ORGANIZATION AND MANAGEMENT SERIES NO. 201

WAGE GAP AND EDUCATION – A GENDER PERSPECTIVE

Ewa MAZUR-WIERZBICKA^{1*}, Natalia ZIEMBOWSKA²

¹ University of Szczecin; ewa.mazur-wierzbicka@usz.edu.pl, ORCID: 0000-0001-7874-6417

² University of Szczecin; 231025@stud.usz.edu.pl

* Correspondence author

Purpose: The purpose of this article is to identify the relationship between the wage gap and the educational level of men and women.

Design/methodology/approach: Desk research was conducted using secondary data (Statistics Poland) on wages for men and women, as well as data on college graduates by groups of education majors.

Findings: A large number of women achieve higher education; additionally, there are more female graduates than male graduates in many groups of education majors, nevertheless the wage gap mainly affects women.

Research limitations/implications: Limitations are mainly due to the fact that not all female graduates of the groups of education majors identified in the article enter the workforce according to their education. For this reason, comparing the percentage of female graduates of specific groups of education majors to data on the amount of the wage gap in the corresponding (groups of education majors) groups of major occupations can only be a preview.

Practical implications: The conclusions of the analysis may be an incentive to introduce measures to help equalize opportunities in the labor market, which will normalize the problem of lower wages for women in relation to men (assuming a comparable level of education).

Social implications: Awareness of the existence of the problem of wage discrimination affecting women may have an impact on the quality of their lives as well as the work, since wages are one of the most important motivational factors. The analyses included in the article may increase awareness of the high level of education of women in Poland.

Originality/value: The article holistically shows the problem of wage discrimination against women in the Polish labor market and the fact that it is not caused by differences in education between men and women. The article shows the magnitude of the problem and how lack of knowledge on this subject may lead the society to draw misleading conclusions, thereby exacerbating gender inequality in the labor market and reinforcing existing gender stereotypes.

Keywords: discrimination, gender equality, wage gap.

Category of the paper: research paper.

1. Introduction

Discrimination against women in the labor market is a fact of life. However, it is worth remembering that discrimination is a phenomenon that affects society and its development, as well as people and their self-esteem, commitment and motivation (Abrams, 2010; Zwiech, 2016, 2017). Therefore, it is important to identify factors that cause prejudice and reinforce the phenomenon of discrimination. There are many potential reasons for such widespread inequality in social life. One of them may be the stigmatization that occurs in the relationship between a dominant group and a minority group (Zwiech, 2013). In such a case, the minority group is assigned a specific characteristic that constitutes their "otherness", and in doing so is a justification for discriminatory behavior and the resulting inequality. The phenomenon of discrimination may also have its roots in stereotypical perceptions of the world or in prejudices that arise in people's minds (Winiarska, Klaus, 2011). Unfortunately, society often has a misleading picture of reality resulting from the functioning stereotypes, or at least from the attribution of many important roles to men - including in the vocabulary area (e.g. the words "manager" or "director" with no feminine suffixes). Such perceptions are not without influence on the occurrence of specific phenomena such as the wage gap (Turczak, Zwiech, 2016). Despite much evidence, society has not yet completely shed its misconceptions, and many people believe that the cause of the wage gap lies in women's lower education and insufficient qualifications.

The reason for suspecting women to have lower education may lie in the historical background or existing phenomena (e.g., the glass ceiling or sticky floor) that make them more likely to fill lower-paying positions and less likely to take on those of leadership or management. Through the influence of the aforementioned phenomena on the subconscious of both women and men, they can negatively affect the perception of gender dualism in the labor market.

The above prompted the authors to identify the relationship between the wage gap and the level of education, taking into account the gender criterion. The composition of the article serves is purpose. There is a theoretical part, which refers to the basic issues of discrimination, including wage discrimination, a methodological part and a research part, which focuses on identifying the relationship between the wage gap and the level of education for women and men

2. Discrimination in the workplace - theoretical introduction

Discrimination is a very broad concept. We can encounter it in many spheres of life (including in the labor market). In recent years, it has also been more strongly emphasized as gender equality issues have been increasingly addressed. Discrimination takes on different intensities and is mainly associated with injustice and inequality - in the worst cases also with sabotage or oppression. It is worth noting that discrimination in the labor market does not only involve bias in the recruitment process, but also unfair practices in the workplace (e.g., demotions, firings, harassment) (Roscigno, 2019; Zwiech, 2011).

