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## **Horizontal gender segregation and gender pay gap (GPG) in the light of social value of work and sustainable development. Case for Poland<sup>2</sup>**

### *Abstract*

The persistence of horizontal gender segregation and the gender pay gap (GPG) poses a significant challenge to achieving the Sustainable Development Goals (SDGs). Success in reaching these goals requires considering both the economic and social aspects of work. In ongoing academic discourse, the topic of social value is increasingly addressed, and it serves as the background for the analyses in this article. The article aims to answer the question of the level of feminization and GPG in professions with varying levels of social value. The hypothesis is that professions with high social value are more feminized and have a lower pay gap compared to those with low social value. The study uses a mixed-method approach, integrating survey data from 2020 with statistical data from the Polish Central Statistical Office (GUS), focusing on professions classified at the third level of the ISCO-08 classification. This combination provides a detailed analysis of gender segregation and the GPG concerning the social value of work. The findings suggest that, in order to reduce pay inequalities, it is important not only to reduce horizontal segregation but also to support and recognize professions with a high level of social value.

*Keywords:* occupational wage differential, wage gap, social value of work, gender segregation.

### **Horyzontalna segregacja zawodowa i luka płacowa ze względu na płeć w świetle społecznej wartości pracy i zrównoważonego rozwoju. Przykład Polski**

### *Abstrakt*

Utrzymywanie się horyzontalnej segregacji zawodowej oraz luki płacowej ze względu na płeć stanowi istotne wyzwanie w realizacji Celów Zrównoważonego Rozwoju (SDGs). Osiągnięcie tych

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celów wymaga uwzględnienia zarówno ekonomicznych, jak i społecznych aspektów pracy. W ostatnich latach w dyskursie akademickim coraz częściej porusza się temat społecznej wartości pracy, który stanowi tło analiz zawartych w niniejszym artykule. Celem artykułu jest odpowiedź na pytanie jaki jest stopień feminizacji i międzypłciowej luki płacowej w zawodach o różnym poziomie społecznej wartości. Postawiona hipoteza zakłada, że zawody o wysokiej wartości społecznej są bardziej sfeminizowane i cechują się niższym poziomem międzypłciowej luki płacowej w porównaniu do zawodów o niskiej wartości społecznej. W badaniu zastosowano metodę mieszaną, łączącą dane ankietowe z 2020 roku oraz dane statystyczne Głównego Urzędu Statystycznego (GUS), koncentrując się na zawodach sklasyfikowanych na trzecim poziomie klasyfikacji ISCO-08. Połączenie tych dwóch źródeł danych umożliwia szczegółową analizę segregacji płciowej i luki płacowej w odniesieniu do społecznej wartości pracy. Badanie wykazało, że w zawodach o wyższej wartości społecznej luka płacowa jest niższa, ale jednocześnie większość tych zawodów jest silnie sfeminizowana. Wyniki te rzucają nowe światło na ustalenia Strawińskiego (2018), który wskazywał, że najmniejsze różnice w wynagrodzeniach występują w zawodach o niemal zrównoważonym udziale kobiet i mężczyzn.

*Słowa kluczowe:* zrównoważony rozwój, luka płacowa ze względu na płeć, społeczna wartość pracy, horyzontalna segregacja zawodowa.

JEL: J310, J710.

## INTRODUCTION

The persistence of horizontal gender segregation and the gender pay gap (GPG) represents a significant barrier to achieving the Sustainable Development Goals (SDGs), particularly Goal 5: Gender Equality and Goal 8: Decent Work and Economic Growth. The effective achievement of these goals depends on acknowledging the importance of both the economic and social dimensions of human work. Therefore, in recent years, there has been increasing discussion about the social value of various types of activities. I apply the concepts of social value to the field of work study addressing the topic of horizontal gender segregation and gender pay gap in the context of the social value of work. The main aim of the article is to answer the question of what the feminization and gender pay gap (GPG) are in professions with different levels of social value, with the hypothesis that professions with a high level of social value are more feminized, and the GPG is lower than in occupations with a low level of social value. In this context, the social value of work can serve as the background or framework for explaining the relationship between horizontal gender segregation and the gender pay gap, that has been analyzed in many studies (Blau, Kahn, 2017; Burchell et al., 2014; Brynin, Perales, 2016; Council of the European Union, 2017; Rabu, 2023, p. 497; Strawiński et al., 2018).

In the article I used a mixed-method approach that integrates self-reported survey data with statistical data from Polish Central Statistical Office (GUS). The survey was conducted in 2020 and includes responses from individuals across 30 different occupations. The statistical data focuses on occupations categorized at

level 3 of the ISCO-08 classification, which provides a detailed analysis of the workforce, which in itself is original, as few studies worldwide take this level of classification into account (Strawiński et al., 2018, p. 387). The combined use of these two data sources offers a comprehensive insight into gender segregation and GPG within detailed occupational groups with respect to social value of work.

