

THE IMPACT OF TECHNOLOGICAL DEVELOPMENTS ON EMPLOYMENT LAW REGULATIONS

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Received : 01 September 2025

Published : 23 October 2025

Revised : 20 September 2025

DOI : <https://doi.org/10.54443/ijset.v4i12.1257>

Accepted : 15 October 2025

Publish Link : <https://www.ijset.org/index.php/ijset/index>

Abstract

The rapid development and advancement of technology in recent decades have had a significant impact on various aspects of life, including the employment sector. Technological changes such as automation, artificial intelligence, robotics, and digitalization have fundamentally altered the work landscape. Consequently, employment law regulations need to be adjusted to address emerging new challenges and protect workers' rights. Technological changes such as automation, artificial intelligence, robotics, and digitalization have fundamentally changed the work landscape. Consequently, employment law regulations need to be adjusted to address emerging new challenges and protect workers' rights. This study aims to examine the impact of technological changes on employment law regulations. Flexible work concepts, such as remote work and temporary work contracts, are becoming increasingly common with the adoption of digital technology. Employment law regulations need to accommodate this flexible work by taking into account technological changes, employment law regulations, the impact of technological changes on employment relationships, and how employment law regulations can be adjusted to remain relevant and protect workers in an era of technological change.

Keywords: *Employment Law, Technology, Labor Absorption, Regulation.*

Introduction

The rapid development of digital technology has now permeated every aspect of human life. This rapid and transformational technological advancement has changed the way we work and interact in the workplace. Innovations such as automation, artificial intelligence, robotics, and digitalization have significantly impacted the job market and workforce demands. In this context, employment laws and regulations need to be updated and adapted to remain relevant and effective in facing emerging new challenges.¹ In line with the adoption of new technologies, there has been a shift in the need for labor in the current era. Almost all human activities are inseparable from the use of digital aspects, such as internet use by individuals and groups. The internet is a product of information and communication technology (ICT) whose use is increasingly widespread. All groups can use the internet, from children, teenagers, adults, the elderly, men and women. Jobs that require routine and physical skills tend to be replaced by automation and robotics, while jobs that require cognitive skills and social interaction are becoming increasingly important. Employment laws and regulations must address this inequality by providing appropriate protection and promoting continuous learning for workers. Furthermore, technology also influences the relationship between employers and employees.² The internet has enabled employment creation. Manufacturers utilize the internet for employee recruitment, broader product promotion and sales reach, and quick and transparent access to a variety of information. Meanwhile, consumers increasingly access relevant economic information tailored to their needs, such as product or service information, prices and wage levels, job openings, and more. With the advent of increasingly modern technology, many companies are implementing remote working systems.

¹Alina, The Influence of Technological Change on Employment Law Regulations, Journal of Social Science Research Vol.3 No.2, 2023, p. 276.

²Ifan, The Impact of Digitalization on the Absorption of Indonesian Female Labor, Indonesian Economic Journal Vol 11 No. 3, 2022, p. 301

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With the development of 4.0 technology, jobs requiring routine and physical skills are likely to be replaced by automation and robotics, while jobs requiring cognitive skills and social interaction are becoming increasingly important. Employment laws and regulations must address this inequality by providing appropriate protections and promoting continuous learning for workers. Furthermore, technology is also influencing the relationship between employers and employees.³Digital advancements have enabled remote work, temporary contracts, and other flexibilities. Employment laws need to adapt to these trends to ensure fair protection for workers and balance the interests of employers and employees. Furthermore, technological change also presents new challenges in occupational safety and health. The use of technologies such as robotics and automation can pose new risks to workers, including physical injuries and psychological impacts.⁴

Furthermore, employment law regulations must be able to identify and address these risks by updating occupational safety and health standards. This study aims to analyze the impact of technological change on labor absorption and employment law regulations. Through a better understanding of the impact of technology in the employment context, it is hoped that appropriate legal regulations can be developed that are responsive to technological developments. The research method used by the researcher in this study is empirical juridical with a qualitative research approach and descriptive research nature. According to Bogdan and Taylor, qualitative research is a research procedure that produces descriptive data in the form of speech or writing and the behavior of people being observed. A qualitative approach is expected to be able to produce an in-depth description of the speech, writing, and behavior observed from an individual, group, community, or organization. The method used is a literature study by searching journals and books related to this research. The purpose of this study is to analyze employment problems that may occur due to the absence of regulations that are in accordance with the conditions of technological change in the digital era 4.0.