The problem of discrimination is also addressed and regulated by Polish legislation. According to Article 11³ of the Labor Code: "No discrimination in employment, either direct or indirect, in particular on the grounds of sex, age, disability, race, religion, nationality, political opinion, trade union membership, ethnic origin, denomination, sexual orientation, employment for a definite or indefinite period of time or on full-time or part-time basis, shall be allowed".

Poland's most important legal act also contains a provision regulating the subject of discrimination. In Article 32, the Constitution of the Republic of Poland lays down that:

- 1. "All persons shall be equal before the law. All persons shall have the right to equal treatment by public authorities.
- 2. No one shall be discriminated against in political, social or economic life for any reason whatsoever" (Constitution of the Republic of Poland).

Interestingly, the Constitution does not stop at marking the relevance of the topic of discrimination in Poland. Another article of the Constitution contains a provision on equality between men and women. To quote Article 33:

- 1. "Men and women shall have equal rights in family, political, social and economic life in the Republic of Poland.
- 2. Men and women shall have equal rights, in particular, regarding education, employment and promotion, and shall have the right to equal compensation for work of similar value, to social security, to hold offices, and to receive public honours and decorations".

The literature offers various divisions of discrimination (Zwiech, 2011) - the most common is the separation of direct and indirect discrimination. It is worth mentioning that indirect discrimination is sometimes said to be a side effect of existing inequalities and that it leads to aggravation of the consequences resulting from direct discrimination (Klaus, Winiarska, 2011). Definitions of these terms can be found in Article 18(3a) of the Labor Code. According to it, direct discrimination is a situation in which an employee for one or more reasons (e.g., age, gender, disability, race) is or may be treated less favorably than other employees in a comparable situation. Indirect discrimination, on the other hand, occurs when an apparently neutral decision results in a situation that disadvantages a particular group of people.

Women often experience both direct and indirect discrimination in the labor market. According to the "Gender Gap the Polish Way 2020" report, women are more likely to experience discrimination in the workplace. 42.6% of women and 28.4% of men were affected

by downgrading of competences based on gender. On the other hand, 37.6% of women (compared to 26.7% of men) were affected by gender-based downgrading of merit. It is interesting to note that gender exclusion affected 28.2% of women and 24.2% of men, thus a very small difference. Therefore, based on the data presented, it may be concluded that men also experience discrimination in the labor market (Gender Gap po polsku, 2020).

Despite the world's dynamic development and increasing social awareness, there is still a long way to go to achieve full gender equality. According to the World Economic Forum, at the current rate of progress, it will take 131 years to achieve full gender equality (Global Gender Gap Report, 2023), while according to the UN Secretary General it will take 300 years.

There are many barriers to achieving full gender equality in the labor market. Often they are rooted in the past, however, they still have a strong impact on shaping social attitudes. It is worth mentioning the ingrained models of the family, in which a woman should not work, only take care of the household. For many years, women also had no rights to property, which meant that formally everything belonged to their husbands and they could not even decide their own whereabouts (Scott, 2021). The current gender inequality has also been heavily influenced by the inheritance law that was once in effect. It stipulated that property after a man's death did not go to his wife or daughters but to his male heirs. This led to situations in which a widow was left with nothing after her husband's death, while marriage was the safest option for daughters (Kwak, 2019). Another reason for such strong inequalities occurring between men and women in the labor market is the unequal burden of domestic responsibilities, which means that women have far less time and strength for professional development (Klimek, 2020). The notion of a "motherhood penalty" is also associated with this problem. It means that mothers take on inferior jobs compared to childless women, and have fewer opportunities for promotion and lower salaries (Scott, 2021).