### GENDER PAY GAP IN CURRENT RESEARCH

Gender equality has gained significant relevance in modern discourse, though its origins stretch back much further. One of its first formal acknowledgments came with the 1957 Treaty of Rome, which established the European Economic Community (EEC) and recognized wage equality as a key principle (Preti, di Bella, 2023). Over time, the European Union introduced policies and action plans focused on promoting equal opportunities in education, employment, and working conditions. Key treaties, such as the Treaty of Maastricht and the Treaty of Amsterdam, further reinforced gender equality by embedding it into the core objectives and policies of the EU (Preti, di Bella, 2023). At the international level, additional efforts were made, including the creation of the W20 group in 2015 at the G20 summit, with a mission to empower women and ensure their active participation in the G20 process (di Bella, Suter, 2023, p. 61). The European Union's commitment to gender equality also aligns with the Sustainable Development Goals (SDGs), particularly in ensuring equal opportunities in the labour market without gender discrimination. The International Labour Organization (ILO) similarly emphasizes gender equality within its Decent Work agenda, which promotes sustainable, productive, and fair employment for both men and women. In 1999, the ILO developed gender equality policies aimed at improving institutional frameworks, implementing gender mainstreaming, and promoting gender balance across all workforce levels (Annovazzi et al., 2018, p. 271). Despite progress toward gender equality, significant pay disparities persist across occupations and industries. Studies highlight that the gender pay gap continues due to factors like occupational segregation, discrimination, and the underrepresentation of women in high-paying sectors.

One of the significant contributors to the overall gender pay gap is horizontal gender segregation, when men and women are distributed unequally across industries and job types. Studies, such as those conducted by the International Labour Organization, reveal that the global gender pay gap stands at 16%, with women earning on average 84 cents for every dollar earned by men (ILO, 2018). However, this gap is even wider in certain high-paying sectors like finance, technology, management, engineering, construction, medicine, and law where women are underrepresented and continue to face both vertical and horizontal

barriers to economic advancement (Rabu, 2023, p. 497). Moreover, a lot of women work in low-paid occupations in caregiving, secretarial, and pre-primary education positions (Council of the European Union, 2017). Burchell *et al.* (2014) report that in European Union 18% of women are employed in mixed-gender occupations, 69% work in predominantly female roles, and 13% are in male-dominated fields. In comparison, 15% of men are in mixed occupations, 59% are in male-dominated roles, and 26% are employed in female-dominated jobs. This segregation not only reinforces the gender pay gap but also perpetuates social norms that define 'appropriate' roles for women and men (Bettio *et al.*, 2009). Gender differences in occupation and industry remain significant contributors, explaining the gap (Bettio *et al.*, 2009; Blau, Kahn, 2017; Goldin, 2014; Levanon, Grusky, 2016). Blau and Kahn found that occupational differences alone account for one-third of the gender wage gap, and when combined with industry, they explain half of it (2017, p. 827). Thus, a large part of the wage gap is due to the different types of jobs men and women hold. Most papers argue that the relationship between occupational segregation and the gender wage gap is linear, meaning that female occupations pay less than male occupations (Buligescu, Borghans, Fouarge, 2020, p. 87). Few other papers find a non-linear relationship between sex composition and wages where the highest wages for both men and women are earned in mixed or integrated occupations (Buligescu, Borghans, Fouarge, 2020, p. 87). Whether the relationship is linear or not, studies show that GPG is high in masculinized occupations.

Besides, the wage difference may also result from varying levels of education or experience. Traditional human capital factors account for only a small portion of the wage gap, largely because educational levels between men and women have become more similar (ILO, 2018). The American Association of University Women found that, even after controlling for factors such as education and experience, women earn between 78% and 82% of what men earn in similar roles (AAUW, 2018). It shows that there are some psychological and social factors influence the gender pay gap.

Research conducted in Poland reveals that occupational segregation and wage disparities are closely linked to gendered roles in the labour market. A study focusing on 98 occupational groups at the three-digit level of the ISCO-08 classification found significant unexplained wage gaps, particularly in male-dominated occupations (Strawiński *et al.*, 2018, p. 389). Interestingly, wage differences were smallest in female-dominated and mixed-gender occupations, suggesting that wage discrimination is less prevalent in these sectors. Strawiński *et al.* (2018) hypothesized that these gaps may result not only from discrimination but also from factors difficult to capture in econometric models, such as physical job demands and cultural expectations.

The importance of norms, psychological traits, and non-cognitive skills were analysed by Blau and Kahn (2017). They found that women are less likely than

men to engage in negotiation and competition and are more risk-averse. Gender differences in these traits were proposed as an explanation for women's lower wages and their underrepresentation in higher-level positions. Blau and Kahn (2017) cite several studies that have examined these factors, with results showing that while the role of psychological traits is smaller than the effects related to occupation and industry, they still account for over 25 percent of the overall gender wage gap. According to Benerjee social norms and stereotypes are also significant factors influencing the gender pay gap and unexplained portion of the gender wage gap must be considered carefully within the broader context of cultural and social factors (Banerjee, 2014).