Discussion

Employment Law Issues in the Era of Technology 4.0

Indonesia boasts abundant human resources, making it a fertile ground for the implementation of Industry 4.0. In this digital information age, while bringing advancements to the industrial world, it also has the potential to create challenges for labor law.⁵Employment Issues What needs to be regulated immediately are technological relationships that are more friendly/partnership-based than static, employing costs whose payments are more dependent on agreements, skill levels and work results, developing employee competencies and protecting workers from layoffs of employment relationships that have a tendency to occur on a large scale. The revision of Law No. 13 of 2003 must be able to specifically accommodate the changes that occur in the field of Employment along with the Industrial Revolution 4.0.

The rapid technological advancements in employment regulations are bringing significant changes to the world of technology and will also impact employment relationships. Improved employment relationships are being replaced by freelancers, a phenomenon known as the "GIG Economy." In the Employment Law No. 3 of 2013 Article 56 paragraph 1⁶There are two forms of employment agreements: the Indefinite Term Employment Agreement (PKWTT) and the Fixed Term Employment Agreement (PKWT), which are freelance work agreements for various companies. Indonesia has begun to see the GIG Economy phenomenon, initially evident in the online transportation industry and workers with specific skills. The economy is also starting to grow in the creative industry and start-ups. Current employment law regulations seek to address the challenges arising from technological change by adapting and updating the legal framework governing employment relations in the era of digital transformation. These regulations aim to ensure adequate protection for workers, promote equality, and maintain a balance between the interests of employers and employees. Current employment law regulations aim to address the challenges posed by technological change by ensuring adequate protection for workers and maintaining a balance between the interests of employers and employees in an ever-changing work environment.⁷These regulations attempt to accommodate

³Lee, SH, & Nica, E, Artificial intelligence, robotics, and the future of work: Policy implications and recommendations for the European Union. *Journal of Telematics and Informatics*, Volume 11 Number. 2019, p 101.

⁴Alina, Loc.Cit., The Influence of Technological Changes on Employment Law Regulations, *Journal of Social Science Research* Vol.3 No.2, 2023, p. 289.

⁵Estlund, CL, Regulating in a digital era: Old responses to new challenges. *Comparative Labor Law & Policy Journal*, Vol.41 No.4, 2019, p. 691-717

⁶Law Number 13 of 2013 concerning Manpower, Article 56 paragraph (1)

⁷Sun, LY, Aryee, S., & Law, K. S, High-performance human resource practices, citizenship behavior, and organizational performance: A relational perspective. *Academy of Management Journal*, Vol.60 No.1, 2017, p. 299-322

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changes in job types, flexible employment relationships, occupational safety and health, and social protection in an era of technological change. Current labor laws attempt to address the challenges posed by technological change, but responses to these changes may vary across countries and regions. Some steps taken in labor law regulations to address technological change include:

1. Protection of workers' rights: Employment laws protect workers' rights in a changing work environment driven by technological change. These include rights such as fair wages, reasonable working hours, occupational safety and health, and protection against discrimination and harassment.⁸
2. Regulatory reform: Employment laws and regulations need to be updated to account for technological developments and address emerging challenges. This may involve revising existing regulations, developing new regulations, or creating a flexible framework to facilitate adaptation to technological changes.⁹
3. Worker protection in the gig economy: Technological advancements have given rise to the gig economy, which involves freelance or contract workers. Employment laws and regulations seek to expand protections for workers in the gig economy, including rights such as fair wages, access to social security, and job security.¹⁰
4. Provision of training and education: Employment laws and regulations can encourage the provision of relevant training and education. This aims to strengthen workers' skills so they can adapt to technological changes and maintain competitiveness in the labor market.¹¹

