

**THE DIFFERENTIATION OF WAGES  
IN POLISH ECONOMY IN THE YEARS 2005–2012**

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Key words: wages, differentiation of wages, criteria and main reasons for wage differentiation.

Abstract

The study characterized and analysed the differentiation of wages in Poland in the years 2005–2012. The analysis present changes of the level of wages in connection with such criteria as sections of economic activity, owner-ship sectors, occupations, sex, level of education and work experience. The analysis will make it possible to reflect on the main socio-economic reasons for wage differentiation, which may have a significant impact on the change of employment structure in Poland.

**ZRÓŻNICOWANIE WYNAGRODZEŃ W GOSPODARCE POLSKIEJ W LATACH 2005–2012**

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Słowa kluczowe: wynagrodzenia, zróżnicowanie wynagrodzeń, kryteria i główne przyczyny zróżnicowania wynagrodzeń.

Abstract

Celem opracowania jest charakterystyka i ocena zróżnicowania wynagrodzeń w Polsce w latach 2005–2012. Przeanalizowano poziom wynagrodzeń w przekroju sektorów własności, sektorów ekonomicznych, zawodów, poziomu wykształcenia, stażu pracy i płci. Pozwoliło to wskazać główne, ekonomiczne i społeczne, przyczyny różnic między wynagrodzeniami, co może mieć znaczący wpływ na zmiany struktury zatrudnienia w polskiej gospodarce.

## **Introduction**

Remuneration for work constitutes an important socioeconomic category. This is due to the many significant functions it performs, impacting the economic effects of companies and economy as a whole, the degree of satisfying the employees' needs, their attitudes at the workplace, and the shape of social relations.

Wages depend on a variety of factors, which are connected with the economic situation of the given country (among other things, GDP fluctuations, inflation processes, the situation on the labour market), the economic and financial situation of its companies, but also with the level of difficulty of the jobs performed by employees, their results and work experience, as well as aspects of a social nature. The numerous determinants help to account for the differentiation of workers' wages, although it is generally accepted that remuneration should be fair and just.

The aim of this article is to characterize and assess the differentiation of wages in Poland in the years 2005–2012/2013. In order to achieve this aim, I propose an analysis of the level of wages in connection with such criteria as sections of economic activity, ownership sectors, occupations, sex, level of education and work experience. The present analysis will make it possible to reflect on the main reasons for wage differentiation, which may have a significant impact on the change of employment structure in Poland.

My description of the differentiation of wages in various areas is based on the data collected from Central Statistical Office (Główny Urząd Statystyczny – GUS) and the results of Polish Nationwide Salary Survey (Ogólnopolskie Badanie Wynagrodzeń – OBW), conducted in 2012 by Sedlak & Sedlak company, on the sample of 114,718 respondents from over 20,000 companies. The differences between wages are demonstrated by comparing average gross nominal monthly wages and the median of wages in accordance with the adopted criteria.

### **The differentiation of wages according to the section of economic activity in Poland**

Differentiation of wages depends on the type of work performed in specific sections of economic activity. According to the Labour Code, the basic legislative act regulating the rules of remuneration in Poland, „remuneration for work should be established at a level which would be, above all, commensurate with the type of work performed and the qualifications demanded for performing it, as well as its amount and quality” (Journal of Laws 1998, no 21, item 94). This

regulation emphasizes the importance of the motivational aspect of wages, which in itself assumes differentiation of wages based on the type of work, the amount of work and its effectiveness (CZAJKA 2009, p. 22, 23). Motivating through remuneration is supposed to encourage greater professional qualification and spatial mobility, i.e. employees are expected to raise their qualifications, invest in self-development, engage in performing more difficult tasks, or even change their careers and locations of professional placement (JANUSZEK 2003, p. 86).

Data concerning the differentiation of wages according to the section of economic activity are included in table 1.

Table 1  
Average gross monthly wages according to the section of economic activity in Poland in 2005 and 2013, in PLN (Polish zlotys)

Sections	2005	2013	Changes	
			in PLN	2005=100
Agriculture, forestry, hunting and fishing	2,387	4,021	1,634	168.4
Industry	2,362	3,751	1,389	158.9
– mining and quarrying	4,343	6,805	2,462	156.7
– manufacturing	2,099	3,374	1,275	160.7
– electricity, gas, steam and air conditioning supply	3,615	6,231	2,616	172.5
– distribution of water, sewer and waste management, reclamation	2,380	3,566	1,186	150.2
Construction	1,938	2,964	1,026	152.9
Trade, repair of motor vehicles	1,914	2,974	1,060	155.5
Transport and storage	2,327	3,241	914	139.2
Accommodation and catering	1,506	2,251	745	149.5
Information and communication	4,219	6,141	1,922	145.4
Financial and insurance activities	4,239	6,149	1,910	145.0
Sections	2005	2013	Changes	
			in PLN	2005=100
Real estate services	2,578	3,834	1,256	148.9
Professional, scientific and technical activities	3,055	4,474	1,419	146.5
Administrative and support service activities	1,582	2,563	981	162.1
Public administration and national defence; compulsory social security	3,061	4,523	1,462	147.8
Education	2,469	3,904	1,435	158.0
Health care and social work	1,950	3,383	1,433	173.4
Activities connected with arts, entertainment and recreation	2,197	3,204	1,007	145.7
Other service activities	2,192	2,595	403	118.3

Source: Mały Rocznik Statystyczny Polski (2010, pp. 172, 173, 2014, pp. 177, 178).

Average gross nominal monthly salary in Poland amounted to PLN 2,361 in 2005, whereas in 2013 it amounted to PLN 3,650, which means it was higher by PLN 1,289 (54.6 %). In 2005 the highest wages were paid in the industry sector, particularly in the mining and quarrying section, surpassing the average wages in national economy by 84%. Relatively high were also the wages in the financial and insurance activities section (79.5% higher than average), in the information and communication section (higher than average wages by 78.7%) and in the electricity, gas, steam and air conditioning supply section (higher by 53%).