The gender pay gap has far-reaching consequences not only for individuals but also for economies at large. The World Economic Forum (WEF) estimates that closing the gender pay gap could add \$12 trillion to the global economy by 2025 (WEF, 2019). The gap also results in a lifetime earnings deficit for women, limiting their financial autonomy and exacerbating issues related to savings and retirement (WEF, 2019). The gender wage gap has significantly decreased during the last three decades. Brynin and Perales (2016, p. 163) link the narrowing of the gender wage gap as the result of the growth in female skills, to the spread of egalitarian gender ideologies and mainstreaming policies. Blau and Kahn (2017) note that since the 1970s, women in the USA have decreased (though not fully eliminated) their dominance in administrative support and service roles, such as teaching and nursing, and made notable progress in entering management positions and traditionally male-dominated professions. While significant progress has been made in addressing the gender pay gap, particularly in high-income countries, the pace of change remains slow. The 2024 Global Gender Gap Report indicates that at the current rate, it will take 134 years to achieve full gender parity (WEF, 2024). However, countries that have implemented gender-responsive policies, such as Iceland and Finland, have made substantial progress, closing over 80% of their gender gaps.

### THE THEORIES OF GENDER PAY GAP

The research highlights various factors influencing the gender pay gap (GPG), explained by theories from economics, sociology, and psychology. The key theories are: Personal Prejudice Theory (Discrimination Theory), Human Capital Theory, Statistical Discrimination, Monopsony Theory, Compensating Wage Differentials, Devaluation, Theory Crowding Model and Occupational Segregation Theory.

Gary Becker's Personal Prejudice Theory (1957, expanded in 1971) explains gender wage discrimination as stemming from personal biases against women (Becker, 1971). It identifies three forms of discrimination in the labour market namely,

customer discrimination, employee discrimination and employer discrimination. Some customers prefer male workers, leading employers to segregate women into lower-paying jobs with minimal customer interaction (Becker, 1971; Sielska, 2017, pp. 433–440; Sielska, 2019, p. 31). Another form of bias occurs when male employees resist working alongside female colleagues, prompting employers to compensate male workers with higher wages. This employee-driven discrimination increases labour costs, leading employers to avoid hiring women in certain roles to maintain workplace harmony (Sielska, 2019, p. 31). Besides employers' personal prejudices lead them to prefer hiring men (Sielska, 2019, p. 31). The theory has been criticized for assuming that discrimination will disappear in the long run as employers maximize profits. However, critics like Hamermesh and Rees argue that this oversimplifies the complexity of workforce diversity (Słoczyński, 2008).

Gary Becker also developed Human Capital Theory, later expanded by Jacob Mincer, which is central to discussions on the gender pay gap (GPG). The theory suggests that wage differences between men and women are due to variations in skills, education, experience, and investments in human capital. Becker and Mincer argue that women tend to invest less in human capital due to career breaks like maternity leave, leading to lower wages (Becker, 1962). This theory highlights individual choices, overlooking the broader social and structural barriers that limit women's access to education and training. For example, women may face limited opportunities for education or career advancement due to cultural expectations and discriminatory workplace policies (Mazur-Łuczak 2010, p. 22). Additionally, it fails to acknowledge the impact of unpaid care work, which disproportionately falls on women and is not considered part of human capital (England, 2010).

The theory of statistical discrimination, introduced by Kenneth Arrow and Edmund Phelps, posits that employers make decisions based on perceived averages of gender groups. They assume, that women are less likely to remain in the workforce long-term, leading to lower wages for women as a group (Arrow, 1973; Phelps, 1972). While this theory helps explain how stereotypes about women's productivity contribute to wage gaps, it overlooks the socialization processes that shape these stereotypes in the first place. It also fails to recognize the role of societal expectations and pressures on women to conform to traditional roles (Zachorowska-Mazurkiewicz, 2016).

Joan Robinson's Monopsony Theory (1933) explains wage discrimination through the lens of market power (Kuropatwa, 2014, pp. 57–61). Robinson argued that employers, especially in less populated or rural areas, have significant power in setting wages due to the lack of alternative employment options. Women, with fewer mobility options due to caregiving responsibilities, are often willing to accept lower wages. Though the theory highlights structural market imbalances, it does not adequately address how societal expectations about gender roles limit women's employment choices, particularly in terms of their caregiving responsibilities (Sielska, 2017).



An interesting explanation of gender wage inequality is presented by the theory of Compensating Wage Differentials, according to which women are paid less because they prefer jobs with more favourable working conditions or greater flexibility, often found in lower-paying fields (Goldin, 2014). The major flaw in this theory is that it ignores the societal pressures and expectations that force women to prioritize caregiving over career advancement. The lack of support for working mothers further skews this trade-off, limiting women's opportunities in high-paying, demanding fields (Perales, 2013).

