

A Review of Labor Law in Addressing the Threats of Termination of Employment Relations in the Era of Artificial Intelligence Technology Disruption

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Abstract: Artificial Intelligence is a concept related to the development of technology in the 4.0 era and society 5.0. The presence of Artificial Intelligence in people's lives provides significant changes to people's lives. The use of artificial intelligence is so popular that it has been widely used by all circles of society. The presence of artificial intelligence is considered to provide many benefits to society, but the existence of artificial intelligence also brings changes in the field of labor because it causes a reduction in labor in various fields. With the reduction of workers, it will increase the number of unemployed. This research suggests that labor law must provide protection for workers' rights in the current digital era.

Keyword: Artificial Intelligence, Distruption, Labour Law, Termination.

INTRODUCTION

Creativity and technological innovation continue to advance in line with the progress of time. The advancement of any era is inseparable from human life aspects that influence technological progress, thereby making the current way of life inevitably intertwined with existing technological advancements. Technological progress offers numerous conveniences and new methods for individuals to carry out their activities. Such technological developments have a variety of impacts on human life. The impact of technological advancements is considered to significantly influence human life and change societal habits in the way they conduct their lives. With the advancement of technology, the positive impact currently felt is that tasks are becoming easier to perform and more time-efficient, as there is greater ease in accessing the information required.

The ease of accessing information has a significant impact on the field of education, as students and educators can explore various sources of knowledge, allowing for the rapid development of learning. Technological advancements in education also enable the occurrence of distance learning, such as webinars, online classes, and other similar methods. The ease of communication is also felt by everyone. Through a mobile phone, individuals can connect and communicate with anyone around the world (Matheus & Gunadi, 2024). In fact, with just a

phone, people can communicate face-to-face through video calls. Additionally, by using a mobile phone and the internet, individuals can easily engage in online shopping, which is readily accessible. Technological advancements also bring negative impacts on human life, such as the rise of fraud that can harm technology users. The ease of accessing information from the internet also has negative consequences, as it allows easy access to pornography, which is particularly harmful to teenagers and children. The ease of accessing information can lead to the acceptance of false or misleading information, as individuals may believe that what they obtain is accurate and therefore do not feel the need to reassess the veracity of the information.

The advancement of technology signifies that we have now entered the era of Society 5.0. The concept of Society 5.0 is a development initiative introduced by the Government of Japan, which describes a stage of societal evolution based on information technology and aims to achieve a stronger integration between the physical and digital worlds (Hamu et al., 2023). Society 5.0 is a concept still under development and cannot yet be regarded as a standard, unlike Industry 4.0. Industry 4.0 focuses on technological advancement and efficiency, often at the cost of human jobs and environmental sustainability. In contrast, the era of Industry 5.0 emphasizes a return to human-centered values, integrating advanced technology with individual creativity and ethical considerations to foster a sustainable future. This revolution creates a space for collaboration between humans and machines, with the aim of reshaping the relationship between technology, society, and the environment (Empowered Automation Solution, 2024).

Artificial Intelligence (AI) is a concept closely related to technological advancements in the era of Industry 4.0 and Society 5.0. AI refers to the simulation of human intelligence processes by machines, especially computer systems. These processes include learning, reasoning, problem-solving, perception, and language understanding. In both Industry 4.0 and Society 5.0, AI plays a crucial role in enhancing efficiency, automating tasks, and fostering innovation while supporting human-centric development and ethical considerations (Fosso-Wamba & Guthrie, 2024). In the current era, the role of AI is expected to continue growing, not only to complement human labor but also to enhance decision-making processes within companies. The term "artificial intelligence" was first introduced by John McCarthy in 1956, during the first academic conference on the subject. Researchers contributed to the concept of machines capable of mimicking human thought processes. Since then, AI has evolved to perform a wide range of tasks, from basic automation to complex decision-making and problem-solving, transforming industries and the way businesses operate.