The lowest wages in 2005 were observed in the following sections: accomodation and catering, administrative and support service activities. In rela-

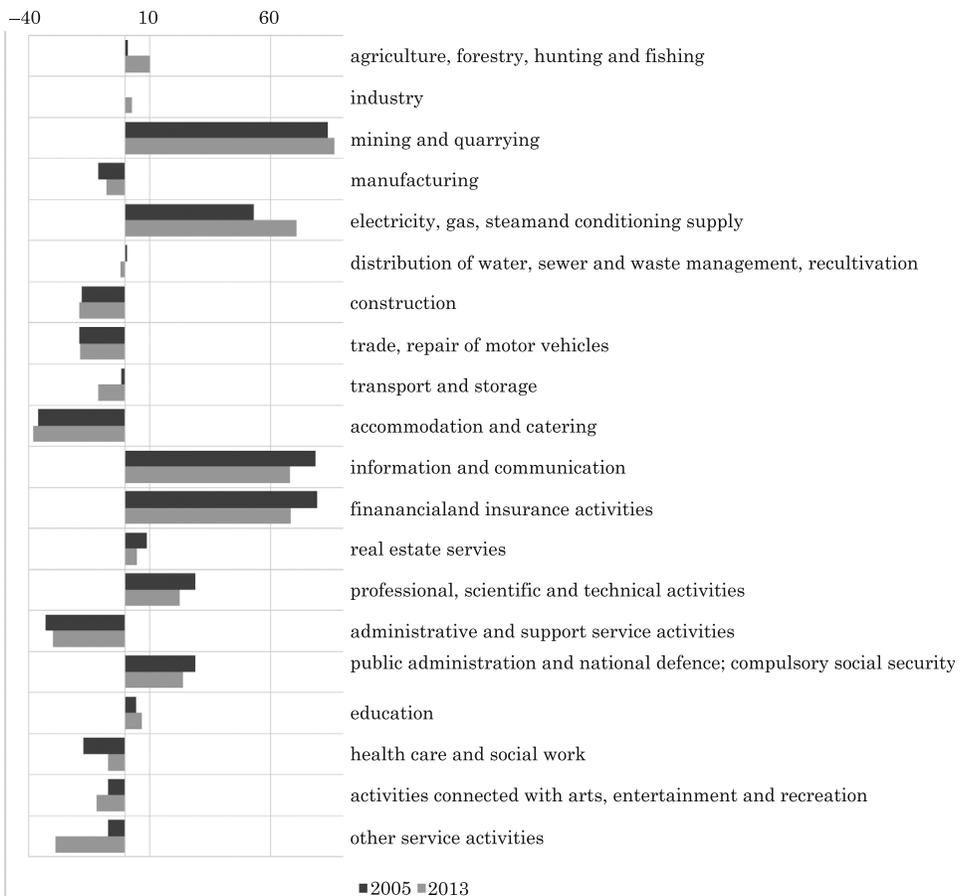


Fig. 1. Relative deviations of average gross monthly wages in selected sections from the average gross wages in Poland in the years 2005 and 2013, in %

Source: author's calculations on the basis of the data in table 2.

tion to the average wages, they were lower by 36% and 33%, respectively, while in relation to the financial and insurance activities they were lower by more than PLN 2600–2700, i.e. by 181% and 168%, respectively.

In 2013 relatively high wages (more than PLN 6100 per month) were paid to employees in the same sections as in 2005. The highest wages were paid in the mining and quarrying section (86.4% higher than average), due to the high degree of arduousness of work and the risk of losing health or even life. Wages in the electricity, gas, steam and air conditioning supply section were higher by 71% than average. The next two slots, with wages higher by 68% than average, were taken by sections which are considered state-of-the-art: financial and insurance activities and information and communication. Among the employees remunerated the least there were those working in accommodation and catering (their wages were lower by 38% than the average) and in the section: administrative and support service activities (lower by 30% than the average).

The difference between relatively high wages (electricity, gas, steam and air conditioning supply) and the lowest ones (accommodation and catering) amounted to 177%.

The differentiated increase of wages in the years 2005 and 2013 retained the number of sections with wages higher and lower than the average gross monthly wages in Poland.

Thanks to raises, wages in some sections in the year 2013 decidedly exceeded the average level, e.g., in the agricultural section from 1% to over 10%, or approached the level to a larger degree, e.g., in the health care and social work activities section (from -17.4% to -7%) and industrial processing (from -11% to -7.6%). In the years under discussion one can also observe the decrease of the surplus of average wages in some sections in relation to the average national wages, e.g., in the professional, scientific and technical activities section (from 29% to 22.6%), which is important from the point of view of the development of Polish economy.

### **Wages according to ownership sectors**

One of the many aspects of wage differentiation in economy is the presence of the public and the private ownership sectors, which identify the employees' workplace. Data concerning this criterion are included in table 2.

According to the data in table 2, average gross nominal monthly wages were higher in the public sector than in the private sector and, additionally, they exceeded the average wages calculated for the whole economy. In 2005 wages in the public sector were higher by 24.8% in comparison with the private

Table 2  
Average gross nominal monthly wages in Poland according to ownership sectors in the years 2005, 2010, 2012, 2013

Specification	2005		2010		2012		2013	
	in PLN	in %						
Total	2,361	100.0	3,224	100.0	3,522	100.0	3,650	100.0
Public sector	2,692	114.0	3,758	116.6	4,110	116.7	4,249	116.4
Private sector	2,157	91.4	2,952	91.6	3,240	92.0	3,369	92.3

Source: Rocznik Statystyczny Rzeczypospolitej Polskiej (2011, p. 252), Mały Rocznik Statystyczny Polski (2014, p. 177, 180), author's calculations.

sector. In 2010 the difference increased to 27.3%, but in the subsequent years under discussion one can observe the decrease of the difference between wages in both ownership sectors: to 26.9% in 2012 and 26.1% in 2013. It is a result of the improvement of economic situation and the gradual increase of share of the private sector in the wages total, as well as a slightly faster increase of wages (by 14.1% in the years 2010–2013) than in the public sector (by 13.1%), and, in particular, the result of increasing average gross wages in private companies with foreign capital by 44% in the years under discussion (from ca PLN 3,200 in 2005 to ca PLN 4,600 in 2012).

The differentiation of average gross wages and average employment in the public and private sectors in individual sections of economy in the year 2013, in economic entities employing more than 9 people, is presented in table 3.