Social and cultural factors contributing to wage disparities between male- and female-dominated occupations play a crucial role in Paula England's Devaluation Theory (1992). This theory posits that jobs traditionally performed by women, such as caregiving or teaching, are systematically undervalued compared to male-dominated professions, even when they require similar levels of skill and education. The undervaluation of women's work stems from long-standing societal biases that devalue care work and other nurturing roles associated with women (Perales, 2013). As a result, female-dominated occupations tend to offer lower wages than male-dominated ones. Paula England's Devaluation Theory focuses on cultural biases and social norms that devalue jobs held by women. This is related to the roles of men and women in society and the belief (based on stereotypical thinking) that women should take care of housework and child-rearing, which require lower competences than professional work (Goldin, 2021).

The topic of unpaid care and domestic work as one of the key factors influencing gender inequalities in employment and wages is extensively explored in the research of Claudia Goldin – Nobel Prize laureate in economy in 2023. She points out that the traditional division of social roles, in which women take on the majority of household and caregiving responsibilities, has negative consequences for their position in the labour market. Women are more likely to choose industries and positions that offer greater flexibility and allow them to balance work with family life, which often correlates with lower earnings. Additionally, women more frequently work part-time or in less demanding positions, which impacts their income and career advancement. Employment gaps (e.g., maternity leave) and lower availability for work result in women being less likely to reach top managerial positions. According to Goldin, one of the main barriers for women in the labour market is the lack of flexibility in employment structures (Goldin, 2014).

A lot of indicated aspects of inequality are present in Horizontal Gender Segregation Theory. A pioneer of occupational segregation theory was Barbara Bergmann (1974), who believed that the reason women earn lower wages is due to their work in lower-paying professions. Her theory was later developed by George Johnson and Frank Stafford (2002). Both economists explored the influence of various factors on occupational segregation, as: the degree of employer discrimination against certain groups in specific occupations, employee preferences,

human capital, and societal pressure stemming from institutional constraints or social norms (Kuropatwa, 2014, p. 62). Horizontal Gender Segregation Theory is a concept that seeks to explain the division of men and women into different occupational fields, often described as “masculine” or “feminine” jobs. The main premise of horizontal segregation is that societal norms and stereotypes drive this separation, impacting both job choices and opportunities. Feminine traits, such as nurturing and caregiving, are typically associated with jobs in health care, education, and social services, while masculine traits, such as physical strength and technical skills, are linked to jobs in engineering, construction, and manufacturing (Gromkowska-Melosik, 2013). According to this theory occupations dominated by women tend to be undervalued, both socially and economically, which leads to lower wages in comparison to male-dominated fields, even when the skills required are similar (Levanon et al., 2009; Czeranowska, 2024, p. 176). Horizontal segregation not only affects the types of jobs that men and women enter, but it also has long-term implications for career advancement. In feminized industries, there are fewer opportunities for promotion and career progression compared to male-dominated industries. As a result, women are often limited in their ability to achieve higher pay and leadership positions.

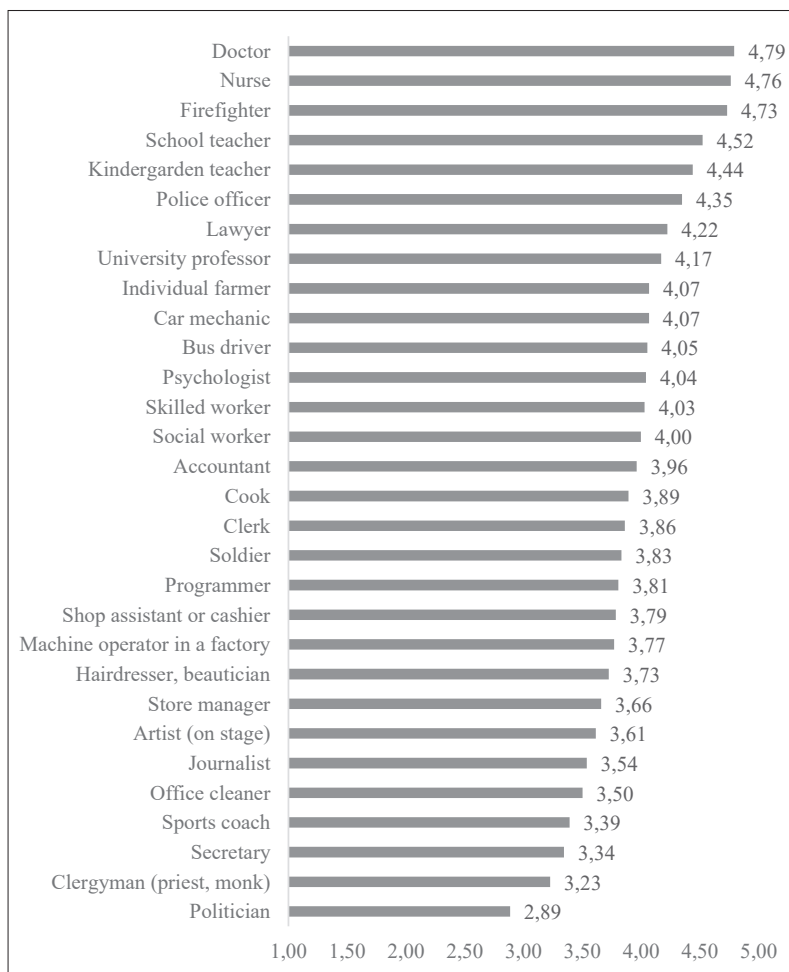
While these economic theories offer valuable insights into the gender pay gap (GPG), the social dimensions of the issue require deeper explanation. None of these theories develop the concept of the social value of work, even though it seems to be very important characteristic of the work referring to sustainable development discourse. So far, there is only one study that has addressed the issue of the social value of work in various professions in the context of pay inequalities and fair compensation. The results of this research have been included in the report “A Bit Rich”, where social value of work was calculated for six professions. The conclusion was that: high-paid occupations, as city bankers, advertising executives, and tax accountants generated social costs, while low-paid occupations: nursery workers, hospital cleaners, and recycling workers contributed to the growth of social value (Lawlor et al., 2009, pp. 30–35). The aspect of the social value of work can provide an interesting background for analysing inequalities in the labour market.