The journey to understanding how a machine can accurately replicate human thought processes began long before this. In the seminal work of Vannevar Bush titled "As We May Think," he proposed a system designed to enhance human knowledge and understanding. Five years later, Alan Turing published a paper on the idea of machines capable of simulating human behavior and performing intelligent tasks. Turing's groundbreaking work laid the foundation for the development of what we now know as artificial intelligence, challenging the boundaries of machine capabilities and setting the stage for future advancements in the field (Smith et al., 2006).mSince the early 1990s, advancements in computational power and the availability of large datasets have provided researchers with the opportunity to develop learning algorithms and lay the foundation for the artificial intelligence we have today. In recent years, artificial intelligence has experienced significant growth, largely driven by the development of deep learning, which uses layered neural networks to interpret complex data structures. This progress has revolutionized the field of artificial intelligence, enabling it to solve more intricate problems and perform tasks that were once thought to be exclusive to human intelligence (Iberdrola, 2024).

Artificial intelligence, which refers to the simulation of human intelligence by a system or machine, aims to develop machines that can think like humans while also mimicking human intellectual capabilities. This includes tasks such as observing, reasoning, learning, planning, predicting, and more. The goal is to create systems that can perform functions typically requiring human cognitive abilities, thereby enhancing efficiency and enabling new possibilities across various fields (Xu et al., 2021). The field of artificial intelligence research encompasses a wide range of areas, including search algorithms, knowledge graphs, natural language processing (NLP), expert systems, evolutionary algorithms, machine learning, deep learning, and more. These areas focus on developing methods and systems that enable machines to perform tasks that typically require human-like intelligence, from solving problems and understanding language to learning from data and making decisions (Xu et al., Artificial intelligence is considered to offer significant benefits in predictive 2021). maintenance, which involves proactively maintaining machines and equipment. By analyzing data and using machine learning methods, potential failures can be detected earlier, allowing for timely preventive actions to be taken. This helps to reduce downtime, extend the lifespan of equipment, and improve overall operational efficiency (ATOSS Software SE, 2024). It can be observed that artificial intelligence plays a crucial role in the future of industries, as its use is already widespread across various sectors such as finance, telecommunications, healthcare, retail, transportation, and more. AI's ability to analyze large datasets, automate processes, and improve decision-making is transforming these industries, offering increased efficiency, innovation, and enhanced customer experiences (Adhiat, 2023).

The presence of artificial intelligence brings both threats and opportunities to society, making it essential for the public to have an understanding and awareness of these issues. The widespread use of artificial intelligence can affect the job market, as AI systems are designed to perform tasks similar to human workers. Reports of human labor being replaced by AI have sparked negative reactions, particularly among those concerned about the potential impact on their employment fields. This concern highlights the need for thoughtful discussion and planning on how AI can be integrated into the workforce while ensuring the protection and adaptability of human workers. The possibility that artificial intelligence could take over tasks in the workplace, eliminating the need for human involvement, could lead to significant job reductions, especially for individuals with fewer skills, who are more likely to be displaced. Companies are likely to prefer workers with specialized skills and expertise, as this allows them to secure guaranteed profits. Consequently, this shift may increase the demand for skilled labor while leaving those with limited qualifications at a disadvantage, underscoring the importance of reskilling and adapting to the changing job market.

On the other hand, artificial intelligence also holds great potential to support human work. This is because the technology within AI can analyze and process data quickly and efficiently, as well as identify complex patterns, providing valuable insights to aid in decision-making. By automating routine tasks and offering data-driven recommendations, AI can enhance human productivity and decision-making processes, allowing workers to focus on higher-level, strategic tasks. This collaboration between AI and humans has the potential to improve outcomes across various industries (Inspektorat Jenderal Kemendikbudristek, 2023).

The presence of artificial intelligence supporting human work is demonstrated by the fact that many countries have implemented AI across various industries. For example, the Australian Department of Health has deployed a virtual assistant named Roxy to answer questions related to the rules and regulations of its programs. Currently, Roxy manages 78% of standard regulations and regulatory inquiries, allowing human workers to focus on more complex tasks. This showcases how AI can efficiently handle routine inquiries and administrative tasks, enhancing productivity and enabling human workers to engage in higher-level problem-solving (Zirar et al., 2023).

Several banks in Indonesia have also implemented chatbot systems, which automatically provide answers to customer inquiries through messaging platforms such as WhatsApp, Facebook Messenger, and others. These chatbots utilize Natural Language Processing technology to understand and process customer requests in an efficient and user-friendly manner. In the field of education, artificial intelligence has also been utilized in online learning systems in Indonesia, such as edX and Coursera. These platforms offer courses that can be accessed online, allowing students to receive instruction from experts in various fields. This demonstrates the growing adoption of AI to enhance customer service and learning experiences in various sectors (Kusuma, 2023). Although artificial intelligence is considered to be a significant help to humans in performing tasks, the future of human workers will inevitably be impacted by the rise of AI technology. This calls for public awareness, as the internal workings of AI systems are generally not well understood. Workers must enhance and update their skills to ensure they can coexist with artificial intelligence in the workforce. By doing so, they can stay relevant in an evolving job market, where AI will increasingly play a critical role.

