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SALARY DIFFERENCES BETWEEN LARGE GROUPS OF PROFESSIONS IN POLAND

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Purpose: The aim of the article is to assess the differences in salary levels in large groups of professions in Poland in the years 2004-2022.

Design/methodology/approach: The average monthly gross wages in Poland, deviations from the average gross wages in Poland and the ratios of average wages will be used for this purpose. To carry out the analysis and evaluation, statistical data published in the Statistical Yearbooks of the Central Statistical Office for the years 2004-2022 will be used.

Findings: There was a large variation in wages in groups of large professions.

Research limitations/implications: In the future, research on wage differentiation should be conducted taking into account statistical and econometric methods, analyzing changes and factors that influence these changes.

Practical implications: As a result of the research, it is possible to determine which groups of professions are and will be more attractive in terms of remuneration, and which professions may even disappear from the labor market.

Social implications: The research conducted can encourage society to further develop and educate society. Research shows that skills and education are very important.

Originality/value: The article shows the differences in salaries in large groups of professions. It is addressed to current employees as well as those who want to take up education and work in the future.

Keywords: remuneration, wages, occupational groups, employee, employer.

Category of the paper: Research paper.

1. Introduction

Remuneration of employees is one of the basic and important issues of the modern economy. It concerns the human factor and the work it performs, as well as employees' expectations related to this work in the form of remuneration. The attitudes and behaviors of people engaging in their activities, skills and knowledge "translate" into specific expenditures and measurable effects both in the economy as a systemic whole and in its individual

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departments and economic organizations. Among the various aspects of wage formation in a market economy, wage differentiation deserves special attention. It is the result of various factors: demographic, social and economic (Jarmołowicz, Knapińska, 2007). Knowledge about the level and differentiation of remuneration for work can be used in the Polish economy (both on a micro- and macroeconomic scale) to increase work efficiency and improve the competitive position of enterprises, as well as to more rationally manage human resources in the region and country. The level, dynamics and relations of wages in economic organizations depend on the situation on the labor market, so they require detailed and constant monitoring, analysis and evaluation. Wage differentiation indicates, among other things, how much should be paid in different positions in order to obtain, among others: employees with the desired qualifications (Listwan, 2002). Remuneration is all cash expenses and benefits in kind paid to employees for employment in an economic entity and calculated according to employment and wage statistics. Remuneration is one of the important determinants of the human resources management function (Pocztowski, 1998). The social nature of work and pay is especially emphasized by Catholic social teaching. Due to the social utility of his work, the employee has the right to share in the national income, based on three premises: human needs, remuneration for creative activity (efficiency and profitability of the enterprise) and family needs (Hajec, 2023). Wages also include other colloquially used terms such as salary, wages and emoluments. The remuneration is therefore cash benefits and the value of benefits in kind for work performed under the employment relationship, apart from the share in the profit and pure surplus in the cooperative. However, the concept of remuneration itself has a broader scope, as it includes all monetary benefits and the value of benefits in kind for work performed under this relationship or on the basis of a mandate contract, as well as fees and other receivables related to work (Jacukowicz, 1986). Salaries - on the one hand - constitute an element of employee income, and on the other - labor costs incurred by the enterprise (Borkowska, 1999). The basic salary is therefore the main and fixed component of remuneration, the amount of which is most often related to the standardized quantity and quality of work performed at a given job position and to the qualifications of the employee performing this work. The basic salary supplemented with relatively fixed allowances (e.g. for overtime work) is the so-called fixed salary, while bonuses and awards for performing these additional tasks are the so-called variable pay (Oleksyn, 1998). Performing a specific profession is an important criterion determining the amount of remuneration (Pocztowski, 1998). The decisive factor in shaping the level of remuneration is the job position, understood as the function assigned to the employee along with the scope of activities, tasks and responsibilities that constitute the work performed (Sekuła, 1999). Depending on the activities performed in a given position, the employee must also have appropriate theoretical knowledge, experience and skills. Work involves various scope and types of responsibility, burdensomeness and effectiveness (Listwan, 2002).