## METHODOLOGY OF RESEARCH

The aim of this article was to analyse the wage structure and pay inequalities in professions with varying levels of social value. The hypothesis tested was that professions with a high level of social value are more feminized and that the gender pay gap (GPG) is smaller in these professions compared to those with lower levels of social value. To achieve this goal, a triangulation method of data



sources was applied. The ranking of socially valuable professions was based on original research conducted within the project no. 2013/09/D/HS4/02701, funded by the National Science Centre. Survey data were collected between April 2019 and May 2020. A total of 490 employees participated in the study. They were asked, among other things, to assess the social value of work in 30 selected professions, chosen to represent all ten major occupational groups in the ISCO-08 classification. Occupations were defined at the ISCO-08 classification's third, fourth and fifth level, which provides a fairly detailed level of disaggregation (for more information see: Andrałojć, 2023b). The resulting ranking of socially valuable professions is presented in Figure 1.



**Figure 1. Social value of work by occupations**

Source: (Andrałojć, 2023b).

In the next phase of the research, the gender distribution and the pay gap in these individual professions were analysed. Data showing the employment structure by gender in the studied occupations and the GPG index were taken from the Polish Central Statistical Office (GUS) datasets, collected biennially in the “Structure of Wages and Salaries by Occupations” (SWSO) surveys for 2020. These studies account for the third level of occupational disaggregation. One of the strengths of the SWSO survey is its high reliability in wage data, which is directly reported by accounting departments, including the number of hours worked, and the large size of its dataset. Moreover, previous research shows that the range of the estimated gender pay gap at the ISCO third-digit occupational level is significantly broader than estimates obtained at a more aggregated level. Analyses conducted at the aggregated level may lead to underestimating the gender pay gap in occupations, as they do not adequately account for segregation effects (Strawiński et al., 2018, p. 383). The key for mapping between the studied occupations in social value ranking and the ISCO-08 classification, average earnings, GPG indicator and the participation of women in the employment structure is presented in Table 1.

Finally, 27 occupations’ groups were analysed in this research. Three professions were excluded. First soldier, which is classified in group 10 in the ISCO-08 classification, was not covered by the SWSO report. The other two professions, police officer and clergyman, are highly specific, and in the ISCO-08 classification, they were included in very broad and diverse groups at the third level, making gender structure and GPG analysis at this level not reliable.

**Table 1. The key for mapping between the studied occupations and the ISCO-08 classification, average earnings, GPG and feminization, year 2020, SWSO**