Among the general public, there is a perception that women's holding of lower positions or their lower salaries relative to men are the result of their poorer competences and education. In many cases, however, this is untrue, and is associated, among other things, with the phenomenon known as the "sticky floor", according to which women mainly practice professions involving low salaries and poor opportunities for promotion (Neto, Grangeiro, Esnard, 2021), or the phenomenon of the "glass ceiling", i.e. the presence of an invisible barrier that prevents women from reaching the highest levels of management, which leads to inhibition of their professional development and translates into lower earnings. This is confirmed, among other things, by the Gender Equality Index, according to which the share of women as members of management boards and supervisory boards in Poland's largest listed companies is 26%, compared to 74% form men (EIGE, 2023).

In view of the above, it is apparent that one of the important types of discrimination against women in the labor market is wage discrimination, which occurs when wage differences are due to reasons other than differences in labor productivity (Kazmierczak, 1995, p. 95).

The scale of wage discrimination against women can be shown using the wage gap index (The gender pay gap in the Member States of the European Union..., 2010).

Awareness and prevention of discrimination are important since inequalities in the labor market in many cases result in a decrease in motivation and willingness to act, which can ultimately further exacerbate the problem and cause even greater disparities. It is worth being aware that discrimination may also lead to health problems - evidence suggests that groups that are repeatedly discriminated against often have a higher risk of certain mental problems, including depressive symptoms (Vargas, Huey, Miranda, 2020).

3. Methodological aspects

Data published by Statistics Poland (GUS) were used for the analyses underlying the adopted purpose of the article. The research period is 2015-2022. 2015 was taken as the beginning of the research period as a year in which the document "Transforming Our World: the 2030 Agenda for Sustainable Development" was signed, introducing 17 Sustainable Development Goals, including a goal relating directly to gender equality (Goal 5). Goal 5 stipulated empowerment of women and girls. The year 2022 – that closed the analysis - was the last year for which data was available.

GUS data on "Employed persons and average gross wages by occupational group" for 2015-2022 were extracted. Data on this aspect are published every two years, therefore information for the years: 2016, 2018, 2020 and 2022 was taken for this investigation. The analyses were based on the extracted groups of major occupations from the compilation and data on average gross wages in PLN for women and men in these groups.

The groups of occupations are made on the basis of the International Standard Classification of Occupations ISCO-08 adopted in December 2007. It is a five-level classification of hierarchically structured set of occupations and specialties occurring in the labor market (Regulation..., 2010, p. 6974). There are 10 groups of major occupations, of which the Statistical Yearbooks have data on 9, and these will be studied in this article (without group 0 – the armed forces).

The wage gap was calculated on the basis of the data "Employed and average gross wages by occupation group" for 2015-2022 according to formula 1 accurate to two decimal places.

$$Wage \ gap = \frac{\text{average gross earnings of men-average gross earnings of women}}{\text{average gross earnings of men}} x 100\% \tag{1}$$

The wage gap indicates numerically the disparity that exists in the earnings of men and women. The result tells us by how many percent women's wages are lower or higher (negative value) than men's.

The data, which will be matched with data on the wage gap between men and women in groups of major professions, includes university graduates by groups of education majors from the 2014/2015 academic year until the 2022/2023 academic year.

The analyses also compare the numbers of female graduates in selected groups of education majors to the corresponding data on the wage gap in groups of major professions. This comparison points to the existence of a certain limitation; namely, not all female graduates of a given group of majors take up jobs in the corresponding profession from the major occupation group. Therefore, the comparison of the percentage of female graduates from given groups of education majors to the wage gap in the corresponding groups of major occupations only serves as a preview of the situation.

4. Wage gap vs. education for men and women - results of analysis

The data on the earnings in groups of major occupations included in the Statistical Yearbooks show the average earnings of men and women as well as the overall average earnings in a given group of occupations. Using these, the wage gap for each group of major occupations was calculated as well as the overall wage gap for all groups of major occupations from the compilation over the 2015-2022 time period. Figure 1 shows the overall wage gap for all groups of major occupations.

