

AI AND WOMEN'S LABOUR RIGHTS: GENDER PAY TRANSPARENCY IN GERMANY AND UZBEKISTAN

Dilrabo Abdumalikova

Leading Legal Counsel, New Uzbekistan University

ORCID: 0009-0003-2297-843X.

<https://doi.org/10.5281/zenodo.23230205>

Annotation. *This article examines how the use of artificial intelligence in pay-setting affects women's right to equal pay and how pay transparency legislation can protect against algorithmic pay discrimination. The German model, based on the Pay Transparency Act of 2017, Directive (EU) 2023/970 and the Artificial Intelligence Act, is compared with the Uzbek model, based on the Constitution, the Labour Code, the Law "On Guarantees of Equal Rights and Opportunities for Women and Men", the Law "On Personal Data" and Law No. ZRU-1115 of 21 January 2026. It is shown that algorithmic tools for setting salaries, bonuses and performance ratings can reproduce historical pay gaps and conceal them behind technical opacity, and that safeguards aimed only at exclusively automated decisions are of limited use in pay matters. The gaps in Uzbek legislation are identified, and proposals are formulated for introducing a pay transparency regime adapted to the use of artificial intelligence.*

Keywords: *artificial intelligence, women's labour rights, gender pay gap, pay transparency, equal pay for work of equal value, algorithmic discrimination, Directive (EU) 2023/970, AI Act, Labour Code of the Republic of Uzbekistan, comparative labour law.*

INTRODUCTION

The principle of equal pay for men and women for work of equal value was laid down in ILO Convention No. 100 of 1951, which both Germany and Uzbekistan have ratified, and it is reflected in the legislation of both States. Pay inequality nevertheless persists. In Germany, women's average gross hourly earnings in 2025 were EUR 22.81 against EUR 27.05 for men, an unadjusted gap of 16 per cent; about 40 per cent of this difference, corresponding to an adjusted gap of 6 per cent, is not explained by part-time work, occupation, sector or qualification requirements [11]. In Uzbekistan, women in wage employment earned 31.7 per cent less than men at the mean and 35.7 per cent less at the median in 2022, well above the global average of about 20 per cent [12].

Artificial intelligence (AI) adds a new dimension to this problem. Employers increasingly use software to benchmark salaries, generate offers to candidates, calculate bonuses and produce performance ratings that determine pay progression. Trained on historical data, such systems can carry existing disparities into future decisions: career breaks, part-time work and lower starting salaries, which are statistically associated with women, may operate as proxies for sex [17; 19].

Large language models asked for advice on salary negotiation have been found to suggest substantially lower salaries to women than to men with otherwise identical profiles [20]. The opacity of algorithms thus aggravates the traditional secrecy of pay, which has always been the main obstacle to proving pay discrimination.

Pay transparency is therefore the point at which equal pay law and the regulation of AI meet. The European Union has adopted Directive (EU) 2023/970 on pay transparency, which had to be transposed by 7 June 2026 [6], and Regulation (EU) 2024/1689 (the AI Act), which classifies AI systems used in employment as high-risk [7]. Germany has had a Pay Transparency Act (*Entgelttransparenzgesetz*) since 2017 [8], but did not transpose the Directive on time.

Uzbekistan guarantees fair remuneration without discrimination in Article 42 of the Constitution [1], and Law No. ZRU-1115 of 21 January 2026 prohibited relying exclusively on AI-generated conclusions in decisions affecting the rights and freedoms of individuals [5]; however, Uzbek legislation contains no pay transparency instruments. The aim of the article is to compare how Germany and Uzbekistan protect women's right to equal pay in the context of AI and to formulate proposals for improving Uzbek legislation.