The development of technology will continue to progress, and its future trajectory remains unpredictable. It is essential that advancements in technology do not disrupt the well-being of the people. Both the state and society must stay abreast of these developments to avoid being left behind. As the country follows technological advancements, it must also ensure the wellbeing of its people, both now and in the future. The sophistication of artificial intelligence should not undermine the rights of human workers. Therefore, the author is compelled to write on the topic: "Threats and Opportunities of Artificial Intelligence in the Era of Technological Disruption: A Labor Law Perspective. The issues addressed in this research encompass two primary aspects that are of significant concern in the era of modern technological advancements, particularly with the advent of artificial intelligence. First, the research seeks to examine how the presence of artificial intelligence affects working conditions and either creates or potentially limits employment opportunities for human labor. This includes identifying changes in work patterns, required qualifications, and the impact on labor market equilibrium. Second, the study aims to analyze the extent to which existing labor laws can provide effective legal protection for workers whose positions are rendered vulnerable due to the automation of jobs by artificial intelligence. This approach not only considers the protection of workers' rights, such as wages, working hours, and occupational safety, but also touches upon issues of fairness, sustainability, and the adaptation of legal regulations to the everevolving challenges posed by technology.

METHOD

In this study, the author employs a legal research method with a juridical-normative nature. The approaches used in this research are the statute approach, the comparative approach, and the conceptual approach. The statute approach is applied to analyze legal norms related to labor law regulations concerning the presence of artificial intelligence in the era of technological disruption. Meanwhile, the comparative approach is used because this study will also refer to the use of artificial intelligence in various countries and its impact on people's lives in their employment. Additionally, the conceptual approach is applied to understand doctrinal perspectives, which will serve as a legal foundation to address the legal issues involved. The data collection method used in this research involves gathering primary legal materials, secondary legal materials, and tertiary legal materials, in order to obtain or generate information. After the information is collected, analysis will be carried out using a descriptive-analytical method by providing a comprehensive overview and legal facts, which will be identified through library research by elaborating on each existing issue.

RESULTS AND DISCUSSION

Labor Conditions and Opportunities with the Presence of Artificial Intelligence

1. Labor Conditions in Indonesia

Employment is derived from the basic term "labor" (labor), which in Article 1, paragraph 1 of Law No. 13 of 2003, is defined as "everything related to labor before, during, and after the employment period." This definition covers all aspects concerning the workforce, including employment preparation, the actual working period, and the post-employment phase" (Asyhadie, 2015). In the year 2000, several regulations were enacted in Indonesia to address labor issues, including the following:

- a. Law No. 21 of 2000 on Trade Unions/Workers' Unions
- b. Law No. 13 of 2003 on Manpower
- c. Law No. 1 of 1970 on Occupational Safety
- d. Law No. 3 of 1992 on Social Security for Workers

In addition to the regulations previously mentioned, there are also other written legal sources that govern the relationship between employers and employees in Indonesia. Some of them include (Asyhadie, 2015):

a. Employment Contracts

Employment contracts are a binding legal source between employers and employees. In these contracts, the parties involved agree on the terms of employment, the rights and obligations of each party, and other provisions related to the employment relationship.

b. Company Regulations

Company regulations are rules created by the employer to regulate the order within the company. These regulations serve to govern the rights and obligations of employees and employers in the company's operations.

c. Collective Labour Agreements

A collective labour agreement is an agreement made between the trade union and the employer that governs various aspects of the employment relationship in the company, including wages, benefits, working hours, working conditions, and others. This agreement has legal force and is binding on both parties.