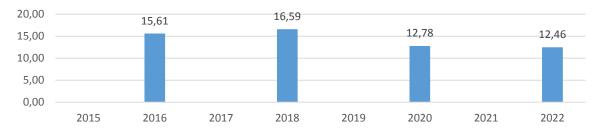


Figure 1. Total wage gap for all groups of major occupations for 2015-2022 in %.

Source: Authors' own compilation based on GUS data.

Between 2015 and 2022, the wage gap was the largest in 2018 at 16.59%. From 2018, there was a downward trend in this indicator. It should be noted that by providing overall data for all groups of major occupations, marginal results, which can present far more unfavorable data, are not seen. Therefore, after looking at the overall data that shows the wage gap for all groups of major occupations, it is worth looking at the data detailing the level of the wage gap separately for each group of major occupations.

Table 1.Average gross salary in PLN and wage gap for groups of major occupations - 2016

Occupation grown (October 2016)	Average gross salary in PLN			Wage gap in %	
Occupation group (October 2016)	total	men	women		
Representatives of public authorities, senior officials and managers	8790.66	9998.52	7359.64	26.39	
Specialists	5342.99	6343.41	4792.58	24.45	
Technicians and other middle personnel	4410.8	5027.46	3900.81	22.41	
Office workers	3525.59	3591.39	3479.98	3.10	
Service and sales workers	2698.69	2910.03	2595.98	10.79	
Farmers, gardeners, foresters and fishermen	2959.55	2986.77	2873.49	3.79	
Industrial and craft workers	3427.23	3573.37	2646.58	25.94	
Operators and assemblers of machinery and equipment	3519.14	3664.18	2953.36	19.40	
Workers performing simple work	2602.65	2892.94	2416.27	16.48	
Total	4346.76	4705.63	3971.13	15.61	

An analysis of the data collected in Table 1 shows that in 2016 all occupation groups achieved a positive wage gap. This means that in all groups of major professions, men earned statistically more than women. The smallest gap between men's and women's wages was in the "office workers" group at 3.1%, followed immediately by the "farmers, gardeners, foresters and fishermen" group at 3.79%. The data shows that women in these occupation groups earned on average 3.1% and 3.79% less than men, respectively. The largest wage gap was in the "Representatives of public authorities, senior officials and managers" group, where the wage gap was 26.39%.

Table 2.Average gross salary in PLN and wage gap for groups of major occupations - 2018

Occupation group (October 2018)	Average	Average gross salary in PLN			
Occupation group (October 2018)	total	men	women		
Representatives of public authorities, senior officials and managers	9597.49	10917.6	8065.66	26.12	
Specialists	6093.43	7242.81	5449.12	24.77	
Technicians and other middle personnel	4950.88	5681.8	4352.53	23.40	
Office workers	4051.57	4206.09	3945.14	6.20	
Service and sales workers	3129.77	3363.55	3013.66	10.40	
Farmers, gardeners, foresters and fishermen	3400.07	3398.06	3409.34	-0.33	
Industrial and craft workers	4143.95	4305.92	3252.14	24.47	
Operators and assemblers of machinery and equipment	4104.95	4261.1	3483.79	18.24	
Workers performing simple work	3002.43	3356.87	2777.87	17.25	
Total	5003.78	5447.24	4543.36	16.59	

Source: authors' own compilation based on GUS data.

The data in Table 2 show that in 2018 the wage gap for the occupational group "farmers, gardeners, foresters and fishermen" was -0.33%. This means the percentage that women in this group of occupations earned more than men. The largest wage gap still remained in the occupational group "Representatives of public authorities, senior officials and managers", and was slightly lower than in 2016, at 26.12%.