2. Salary differences between large groups of professions in Poland

To analyze the differences in wages in Poland by occupational groups in the years 2004-2022, data on average monthly nominal gross wages will be used. Thus, data on average monthly nominal gross wages by occupational groups in Poland in the years 2004-2022 are presented in Table 1. The results of the conducted research indicate that in the years 2004-2022 in Poland, there was also significant variation in average wages among various occupational groups. In 2004, the average monthly nominal gross wages according to occupational groups in Poland amounted to PLN 2368,52. In 2006 they increased to PLN 2654,13, in 2008 to PLN 3232,07, in 2010 to PLN 3543,50, in 2012 they increased to PLN 3895,72, in 2014 to PLN 4107,72, in 2016 PLN 4346,76, in 2018 they increased to PLN 5003,78, in 2020 to PLN 5748.24, and at the end of 2022 they amounted to PLN 7001,28. The highest salaries in the analyzed period were recorded in the professional group of representatives of public authorities, senior officials and managers and in 2004 amounted to PLN 5482,11. In 2006 they increased to PLN 5917,29, in 2008 to PLN 7219,37, in 2010 to PLN 7344,00, in 2012 they increased to PLN 8143,17, in 2014 to PLN 8378,63, in 2016 PLN 8790,66, in 2018 they increased to PLN 9597,49, in 2020 to PLN 10476,03, and at the end of 2022 they amounted to PLN 12572,14. Great responsibility and high education resulted in such a high level of remuneration in this professional group. High salaries were also observed in the professional group of specialists in physical, mathematical and technical sciences and in 2004 they amounted to PLN 3737,21. In 2006 they increased to PLN 4132,44, in 2008 to PLN 5056,94, in 2010 to PLN 4841,14, in 2012 they increased to PLN 5237,02, in 2014 to PLN 5630,19, in 2016 PLN 5827,44, in 2018 they increased to PLN 6581,86, in 2020 to PLN 7203,08, and at the end of 2022 they amounted to PLN 8715,07. Very high education and specialized knowledge and experience contributed to such a high level of education. Security service workers received the lowest salaries. In 2004, salaries in this professional group were PLN 141 234, in 2006 they increased to PLN 1528,52, in 2008 to PLN 1856,58, in 2010 to PLN 1902,30, and in 2012 they increased to level of PLN 2168,90, in 2014 to PLN 2301,02, in 2016 to PLN 2483,90, in 2018 they increased to PLN 2845,83, in 2020 to PLN 3409,20, and at the end of 2022 they were at the level of PLN 3927,76. A small scope of duties and responsibilities, as well as a low level of education resulted in such a low level of remuneration in this professional group. In other occupational groups in Poland, wages remained at a similar level. This situation in average wages in occupational groups in Poland lasted until 2022.

Table 1.Average monthly gross wages in occupational groups performed in Poland in 2004-2022 (in PLN)