Table 3  
Average employment and average gross monthly wages in national economy according to ownership sectors in 2013

Specification	Average employment <sup>a</sup>	Average gross wages in PLN	% difference between wages in public and private sectors
1	2	3	4
Total	8,197.7	3,650.06	
Public sector	2,974.5	4,239.36	22.3
Private sector	5,223.2	3,466.90	
Including			
Agriculture, forestry, hunting and fishing	70.5	4,407.23	
Public sector	32.0	5,964.78	91.4
Private sector	38.6	3,116.70	
Industry	2,462.8	3,954.62	

cont. table 3

1	2	3	4
Public sector	323.8	5,306.68	41.5
Private sector	2,139.0	3,749.97	
– mining and quarrying	168.0	6,743.90	
Public sector	114.4	6,938.20	9.6
Private sector	53.7	6,329.96	
– manufacturing	2,030.1	3,591.54	
Public sector	65.1	4,397.26	23.4
Private sector	1,965.0	3,564.85	
– electricity, gas, steam and air conditioning supply	135.8	6,192.52	
Public sector	52.3	5,590.62	-15
Private sector	83.6	6,568.84	
– distribution of water, sewer and waste management, recultivation	128.9	3,678.62	
Public sector	92.1	3,762.20	8.4
Private sector	36.8	3,469.61	
Construction	445.8	3,727.83	
Public sector	13.1	4,147.58	11.6
Private sector	432.7	3,715.09	
Trade, repair of motor vehicles	1,114.8	3,429.15	
Public sector	3.6	4,709.14	37.5
Private sector	1,111.2	3,425.03	
Transport and storage	487.4	3,621.19	
Public sector	247.0	3,925.39	18.6
Private sector	240.4	3,308.74	
Accommodation and catering	116.7	2,691.73	
Public sector	12.9	3,226.15	22.9
Private sector	103.8	2,625.19	
Information and communication	176.7	6,685.25	
Public sector	12.0	5,925.73	-12.1
Private sector	164.7	6,740.58	
Financial and insurance activities	259.3	6,429.15	
Public sector	46.6	7,298.59	17
Private sector	212.7	6,238.64	
Real estate services	111.3	4,037.02	
Public sector	32.5	4,072.69	1.3
Private sector	78.8	4,022.34	
Professional, scientific and technical activities	239.3	5,443.36	

cont. table 3

1	2	3	4
Public sector	74.9	4,847.23	-15.2
Private sector	164.4	5,715.08	
Administrative and support service activities	325.8	2,621.04	
Public sector	10.7	3,225.17	24
Private sector	315.1	2,600.48	
Public administration and national defence; compulsory social security	621.7	4,523.60	
Public sector	621.2	4,523.47	-3.6
Private sector	0.5	4,691.65	
Education	1,015.4	3,926.67	
Public sector	931.4	3,995.96	26.5
Private sector	84.0	3,158.45	
Health care and social work	622.0	3,448.63	
Public sector	519.5	3,516.30	13.2
Private sector	102.5	3,105.53	

<sup>a</sup> Without economic entities employing 9 people or less.

Source: Mały Rocznik Statystyczny Polski (2014, p. 29, 30), author's calculations.

According to the data in table 3, the total average employment in the private sector exceeded the employment in the public sector by 2,248.7 thousand people. The domination of the private sector in employment occurs in the decisive majority of the sections which are considered market-oriented, with the exception of mining and quarrying, distribution of water, sewer and waste management, recultivation and, to a considerably smaller degree, transport and storage. A relative high share of the public sector in employment characterizes those sections of economy which are classified as not market-oriented, i.e. public administration and national defence; compulsory social security, education and health care and social work.

The situation is different as regards the average wages in ownership sectors in individual sections of the economy. In most sections the average gross monthly wages were higher in the public sector than in the private sector, particularly in the agricultural section (by PLN 2,848, i.e. 91.4%), industry (by PLN 1,556.7, i.e. 41.5%), trade and repair of motor vehicles (by PLN 1,284.1, i.e. by 37.5%) and by more than 20% as regards the public sector in the following sections: education (26.5%), administrative and support services activities (by 24%), manufacturing (by 23.4%), accommodation and catering (by 22.9%). The smallest differences between ownership sectors occurred in the real estate services section (1.3%). Only in four sections wages

in the public sector were lower than in the private sector: by 15% in professional, scientific and technical activities and electricity, gas, steam and air conditioning supply, by 12% in information and communication, and only by 3.6% in public administration and national defence, compulsory social security.

On the basis of the analysis conducted, it can be stated that the large share of the private sector in employment does not translate into its higher share in wages. One assumes that the reason is high competition between employees for job positions, which enforces approval of lower wages offered by employers. The fear of unemployment, particularly in the period of economic slowing down, weakens the bargaining power of employees. Also, trade unions have a relatively small influence on the wages in private companies, particularly small and medium ones (BARTOSIK 2013, p. 23). On the other hand, employers aim at lowering labour costs, which have an impact on the effectiveness and competitiveness of their companies, and that often leads to conflict between the income function and cost function of wages. That is why the criterion of wage differentiation should take into account the degree of correlation with work effects (KWIATKOWSKA 2013, p. 311). Higher productivity in specific sections should be conducive to an increase of average wages in them, while lower than required productivity in other sections of the economy will contribute to lower wages. This is yet another, rather significant rationale for the differences between the wages. It seems that the positive effects of noticeable economic recovery in Poland will, with some delay and in various ways, influence the increase of wages in the private sector in its individual sections.

### **Wages according to occupational groups and specializations**

The differentiation of wages depends on belonging to a particular occupational group. The social status of an occupation, its prestige and recognition to a large degree depend on the level of wages. Even if the given occupation is considered important in the society, relatively low wages paid for working in this occupation discourage people from choosing it (POCZTOWSKI 2008, p. 330).

Performing a particular job is connected with having relevant qualifications, both theoretical and practical. The former are gained through education and reflect the employee's level of education, whereas the latter are connected with the work experience at the given job. The qualifications required in the given job should be commensurate with the employee's qualifications. If the employee's qualifications are higher, it means they are not fully utilized, and, moreover, they can produce a lack of satisfaction with the job performed because the wages are lower than the potential wages. On the other hand, qualifications which are lower than the ones required for a particular job may

be the reason for worse work results in comparison with the employer's expectations. Adjusting employees' qualifications to specific work requirements constitutes, then, an important element of shaping the remuneration system, which is beneficial for both the employer and the employee in the form of a commensurate level of remuneration (CARLSSON 2008, p. 36). According to the theory of human capital (BECKER 1975), the dispersal of wages reflects the differences in the level of employees' qualifications. The increase of wages is conditioned by the development of qualifications. Therefore, a person who wants to find work should make sure that s/he has the right qualifications. Hence, of great importance measures which will increase the human capital resources, i.e. the so-called human capital investments (BECKER 1975, p. 9). They are undertaken consciously by the individuals who think about higher wages in the future and the opportunities for finding a job which would be commensurate with their qualifications.

The differences in the level of average gross monthly wages according to major occupational groups in Poland are shown in table 4.