In the development of labor law, particularly in Indonesia, the discussion regarding its growth and evolution is not solely based on laws and other regulations related to labor. It also involves the broader context of social, economic, and technological changes, as well as the dynamics between employers, workers, and the government. Over time, labor law in Indonesia has adapted to address emerging issues such as workers' rights, labor conditions, and the impact of technological advancements, including the rise of artificial intelligence, on the workforce. This evolution reflects the ongoing need to balance the interests of workers, employers, and the state in a rapidly changing labor market (Suratman, 2019). The labor conditions in Indonesia from 2021 to 2023 saw an increase in the workforce by 7.56 million people, or approximately 5.39%. This indicates a significant growth in the availability of labor, contributing to the expanding employment opportunities within the country during this period.

This demonstrates the increase in the availability of labor supply in Indonesia. In 2023, the number of employed individuals reached 140 million, reflecting an increase of approximately 8.8 million people or around 6.71 percent from the period of 2021 to 2023. The Labor Force Participation Rate in August 2023 was the highest since 1986, at 69.48%. This indicates a significant rise in the proportion of the working-age population actively participating in the labor market, which reflects the growing workforce and its potential impact on the economy (Lilipaly, 2023). Former Minister of Manpower, Ida Fauziah, stated that Indonesia, with a population of 281.6 million people and approximately 3 to 3.5 million new workers entering the labor market each year, has a relatively high open unemployment rate compared to other ASEAN countries. This situation poses challenges in providing sufficient job opportunities for

the growing workforce, highlighting the need for effective employment policies and strategies to address the unemployment issue in the country (Violleta, 2024).

2. The Presence of Artificial Intelligence in Companies Opens Opportunities for Labor Efficiency

AI is a branch of computer science focused on developing systems and machines that can perform tasks typically requiring human intelligence. AI uses algorithms and mathematical models to enable computers and other systems to learn from data, recognize patterns, and make intelligent decisions. By analyzing large amounts of data, AI can improve its performance over time, allowing it to solve complex problems, adapt to new situations, and optimize processes in various fields such as healthcare, finance, manufacturing, and more (Eriana & Zein, 2023). Currently, artificial intelligence is one of the most widely used technologies across various industries. Its advanced capabilities are being utilized in fields such as healthcare, finance, and many others. The sophistication of this technology has become so popular that numerous parties are now leveraging its potential to improve efficiency, decision-making, and innovation. In healthcare, AI is used for diagnosing diseases, personalizing treatments, and analyzing medical data. In finance, it helps with fraud detection, risk management, and algorithmic trading. This widespread adoption reflects AI's transformative impact across sectors (Kusuma, 2023).

Many companies have already leveraged the advanced capabilities of artificial intelligence. The strategy of integrating AI typically starts with data acquisition, designing system structures, and then identifying algorithms or methods to solve complex problems throughout the production process. This process spans from the beginning to the end of industrial operations, allowing AI to optimize workflows, enhance decision-making, and improve efficiency in various stages of production. By automating tasks and analyzing large volumes of data, AI helps businesses streamline their operations and achieve more effective, costefficient solutions (Lubis, 2021). The use of artificial intelligence is considered capable of solving problems that are difficult to resolve through traditional methods. Predictive modeling is one such example, which has already been widely adopted by large e-commerce companies like Alibaba, Amazon, and other major corporations. This technology enables these companies to forecast customer behaviors, optimize inventory management, and enhance personalized services, among other applications (Lubis, 2021). Artificial intelligence has also been widely used across various other sectors. In healthcare, AI is employed for diagnosing diseases, predicting patient outcomes, and personalizing treatment plans. In finance, it is used for fraud detection, algorithmic trading, and risk assessment. In transportation, AI powers autonomous vehicles and optimizes logistics and route planning.

AI has divided the world into different sectors that individuals can choose from, demonstrating that AI values diversity. This is also because AI is capable of recognizing that people have different preferences and interests (Tegmark, 2021). Therefore, the advancement of artificial intelligence has had a significant impact on nearly all sectors of human labor. There is a classical argument in labor sociology and labor economics that suggests technological advancements objectively lead to workers losing their jobs. Additionally, David Ricardo, in his book "On Machinery", argued that technological progress can increase labor productivity but also reduce the participation of labor, potentially keeping workers in poverty. This view posits that workers are transformed into beings rendered obsolete by modern machines (Shen & Zhang, 2024).