Specification	2004	2006	2008	2010	2012	2014	2016	2018	2020	2022
Total	2368,52	2654,13	3232,07	3543,50	3895,72	4107,72	4346,76	5003,78	5748,24	7001,28
Managers	5482,11	5917,29	7219,37	7344,00	8143,17	8378,63	8790,66	9597,49	10476,03	12572,14
Professionals	3180,32	3316,84	3979,02	4327,31	4771,02	5067,79	5342,99	6093,43	7066,64	8456,33
science and engineering professionals	3737,21	4132,44	5056,94	4841,14	5237,02	5630,19	5827,44	6581,86	7203,08	8715,07
health professionals	2864,24	2876,52	3637,85	3965,96	4056,87	4222,03	4753,53	6024,46	6937,97	9348,60
teaching professionals	2793,47	2878,02	3316,12	3855,26	4283,44	4473,02	4508,52	4891,15	6083,41	6529,38
business and administration professionals	3582,96	3881,62	4557,24	4712,21	5200,86	5335,41	5586,51	6329,52	099,47	8443,66
information and communications technology	-	-	-	6046,75	6522,38	6993,93	7993,20	9143,86	10210,88	12689,20
professionals										
legal, social and cultural professionals	-	-	-	5566,39	5760,89	5999,91	6374,54	7246,36	8087,92	9515,59
Technicians and associate professionals	2342,55	2799,95	3341,58	3652,71	3888,82	4145,64	4410,80	4950,88	5613,22	6904,36
of which:										
science and engineering associate	2740,71	3051,84	3645,84	4073,65	4545,30	4719,88	4970,35	5568,81	6049,12	7365,42
professionals										
business and administration associate	-	-	-	3690,36	3883,23	4154,70	4459,65	4960,10	5695,30	7050,21
professionals										
Clerical support workers	2021,06	2168,30	2713,47	2978,82	3197,34	3277,66	3525,59	4051,57	4531,56	5519,56
general and keyboard clerks	2053,85	2222,72	2717,25	3018,60	3234,26	3349,72	3597,24	4048,77	4622,59	5553,12
customer services clerks	1897,80	1997,03	2700,70	3079,42	3475,97	3253,42	3532,67	3956,46	4426,93	5458,39
numerical and material recording clerks	-	-	-	2841,74	2984,19	3181,48	3440,13	4033,72	4490,53	5447,34
other clerical support workers	-	-	-	3113,45	3244,46	3412,95	3621,81	4188,80	4586,26	5721,50
Service and sales workers	1361,39	1480,12	1856,99	2107,36	2266,87	2427,87	2698,69	3129,77	3675,12	4402,54
of which:										
personal service workers	1412,34	1528,52	1856,58	2124,52	2238,49	2429,46	2605,07	3043,58	3482,52	4322,40
sales workers	1323,90	1450,89	1690,00	2157,91	2306,23	2463,18	2787,02	3245,43	3801,29	4538,96
protective services workers	1412,34	1528,52	1856,58	1902,30	2168,90	2301,02	2483,90	2845,83	3409,20	3927,76
Skilled agricultural, forestry and fishery	1614,98	1781,07	1979,56	2203,32	2631,44	2662,50	2959,55	3400,07	4051,47	4866,99
workers										
Craft and related trades workers	1845,31	2178,05	2673,58	2772,46	3108,44	3295,45	3427,33	4143,95	4652,88	5466,74
of which:										
building and related trades workers,	2009,40	2489,46	2941,40	2569,95	2857,77	3044,21	3200,89	3590,90	4247,76	4991,70
excluding electricians										
metal, machinery and related trades workers	2153,23	2515,24	3120,48	3159,72	3543,34	3729,67	3790,88	4569,48	5046,14	5995,34

Cont. table 1.

food processing, wood working, garment	1331,89	1486,07	1852,72	2112,89	2298,46	2498,27	2682,62	3336,73	3871,52	4586,28
and other craft and related trades workers										
Plant and machine operators, and assemblers	2002,88	2227,08	2722,19	3006,33	3233,31	3379,03	3519,44	4104,96	4620,90	5981,36
of which drivers and mobile plant operators	1990,27	2193,73	2704,43	2831,12	2949,19	3114,59	3344,27	3845,18	4297,47	6280,22
Elementary occupations	1352,79	1524,53	1895,86	2074,15	2241,28	2397,51	2602,65	3002,43	3576,57	4292,45

Source: Own study based on: Zatrudnienie oraz przeciętne miesięczne wynagrodzenia brutto według grup zawodów wykonywanych za październik, Rocznik Statystyczny Rzeczpospolitej Polskiej 2005, 2007, 2009, 2011, 2013, 2015, 2017, 2019, 2021, 2023. Warszawa: GUS; 2005, p. 267; 2007, p. 274; 2009, p. 270; 2011, p. 255; 2013, p. 276; 2015, p. 275; 2017, p. 277; 2019, p 280; 2021, p. 280; 2023, p. 277.

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3. Deviations from gross wages between large groups of professions in Poland