LITERATURE REVIEW AND METHODS

Economic research shows that pay transparency narrows the gender pay gap, although moderately and depending on the design of the measures. M. Bennedsen and co-authors found that the Danish requirement to report sex-disaggregated wage statistics reduced the gap by about two percentage points, mainly by slowing the wage growth of men [16], whereas T. Brändle and A. Koch, summarizing the second evaluation of the German Pay Transparency Act, found no statistically significant effect of any of its instruments [15]. In the legal literature on AI, S. Barocas and A. Selbst showed that data mining reproduces historical patterns of discrimination even without discriminatory intent [17]; S. Wachter, B. Mittelstadt and C. Russell argued that EU non-discrimination law is difficult to automate and proposed a statistical standard for detecting disparities [18]; J. Adams-Prassl, R. Binns and A. Kelly-Lyth demonstrated that algorithmic decisions may amount to direct discrimination, which the employer cannot justify [19]. For Uzbekistan, the ILO study by C. Pignatti and J. Fattakhova provided the first systematic estimate of the gender pay gap and recommended promoting pay transparency and job evaluation tools at the enterprise level [12]. The link between pay transparency and the regulation of AI, however, has not yet been examined comparatively, nor has it been the subject of special study in the national literature.

The study applied formal-legal analysis of the normative acts of Germany, the European Union and Uzbekistan, the functional comparative method, analysis of the case law of the Federal Labour Court of Germany and of official statistics, and legal modelling. Germany was chosen as the comparator because it combines a pay transparency law in force since 2017 with co-determination rules that expressly cover AI, which makes it possible to evaluate the transparency model in operation rather than only on paper. The legislation is analysed as of September 2026.

RESULTS

The first result concerns the standard of equal pay. In Germany, the Pay Transparency Act prohibits direct and indirect sex discrimination in pay for equal work or work of equal value (Sections 3 and 7), assesses equal value on the basis of a totality of factors, including the nature of the work, training requirements and working conditions, and requires that a pay system as a whole and each of its components exclude sex discrimination (Section 4) [8]; the Directive specifies that the criteria of comparison must include skills, effort, responsibility and working conditions (Article 4(4)) [6]. In Uzbekistan, the Constitution prohibits discrimination on the ground of sex (Article 19), guarantees fair remuneration without discrimination (Article 42) and proclaims the equality of women and men (Article 58) [1]. Article 4 of the Labour Code prohibits direct or indirect restrictions or advantages based on gender, and Article 244 guarantees equal remuneration for work of equal value [2; 12], whereas Article 21 of Law No. ZRU-562 refers only to equal wages for equal work [3]. Neither act defines "work of equal value" or the criteria for comparing different jobs. The ILO considers that for this reason the legislation does not fully comply with Convention No. 100 [12], and when the application of Conventions No.

100 and No. 111 by Uzbekistan was discussed at the International Labour Conference in June 2026, the need for clear and coherent provisions on equal remuneration for work of equal value was emphasized [13]. For AI this gap is decisive: an algorithm can be audited for discrimination only against a defined standard of comparison.

The second result concerns transparency instruments. The German Act introduced an individual right to information in establishments with more than 200 employees, allowing an employee to learn the median pay of a comparison group of at least six employees of the other sex; a voluntary review of pay structures for private employers with more than 500 employees; and reporting by employers with more than 500 employees that are required to prepare a management report [8]. Their effect has been limited: only about 4 per cent of surveyed employees had used the right to information, only about a quarter of large firms had reviewed their pay structures since 2019, and about 330 reports were found against roughly 3,950 expected by the legislator [15]. The Directive requires much more: information on the pay range before employment and a ban on questions about pay history (Article 5), accessible criteria for pay and pay progression (Article 6), a right of every worker to receive within two months information on average pay levels, broken down by sex, for the same work or work of equal value (Article 7), pay gap reporting by employers with 100 or more workers from 7 June 2027 (Article 9), and a joint pay assessment where an unjustified gap of at least 5 per cent in any category of workers is not remedied within six months (Article 10) [6]. Germany has missed the deadline: a government commission submitted its final report on a low-bureaucracy implementation on 7 November 2025, but as of September 2026 no government bill had been published, and on 8 July 2026 the Federal Government stated only that the legislative procedure would begin once open questions had been clarified (Bundestag document 21/7026). In Uzbekistan, none of these instruments exists: employees have no right to information on the pay of comparable colleagues, employers have no reporting duty, and there is no express ban on setting starting pay on the basis of previous pay. Even the ILO estimates had to rely on aggregated monthly data, since neither hourly nor individual-level wage data were available [12].

