Labour market of the European Union in the context of the digital economy: a legal and economic analysis of employment and equal pay

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Abstract: *This article analyses the impact of the digital economy on the labour market of the European Union, particularly focusing on employment relations and the implementation of the principle of equal pay from both legal and economic perspectives. Digitalisation processes not only contribute to the creation of new jobs and the development of remote and platform-based forms of work, but also give rise to challenges such as wage disparities and labour market segmentation. The study substantiates that the legal mechanisms adopted within the European Union play a significant role in ensuring fair employment and equal pay under the conditions of the digital economy.*

Keywords: *digital economy, European Union, labour market, employment, equal pay, digitalisation, labour law*

Introduction. In the twenty-first century, digital technologies have become one of the key drivers of economic development. The widespread adoption of artificial intelligence, Big Data, cloud technologies, and digital platforms is significantly transforming the structure and functioning of labour markets. As one of the world's largest integrated economic areas, the European Union actively promotes and supports digital transformation processes.

At the same time, the development of the digital economy creates not only new opportunities in the labour market but also a number of challenges related to equal pay, gender disparities, and the protection of labour rights. The purpose of this article is to analyse the impact of digitalisation on employment and equal pay in the European Union labour market from both legal and economic perspectives.

1. Contemporary Trends in the Digital Economy and Employment in the European Union. The digital economy has become one of the principal drivers of economic growth in the European Union, fundamentally transforming the structure of the labour market and forms of employment. Digitalisation processes, driven by the development of artificial intelligence, cloud technologies, e-commerce, and the platform economy, contribute to the emergence of new professions and areas of specialisation. As a result, alongside traditional employment relationships, remote work, flexible work arrangements, and platform-based employment have become increasingly widespread.

According to data from the European Statistical Office (Eurostat), nearly 10 million people were employed as information and communication technology (ICT) specialists in the European Union in 2023, accounting for almost 5 per cent of total employment. Over the past decade, the share of ICT specialists has steadily increased. At the same time,

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gender imbalance remains evident in this sector: 81 per cent of ICT specialists are men, while only 19 per cent are women [1].

For this reason, the European Union has established a strategic objective of reaching at least 20 million information and communication technology (ICT) specialists by 2030 in order to support digital transformation [2]. This objective is intended to accelerate the digital transformation of the economy, promote innovation-driven development, enhance labour productivity, and strengthen the global competitiveness of the European Union.

However, digital transformation does not create equal opportunities for all workers. The introduction of automation and artificial intelligence into manufacturing and service sectors is reducing the demand for certain routine and repetitive occupations. As a result, disparities between highly skilled and low-skilled workers are widening, increasing the risk of income inequality within the labour market. Therefore, in the context of the digital economy, the European Union has identified lifelong learning, vocational reskilling, and the development of digital skills as key priorities of its labour market policy.

Table 1.

The Impact of the Digital Economy on the Labour Market of the European Union

Positive Impacts	Negative Impacts
Creation of new ICT and IT-related occupations	Decline of traditional occupations
Expansion of remote work opportunities	Labour market segmentation
Increased labour productivity	Reduced competitiveness of workers lacking digital skills
Simplification of job search and recruitment processes	Growing risk of income inequality
Innovation-driven economic growth	Weak social protection in platform-based work

Source: Compiled by the author based on data from the European Commission and the International Labour Organization.

2. Legal Framework and Practice of Equal Pay in the European Union. The principle of equal pay constitutes one of the core pillars of the European Union's social policy. The legal basis for this principle is established in Article 157 of the Treaty on the Functioning of the European Union (TFEU), which guarantees the right of men and women to receive equal pay for equal work or work of equal value [3]. This provision is recognised as a fundamental principle of European labour law and has been implemented into the national legislation of the Member States.

In order to further strengthen the principles of equal treatment and equal pay, Directive 2006/54/EC was adopted in 2006 [4]. This legal instrument prohibits gender-based discrimination in recruitment, working conditions, career advancement, and remuneration. The primary objective of the Directive is to ensure equal opportunities for men and women in the labour market and to prevent both direct and indirect forms of discrimination.

Nevertheless, gender-based pay disparities continue to persist across the European Union. According to Eurostat data, the gender pay gap in the European Union stood at approximately 12 per cent in 2023 [5]. Although this figure has declined compared to

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previous years, it demonstrates that substantive equality in the labour market has not yet been fully achieved. The principal causes of the gender pay gap include the underrepresentation of women in highly paid technological sectors, their lower participation in managerial positions, and factors associated with family and caregiving responsibilities.

In the context of the digital economy, this issue has become even more significant. In high-income occupations such as artificial intelligence, software development, data analytics, and cybersecurity, the proportion of men remains substantially higher than that of women. Consequently, the expansion of the digital economy may, in certain circumstances, preserve or even reinforce existing gender inequalities rather than eliminate them.

To address these challenges, the European Union adopted the Pay Transparency Directive (Directive (EU) 2023/970) in 2023 [6]. Under this Directive, employers are required to provide employees with information regarding pay-setting mechanisms, disclose salary ranges in job advertisements, and prevent unjustified pay differences for work of equal value. Furthermore, enterprises employing more than 100 workers are obliged to report regularly on gender pay gaps within their organisations.

Therefore, contemporary labour policy in the European Union is aimed not only at increasing employment in the digital economy but also at ensuring fair and transparent labour relations. In particular, the new legal mechanisms concerning pay transparency are expected to become an important instrument for reducing gender-based wage disparities and promoting equality in the labour market in the years ahead.