The Impact of Technology on Employment Law

The impact of technological change on employment law refers to the impact of technological adoption and development on the legal framework governing the relationship between employers and employees. As technology advances and influences work practices, job demands, and working conditions, employment laws need to be adjusted to remain relevant and protect workers' rights. Technological change can include automation, artificial intelligence, digitalization, robotics, and other technological developments that affect work practices and work organization. The impacts of technological change can include:¹²

1. Changes in job types: Technological advances can replace routine and repetitive jobs with automation. This can change job skill requirements and impact employment laws regarding wages, hours, and worker protections. Technological changes can alter the types of jobs available. Some automated jobs may disappear, while new jobs may emerge in technology-related fields, such as software development, data analysis, or expertise in new technologies.
2. Skills and education: Technological changes affect the skills requirements of the workforce. Workers need to develop new skills or upgrade existing ones to stay relevant and adapt to technological changes.
3. Flexible employment relationships: Technological advances also enable flexible work models, such as remote work or temporary contracts. Employment laws need to consider protecting workers' rights in this flexible work context.
4. Interaction and collaboration: Technological changes can impact the way workers interact and collaborate. Communication technologies enable remote collaboration and real-time communication between workers in different locations.
5. Working conditions: Technology can also affect workers' working conditions. For example, automation can reduce physical workloads, while communication technology speeds up the flow of information and affects response times.
6. Occupational health and safety: The introduction of new technologies, such as robotics and automation, can change the work environment and create new risks. Employment laws should update occupational health and safety standards to accommodate the risks associated with these technologies.

⁸Wilkinson, A., & Wood, G, The impacts of automation on employment relations: An international review. *International Journal of Human Resource Management* Vol. 2 No.83, 2017, p. 382-340

⁹De Stefano, V, The rise of the "just-in-time workforce": On-demand work, crowdwork, and labor protection in the "gig-economy". *Comparative Labor Law & Policy Journal* Vol.37 No.3, 2017 p. 619-654

¹⁰Estlund, CL, Regulating in a digital era: Old responses to new challenges. *Comparative Labor Law & Policy Journal* Vol.41 No.4, 2019, p. 691-717.

¹¹Mathews, VH, & Beirne, M, Regulating the gig economy: New labor law models for crowdwork. *Journal of Industrial Relations* Vol.61 No.3, 2019, pp.338-361

¹²Alina, Loc.Cit., The Influence of Technological Changes on Employment Law Regulations, *Journal of Social Science Research* Vol.3 No.2, 2023, pp. 292-293

7. Work-life balance: Technological changes can impact work-life balance. While technology that enables remote work can provide flexibility, it can also increase availability expectations and increase work pressure.
8. Social protection: Technological developments can impact social protection systems, such as health insurance, pensions, and other benefits. Employment laws must consider the social protections necessary for workers in an era of technological change.

The impact of technological change on workers' employment relations and working conditions can vary depending on the industry sector, the level of technology adoption, and the local socio-economic context. It is important to consider and manage these impacts so that workers can adapt and utilize technological change in a positive and sustainable manner. A case in point that illustrates the impact of technological change on workers' employment relations and working conditions is automation in the manufacturing sector. In the manufacturing industry, the introduction of automated machines has replaced human workers in repetitive and routine tasks. The impact of technological change on labor law regulations involves adjusting and updating laws to accommodate trends and New challenges are emerging. The primary goal is to ensure adequate protection for workers, promote equality, and balance the interests of employers and workers in a rapidly changing work environment. The impact is a shift in the workforce from manual work to jobs requiring higher technical skills. Despite the flexibility offered, workers on these platforms often face job insecurity, income instability, and a lack of the social protections afforded by formal employment.