The third result concerns enforcement. In Germany, the shift of the burden of proof under Section 22 of the General Equal Treatment Act applies to pay claims, and the Federal Labour Court has turned transparency into a litigation tool: pay below the disclosed median of the comparison group, as a rule, raises a presumption of discrimination (8 AZR 488/19, 21 January 2021); a male colleague's better negotiation does not justify his higher pay (8 AZR 450/21, 16 February 2023); and a single higher-paid comparator of the other sex suffices, regardless of the size of the comparison group and without any requirement of a predominant probability of discrimination (8 AZR 300/24, 23 October 2025) [10]. Under the Directive, an employer that has breached its transparency obligations bears the burden of proving the absence of discrimination (Article 18) [6]. In Uzbekistan, Article 4 of the Labour Code allows a victim of discrimination to seek its cessation and compensation for material and moral damage in court [2], but it does not regulate the burden of proof. A woman who does not know what her male colleagues earn cannot identify a comparator, so the guarantee of Article 244 is difficult to enforce in practice.

The fourth result concerns AI in pay decisions. Under the AI Act, systems intended to make decisions affecting the terms of work-related relationships, promotion or termination, or to monitor and evaluate the performance of workers, are high-risk (Annex III, point 4(b)); this covers systems that set or recommend salaries, bonuses and ratings. Providers must examine training data for possible biases and ensure human oversight (Articles 10 and 14), employers

must inform workers' representatives and affected workers before putting such a system into service (Article 26(7)), and affected persons have the right to an explanation of the role of the system in the decision (Article 86) [7]. Regulation (EU) 2026/1744 of 8 July 2026, however, postponed these obligations to 2 December 2027. Until then, the main German safeguard is collective: the works council co-determines the introduction of new remuneration methods and of technical devices suitable for monitoring performance (Section 87(1), Nos. 10 and 6 of the Works Constitution Act), must be informed in good time of the planned use of AI (Section 90(1), No. 3) and may involve an expert, whose necessity is presumed where AI is concerned (Section 80(3)) [9]; in practice, an algorithmic pay tool therefore requires a works agreement. In Uzbekistan, Law No. ZRU-1115 prohibits exclusive reliance on AI-generated conclusions in decisions affecting rights and freedoms [5], and Article 24 of the Law "On Personal Data" grants the right not to be subject to decisions based exclusively on automated processing, together with the rights to an explanation of the decision-making procedure and to object, the objection to be answered within ten days [4]. Both rules, however, target exclusively automated decisions, whereas pay decisions are normally signed by a manager, and Article 24 admits such decisions where they are provided for in a contract, which may turn a standard clause of an employment contract into a gateway for automated pay-setting. Neither rule requires the employer to test an AI system for gender bias or to consult the trade union before introducing it.

The fifth result concerns the data infrastructure of transparency. In Germany, transparency relies on employer data processed with the participation of the works council, which may inspect lists of gross pay (Section 13 of the Pay Transparency Act) [8]. Uzbekistan has a potentially stronger basis: following amendments adopted by the Cabinet of Ministers on 27 December 2024, employment contracts are concluded electronically through the Unified National Labour System [14]. Since remuneration is a term of the employment contract, the State already holds employer-level data from which sex-disaggregated pay indicators could be calculated without new reporting burdens, and since the Law "On Personal Data" does not list sex among the special categories of personal data [4], such analysis faces no special restrictions.

This potential remains unused: the ILO has recommended improving access to individual-level wage data [12], and the European Union has called for the regular publication of pay data disaggregated by sector and occupation [13].