3. Challenges and Prospects of Employment and Equal Pay in the Context of the Digital Economy. Although new forms of labour relations are emerging in the digital economy, the principle of equal pay for equal work continues to retain its fundamental significance within the European Union. The legal foundation of this principle is established by Directive 2006/54/EC of the European Parliament and of the Council, which provides for equal treatment of men and women in the fields of employment, vocational development, and remuneration [7]. The relatively low participation of women in the digital labour market and in the information and communication technology (ICT) sector further enhances the practical importance of this Directive. Consequently, Directive 2006/54/EC serves as an important legal mechanism for reconciling economic efficiency with the principle of gender equality in the process of digital transformation.

At the same time, the digital economy is generating both opportunities and challenges for the labour market. The incomes of highly skilled specialists are increasing rapidly, while workers lacking digital competencies face limited employment opportunities and a greater risk of labour market exclusion. This trend contributes to widening income disparities and deepening socio-economic inequalities.

Furthermore, the expansion of platform-based work, performed through digital platforms such as Uber, Bolt, and Deliveroo, has created new forms of employment relationships that do not always fit within traditional labour law frameworks. Ensuring adequate labour rights, social protection, and fair working conditions for platform workers therefore remains one of the key challenges facing the European Union.

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The growing application of automation and artificial intelligence technologies is also reducing demand for certain traditional occupations and creating skills mismatches within the labour market. As a result, the continuous development of digital competencies, vocational reskilling, and lifelong learning policies has become increasingly important for maintaining sustainable employment and social inclusion.

Although workers possessing advanced digital skills generally benefit from higher earnings, the underrepresentation of women in technology-intensive sectors continues to contribute to persistent gender-based pay disparities. According to Eurostat, the gender pay gap in the European Union remained at approximately 12 per cent in 2023 [8]. This situation demonstrates the need for more effective implementation of the principle of equal pay and for further strengthening legal and institutional mechanisms aimed at promoting gender equality in the digital labour market.

Looking ahead, the future development of the European Union labour market will largely depend on its ability to balance technological innovation with social justice. In this regard, investments in digital skills, the promotion of inclusive employment policies, the enhancement of pay transparency, and the strengthening of social protection mechanisms for non-standard forms of work will play a decisive role in ensuring sustainable and equitable labour market development in the digital era.

Table 2.

Challenges and Solutions Related to the Digital Economy and Equal Pay

Challenge	Consequence	Proposed Solution
Shortage of digital skills	Increased risk of unemployment	Expansion of vocational reskilling and upskilling programmes
Gender pay gap	Income inequality	Strengthening pay transparency mechanisms
Growth of platform-based work	Weakening of social protection	Clarifying the legal status of platform workersaniqlashtirish
Automation	Displacement of certain occupations	Development of lifelong learning systems
Low representation of women in the ICT sector	Gender disparities in high-paying occupations	Promoting women's participation in STEM education

Source: Compiled by the author based on data from the European Commission and the International Labour Organization.

To address these challenges, the European Union places particular emphasis on the development of digital skills, the expansion of vocational reskilling programmes, and the strengthening of pay transparency. In particular, the Pay Transparency Directive (Directive (EU) 2023/970) contributes to increasing employer accountability and reducing gender-based pay disparities.

Therefore, ensuring a sustainable development of the labour market in the digital economy requires maintaining an appropriate balance between technological progress and social justice.

Conclusion. The findings of this study demonstrate that the digital economy serves as a significant driver of labour market development within the European Union.

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Digitalisation contributes positively to the creation of new employment opportunities, increased labour productivity, and enhanced economic competitiveness. At the same time, automation, the expansion of platform-based work, and the growing demand for digital skills are generating new legal and social challenges within the labour market.

The analysis further indicates that although the principle of equal pay is firmly guaranteed within the European Union's legal framework, gender-based pay disparities continue to persist in practice. Consequently, ensuring pay transparency, promoting the development of digital skills, and creating equal opportunities for all labour market participants remain pressing priorities. In the future, the European Union's digital transformation policy should continue to advance technological progress while simultaneously strengthening social justice, gender equality, and the protection of labour rights.

References

1. Eurostat. (2024). Digitalisation in Europe – 2024 edition. https://ec.europa.eu/eurostat/web/interactive-publications/digitalisation-2024

2. European Commission – The Digital Decade Policy Programme 2030 https://digital-strategy.ec.europa.eu/en/policies/europes-digital-decade?utm_source

3. Treaty on the Functioning of the European Union (Article 157)

4. Directive 2006/54/EC on Equal Opportunities and Equal Treatment of Men and Women in Employment and Occupation

5. Eurostat – Gender Pay Gap Statistics

6. Directive (EU) 2023/970 on Pay Transparency

7. Directive 2006/54/EC of the European Parliament and of the Council of 5 July 2006 on the implementation of the principle of equal opportunities and equal treatment of men and women in matters of employment and occupation (recast). Official Journal of the European Union, L 204, 26.7.2006, pp. 23 – 36. https://eur-lex.europa.eu/eli/dir/2006/54/oj/eng/pdf?utm_source

8. The gender pay gap situation in the EU https://commission.europa.eu/strategy-and-policy/policies/justice-and-fundamental-rights/gender-equality/equal-pay/gender-pay-gap-situation-eu_en?utm_source

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