Table 4  
Average gross monthly wages according to occupational groups<sup>a</sup> in Poland in the years 2010 and 2012, in PLN

Group no	Occupational groups	Wages			
		2010	2012	increase in PLN	level of qualifications
	Total	3,544	3,896	352	
1	Legislators, senior officials and managers	7,344	8,143	799	3+4
2	Professionals	4,327	4,771	444	4
3	Technicians and associate professionals	3,653	3,889	236	3
4	Clerks	2,979	3,197	218	2+3
5	Service workers and shop sales workers	2,107	2,267	160	2+3
6	Skilled agricultural and fishery workers	2,203	2,631	428	2
7	Craft and related trades workers	2,772	3,108	336	2
8	Plant and machine operators and assemblers	3,006	3,233	227	2
9	Elementary occupations	2,074	2,241	167	1

<sup>a</sup> The data refer to the full-time employed and part-time employed in the entities where the number of employees exceeds 9.

Source: Rocznik Statystyczny Rzeczypospolitej Polskiej (2011, p. 255), Mały Rocznik Statystyczny Polski (2013, p. 181).

The level of average gross nominal wages presented in table 4 is based on the classification of occupations and specializations for the labour market. This classification underwent modifications each 2-3 years, because it was necessary to adjust it to the changes taking place on the labour market, resulting

from the vanishing of old occupations and the emergence of new occupations and specializations. The most recent new classification of occupations has been in force since 1 July 2010<sup>1</sup>. It is based on the International Standard Classification of Occupations (ISCO-08), adopted at the meeting of Labour Statistics Experts. This classification is compliant with the European Union requirements, because Eurostat recommended using it by all the member states.

The classification structure of occupations and specializations is defined on the basis of the similarity of professional qualifications necessary to perform tasks involved in the given profession. Four skill levels were distinguished characterizing specific occupations and specializations:

- The first skill level refers to elementary skills obtained in primary school (1<sup>st</sup> stage of education – ISCED category 1<sup>2</sup>);
- The second skill level refers to lower secondary education (2<sup>nd</sup> stage of education in ISCED) and education obtained in vocational school, general secondary school and specialised secondary school (3<sup>rd</sup> stage of education in ISCED);
- The third skill level refers to education obtained in postsecondary school (4<sup>th</sup> stage of education in ISCED) and after technical secondary school (3<sup>rd</sup> stage of education in ISCED);
- The fourth skill level refers to tertiary education which leads to a university or postgraduate university degree (B.A., B.A. Eng., M.A. and postdiploma education – 5<sup>th</sup> stage of education in ISCED) and to doctorate studies degree (6<sup>th</sup> stage of education in ISCED).

In the classification structure of occupations and specializations unit groups are distinguished for individual occupations and specializations. The unit groups are grouped into minor groups, and subsequently into sub-major and major groups. Major groups are marked with a single-digit symbol (code) and a specific skill level is ascribed to them.

The data in table 4 show that in the years 2010 and 2012 legislators, senior officials and managers, who reached third and fourth skill level, were the highest-earning occupational group. The wages in this occupational group increased by ca 11% in the course of two years; additionally, it was the highest increase in comparison with the other occupational groups. In 2010 employees in this group were paid gross monthly wages which were higher by 107% than the total average wages, while in 2012 their wages were higher by 109%. Furthermore, in 2010 employees in this occupational group earned 354%, and in 2012 363% of the wages that were paid to the lowest-earning 9<sup>th</sup> major

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<sup>1</sup> A new classification of occupations and specializations was made on the 27 April 2010, on the basis of of the Directive of the Minister of Labour and Social Policy, Journal of Laws no 87 of the 27th of May, 2010, item 537.

<sup>2</sup> ISCED – International Classification of Educational Standardards.

group, comprising employees working in elementary occupations. Among the occupational groups in which the wages were higher than the total average wages in the years under research there were technicians and associate professionals. The remaining occupational groups had lower wages in relation to the average wages in Poland in both years.

Professionals with the highest, fourth skill level, (i.e. the fifth and sixth stage of education) were paid ca 59% of the wages earned by employees in the first major occupational group. Their average gross monthly wages were higher than the national average by more than 22%. It can be observed that the wages of technicians and associate professionals were at approximately the same level as the total average wages in the years under research. The lowest wages were paid to employees working in elementary occupations as well as service workers and shop sales workers. In the years 2010 and 2012 the wages of employees working in elementary occupations constituted 57.5–58.5% of the general level of wages in the country.

Table 5  
Average gross monthly wages in occupational groups: legislators, senior officials and managers and employees working in elementary occupations in selected European Union states in the year 2010 (in EUR)

Country	Legislators, senior officials and managers	Employees working in elementary occupations (2)	Index 2:1 in %
Luxembourg	8,496	2,156	25.4
Ireland	4,967	2,391	48.1
Germany	6,141	1,725	28.1
Italy	5,971	1,636	27.4
Slovakia	1,714	470	27.4
Poland	1,698	483	28.4
Czech Republic	1,962	523	26.7
Bulgaria	808	201	24.9
UE-27	4,364	1,450	33.2

Source: Eurostat data: Mean monthly earnings by sex, age and occupation, [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=earn\\_ses10\\_21&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=earn_ses10_21&lang=en), (access: 19.03.2013).

For comparison, table 5 presents average gross monthly wages of the employees belonging to major occupational groups 1 and 9 in selected European Union countries in 2010. In EU27 the wages of employees working in elementary occupations constituted 33.2% of the wages of legislators, senior officials and managers (the difference amounted to EUR 2,914). In the member states presented above the average wages of employees working in elementary

occupations constituted 25–28% of average wages of employees belonging to the first major occupational group. Ireland was an exception to the rule, because the lowest wages there constituted 48% of the highest wages in this country. In Luxembourg the wages of legislators, senior officials and managers constituted 394% of the wages of employees working in elementary occupations, whereas in Poland, despite significantly lower wages, the difference amounted to 352%.

I will now present gross nominal monthly wages in individual sectors in Poland in 2012, on the basis of Polish Nationwide Salary Survey (Fig. 2). Instead of average wages the median of wages is used in the sectors under research.

