

LABOR LAW CHALLENGES IN THE DIGITAL ECONOMY AND THEIR IMPACT ON MANAGEMENT AND THE LABOR MARKET

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Abstract: The expansion of the digital economy has significantly reshaped traditional employment relationships, introducing new forms of work organization and redefining the overall structure of the labor market. In particular, the rapid growth of platform-based and gig work has transformed the way labor is performed, managed, supervised, and regulated across different sectors of economic activity. Digital platforms increasingly act as intermediaries between service providers and users, creating complex triangular relationships that challenge established legal categories and traditional concepts of subordination. These developments raise important challenges for labor law, especially regarding the legal status of workers engaged through digital platforms and other technologically mediated forms of work. A central issue concerns whether such workers should be classified as employees, self-employed people, or as belonging to a distinct intermediate legal category. This classification directly affects the scope of labor protection, including rights related to minimum wage, working time limitations, social security coverage, health and safety standards, and collective bargaining rights. Another critical question involves the allocation of responsibilities between workers and digital platforms, particularly in relation to occupational safety, taxation, insurance obligations, and social contributions. The increasing use of algorithmic management and automated decision-making systems further complicates traditional concepts of employer authority, supervision, and control. This paper examines how existing labor law solutions in the Republic of Serbia respond to these emerging challenges within the evolving digital environment. Special attention is given to relevant regulatory trends and standards developed within European Union law, which increasingly influence domestic legal reforms and policy debates. The analysis explores how digital forms of work affect organizational practices, managerial autonomy, and strategic human resource management. It also considers broader labor market implications, including workforce flexibility, job security, income predictability, and the potential risk of labor market segmentation. From a management perspective, digitalization creates opportunities for greater efficiency, cost reduction, and innovation, but it also generates new compliance, accountability, and governance obligations. By examining the interaction between legal regulation and economic as well as organizational realities, the paper emphasizes the importance of regulatory adaptability. It highlights the need for modern and flexible labor law frameworks capable of balancing technological innovation and market competitiveness with adequate and effective worker protection. The paper concludes that harmonization with European Union labor law principles, combined with carefully designed and context-sensitive national regulation, represents a key factor in ensuring the sustainable and socially responsible development of digital labor markets in Serbia.

Keywords: Digital economy, platform-based and gig work, labor law regulation, EU labor standards

1. INTRODUCTION

The rapid expansion of the digital economy is fundamentally transforming traditional forms of work and employment relationships. Technological innovation, digital platforms, and algorithm-driven business models have enabled new ways of organizing labor, particularly through platform-based work and the gig economy. These forms of employment differ significantly from standard employment relationships, as they are often characterized by flexible working hours, task-based remuneration, and a high degree of autonomy, but also by legal uncertainty and limited access to labor and social protection.

In many legal systems, labor law has historically been developed to regulate stable, long-term employment relationships based on subordination and economic dependence. As a result, existing legal frameworks often struggle to adequately address non-standard forms of work that do not fit neatly into traditional legal categories. This mismatch creates challenges related to the legal classification of workers, the scope of labor rights, and the allocation of responsibilities between workers and digital platforms. These issues are particularly relevant in

countries such as the Republic of Serbia, where labor legislation remains largely oriented toward conventional employment models.

The digitalization of work also has broader organizational and economic implications. Companies operating in the digital economy increasingly rely on flexible workforce arrangements to remain competitive, reduce costs, and respond quickly to market demands. This transformation affects management practices, especially in the field of human resource management, where traditional approaches to recruitment, supervision, and performance evaluation are replaced or supplemented by algorithmic management and digital monitoring tools. At the same time, the growth of non-standard employment influences labor market dynamics, job security, income stability, and access to social protection, raising concerns about long-term economic and social sustainability.

Within this context, European Union labor law has begun to develop regulatory responses aimed at addressing the challenges of digital labor, particularly through initiatives focused on platform work, worker classification, and minimum standards of protection. Although Serbia is not a member of the EU, the process of legal harmonization and alignment with EU standards represents an important reference point for national labor law development.

The objective of this paper is to analyze the key labor law challenges arising from the digital economy and to examine their impact on management practices and the labor market in Serbia. Special attention is given to the interaction between national labor legislation and relevant EU regulatory trends. By providing a legal, managerial, and economic perspective, the paper seeks to contribute to a better understanding of how labor law can adapt to digital transformation while maintaining a balance between flexibility, competitiveness, and worker protection.