Specific Aspects of Employment Law Regulations That Need to be Adapted to Technological Developments

Facing increasingly rapid technological change certainly requires changes to employment law regulations. Several specific aspects of the regulations are required. The following are some specific aspects of employment law regulations that need to be adapted to technological developments:

1. Protection for freelance workers: The emergence of online work platforms has changed the way people work, but labor laws do not yet fully protect freelance workers. This protection can include employment rights such as wages, working hours, health insurance, and social security.¹³
2. Equal rights between contract and permanent workers: Contract and permanent workers have different rights, but with technological changes, the emergence of contract workers is increasing. Employment law regulations need to ensure equal rights for both types of workers, particularly regarding wages and social security.¹⁴
3. Occupational safety and health: Technological changes can also impact workers' safety and health, such as fatigue from continuous computer work, the risk of accidents from automated machinery, and health risks from chemical exposure. Employment law regulations need to ensure that workers are protected from these risks and have the right to a safe and healthy working environment.¹⁵
4. Lifelong learning: Technological advancements also mean workers must continually develop their skills and knowledge to remain relevant in the job market. Employment law regulations need to ensure access to lifelong learning and the skills training necessary to maintain workers' competitiveness.¹⁶

Another aspect that needs to be updated is remote work regulations. In the digital and information technology era, remote work or working from home is becoming increasingly common. Employment law regulations need to accommodate the needs and rights of workers who work remotely, such as flexible working hours, work equipment rights, privacy rights, and the right to fair compensation. Furthermore, there is the aspect of protection against technological discrimination, where the use of technology in the employee recruitment and selection process can increase the risk of discrimination, whether in terms of gender, race, age, or disability. Employment law regulations need to establish clear guidelines and rules to prevent discrimination in the use of technology in the employment process. In the digitalization era 4.0, some types of jobs will disappear and be replaced by robots or automation, but there will also still be jobs that will not be replaced by machines in the future. Furthermore, in the current digital era, the need for mastery of workforce technology is a non-negotiable requirement because technological

¹³De Stefano, V., The rise of the "just-in-time workforce": On-demand work, crowdwork, and labor protection in the "gig-economy". *Comparative Labor Law & Policy Journal* Vol.37 No.3, 2018, p. 619-654

¹⁴Acemoglu, D., & Autor, DH, Skills, tasks and technologies: Implications for employment and earnings. *Handbook of labor economics* Vol 4 No.1, 2011, pp.1043-1171.

¹⁵Lee, SH, & Nica, E., Loc.Cit., Artificial intelligence, robotics, and the future of work: Policy implications and recommendations for the European Union. *Telematics and Informatics* Vol. 46 No. 1, 2019

¹⁶Baruch, Y., & Nicholson, N., Flexibility in the workplace: Implications of flexible work arrangements for individuals, teams, and organizations. *Applied Psychology* Vol.66 No.1, 2017, p. 5-23.

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developments are growing very rapidly. Therefore, training is needed for Indonesian workers to learn to understand and continue to update the latest technology to support every job. Undoubtedly, the technological advancements emerging from the 4.0 era have the potential to create greater and greater improvements in every aspect of our ever-changing lives. On the other hand, there are various challenges stemming from the fourth industrial revolution/4.0 era that must be addressed and utilized, directed and overcome, such as income inequality, cybersecurity, and ethical dilemmas. Technology and advances in science are driving transformations worldwide. The purpose of labor law is to achieve or implement social justice in the employment sector, to protect workers from the unlimited power of employers. The purpose of labor law is to make Indonesian workers the subject of development, not the opposite, as the object of development. The government, by issuing laws and regulations, participates in protecting the vulnerable (workers/laborers) from employers/employers so that they are placed in a proper position in accordance with human dignity.

Closing

The impact of technological developments on employment poses several challenges. Employment issues that need to be addressed immediately include technological relationships that are more friendly/partnership-based than static, employing workers whose payments are more dependent on agreement, skill level, and work output, developing employee competencies, and protecting workers from large-scale layoffs. Current employment law regulations address the challenges arising from Technological changes Current labor law regulations seek to address the challenges arising from technological changes by adapting and updating the legal framework governing employment relations in the era of digital transformation. Current labor law regulations aim to address the challenges posed by technological changes by ensuring adequate protection for workers and maintaining a balance between the interests of employers and workers in a constantly changing work environment. From this study, we understand that the impact of technological changes on employment relations and working conditions has a significant impact on the employment relations and working conditions of workers.

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