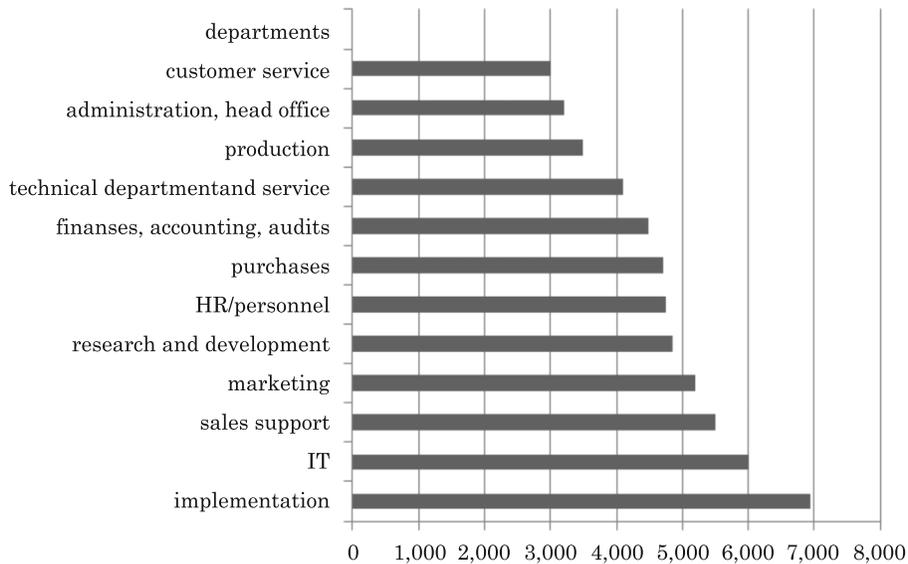


Fig. 2. Wages of employees in selected departments in Poland in 2012 (median, in PLN)  
Source: Polish Nationwide Salary Survey (OBW) carried out by Sedlak & Sedlak in 2012 (access 20.03.2013).

The highest wages were paid to employees in the implementation departments (PLN 6,950), and (lower by PLN 950) in IT. These are state-of-the-art departments, in which employees have to demonstrate a high level of knowledge and skills: departments which have a decisive influence on the development and competitiveness of economic enterprises. Relatively high wages, exceeding PLN 5,000, were noted in sales support and marketing departments. In the next four departments the median of wages amounted to PLN 4,100 (technical department and service) and PLN 4,850 in research and development departments. Wages in production departments (median of PLN 3,500)

were among the lowest: they were nearly two times lower than the highest wages in implementation departments. Lower wages were paid to employees in administration departments, head offices (median of PLN 3,200) and customer service departments (median of PLN 3,000). On the basis of the above analysis one can draw the conclusion that in the functioning of companies of growing importance are departments which support production processes, decide about hiring the right people and about motivational remuneration systems. They strengthen the position of their companies on the market, conduct research, provide technical assistance to production processes; in other words, those departments directly influence the achieved financial and economic effects.

Table 6 shows monthly wages of production workers in foreign capital companies and domestic capital companies in 2012, at various management levels.

Table 6  
Wages of production employees in selected employment tiers in companies with either foreign or domestic capital in 2012 (median of wages), in PLN

Employment tier	Companies		Wages surplus in foreign capital companies, in %
	foreign capital	polish capital	
Low-level worker	2,890	2,500	15.6
Specialist	4,100	3,290	24.6
Senior specialist	5,200	4,000	30.0
Manager of small team (2-10 employees)	6,000	4,000	15.0
Team leader (more than 10 employees)	6,700	5,250	12.8
Director of the company	15,000	8,500	17.6

Source: Polish Nationwide Salary Survey (OBW) carried out by Sedlak & Sedlak in 2012.

The data in table 6 show that wages in foreign capital companies were higher than in the domestic capital ones. As a rule, the wages in both types of companies increase together with the employment tier. Low-level workers were paid the lowest; the median of their wages in the year under research was comprised within the PLN 2,500–2,900 bracket, and it should be added that the wages in foreign capital companies were higher by 15.6% (PLN 390 difference) than in the domestic capital companies. The median of the wages of specialists and senior specialists in the foreign capital companies was decisively higher in comparison with the wages in domestic capital companies, by 24.6% (PLN 810) and 30% (PLN 1,200), respectively. It also correlates with the average wages of specialists on the domestic market (PLN 4,771). The wages of managers of teams employing up to 10 people and teams exceeding 10 people in foreign capital companies differed by PLN 700, while in the domestic capital companies the difference amounted to PLN 1,250 and the median did not

exceed PLN 6,000, as was the case with team leaders in foreign capital companies. The highest wages were paid to the director of the company, especially in companies with mostly foreign capital. The median of the director's wages reached PLN 15,000 and it was higher by 17.6% in comparison with the median of the wages of the director in domestic capital companies.

Higher wages of team leaders and directors, who occupy one of the highest management levels in the company, result from the specific requirements concerning their job functions. Of great importance in this case are not only knowledge, the level of competences and work experience, but also the ability to think rationally, creativity, negotiation and conflict prevention skills, coping with stress successfully, the willingness to take risks, taking responsibility for oneself and one's team members, for the correct functioning of the company, realizing its goals and making decisions rationally (ARMSTRONG 2001, p. 426, SEKULA 2003, p. 64).

In order to round up the above analysis, in table 7 I present the level of wages for specific job positions in the production departments in Polish companies in the year 2012. Apart from the median of wages, the table also shows the wages of the 25% employees who earn less and the 25% employees who earn more. The highest wages were paid to the production manager, but at the same time the wages of the lowest-earning managers and highest-earning managers differed in relation to the median wages (PLN 12,000) by PLN 4,000. PLN 4,000-5,000 was the bracket for the median of wages for production planning managers and manufacturing engineers, production process engineers and production planning specialists. These wages were much lower than in the case of production manager, e.g., production planning manager got less than 45% of the remuneration paid to the production manager, while specialist – ca 35%. The differences between the medians of wages in these job positions were comprised within the PLN 300–500 bracket, whereas the differences between the medians and the lowest wages amounted to PLN 850–980. As regards the gap between the highest wages and their medians for manufacturing engineers, engineers and specialists, it decreased together with the medians of their wages, for instance, in the case of production planning manager it amounted to PLN 2,300, engineers were able to get PLN 1,700 more, manufacturing engineers – PLN 1,420 more, while specialists – PLN 992. Relatively low wages were paid to production technologists (PLN 3,750 median) and machine operators/setters (PLN 3,000 median), whereas the lowest wages were paid to production line operators (PLN 2,696 median). The difference between the lowest wages and the median was decreasing: from PLN 850 in the case of production technologists, PLN 770 in the case of machine operators/setters, to PLN 546 for the job position as a production line operator. Bigger differences were observed between the wages of the 25%

employees earning more and the median of wages in these job positions, e.g. in the job position of a production technologist they amounted to PLN 1,250, machine operator/setter – PLN 800, while production line operator – PLN 904. Therefore, alongside the decrease of the median of wages in specific job positions the differences between the median and the highest and the lowest wages are also decreasing. This tendency is important from the point of view of keeping the remuneration relatively fair.