Occupation aroun (October 2020)	Averag	Average gross salary in PLN			
Occupation group (October 2020)	total	men	women		
Representatives of public authorities, senior	10476.03	11646.34			
officials and managers	10470.03	11040.34	9044.89	22.34	
Specialists	7066.64	8229.87	6405.93	22.16	
Technicians and other middle personnel	5613.22	6290.24	5054.24	19.65	
Office workers	4531.56	4634.34	4458.24	3.80	
Service and sales workers	3675.12	4007.44	3483.84	13.07	
Farmers, gardeners, foresters and fishermen	4051.47	4063.7	4021.71	1.03	
Industrial and craft workers	4652.88	4781.38	3748.68	21.60	
Operators and assemblers of machinery and	4620.9	4755.89	4050.49	14.83	
equipment	4020.9	4733.69	4030.49	14.03	
Workers performing simple work	3576.57	3906.93	3359.26	14.02	
Total	5748.24	6126.15	5343.07	12.78	

Table 3.Average gross salary in PLN and wage gap for groups of major occupations - 2020

The data collected in Table 3 show that no group of occupations recorded a negative wage gap in 2020. The largest wage gap was still in place for the group "Representatives of public authority, senior officials and managers", but it decreased by more than 3 percentage points compared to 2018.

Table 4.Average gross salary in PLN and wage gap for groups of major occupations - 2022

Occupation group (October 2022)	Average gross salary in PLN			Wage gap in %
Occupation group (October 2022)	total	men	women	
Representatives of public authorities, senior officials and managers	12572.14	14003.79	10897.59	22.18
Specialists	8456.33	9944.01	7611.39	23.46
Technicians and other middle personnel	6904.36	7713.84	6267.21	18.75
Office workers	5519.56	5704.56	5389.79	5.52
Service and sales workers	4402.54	4749.45	4206.65	11.43
Farmers, gardeners, foresters and fishermen	4866.99	4810.5	5038.3	-4.74
Industrial and craft workers	5466.74	5659.69	4351.38	23.12
Operators and assemblers of machinery and equipment	5981.63	6291.36	4742.55	24.62
Workers performing simple work	4292.45	4737.04	4038.16	14.75
Total	7001.28	7558.54	6430.06	12.46

Source: authors' own compilation based on GUS data.

Analysis of the data collected in Table 4 shows that in 2022 the occupational group "farmers, gardeners, foresters and fishermen" had a negative wage gap of as much as -4.74%. In contrast, the highest wage gap was 24.62%, recorded for the group "operators and assemblers of machinery and equipment". In addition, it is worth noting that 4 out of 9 major occupational groups displayed a wage gap of more than 20%.

Table 5.)	al	T
Wage gap for groups of major occupations - 2015-2022 in $\%$	p for groups of major occupations - 20	g	la,	W

Wage gap by occupation group		2018	2020	2022
Representatives of public authorities, senior officials and managers	26.39	26.12	22.34	22.18
Specialists	24.45	24.77	22.16	23.46
Technicians and other middle personnel	22.41	23.40	19.65	18.75
Office workers	3.10	6.20	3.80	5.52
Service and sales workers	10.79	10.40	13.07	11.43
Farmers, gardeners, foresters and fishermen		-0.33	1.03	-4.74
Industrial and craft workers	25.94	24.47	21.60	23.12
Operators and assemblers of machinery and equipment		18.24	14.83	24.62
Workers performing simple work		17.25	14.02	14.75
Total	15.61	16.59	12.78	12.46

No data for years: 2015, 2017, 2019, 2021 - this is because GUS releases new data on this subject matter every two years in the Statistical Yearbooks.

Source: authors' own compilation based on GUS data.

The wage gap for each group of occupations is summarized in Table 5. It is worth noting that from 2018, the downward trend of the wage gap counting overall for all groups of major occupations was upheld.

Table 6.Women as a percentage of graduates at Polish universities by education majors - 2014/2015-2021/2022

Female graduates by groups	2014/	2015/	2016/	2017/	2018/	2019/	2020/	2021/
of education majors	2015	2016	2017	2018	2019	2020	2021	2022
Education	84	84	83	84	84	86	86	83
Humanities and arts	75	75	75	74	73	74	73	73
Social sciences, journalism and information	71	69	71	71	71	69	69	70
Business, administration and law	69	69	69	68	67	67	66	66
Natural sciences, mathematics and statistics	73	73	72	72	71	71	70	71
Information and communications technology	15	15	16	16	17	16	16	16
Technology, industry, construction	41	42	42	43	42	41	40	39
Agriculture	53	55	57	58	57	59	59	59
Health and welfare	83	80	80	80	81	81	81	81
Services	57	59	57	56	57	57	59	61
Individual interdisciplinary studies	67	0	74	77	72	52	49	48
Total	65	64	63	63	63	63	63	63

No data for years: 2015, 2017, 2019, 2021 - this is because GUS releases new data on this subject matter every two years in the Statistical Yearbooks.