To analyze the differences in wages in Poland by occupational groups in the years 2004-2022, data on average monthly nominal gross wages will be used. Thus, data on average monthly nominal gross wages by occupational groups in Poland in the years 2004-2022 are presented in Table 1. The results of the conducted research indicate that in the years 2004-2022 in Poland, there was also significant variation in average wages among various occupational groups. In 2004, the average monthly nominal gross wages according to occupational groups in Poland amounted to PLN 2368,52. In 2006 they increased to PLN 2654,13, in 2008 to PLN 3232,07, in 2010 to PLN 3543,50, in 2012 they increased to PLN 3895,72, in 2014 to PLN 4107,72, in 2016 PLN 4346,76, in 2018 they increased to PLN 5003,78, in 2020 to PLN 5748,24, and at the end of 2022 they amounted to PLN 7001,28. The highest salaries in the analyzed period were recorded in the professional group of representatives of public authorities, senior officials and managers and in 2004 amounted to PLN 5482,11. In 2006 they increased to PLN 5917,29, in 2008 to PLN 7219,37, in 2010 to PLN 7344,00, in 2012 they increased to PLN 8143,17, in 2014 to PLN 8378,63, in 2016 PLN 8790,66, in 2018 they increased to PLN 9597,49, in 2020 to PLN 10 476,03, and at the end of 2022 they amounted to PLN 12 572,14. Great responsibility and high education resulted in such a high level of remuneration in this professional group. High salaries were also observed in the professional group of specialists in physical, mathematical and technical sciences and in 2004 they amounted to PLN 3737,21. In 2006 they increased to PLN 4132,44, in 2008 to PLN 5056,94, in 2010 to PLN 4841,14, in 2012 they increased to PLN 5237,02, in 2014 to PLN 5630,19, in 2016 PLN 5827,44, in 2018 they increased to PLN 6581,86, in 2020 to PLN 7203,08, and at the end of 2022 they amounted to PLN 8715,07. Very high education and specialized knowledge and experience contributed to such a high level of education. Security service workers received the lowest salaries. In 2004, salaries in this professional group were PLN 1412,34, in 2006 they increased to PLN 1528.52, in 2008 to PLN 1856,58, in 2010 to PLN 1902,30, and in 2012 they increased to level of PLN 2168,90, in 2014 to PLN 2301,02, in 2016 to PLN 2483,90, in 2018 they increased to PLN 2845,83, in 2020 to PLN 3409,20, and at the end of 2022 they were at the level of PLN 3927,76. A small scope of duties and responsibilities, as well as a low level of education resulted in such a low level of remuneration in this professional group. In other occupational groups in Poland, wages remained at a similar level. This situation in average wages in occupational groups in Poland lasted until 2022.

Table 2.Deviations from the average monthly gross salary in total between large groups of professions in Poland in 2004-2022 in PLN (total = 100)

Specification	2004	2006	2008	2010	2012	2014	2016	2018	2020	2022
Total	-	-	-	-	-	-	-	-	-	-
Managers	+3113,59	+3263,16	+3987,30	+3800,50	+4247,45	+4270,91	+4443,90	+4593,71	+4727,79	+5570,86
Professionals	+811,80	+662,71	+746,95	+783,81	+875,30	+960,07	+996,23	+1089,65	+1318,40	+1455,05
science and engineering professionals	+1368,69	+1478,31	+1824,87	+1297,64	+1341,30	+1522,47	+1480,68	+1578,08	+1454,84	+1713,79
health professionals	+495,72	+222,39	+405,78	+422,46	+161,15	+114,31	+406,77	+1020,68	+1189,73	+2347,32
teaching professionals	+424,95	+223,89	+84,05	+311,76	+387,72	+365,30	+161,76	-112,63	+335,17	-471,90
business and administration professionals	+1214,44	+1227,49	+1325,17	+1168,71	+1305,14	+1227,69	+1239,75	+1325,74	+1351,23	+1442,38
information and communications	-	-	-	+2503,25	+2626,66	+2886,21	+3646,44	+4140,08	+4462,64	+5687,92
technology professionals										
legal, social and cultural professionals	-	ı	ı	+2022,89	+1865,17	+1892,19	+2027,78	+2242,58	+2339,68	+2514,31
Technicians and associate professionals	-25,97	+145,82	+109,51	+109,21	-6,90	+3792	+64,04	-52,90	-135,02	-96,92
of which:										
science and engineering associate professionals	+372,19	+397,71	+413,77	+530,15	+649,58	+612,16	+623,59	+565,03	+300,88	+364,14
business and administration associate professionals	-	-	-	+146,86	-12,49	+46,98	+112,89	-43,68	-52,94	+48,93
Clerical support workers	-347,46	-485,83	-518,60	-564,68	-698,38	-830,06	-821,17	-952,21	-1216,68	-1481,72
general and keyboard clerks	-314,67	-431,41	-514,82	-524,90	-661,46	-758,00	-749,52	-955,01	-1125,65	-1448,16
customer services clerks	-470,72	-657,10	-531,37	-464,08	-419,75	-854,30	-814,09	-1047,32	-1321,31	-1542,89
numerical and material recording clerks	_	-	-	-701,76	-911,53	-926,24	-906,63	-970,06	-1257,71	-1553,94
other clerical support workers	_	-	-	-430,05	-651,26	-694,77	-724,95	-814,98	-1161,98	-1279,78
Service and sales workers	-1007,13	-1174,01	-1375,08	-1436,14	-1628,85	-1679,85	-1648,07	-1874,01	-2073,12	-2598,74
of which:										
personal service workers	-956,18	-1125,61	-1375,49	-1418,98	-1657,23	-1678,26	-1741,69	-1960,20	-2265,72	-2678,88
sales workers	-1044,62	-1203,24	-1542,07	-1385,59	-1589,49	-1644,54	-1559,74	-1758,35	-1946,95	-2462,32
protective services workers	-956,18	-1125,61	-1375,49	-1641,20	-1726,82	-1806,70	-1862,86	-2157,95	-2339,04	-3073,52
Skilled agricultural, forestry and fishery workers	-753,54	-873,06	-1252,51	-1340,18	-1264,28	-1445,22	-1387,21	-1603,71	-1696,77	-2134,29