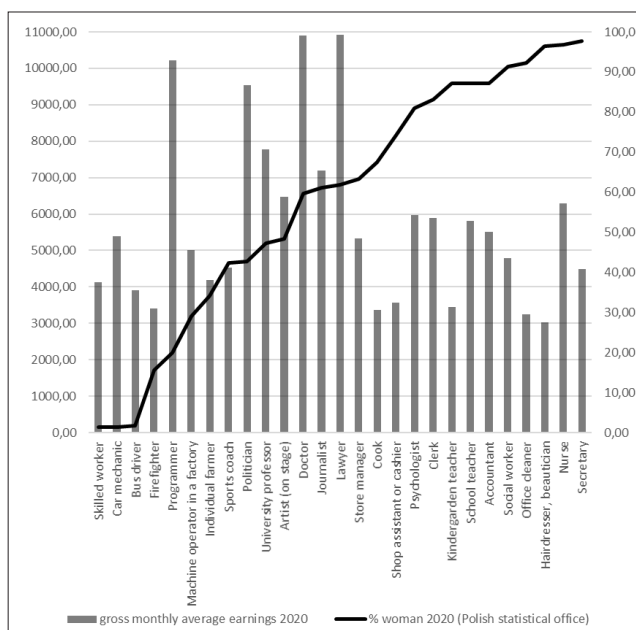
| Lp. | Occupation           | ISCO-08 code and title for third level of coding         | Average gross monthly earnings in pln 2020 | GPG 2020 | Feminization (% of employed women) 2020 |
|-----|----------------------|----------------------------------------------------------|--------------------------------------------|----------|-----------------------------------------|
| 1   | 2                    | 3                                                        | 4                                          | 5        | 6                                       |
| 1   | Clerk                | 335 – Regulatory government associate professionals      | 5891.36                                    | 17.90    | 83.13                                   |
| 2   | Politician           | 111 – Legislators and senior officials                   | 9543.87                                    | 19.40    | 42.74                                   |
| 3   | Accountant           | 331 – Financial and mathematical associate professionals | 5506.33                                    | 19.90    | 87.24                                   |
| 4   | Store manager        | 142 – Retail and wholesale trade managers                | 5324.64                                    | 20.00    | 63.36                                   |
| 5   | Doctor               | 221 – Medical doctors                                    | 10909.24                                   | 5.70     | 59.65                                   |
| 6   | Nurse                | 222 – Nursing professionals                              | 6299.02                                    | 3.20     | 96.75                                   |
| 7   | University professor | 231 – University and higher education teachers           | 7774.87                                    | 10.10    | 47.25                                   |

| 1  | 2                             | 3                                                            | 4        | 5     | 6     |
|----|-------------------------------|--------------------------------------------------------------|----------|-------|-------|
| 8  | Kindergarden teacher          | 531 – Child care workers and teachers' aides                 | 3450.85  | 3.40  | 87.23 |
| 9  | School teacher                | 234 – Primary school and early childhood teachers            | 5802.04  | 5.60  | 87.23 |
| 10 | Programmer                    | 25 – Information and communications technology professionals | 10210.88 | 18.50 | 19.86 |
| 11 | Lawyer                        | 261 – Legal professionals                                    | 10916.09 | 10.00 | 61.77 |
| 12 | Psychologist                  | 263 – Social and religious professionals                     | 5972.56  | 13.30 | 80.91 |
| 13 | Clergyman (priest, monk)      | -                                                            | -        | -     | -     |
| 14 | Journalist                    | 264 – Authors, journalists and linguists                     | 7193.84  | 15.3  | 61.17 |
| 15 | Artist (on stage)             | 265 – Creative and performing artists                        | 6467.91  | 7.9   | 48.28 |
| 16 | Police officer                | -                                                            | 4786.08  | -     | -     |
| 17 | Social worker                 | 341 – Legal, social and religious associate professionals    | 4786.08  | -1.4  | 91.42 |
| 18 | Sports coach                  | 342 – Sports and fitness workers                             | 4529.63  | 9.5   | 42.31 |
| 19 | Secretary                     | 412 – Secretaries                                            | 4491.54  | 0.1   | 97.69 |
| 20 | Cook                          | 512 – Cooks                                                  | 3366.05  | 5.4   | 67.49 |
| 21 | Hairdresser, beautician       | 514 – Hairdressers, beauticians and related workers          | 3016.06  | 21.1  | 96.43 |
| 22 | Shop assistant or cashier     | 522 – Shop salespersons                                      | 3574.27  | 17.9  | 74.28 |
| 23 | Firefighter                   | 541 – Protective services worker                             | 3409.20  | 6.0   | 15.54 |
| 24 | Individual farmer             | 61 – Market-oriented skilled agricultural workers            | 4194.18  | 4.8   | 34.19 |
| 25 | Skilled worker                | 711 – Building frame and related trades workers              | 4128.45  | -6.0  | 1.30  |
| 26 | Car mechanic                  | 723 – Machinery mechanics and repairers                      | 5396.64  | 13.4  | 1.34  |
| 27 | Machine operator in a factory | 81 – Stationary plant and machine operators                  | 5013.46  | 24.8  | 28.97 |
| 28 | Bus driver                    | 833 – Heavy truck and bus drivers                            | 3915.09  | -22.7 | 1.66  |
| 29 | Office cleaner                | 911 – Domestic, hotel and office cleaners and helpers        | 3242.51  | 3.6   | 92,32 |
| 30 | Soldier                       | -                                                            | -        | -     | -     |

Source: author's own elaboration on the basis of SWSO, Polish National Statistical Office.