Table 7  
Gross nominal wages in selected job positions in production departments in 2012 (in PLN)

Job position	25% earn less	Median	25% earn more
Production manager	8,000	12,000	16,000
Production planning manager	4,400	5,350	7,650
Production process engineer	3,950	4,800	6,500
Manufacturing engineer	3,500	4,480	5,900
Production planning specialist	3,315	4,183	5,175
Production technologist	2,900	3,750	5,000
Machine operator / setter	2,230	3,000	3,800
Production line operator	2,150	2,696	3,600

Source: Polish Nationwide Salary Survey (OBW) carried out by Sedlak & Sedlak in 2012 (access: 20.03.2012).

### **Differentiation of wages according to level of education and work experience**

Together with skills and work experience, education indicates employees' level of professional competences. It constitutes the basic for evaluating the quality of individuals' human capital resources, which has been previously commented upon, in relation to the requirements for belonging to major occupational groups and job positions. The quality of human capital resources can be improved depending on the development of education level and knowledge gained in the process of school education as well as employees' pro-educational attitudes, e.g. through their participation in lifelong learning processes, vocational trainings, additional training courses, accumulation of professional experience (DOMAŃSKI 1993, p. 3–5).

Changes of the human capital resources are an important factor influencing the level of socioeconomic development and a major aspect of the production process in companies. Employees who are better educated and have high professional skills are more productive and are able to meet the challenges resulting from technological process, implementation of new methods of organizing and managing production process, and creation of new and modern-

ized products and services. Therefore, in generating these changes of great significance are more flexible education systems, offering varied education profiles and education paths adapted to the new socioeconomic requirements.

Education affects a person's situation on the labour market and his/her remuneration. The higher the level of education, the higher the remuneration and the resulting prestige and social recognition. Thus there exists positive correlation between education and the amount of wages earned. Different levels of education constitute a basis for a differentiation of wages. This correlation is visible in Fig. 3.

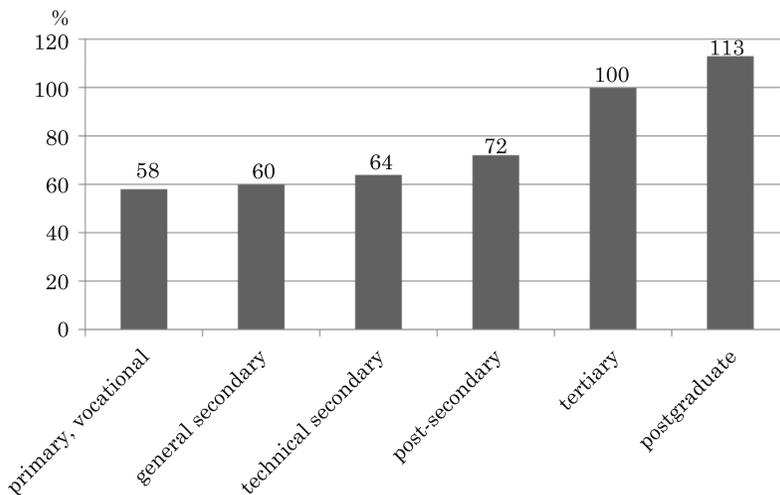


Fig 3. Correlation between the level of education and the average gross nominal monthly wages in 2012 in Poland, in %

Source: Polish Nationwide Salary Survey (OBW), Sedlak & Sedlak, 2012, [www.wynagrodzenia.pl](http://www.wynagrodzenia.pl).

The level of tertiary education and the related remuneration were specified on the basis of correlation index = 100%. The highest wages were paid to the employees with postgraduate education. The lowest wages were paid to employees with primary and vocational education; in 2012 their average wages constituted more than a half of the wages paid to employees with tertiary education. The wages of the employees with general and vocational secondary education constituted 60 and 64%, respectively, while in the case of employees with post-secondary education – 72% of the tertiary education-related remuneration.

Specific jobs require a specific professional experience. It is connected with work experience, which means there is a correlation between the level of remuneration and the number of years spent at the workplace. The basic expectation is that longer work experience is conducive to a higher remuner-

ation for the given employee; thus the higher remuneration is a form of gratification for employees' longstanding loyalty and attachment, their professional experience, knowledge and skills. On other words, it is a form of appreciating the value and usefulness of such employees in realizing the companies' goals (SEKUŁA 2011, p. 259). The influence of work experience on the level of remuneration is presented in table 8.

Table 8  
Average gross nominal monthly wages according to work experience in Poland in 2012, in PLN

Education level	Work experience in years						
	1 or less	2–3	4–5	6–8	9–10	11–15	16+
Tertiary MA	2,800	3,500	4,200	5,000	5,400	6,200	5,800
Tertiary vocational (BA/Eng)	2,500	2,700	3,200	3,804	4,200	4,900	4,700
Secondary	2,000	2,200	2,500	2,800	2,900	3,050	3,075
Primary or vocational	1,950	2,300	2,500	3,000	3,050	3,580	3,000

Source: Polish Nationwide Salary Survey (OBW), Sedlak & Sedlak, 2012.

The data in table 8 indicate a differentiation of average gross monthly wages according to the employees' work experience, and taking into account various levels of education. It can be observed that the wages increased proportionately to the work experience lasting up to 15 years, but longer work experience (16 years and more) led to a decrease of wages, although the pattern varied depending on the level of education, for instance in the case of employees with tertiary education – by PLN 400, tertiary vocational – by PLN 200, primary or vocational – by PLN 580, and a stable trend as regards the wages of employees with secondary education. The decrease of wages may be a result of the decrease of productivity on the part of the employees with longer work experience or their inability to adapt themselves completely to the changing work conditions.

The lowest wages, still differentiated depending on the level of education, were paid to the employees whose work experience did not exceed 1 year. The difference between the wages of employees with tertiary, MA education and those with primary or vocational education amounted to PLN 850. The longer the work experience was, the greater the pay difference was, because of the bigger increase of wages for employees with tertiary education, rather than those with primary or vocational education, for example, in the case of 2–3 years' work experience the difference amounted to PLN 1200, 6–8 years of work experience increased the pay gap to PLN 2,000, and in the case of 11–15 years of experience to PLN 2,620.