Source: authors' own compilation based on GUS data.

As can be seen from the data in Table 6, total women accounted for 63% of graduates in 2021/2022. According to the data for 2021/2022, women accounted for more than half in most groups of education majors, as many as 8 out of 11 groups surveyed. Women were in a distinct minority in the "information technology" group - 16%, and in the "technology, industry,

construction" group they accounted for 39%. In the "individual interdisciplinary studies" group, women accounted for 48% of the total number of graduates.

It is noteworthy that in most groups the number of female graduates decreased compared to the 2014/2015 academic year (8 out of 11 groups of education majors). For the most part, these were small differences, but the statistics in one category dropped down by 19 percentage points (individual interdisciplinary studies). There are also groups of education majors in which the percentage of female graduates is increasing. Comparing the 2014/2015 academic year to 2021/2022, the number of female graduates increased in 3 of the 11 groups of education majors. These were: "information and communications technologies," "agriculture" and "services".

The comparison of the marginal years (2014/2015 and 2021/2022), however, shows only a part of the data. However, are trends developing over the entire time frame are also important. The number of female graduates in most of the studied groups of education majors did not fluctuate much over the years investigated. For example - 7 out of 11 groups of education majors were only 3 percentage points off the highest and lowest results over the years studied. This means that the number of female graduates in 7 out of 11 groups of education majors changed by no more than 3 percentage points when comparing the years with the highest and lowest number of female graduates. Interestingly, in 10 out of 11 education major groups, the difference between the data was 6 percentage points or fewer. One group of education majors ("individual interdisciplinary studies") showed a result greater than the aforementioned 6 percentage points, as in this case the difference between the year with the highest and lowest number of female graduates was 29 percentage points.

The data in Table 6 shows that women make up a large number of graduates in many groups of education majors. The claim that they are educated in inappropriate fields of study, and thus earn less than men, therefore has no basis.

In order to further investigate this issue, data on the wage gap in selected groups of major professions were compared to data on the number of female graduates in selected groups of education majors. The data were selected so that the group of professions overlapped thematically with the group of education majors. The premise of the juxtaposition was that the data on people who were educated in a particular group of majors and may belong to the corresponding occupational group (if they chose a vocational path related to the profession in which they were educated) should be examined for correlation. There were 3 groups that had their closer counterparts in both groups (groups of major occupations and groups of majors). Table 7 considers the education group "business, administration and law" and the major occupations group "Representatives of public authority, senior officials and managers."

Table 7.Comparison of data on the percentage of women among graduates in the group of education majors "business, administration and law" to data on the wage gap in the group of professions "representatives of public authorities, senior officials and managers" - 2015-2022

Business, administration and law / Representatives of public authorities, senior officials and managers				
Year	Female raduates in %	Wage gap in %		
2015	69	no data*		
2016	69	26.39		
2017	69	no data*		
2018	68	26.12		
2019	67	no data*		
2020	67	22.34		
2021	66	no data*		
2022	66	22.18		

^{*} No data for certain years because GUS releases new data on this subject matter every two years in the Statistical Yearbooks.

The data included in Table 7 shows that women do not have an inferior education in the group of "business, administration and law" majors, since in all the years studied the percentage of female graduates was between 67% and 69%, and thus higher than the percentage of male graduates. Despite the fact that a large proportion of graduates in this group of education majors are women, the wage gap in the corresponding group of professions (Representatives of public authority, senior officials and managers) was more than 26% in 2016 and 2018 and about 22% in 2020 and 2022

Table 8.Comparison of data on the percentage of women among graduates in the "agriculture" group of education majors to data on the wage gap in the "farmers, gardeners, foresters and fishermen" group of occupations - 2015-2022

Agriculture / Farmers, gardeners, foresters and fishermen				
Year	Female graduates in %	Wage gap in %		
2015	53	no data*		
2016	55	3,79		
2017	57	no data*		
2018	58	-0.33		
2019	57	no data*		
2020	59	1.03		
2021	59	no data*		
2022	59	-4.74		

^{*} No data for certain years because GUS releases new data on this subject matter every two years in the Statistical Yearbooks.