## ANALYSIS AND DISCUSSION

The Spearman correlation coefficient between feminization and average gross monthly earnings for the 27 professions included in the study was -0.14 and was not statistically significant. This could indicate a lack of correlation between these categories. However, when examining the distribution of these variables presented in Figure 2, it can be observed that in professions with the highest share of women (black line on the chart), average earnings are lower than in professions with a smaller proportion of women in the employment structure. Examples of feminized professions with low earnings include secretary, nurse, hairdresser, beautician, office cleaner, social worker, kindergarten teacher, and shop assistant. It is also worth noting that in highly masculinized professions, earnings were relatively low as well (e.g., skilled worker, car mechanic, bus driver, firefighter). The exception was programmer – a highly masculinized profession with high average earnings. Other highly paid professions, such as lawyer, doctor, and university professor, had a balanced gender employment structure. These results correspond with the theory of horizontal labour market segregation – women work in lower-paid professions, while men predominantly work in higher-paid ones, which explains a significant portion of the overall gender pay gap in the labour market.



**Figure 2. Relationship between monthly average earnings and feminization (% of women in employment)**

Source: author's own elaboration on the basis of SWSO, Polish National Statistical Office.

Women tend to work in professions that are not highly paid, despite the fact that the work performed in these professions is socially valuable. Examples include preschool and childcare workers, whose earnings in 2020 averaged 60% of the national average, as well as teachers and nurses (whose earnings were only slightly above the national average) (Andrałojć, 2023b). In general, professions with high social value, which should gain importance in the context of achieving sustainable development goals, are still not properly valued by the market, meaning that wage levels in these professions remain relatively low (Andrałojć, 2023a; Andrałojć, 2023b). According to respondents, the most undervalued professions include nurse, firefighter, police officer, preschool teacher, school teacher, social worker, and cleaner. The research found a very strong and statistically significant relationship between the assessment of the social value of work and the adequacy of wages—the more socially valuable a profession is perceived to be, the greater the opinion that the profession is undervalued by the labour market (Andrałojć, 2023b). Looking at the analyzed professions, it can be observed that the top professions rated as socially valuable were female-dominated (e.g., doctor, nurse, school teacher, kindergarten teacher), with the exception of firefighter (Figure 3). In contrast, the least socially valuable occupations were mainly male-dominated (with the exception of secretary and office cleaner). This trend is shown in Figure 3, although the Spearman’s rho correlation coefficient was very low and statistically insignificant at -0.1.

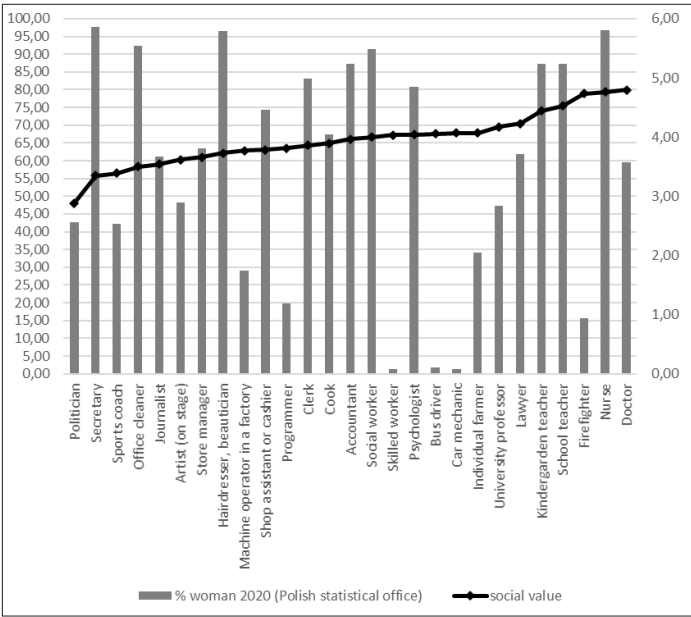
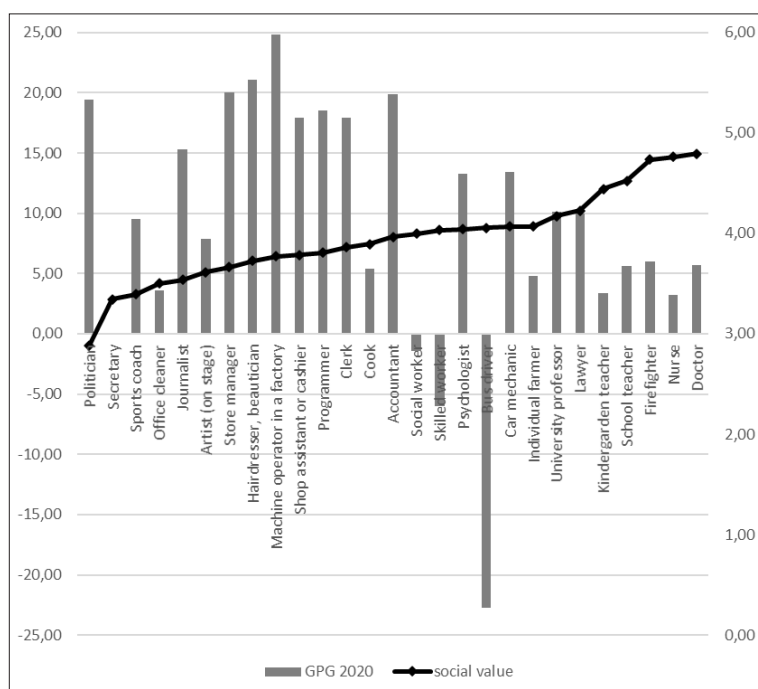