DISCUSSION

First, safeguards built around the decision-making process – Article 22 of the General Data Protection Regulation, Article 24 of the Uzbek Law "On Personal Data" and Law No. ZRU-1115 – are of limited use in pay matters: pay decisions are rarely fully automated, and a manager who approves an algorithmic recommendation without knowing what comparable colleagues earn cannot detect bias. Transparency of outcomes – information rights, pay gap reports and joint pay assessments – reveals discrimination whether it originated in human judgement or in a model. The two approaches should therefore be combined: where a report reveals an unexplained gap, the assessment should extend to the data, variables and weights of the algorithm, using statistical tests of the kind proposed in the literature [18]. Although the Directive does not mention AI expressly, its requirements of gender-neutral criteria and accessible pay-setting rules apply whether a pay structure has been designed by a human or by software.

Second, the German experience warns against equating transparency with reporting forms. High thresholds, voluntary audits and the absence of sanctions made the 2017 Act an

instrument used by about one employee in twenty-five [15], while real progress came from the case law on the burden of proof [10]. Moreover, Germany is in a period of “double delay”: the Directive has not been transposed, and the employment-related obligations of the AI Act will apply only from December 2027. Meanwhile, algorithmic pay tools are governed mainly by the General Equal Treatment Act, data protection law and co-determination, which shows the value of collective mechanisms when specialized rules lag behind technology.

Third, for Uzbekistan, where the gap is roughly twice as large as in Germany (although the Uzbek estimate is based on monthly rather than hourly wages), what is needed is not a transplantation of German reporting templates but the functional borrowing of three elements: a clear standard of equal value, a rule on the burden of proof and accessible data. Given the limited administrative capacity of small and medium-sized enterprises, a State-centred model is more suitable than employer reporting: data from the Unified National Labour System would allow the State to calculate pay gap indicators and the State Labour Inspectorate to use analytical tools, including AI, for risk-based targeting of inspections. AI would thus become an instrument for enforcing equal pay rather than only a risk to it, provided that only aggregated data are published and the guarantees of the Law “On Personal Data” are observed. Article 21 of Law No. ZRU-562 should also be harmonized with Article 244 of the Labour Code, removing the inconsistency noted at the international level.

CONCLUSION

The study leads to the conclusion that the use of AI in pay-setting creates a new risk for women’s right to equal pay, since algorithms can reproduce historical pay gaps and conceal them behind technical opacity, and that pay transparency is the principal legal means of making such discrimination visible and contestable. Germany has a developed but weakly effective transparency model, strengthened by case law and awaiting the stricter rules of the Directive, while the AI-specific safeguards in employment have been postponed to December 2027. Uzbekistan has proclaimed equal remuneration for work of equal value and adopted general rules on AI and automated decisions, but lacks the transparency mechanisms needed to apply them to pay.

On this basis, the following proposals are put forward: to supplement Article 244 of the Labour Code with a definition of work of equal value based on objective, gender-neutral criteria – skills, effort, responsibility and working conditions – and with a requirement that pay systems, including automated ones, exclude sex discrimination, and to align Article 21 of Law No. ZRU-562 with it; to grant employees the right to receive, within a fixed period, written information on their own pay and on average pay levels, broken down by sex, for the same work or work of equal value, and to grant job applicants the right to know the pay range; to introduce, in stages, the calculation of pay gap indicators from Unified National Labour System data for employers with 100 or more employees, with a duty to justify or remedy unexplained gaps of 5 per cent or more and with publication of aggregated data by sector and occupation; to supplement Article 4 of the Labour Code with a rule shifting the burden of proof to the employer once the employee has shown facts from which discrimination may be presumed, including higher pay of a comparator of the other sex; and to oblige employers that use AI to set or recommend pay, bonuses or performance ratings to inform employees and the trade union in advance, to test such systems for gender bias at least annually and to ensure the employee’s right to an explanation and to review by a person, while clarifying that the contractual exception in Article 24 of the Law “On Personal Data” cannot be met by a standard clause of an employment contract.