Source: authors' own compilation based on GUS data.

The data included in Table 8 on the group of education majors "agriculture" and the major group of occupations "farmers, gardeners, foresters and fishermen" do not show a correlation. However, it is worth noting that this is the only group in which a negative wage gap was observed at -0.33% in 2018 and -4.74% in 2022.

Table 9.
Comparison of data on the percentage of women among graduates in the "services" education
major group to data on the wage gap in the "service and sales workers" occupation group -
2015-2022

Services / Service and sales workers				
Year	Female graduates in %	Wage gap in %		
2015	57	no data*		
2016	59	10,79		
2017	57	no data*		
2018	56	10,40		
2019	57	no data*		
2020	57	13,07		
2021	59	no data*		
2022	61	11,43		

^{*} No data for certain years because GUS releases new data on this subject matter every two years in the Statistical Yearbooks.

The data in Table 9 show that although more than 50% of university graduates in the "services" group of education majors are women, the wage gap in the corresponding "service and sales workers" occupational group is more than 10% in each year studied. Another interesting relationship is that although the percentage of female graduates increased by 2 percentage points compared to 2016, there was no positive change in the wage gap. In 2022, there was a higher wage gap than in 2016, although a decreasing trend - from 13.07% to 11.43% compared to 2020 - was noted.

5. Summary

Although many people are aware that discrimination, including wage discrimination, affects in particular women in the labor market, they do not always realize the scale of the problem. It is worth bearing in mind that discrimination against women in the labor market affects many aspects of their lives - it involves their being placed in lower positions, stereotypical attitudes, lack of acceptance by co-workers or their lowered self-esteem. Thus, it relates to both specific individuals and the environment as a whole.

This article focuses on identifying the relationship between the wage gap and educational attainment for men and women. The analysis of the data presented shows that many women achieve higher education and, on top of that, in many groups of majors there are more female graduates, yet the wage gap is a problem that mainly affects women.

By juxtaposing data on the wage gap for major groups of occupations with data on the number of female graduates in specific groups of education majors, it is even more apparent that the wage gap is a problem in all groups of education majors, including those in which women make up the vast majority of graduates. The implication is that despite having received

a high level of education, women are still discriminated against in terms of wages in the labor market – thus it is not education that is the factor causing wage inequality.

The wage gap is a serious problem not only for women, but also for the economy. By law, everyone should be equal and everyone should have the same opportunities. Wage discrimination not only disturbs fairness in the labor market, but is also a serious obstacle in women (both in the labor market and in their private lives) being treated in an equal, due manner. The analysis carried out here may encourage the introduction of measures to help provide equal opportunities in the labor market, which would normalize the problem of wage discrimination against women.

Acknowledgements

Co-financed by the Minister of Science under the "Regional Excellence Initiative" Program.





References

- 1. Abrams, D. (2010). *Processes of prejudice: Theory, evidence and intervention*. Equality and Human Rights Commission Research Report Series.
- 2. *Gender Equality Index*, https://eige.europa.eu/gender-equality-index/2023/country/PL, 25.02.2024.
- 3. GUS (2024). Rocznik Statystyczny Rzeczypospolitej Polskiej 2023. Warszawa.
- 4. GUS, *Struktura wynagrodzeń według zawodów za październik 2022 r., wykresy*, https://stat.gov.pl/obszary-tematyczne/rynek-pracy/pracujący-zatrudnieni-wynagrodzenia-koszty-pracy/struktura-wynagrodzen-wedlug-zawodow-za-pazdziernik-2022-r-,5,8.html, 25.02.2024.
- 5. Institute for the equality of women and men (2011). The gender pay gap in The Member States Of The European Union: Quantitative And Qualitative Indicators. Brussels.
- 6. Kaźmierczak, Z. (1995). Niektóre przyczyny ubóstwa i formy polityki przeciwdziałania (na przykładzie Stanów Zjednoczonych Ameryki Północnej). *Acta Universitatis Lodziensis, Folia Oeconomica, vol. 137.* Łódź, pp. 83-99.
- 7. Klaus, W., Winiarska, A. (2011). Dyskryminacja i nierówne traktowanie jako zjawisko społeczno-kulturowe. *Studia BAS, No. 2(26)*, pp. 9-40.