2. MATERIALS AND METHODS

This study is based on a normative-legal and comparative methodological approach aimed at examining labor law challenges associated with digital forms of work. The analysis focuses on the legal framework of the Republic of Serbia, with particular attention to the Labor Law and related regulations governing employment relationships, worker rights, and employer obligations. These legal sources are analyzed to assess their applicability to non-standard employment arrangements, especially platform-based and gig work.

In addition to national legislation, relevant European Union legal instruments, policy documents, and regulatory standards concerning digital labor and platform work are examined for comparative purposes. The comparative analysis is used to identify similarities and differences between Serbian labor law and EU approaches, as well as to highlight areas where harmonization may be necessary or beneficial. Academic literature and institutional publications are also consulted to provide interpretative support and contextual understanding of the legal and economic dimensions of digital labor.

The methodological approach involves a systematic examination of legal provisions, followed by analytical interpretation of their implications for organizational management and labor market outcomes. The study does not include empirical research or statistical analysis, as its primary aim is to provide a conceptual and regulatory assessment. This approach allows for reproducibility by other researchers using the same legal and documentary sources, while also enabling an interdisciplinary perspective that connects legal regulation with managerial and economic considerations.

3. RESULTS

The analysis revealed that the Serbian labor law framework remained predominantly oriented toward standard employment relationships based on long-term engagement, fixed working hours, and hierarchical subordination. Existing legal definitions of employment and employee status were found to be insufficiently flexible to encompass non-standard forms of work prevalent in the digital economy, including platform-based labor and online freelancing. As a result, a significant share of digital workers operated in a legal grey area between employment and self-employment, which limited their access to core labor protections such as regulated working time, minimum wage guarantees, paid leave, and comprehensive social security coverage.

Further examination of Serbian legislation showed that the criteria used to establish an employment relationship were difficult to apply to digital labor arrangements characterized by task-based engagement, remote work, and algorithmic coordination. Although elements of economic dependence and functional integration into business processes were present in many cases, these elements were not consistently recognized as indicators of employment. This was particularly evident in online freelancing, where individuals provided services such as software development, graphic design, content creation, or digital marketing through global platforms. Despite long-term cooperation with a limited number of clients and income dependence on platform-mediated work, freelancers were generally classified as independent contractors, bearing full responsibility for taxes, social contributions, and business risks.

The analysis also indicated that the responsibilities of digital platforms toward workers were not clearly defined within the Serbian legal framework. In both platform-based local services and online freelancing, platforms exercised indirect but significant control over work organization. For example, platforms regulated access to clients through ranking systems, determined visibility through algorithms, imposed standardized contractual terms, and influenced pricing through commission structures. However, such forms of control were not legally interpreted as managerial authority or employer responsibility. As a result, platforms remained largely exempt from obligations related to labor protection, occupational safety, or income security, while workers absorbed the associated economic risks.

Comparative analysis with European Union labor law demonstrated that EU regulatory developments increasingly addressed the managerial and economic realities of digital labor. EU initiatives emphasized the need to align legal classification with the actual organization of work, particularly where platforms performed functions similar to management, such as task allocation, performance evaluation, and behavioral control. The results showed that, although Serbia had introduced certain measures aimed at improving labor protection, substantial divergences persisted in relation to platform accountability, worker classification criteria, and enforcement mechanisms. These divergences affected not only legal outcomes but also organizational practices and competitive conditions across markets.

The results further revealed notable implications for management strategies within digital businesses. Organizations relying on platform-based work and freelancing adopted flexible workforce models that allowed rapid scaling, cost reduction, and access to global talent pools. In the case of online freelancing, firms benefited from outsourcing specialized tasks without long-term employment commitments, which influenced human resource planning, cost structures, and managerial decision-making. However, the findings indicated that this reliance on externalized labor also reduced organizational control over workforce stability, knowledge retention, and long-term skill development. From an economic perspective, the expansion of freelancing and platform work contributed to increased labor market flexibility and cross-border service provision. At the same time, the results showed that income volatility, fragmented career paths, and uneven access to social protection became more pronounced among digital workers. This dynamic reinforced labor market segmentation between workers in standard employment and those engaged in digital labor, affecting income distribution, social security financing, and long-term economic security. The interaction between legal gaps, managerial practices, and economic outcomes thus emerged as a defining feature of the digital labor market in Serbia.