The wages of employees with secondary education were relatively low, although they also increased in correlation with work experience. In the first

year of work the wages of these employees were higher only by PLN 50 in comparison with the wages of employees with primary or vocational education; during the 4<sup>th</sup> and 5<sup>th</sup> year of work the wages of the employees with these levels of education became similar (PLN 2,500), but in the course of the subsequent years the wages of employees with secondary education rose at a slower pace and reached a relatively lower level. In addition, employees with secondary education could expect to earn more than PLN 3,000 only after 11–15 years of working, while the employees with tertiary education – after 2–3 years of working (tertiary MA) or after 4–5 years of working (tertiary vocational).

Tertiary MA education guarantees the highest wages alongside accumulated work experience and relative high pay raises, e.g. after 11–15 years of working they increased by PLN 3,400. Employees with tertiary vocational education had to work 9–10 years in order to be able to earn the wages (PLN 4,200) which employees with tertiary MA education earned after 4–5 years of working. It can therefore be stated that the relatively high level of wages and their increase achieved by employees with tertiary education together with the accumulation of work experience constitutes a significant motivation to raise one's qualifications and aim for professional development.

### **Women's wages and men's wages**

In accordance with the European Social Charter of 1961, workers of both sexes have the right to equal remuneration for the work of equal value (*European Social Charter*, 1999). The non-discriminatory and fair remuneration for working women and men is also emphasized in the Convention no 100 of International Labour Organisation (*Journal of Laws* 55.38.238). Despite regulations forbidding the differentiation of wages depending on sex, in the economic practice of many countries these regulations, although legally binding, are not applied (JACUKOWICZ 1999, pp. 24–29). The fact that women are paid less than men for work of equal value is considered to be a reflection of pay discrimination against women. Among the reasons for the discrimination one should enumerate hiring women for lower-paid jobs, problems with being promoted for higher positions, for example at the executive level, in politics; a lower degree of women's availability due to household and family obligations; lowering wages where mostly women's jobs are involved. The differences between women's wages and men's wages in Poland in the years 2004-2012 are shown in table 9.

Table 9

Average nominal gross monthly wages for women and men in Poland in the years<sup>a</sup>  
2004, 2006, 2008, 2010, 2012, in PLN

Specification	Wages				
	2004	2006	2008	2010	2012
Women	2,150	2,386	2,893	3,256	3,540
Men	2,572	2,904	3,557	3,832	4,249
Men's wages surplus	422	618	664	576	709

<sup>a</sup> Data for October; they refer to workers employed full-time and part-time, in entities in which the number of employees exceeds 9.

Source: Roczniki Statystyczne Rzeczypospolitej Polskiej (2006, p. 272, 2007, p. 274, 2011, p. 255), Rocznik Statystyczny Pracy (2010, p. 294), Mały Rocznik Statystyczny Polski (2014, p. 181).

The data in table 9 confirm that women's average monthly wages are lower in relation to men's wages in the years under research. The fact that men's wages grew faster than women's wages caused a growing gap between the two sexes' wages. The year 2010 was an exception insofar as the gap between women's wages and men's wages was smaller due to a slightly higher increase of women's wages in the years 2008–2010 (by PLN 363) than men's wages (by PLN 275). However, already in 2012 the gap between the wages increased again due to the higher increase of men's wages (by PLN 417) than women's wages (by PLN 284) in comparison with 2010.

The differences between women's wages and men's wages were confirmed by the data from Polish Nationwide Salary Survey, carried out in the years 2009 and 2012 (Fig. 4).

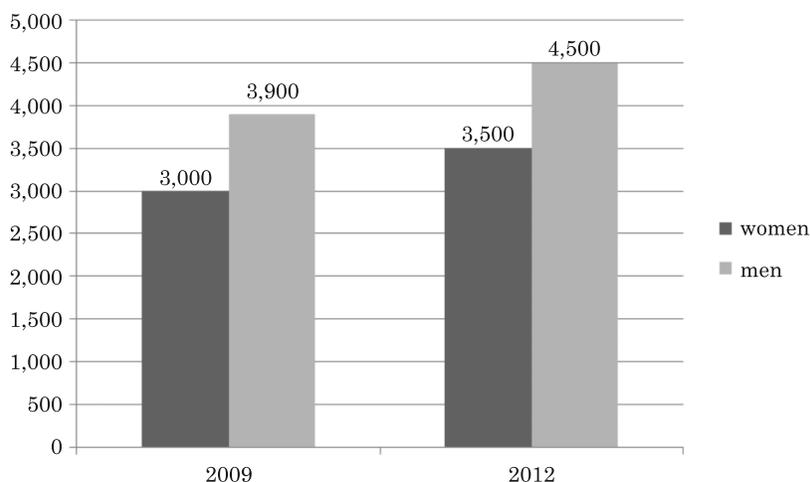


Fig. 4. Gross monthly wages for women and men in Poland in the years 2009 and 2012 (median), in PLN

Source: Polish Nationwide Salary Survey (OBW) in the years 2009 and 2012.

In 2009 the median of total gross wages for men amount to PLN 3,900 and it was 30% higher than the median for women. In 2012 the difference between men's wages and women's wages amounted to PLN 1,000. The median of total wages for men increased by 28% in relation to the median of women's wages. In the years under research, women's wages constituted 76-77% of men's wages.

Let us consider the differentiation of wages according to sex from the point of view of the level of education. This criterion was used in figure 5.

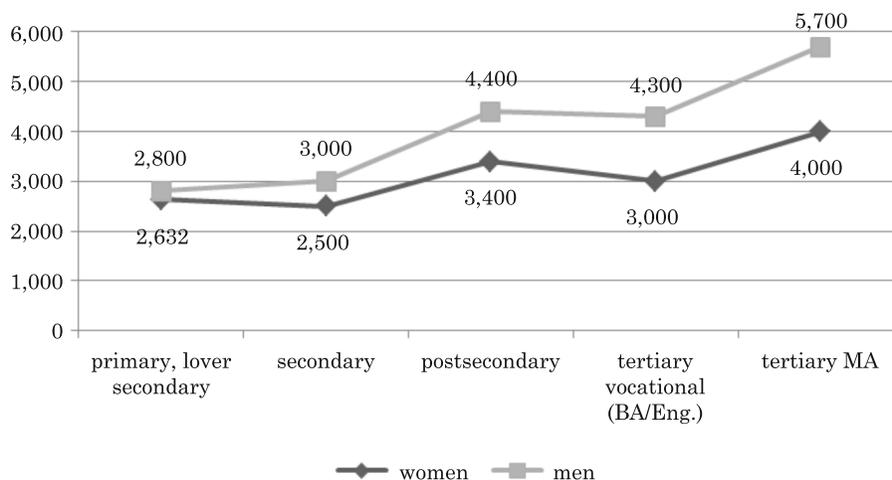


Fig. 5. Gross monthly wages of women and men according to the level of education in Poland (median) in 2012, in PLN

Source: Polish Nationwide Salary Survey (OBW), carried out by Sedlak & Sedlak in 2012.