The implementation of these proposals would allow Uzbekistan to use AI for the modernization of labour relations without perpetuating the gender pay gap.

REFERENCES

1. Constitution of the Republic of Uzbekistan (new edition adopted by referendum on 30 April 2023). – Lex.uz.
2. Labour Code of the Republic of Uzbekistan (approved by Law No. ZRU-798 of 28 October 2022, in force since 30 April 2023). – Lex.uz.
3. Law of the Republic of Uzbekistan “On Guarantees of Equal Rights and Opportunities for Women and Men” (No. ZRU-562, 2 September 2019). – Lex.uz.
4. Law of the Republic of Uzbekistan “On Personal Data” (No. ZRU-547, 2 July 2019). – Lex.uz.
5. Law of the Republic of Uzbekistan “On Amendments and Additions to Certain Legislative Acts of the Republic of Uzbekistan in Connection with the Regulation of Relations Arising from the Use of Artificial Intelligence” (No. ZRU-1115, 21 January 2026). – Lex.uz.
6. Directive (EU) 2023/970 of the European Parliament and of the Council of 10 May 2023 to strengthen the application of the principle of equal pay for equal work or work of equal value between men and women through pay transparency and enforcement mechanisms // Official Journal of the European Union. – 2023. – L 132. – P. 21–44.
7. Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence (Artificial Intelligence Act) // Official Journal of the European Union. – L series, 12.7.2024.
8. Gesetz zur Förderung der Transparenz von Entgeltstrukturen (Entgelttransparenzgesetz – EntgTranspG) vom 30. Juni 2017 // Bundesgesetzblatt. – 2017. – Teil I. – S. 2152.
9. Betriebsverfassungsgesetz (Works Constitution Act) in the version of 25 September 2001, as amended by the Betriebsrätemodernisierungsgesetz of 14 June 2021 // Bundesgesetzblatt. – 2021. – Teil I. – S. 1762.
10. Federal Labour Court of Germany (Bundesarbeitsgericht). Judgment of 23 October 2025 – 8 AZR 300/24. – Erfurt, 2025.
11. Statistisches Bundesamt (Destatis). Gender Pay Gap 2025 unverändert bei 16 %. Press release No. 453 of 16 December 2025. – Wiesbaden, 2025.
12. Pignatti C., Fattakhova J. The Gender Pay Gap in Uzbekistan: Recent Trends and Policy Implications. – Moscow: International Labour Organization, 2025.
13. Statement of the European Union and its Member States. International Labour Conference, 114th Session, Committee on the Application of Standards: Uzbekistan – Conventions No. 100 and No. 111. – Geneva, 8 June 2026.
14. Uzbekistan introduces electronic employment contracts // Kun.uz. – 8 January 2025.
15. Brändle T., Koch A. Entgelttransparenzgesetz erreicht Ziel nicht // Wirtschaftsdienst. – 2023. – Vol. 103, No. 12. – P. 842–849.
16. Bennedsen M., Simintzi E., Tsoutsoura M., Wolfenzon D. Do firms respond to gender pay gap transparency? // Journal of Finance. – 2022. – Vol. 77, No. 4. – P. 2051–2091.
17. Barocas S., Selbst A.D. Big data’s disparate impact // California Law Review. – 2016. – Vol. 104, No. 3. – P. 671–732.

18. Wachter S., Mittelstadt B., Russell C. Why fairness cannot be automated: Bridging the gap between EU non-discrimination law and AI // Computer Law & Security Review. – 2021. – Vol. 41. – Article 105567.
19. Adams-Prassl J., Binns R., Kelly-Lyth A. Directly discriminatory algorithms // Modern Law Review. – 2023. – Vol. 86, No. 1. – P. 144–175.
20. Sorokovikova A., Chizhov P., Eremenko I., Yamshchikov I.P. Surface fairness, deep bias: A comparative study of bias in language models // Proceedings of the 6th Workshop on Gender Bias in Natural Language Processing (GeBNLP). – Vienna: Association for Computational Linguistics, 2025. – P. 206–227.