Cont. table 2.

Craft and related trades workers	-523,21	-476,08	-558,49	-771,04	-787,28	-812,27	-919,43	-859,83	-1095,36	-1534,54
of which:										
building and related trades workers, excluding electricians	-359,12	-164,67	-290,67	-973,55	-1037,95	-1063,51	-1145,87	-1412,88	-1500,48	-2009,58
metal, machinery and related trades workers	-215,29	-138,89	-111,59	-383,78	-352,38	-378,05	-555,88	-434,30	-702,10	-1005,94
food processing, wood working, garment and other craft and related trades workers	-1036,63	-1168,06	-1379,35	-1430,61	-1597,26	-1609,45	-1664,14	-1667,05	-1876,72	-2415,00
Plant and machine operators, and assemblers	-365,64	-427,05	-509,88	-537,17	-662,41	-728,69	-827,32	-898,82	-1127,34	-1019,92
of which drivers and mobile plant operators	-378,25	-460,40	-527,64	-712,38	-949,53	-993,13	-1002,49	-1158,60	-1450,77	-721,06
Elementary occupations	-1015,73	-1129,60	-1336,21	-1469,35	-1654,44	-1710,21	-1744,11	-2001,35	-2171,67	-2708,83

Source: Own study based on table 1.

4. Gross wage relations in the system of occupational groups

Further analyzes also prove that in the years 2004-2022 there was a significant variation in average wages according to occupational groups in relation to the average wage in Poland (Table 3). Throughout the analyzed period, the highest average remuneration was observed in the professional group of representatives of public authorities, senior officials and managers. The remuneration of this professional group was 231,46% in 2004, 222,95% in 2006, 223,37% in 2008, 207,25% in 2010, 209,03% in 2012, and 203,97% in 2014 %, in 2016 202,23%, in 2018 191,80%, in 2020 182,25%, and in 2022 179,57% of the average salary in Poland. High ratios of gross remuneration were also recorded in the group of specialists in physical, mathematical and technical sciences. The remuneration of this professional group was 157,79% in 2004, 155,70% in 2006, 156,46% in 2008, 136,62% in 2010, 134,43% in 2012, and 137,06% in 2014, in 2016 134,06%, in 2018 131,54%, in 2020 125,31%, and in 2022 124,48% of the average salary in Poland. However, the lowest gross remuneration in relation to the average gross remuneration in Poland was recorded in the professional group of security services workers. The remuneration of this professional group in 2004 was only 59,63%, in 2006 57,59%, in 2008 57,44%, in 2010 53,68%, in 2012 55,67%, in 2014 56,02%, in 2016 57,14%, in 2018 56,87%, in 2020 59,31%, and in 2022 56,10% of the average salary in Poland. In other job positions, average remuneration in relation to the average remuneration in the country remained at a similar level. By the end of 2022, there were no major changes in average wages in job positions in relation to the average wage in Poland.