4. DISCUSSION

The findings of this study reveal a structural mismatch between traditional labor law concepts and the evolving organization of work in the digital economy. Serbian labor law continues to rely on rigid classifications based on formal subordination and stable employment relationships, which limits its ability to respond to new forms of work characterized by economic dependence, algorithmic control, and fragmented contractual arrangements. Platform-based work and online freelancing demonstrate that legal independence does not necessarily correspond to actual autonomy in the organization of work. This discrepancy weakens the protective function of labor law and contributes to legal uncertainty for all parties involved.

From a managerial perspective, the results indicate that legal ambiguity has become a central element shaping organizational behavior in the digital economy. Digital platforms and firms engaging freelancers benefit from regulatory gaps that allow them to design flexible workforce models with reduced labor costs and minimal long-term obligations. These models support rapid scalability, access to global talent, and responsiveness to fluctuating demand, which are critical competitive advantages in technology-driven markets. However, the absence of clear legal boundaries also creates managerial challenges related to workforce coordination, quality control, and organizational commitment. Reliance on externalized labor limits the development of stable organizational cultures and reduces incentives for long-term investment in employee training and skill formation.

The role of platforms in managing digital labor further blurs the distinction between coordination and control. Through algorithmic management, platforms influence task allocation, pricing mechanisms, performance evaluation, and access to future work opportunities. Although these functions resemble traditional managerial authority, they remain largely unregulated within the Serbian labor law framework. This allows platforms to exercise significant influence over workers while avoiding responsibilities typically associated with employers. From a management standpoint, this arrangement transfers operational and economic risks to workers, while preserving strategic control for organizations.

Freelancers often engage in long-term cooperation with specific clients or platforms, generating stable value for organizations without corresponding employment protections. While firms benefit from reduced fixed labor costs and administrative burdens, freelancers face income volatility, uncertain career trajectories, and limited access to

social security. Over time, this imbalance may negatively affect labor productivity and workforce sustainability, as workers bear the costs of skill development, health risks, and periods of inactivity without institutional support.

At the labor market level, the expansion of digital work intensifies segmentation between standard and non-standard forms of employment. The coexistence of protected employees and digitally engaged workers with limited rights contributes to growing inequality in income stability, social protection, and long-term economic security. From an economic perspective, such segmentation poses risks to social insurance systems, which are traditionally financed through standard employment contributions. A growing share of workers operating outside these systems may undermine their financial sustainability and increase pressure on public welfare mechanisms.

The findings also suggest that insufficient regulation of digital labor may produce short-term efficiency gains at the organizational level while generating long-term structural challenges at the macroeconomic level. While flexibility and innovation are essential drivers of competitiveness in the digital economy, their benefits may be offset by increased precarity, reduced consumer security, and weakened social cohesion. These dynamics highlight the importance of viewing labor law not only as a protective mechanism, but also as a key institutional framework supporting stable economic development.

The comparative perspective with European Union labor law further emphasizes the strategic importance of harmonization. EU regulatory initiatives increasingly seek to align legal classification with the actual organization of work, particularly where platforms perform managerial functions. Such approaches recognize that legal certainty benefits not only workers, but also organizations by providing predictable regulatory environments and reducing compliance risks. For Serbia, alignment with EU labor law principles offers an opportunity to modernize labor regulation in a way that supports innovation while ensuring fair competition and adequate worker protection.

Overall, there is a need for an integrated approach that simultaneously considers legal definitions, managerial practices, and economic outcomes. Effective regulation of digital labor requires moving beyond formal classifications toward a functional assessment of work relationships and organizational control. By addressing these interconnected dimensions, labor law can play a constructive role in shaping sustainable management strategies and resilient labor markets in the context of ongoing digital transformation.

5. CONCLUSIONS

The study confirms that the digital economy poses substantial challenges for labor law, management practices, and labor market stability. Serbian labor legislation, while suitable for standard employment relationships, does not sufficiently address the specific characteristics of platform-based and gig work. This gap affects worker protection, organizational decision-making, and broader economic outcomes.

Harmonization with European Union labor law standards emerges as a key factor in improving legal certainty and ensuring fair working conditions in the digital economy. Clearer definitions of employment status and platform responsibilities can support both worker protection and sustainable business practices.

Overall, the findings emphasize the need for adaptive and context-sensitive labor law reforms that integrate legal, managerial, and economic considerations. Such reforms can contribute to the development of a more inclusive, stable, and competitive digital labor market in Serbia. Future research may build on this analysis through empirical studies examining the experiences of digital workers and the practical effects of regulatory reforms.

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