Figure 3. Feminization and social value of work in different occupations

Source: author’s own elaboration.

Taking into account social value of work and GPG the correlation, measured by Spearman coefficient was negative:  $-0.31$ , but it was not statistically significant. These results indicate that there is no strong, statistically significant relationship between these indicators, but there is a noticeable trend suggesting that a higher level of social value in a given profession is associated with a lower level of income inequality between genders. Taking a closer look at the distribution of variables, which is presented graphically in Figure 2 it can be observed that in the group of professions with the highest social value ratings (e.g., doctor, nurse, firefighter, school teacher, preschool teacher), the gender pay gap was lower than in professions with lower social value ratings (politician, journalist, store manager, hairdresser and beautician, or machine operator in a factory). It is also worth noting that in the group of professions with relatively high or medium levels of social value, there were some professions where the GPG was negative, meaning that, on average, women earned more than men (bus driver, skilled worker, social worker).



**Figure 4. GPG and social value of work in different occupations**

Source: author's own elaboration.

It is worth noting that in the group of 27 analysed professions, a trend was observed indicating a positive relationship between the average wage level and



the gender pay gap (GPG), with a Spearman correlation coefficient of 0.29. This means that in professions with higher average wages, pay inequalities were greater. Additionally, when considering all 127 professions covered by the SWSO report, the correlation coefficient was 0.31, and it was statistically significant at the 0.01 level. An even stronger positive relationship was observed between men's average earnings in a given profession and the GPG, with a Spearman coefficient of 0.43, also significant at the 0.01 level. This indicates that the higher the wages in a given profession, the greater the level of pay inequality between women and men, particularly in professions where men earn significantly more on average.

## CONCLUSION

The theories and studies referenced in this article suggest that cultural norms and value systems, which shape beliefs about the social value of work, can be an important factor in discrimination in the labour market. The article highlights that in professions with higher social value, the gender pay gap (GPG) is lower than in professions with lower social value. It is important to note that most of these professions are female-dominated. Therefore, it is not only necessary to reduce horizontal segregation but also to promote and support socially important work that aligns with the goals of sustainable development. As the sustainable economy develops, work in socially useful professions may gain more importance, which could lead to increased wages in these fields and, consequently, a reduction in the GPG.

This conclusion sheds a slightly different light on the findings of Strawiński (2018), who indicated that the smallest gender pay gaps are observed in occupational groups with nearly balanced participation of men and women (masculinization index between 0.41 and 0.50). He suggests that reducing the degree of segregation between men and women in various professions could help reduce wage differences between these two groups (Strawiński, 2018). While such actions are valid, they may not be the only solution to reducing the pay gap. The varying degrees of feminization and masculinization in professions may remain to some extent. Both women and men, having specific skills and predispositions, may perform better in certain professions. Therefore, alongside efforts to achieve balanced gender employment ratios in different professions, it is essential to give greater recognition to work in professions with a high level of social value. Such conclusion correspond to come extant with Horizontal Gender Segregation Theory, according to which feminized occupation tend to be undervalued, both socially and economically (Levanon et al., 2009; Czeranowska, 2024) taking into account social value of work as an important aspect of sustainable development may contribute to reduce pay inequality. Awareness of the social value causes that

people focus in their work not only on economic aspects – that is, earning money – but also on the socially important outcomes of their work and deeper meaning of work performed.

Further research could consider conducting analysis at an even lower level of occupational aggregation to obtain more detailed information about specific occupational groups. It would be interesting to combine these analyses with the social roles women play, such as being mothers. It could be assumed that the stronger the role of women in childcare (compared to men), the greater the occupational segregation and the GPG. Moreover, it would be worth examining the distribution of income among women and men in various professions. One could assume that in cases where women play a dominant role in childcare, the variation in wage levels could be greater than for men. Even if the average wages of women and men were comparable, it would not necessarily indicate an absence of “hidden” discrimination, particularly women with children. Expanding the scope of research further, the topic of the social value of unpaid work, such as childcare, and its appropriate recognition in both social and economic dimensions could be explored. After all, the topic of gender discrimination in the labour market goes back not only to the social roles that both women and men play, but to what extent these roles are considered valuable.

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