Figure 5 demonstrates clearly pay inequalities between women and men. It can also be observed that as the level of education increases, so does the disproportion between their wages. At the primary and low secondary level the difference amounted only to PLN 168, at the secondary level the difference amounted to PLN 500, postsecondary – PLN 1,000, tertiary vocational – PLN 1,300. As regards the employees with MA degrees, the difference between women's wages and men's wages increased to PLN 1,700. Such a huge difference may result from a high concentration of women in low-paid, low-level jobs, despite their high qualifications.

The data in table 10 present the share of women and men in general employment and their wages according to major occupational groups in October 2012.

Analysis of the data confirms the observation that women earn relatively lower wages than men in each major occupational group, regardless of their

Table 10

Employees<sup>a</sup> and average gross wages according to occupational groups – data for October 2012

Occupational groups	Employment in per cent			Average gross wages in PLN			Women's and men's wages ratio index 2:1
	total	men	women	total	mean (1)	women (2)	
Total	100.0	100.0	100.0	3,896	4,249	3,540	0.83
Legislators, senior officials and managers	8.1	8.8	7.3	8,143	9,295	6,749	0.73
Professionals	26.0	17.2	35.0	4,771	5,677	4,321	0.76
Technicians and other mid-level personnel	11.6	10.2	13.0	3,889	4,458	3,437	0.77
Clerks	9.3	6.8	11.8	3,197	3,237	3,175	0.98
Service workers and shop sales workers	10.6	7.0	14.1	2,267	2,482	2,159	0.87
Skilled agricultural and fishery workers	0.2	0.3	0.1	2,631	2,659	2,519	0.95
Craft and related trades workers	14.1	23.5	4.8	3,108	3,295	2,185	0.66
Plant and machine operators and assemblers	11.4	19.2	3.5	3,233	3,346	2,611	0.78
Elementary occupations	8.7	7.0	10.4	2,241	2,569	2,019	0.79

<sup>a</sup> The data refer to workers employed full-time and part-time, without conversion into full-time employment, and comprise entities in which the number of employees exceeds 9.

Source: Mały Rocznik Statystyczny Polski (2014, p. 181).

share of total employment. The share of women (two times greater in comparison with men) in the employment of professionals did not translate into at least equal wages. The average gross monthly wages for women constituted 76% of the wages paid to men; the difference between them amounted to PLN 1,356. Almost equal (PLN 62 difference) were the wages of women and men in the clerks' group, where women dominated in terms of employment. Relatively big differences between wages when women had a significant share of the labour market were noted in the following occupational groups: technicians and other mid-level personnel as well as employees performing simple jobs, where women's earnings constituted 77% and 79% of men's earnings. Relatively smaller differences concerned the group of service workers and shop sales workers, in which the share of women was also two times higher than that of men, whereas their earnings constituted 97% of men's wages. The existing differences between women's wages and men's wages are often based on employers' prejudices concerning the value of women's work and men's work and result from prioritizing the activity spheres ascribed to them.

## **Conclusions**

On the basis of the above considerations and analyses, several conclusions can be drawn.

1. Differentiation of wages is, to a large degree, conditioned by the use of its motivational function in economic entities. – Differentiation of wages should reflect the kind, amount and quality of work and its effectiveness, i.e. it should demonstrate a positive correlation with the value of work..

2. Differentiation of wages cannot be contrary to maintaining their fair and just character. Therefore, the social and ethical aspect of shaping and diversifying wages is of great importance.

3. Differentiation of wages is a result of numerous factors connected with the economic situation of the given country, the economic and financial condition of companies, and the employees' traits.

4. The type of job performed in individual sections of economic activity also affects the differentiation of wages. In the years 2005 and 2013, in the same sections the highest and the lowest wages were noted in relation to the average gross nominal monthly salary in Poland. The highest wages were earned by those working in the following sections: mining and quarrying, electricity, gas, steam and air conditioning supply, financial and insurance activities, information and communication. The lowest wages were earned in the following two sections: accommodation and catering, and administrative and support service activities.

5. The differentiation of wages according to ownership sectors indicates a higher level of wages in the public sector than in the private sector, even though the private sector dominates in terms of employment. Among the reasons for this situation, one could enumerate: high level of competition between employees who want to get or retain jobs, the fear of unemployment, particularly in the period of economic slowing down, weakness of trade unions, the employers' drive towards lowering labour costs which underlie the effectiveness and competitiveness of companies. The basis for diversifying wages should be the real work results achieved in individual sections in both ownership sectors.

6. Belonging to a specific occupational group has an impact on the differentiation of wages as well. Higher wages in the given profession should be a result of the employee's higher qualifications. In addition, the qualifications should be adapted to the specific job requirements in the given profession. The top-earning occupational group included legislators, senior officials and managers, as well as professionals, although the latter earned ca 59% of the wages paid to people from the former major occupational group. The lowest-earning group consisted of employees performing elementary jobs. Their wages con-

stituted 27.5% of the wages paid to the first major occupational group (in EU the respective figure amounted to 33.2%).

7. In production companies of growing importance are the departments which have a decisive influence on their growth and competitiveness, and which offer relatively high wages, e.g. implementation department, IT, marketing, sales assistance, research and development.

8. Wages in companies with foreign capital were higher than in the companies where Polish capital prevailed, but the pattern was the same in both: the higher the employee level, the higher the wages were (Low-level workers were paid the lowest wages while production managers and team leaders were paid the highest wages, which is connected with their responsibility for themselves, for their co-workers and their companies).

9. An important prerequisite for the differentiation of wages is the level of education, which affects the individual's position on the labour market. There is a positive correlation between education and wages. The relatively high wages are connected with tertiary (including post-graduate) level of education. The lowest wages, amounting to 58% of the wages paid to people with higher education, were paid to employees with primary and vocational training.

10. The basis for the differentiation of wages is the number of years people are employed: a marker of their professional experience. Longer work experience correlates with higher wages, particularly when employers have obtained higher education.

11. In spite of the legally guaranteed equality of men's wages and women for the work of equal value, in the economic reality of Poland and other EU countries the average nominal wages for women are lower than those for men, regardless of their level of education and their being employed in the same professional group.

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