- 8. Klimek, S. (2020). *Przedsiębiorczość kobiet w Polsce i jej wpływ na rozwój gospodarczy kraju*. Warszawa: Difin.
- 9. Kodeks pracy, Dz.U. 1974, Nr 24, poz. 141.
- 10. Konstytucja Rzeczypospolitej Polskiej z dnia 2 kwietnia 1997 r., Dz.U. 1997, nr 78, poz. 483 ze zm., art. 33, pkt. 2.
- 11. Kwak, A. (2019). Wychodzenie kobiety z cienia jednej roli zmiany i ograniczenia. *Acta Universitatis Lodziensis. Folia Sociologica*.
- 12. Leythienne, D., Pérez-Julián, M. (2021). Gender pay gaps in the European Union—a statistical analysis, statistical working papers. Luxembourg: Eurostat.
- 13. Polski Instytut Ekonomiczny (2023). Sytuacja kobiet w Polsce z perspektywy społecznoekonomicznej. Warszawa.
- 14. Roscigno, V.J. (2019). Discrimination, Sexual Harassment, and the Impact of Workplace Power, *Socius*, 5.
- 15. Scott, L. (2021). Kapitał kobiet. Warszawa: Filtry.
- 16. Smoder, A., Mirosław, J. (2016). Luka płacowa (gender pay gap): pojęcie, metody pomiaru, sposoby ograniczania. *Zarządzanie Zasobami Ludzkimi*,pp. 25-38.
- 17. Stowarzyszenie Kongers Kobiet (2023). Kobiety, rynek pracy i równość płac. Warszawa.
- 18. Turczak, A., Zwiech, P. (2016). Porównanie województw w Polsce na podstawie rozkładu dochodu rozporządzalnego per capita. *Optimum. Studia Ekonomiczne, no. 3(81)*, pp. 131-147, DOI: 10.15290/ose.2016.03.81.09
- 19. Vargas, S.M., Huey, S.J. Jr., Miranda, J. (2020). A critical review of current evidence on multiple types of discrimination and mental health. *American Journal of Orthopsychiatry*, 90(3), pp. 374-390.
- 20. Women in Technology Poland (2020). *Gender gap po polsku 2020*. Warszawa/Kraków, https://uploads-ssl.webflow.com/63b83afa6df4ef75243a1782/6404f43ae2cfd95812f b5e3c_Gender_gap_po_polsku.pdf, 25.02.2024.
- 21. World Economic Forum (2023). Global Gender Gap Report 2023. Switzerland.
- 22. Zwiech, P. (2011). Rodzaje dyskryminacji kobiet na rynku pracy. *Polityka Społeczna, no. 4*, pp. 17-20.
- 23. Zwiech, P. (2013). Nierówności społeczno-ekonomiczne w świetle teorii segmentacji rynku pracy. *Ruch Prawniczy, Ekonomiczny i Socjologiczny, LXXV*(75), no. 2, pp. 139-150.
- 24. Zwiech, P. (2016). *Nierówności ekonomiczne w Polsce*. Szczecin: Wydawnictwo Naukowe Uniwersytetu Szczecińskiego.
- 25. Zwiech, P. (2017). Eliminacja nierówności społeczno-ekonomicznych jako cel polityki spójności. *Studia Ekonomiczne. Zeszyty Naukowe Uniwersytetu Ekonomicznego w Katowicach, no. 310*, pp. 128-136.