index of labour productivity (sold production divided by the number of employees), 1989 = 100

PRIV - a dummy variable which takes the value of:

0 for the years 1989-1991 (before privatization)

1 for the years 1992-1994 (after privatization)

U 89 m - a dummy variable which takes the value of:

1 for the companies controlled by managers in 1989

0 for other observations

U 89 sp - a dummy variable which takes the value of:

1 for the companies controlled by strategic investor or companies controlled by employees in 1989

0 for other observations

Under the values of the estimated parameters t - values were given.

Actual values of the logs of average real wages and the magnitudes resulted from the model are presented in figure 1.

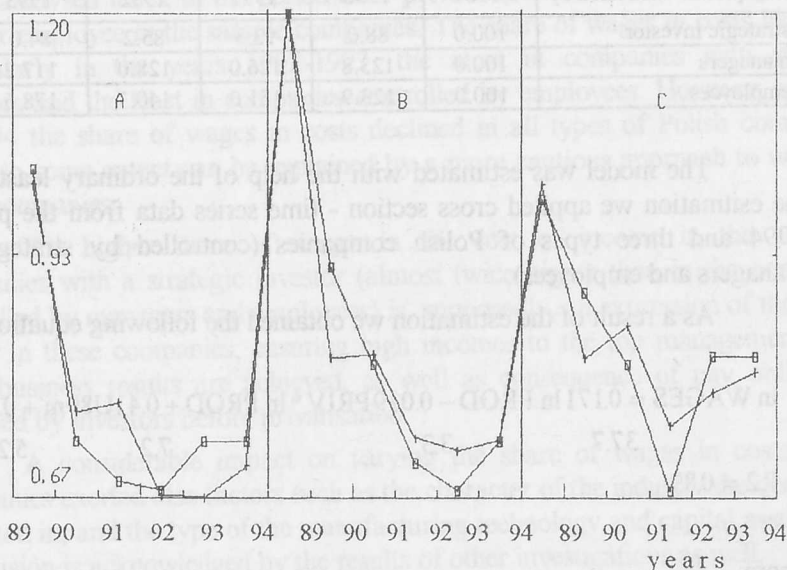


Figure 1. + values generated by the model, actual values,
 A - companies controlled by strategic investors,
 B - companies controlled by managers,
 C - companies controlled by employees.

The results of the estimation confirmed the influence of labour productivity upon the average real gross wages in the examined groups of the Polish companies. The elasticity of real wages to labour productivity amounted to 0.17 before privatization between 1989-1991. After privatization the estimated coefficient was lower by about 0.02 and amounted to 0.15. This means that the influence of labour productivity upon the real wages was weaker after privatization. The only difference between the companies we were able to find out was a different variation of wages in 1989 as compared to the period 1990-1993. In 1989 in the companies controlled by managers real wages were higher by about 41%, in the companies controlled by strategic investor and companies controlled by employees real wages were higher by ca 22%.

Summary

The analysis made shows that in the years 1989-1994 important changes in the area of employment and wages took place in the Polish and German companies covered by the survey. The changes were launched still before the privatisation of the companies, due to the transformation of the economic systems and were continued after privatisation. They addressed improvement of management efficiency in the companies.

The German companies had to be omitted in the analysis quite frequently. The reasons was either too scarce database (incomplete data), particularly on the period before their privatisation or the total lack of data. This particularly concerned numbers of persons recruited and dismissed (hence the inability to calculate the personnel turnover ratio), wages for manual and non-manual jobs, as well as the level of wages and their share in total costs.

The analysis of employment in particular types of Polish and German companies confirms employment rationalisation processes in the companies. They mainly consisted in liquidating excess employment inherited after the previous system and in modification of unfavourable structures of employment².

Throughout the period in question (1989-1994) in all distinguished types of Polish and German companies employment tended to fall. It was different only in a few single cases. Quite considerable reductions of employment took place particularly in the period prior to privatisation (1989-1991). After privatisation (1992-1994) favourable employment trends appeared: in the majority of the companies in question the rate of declining employment was relatively lower, in some types of companies employment stabilised, or even some growing trend appeared, mostly in the Polish companies controlled by managers and employees and in the German companies controlled by managers.

The analysis of employment in Polish companies shows that despite such a small sample (16 companies) their employment trends are fully aligned with the trends characteristics of the whole population of Polish companies.

An important role in arresting the decline of employment in the companies was played by the pertinent obligations of new owners stipulated in the privatisation agreements. In their majority, the obligations consisted in maintaining the present level of employment for some period of time (from one to three years), or not reducing the employment for a period of 3 years (most frequently) by more than 6-10% in the Polish companies and 50-75% in German companies. The survey confirmed the preliminary hypothesis that the major

² From the empirical research it results that at the end of the 1980s excess employment in industrial enterprises reached 5% of total employment in Polish industry, Rutkowski (1990)

factors shaping the volume of employment after privatisation were: financial results of the company, current output, technical manufacturing environment and current orders from customers.

The employment rationalisation processes added to the restructuring of employment in the Polish and German companies in question. Some fluctuations occurred also in the structure of employment. In German companies the share of manual jobs was twice higher after privatisation, while a reverse trend occurred in the case of the share of non-manual jobs. In Polish companies the share of manual jobs was higher before privatisation than after and, regarding the non-manual jobs, their share was higher after privatisation than before.

The analysis of the rate of recruitment and the rate of dismissals in the Polish companies in the survey indicates that the turnover of personnel was higher before privatisation than after it. This was mainly due to the fact that the major adjustment processes occurred still before privatisation, and also because of the employment stabilisation trend after privatisation that was related, amongst others, to the obligations assumed in the privatisation agreements, protection of jobs in companies controlled by employees and improvement of general business conditions.

In the Polish and German sample companies important changes affected the wages. Prior to privatisation, average wages tended to decline, whereas after privatisation they tended to grow, especially in the German companies controlled by managers and Polish companies controlled by employees. These changes point to a growing role of the economic criteria in shaping wages.

The analysis of the Polish companies shows that after their privatisation the span between wages for manual and non-manual jobs grew in favour of non-manual jobs.

The analyses concerning the share of wages in the cost of income reveal that the rates of this share were higher in German companies than in Polish. It should be remembered, however, that in the case of German companies the decisive factor was probably the policy of the German government aiming to a possibly fast liquidation of wage disparities between former east Germany and the western part of the country.

The influence of labour productivity upon the average real gross wages in particular types of the investigated Polish companies was estimated on the basis of a simple econometric model. The analysis shows that the elasticity of average real wages to labour productivity amounted to 0.17 before privatization and to 0.15 after privatization meaning that the influence of labour productivity upon the real wages was weaker after privatization.

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