Table 3.Relationships of average monthly nominal gross remuneration by occupational groups compared to the average monthly nominal gross remuneration in Poland in 2004-2022 in % (total = 100)

Specification	2004	2006	2008	2010	2012	2014	2016	2018	2020	2022
Total	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
Managers	231,46	222,95	223,37	207,25	209,03	203,97	202,23	191,80	182,25	179,57
Professionals	134,27	124,97	123,11	122,12	122,47	123,37	122,92	121,78	122,94	120,78
science and engineering professionals	157,79	155,70	156,46	136,62	134,43	137,06	134,06	131,54	125,31	124,48
health professionals	120,93	108,38	112,55	111,92	104,14	102,78	109,36	120,40	120,70	133,53
teaching professionals	117,94	108,44	102,60	108,80	109,95	108,89	103,72	97,75	105,83	93,26
business and administration professionals	151,27	146,25	141,00	132,98	133,50	129,89	128,52	126,49	123,51	120,60
information and communications technology	-	-	-	170,64	167,42	170,26	183,89	182,74	177,63	181,24
professionals										
legal, social and cultural professionals	ı	-	-	157,09	147,88	146,06	146,65	144,82	140,70	135,91
Technicians and associate professionals	98,90	105,49	103,39	103,08	99,82	100,92	101,47	98,94	97,65	98,62
of which:										
science and engineering associate	115,71	114,98	112,80	114,96	116,67	114,90	114,35	111,29	105,23	105,20
professionals										
business and administration associate	-	-	-	104,14	99,68	101,14	102,60	99,13	99,08	100,70
professionals										
Clerical support workers	85,33	81,70	83,95	84,06	82,07	79,79	81,11	80,97	78,83	78,84
general and keyboard clerks	86,71	83,75	84,07	85,19	83,02	81,55	82,76	80,91	80,42	79,32
customer services clerks	80,13	75,24	83,56	86,90	89,23	79,20	81,27	79,07	77,01	77,96
numerical and material recording clerks	-	-	-	80,20	76,60	77,45	79,14	80,61	78,12	77,80
other clerical support workers	-	-	-	87,86	83,28	83,09	83,32	83,71	79,79	81,72
Service and sales workers	57,48	55,77	57,46	59,47	58,19	59,11	62,09	62,55	63,93	62,88
of which:										
personal service workers	59,63	57,59	57,44	59,96	57,46	59,14	59,93	60,83	60,58	61,74
sales workers	55,90	54,67	52,29	60,90	59,20	59,96	64,12	64,86	66,13	64,83
protective services workers	59,63	57,59	57,44	53,68	55,67	56,02	57,14	56,87	59,31	56,10
Skilled agricultural, forestry and fishery	68,19	67,11	61,25	62,18	67,55	64,82	68,09	67,95	70,48	69,52
workers										

Cont. table 3.

Craft and related trades workers	77,91	82,06	82,72	78,24	79,79	80,23	78,85	82,82	80,94	78,08
of which:										
building and related trades workers,	84,84	93,80	91,01	72,53	73,36	74,11	73,64	71,76	73,90	71,30
excluding electricians										
metal, machinery and related trades workers	90,91	94,77	96,55	89,17	90,95	90,80	87,21	91,32	87,79	85,63
food processing, wood working, garment	56,23	55,99	57,32	59,63	59,00	60,82	61,72	66,68	67,35	65,51
and other craft and related trades workers										
Plant and machine operators, and assemblers	84,56	83,91	84,22	84,84	83,00	82,26	80,97	82,04	80,39	85,43
of which drivers and mobile plant operators	84,03	82,65	83,67	79,90	75,70	75,82	76,94	76,85	74,76	89,70
Elementary occupations	57,12	57,44	58,66	58,53	57,53	58,37	59,88	60,00	62,22	61,31

Source: Own study based on table 1.

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5. Summary

The level and structure of remuneration are largely justified by the autonomous functioning of enterprises. Wages depend on the situation in enterprises and the level of competitiveness. The attractiveness of occupational groups is often dictated by the advantages resulting from the economic situation. There were large differences in wages between professional groups. The amount of remuneration in individual professional groups in Poland was quite diverse. The highest salaries were recorded among representatives of public authorities, senior officials and managers. High salaries were also observed among specialists in physical and mathematical sciences. Security service employees received the lowest salaries. This applied to people holding similar positions and performing similar activities. In conclusion, it should be noted that the wage gap in Poland is decreasing, which means that from year to year the differences in wages were smaller and smaller.

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