The presence of artificial intelligence has an impact on all sectors of the workforce, presenting new challenges for the labor market in Indonesia. The utilization of artificial intelligence is expected to affect 17 sectors of the Indonesian economy, with an estimated 26.7 million jobs potentially becoming more efficient through AI technology. This figure represents 22.1% of the total workforce in Indonesia as of 2021 (Puteri et al., 2023). If AI is applied in everyday

work, the working hours will become shorter. According to data from the National Labor Force Survey by BPS, the average working time for workers in Indonesia is 8 hours per day. However, with the use of artificial intelligence, this working time can be reduced to 6 hours per day, with the remaining 2 hours being handled by artificial intelligence (Puteri et al., 2023). However, this depends on the specific sector of employment.

The International Monetary Fund (IMF) states that the development of AI technology has the potential to exacerbate inequality, which could result in 40 percent of jobs being lost and replaced by artificial intelligence (Universitas Airlangga, 2024). In this regard, it does not matter whether the job field involves high-level skills or low-level skills. The reduction of labor due to the use of artificial intelligence will lead to termination of employment carried out by employers or business owners. According to Article 1, paragraph 25 of Law No. 13 of 2003, the definition of Termination of Employment is the termination of the employment relationship due to a specific reason that causes the termination of the rights and obligations between the employee/laborer and the employer.

Legal Regulation of Employment Law in Protecting the Rights of Workers Threatened by the Presence of Artificial Intelligence.

1. Regulation of Termination of Employment with the Presence of Artificial Intelligence The Chairman of KSPSI, KRH H. M. Jusuf Rizal, as a labor activist, urges both employers and employees to remain vigilant regarding the presence of AI technology, which poses a potential threat to the future of workers. This concern particularly relates to the likelihood of mass layoffs across various industry sectors. AI, with its ability to take over tasks previously performed by humans, offers more efficient and accurate solutions. However, this may lead to a direct reduction in human labor in certain job sectors. Therefore, it is crucial for the government, employers, and workers to collaborate in addressing these changes and ensuring that workers' rights are protected amidst technological advancements (Konfederasi Serikat Pekerja Seluruh Indonesia, 2023).

In the transition and understanding of artificial intelligence, a sufficient period of adjustment is needed, along with a continuous strategic alignment of the workforce. This process may involve mass layoffs and simultaneous recruitment, although not necessarily in equal numbers. Layoffs among workers are generally caused by a lack of skills, workers' skepticism towards new technologies, and slow-moving regulations. To mitigate these challenges, it is crucial for both the government and companies to create a supportive framework that enables workers to adapt to technological changes while ensuring they are not left behind in the evolving job market. The company's decision to adopt artificial intelligence for the purpose of time and cost efficiency negatively impacts workers, as it leads to an increase in unemployment due to the limited number of workers being hired. Meanwhile, the number of potential workers produced by the education sector is significant every year. This situation will create problems in the field of employment, as it challenges the balance between labor supply and demand, leading to a potential increase in social and economic inequalities.

The occurrence of termination of employment for workers will have negative impacts, as workers will lose their job roles, leading to an increase in unemployment. This results in an imbalance in the workers' lives, making it difficult for them to meet their own and their families' basic needs (Silaban et al., 2021). Therefore, to ensure the security of workers and the fulfillment of their basic rights, as well as guaranteeing equality, opportunity, and prevent discrimination, government intervention is necessary to provide legal protection. Article 1, paragraph 1 of Government Regulation No. 35 of 2003 on Labor states that an employment relationship is a relationship between the employer and the employee/laborer based on a work agreement that involves elements of work, wages, and instructions. Meanwhile, Kartasaputra defines the employment relationship as a cooperation between the two parties, namely the

workers and the company, based on a work agreement and work regulations that are known and mutually agreed upon by both parties. Both the workers and the company have equal rights, which are binding and obligatory under the work agreement (Silaban et al., 2021).

Thus, the company exercises its strong right to assign its employees to work according to the company's criteria, which ultimately contributes to the company's profit and affects the income of the workers who drive the company's operations. Article 37, paragraph 1 of Law No. 13 of 2003 states that the employer, employees/laborers, and the government must make efforts to prevent the termination of the employment relationship (Wibowo & Matheus, 2023). Article 37, paragraph 1 of Law No. 13 of 2003 states that in the event of a termination of the employment relationship that cannot be avoided, the reasons and grounds for the termination must be communicated by the employer to the employee and/or the labor union within the company, especially if the employee is a member of a labor union (Silaban et al., 2021). The termination of an employment relationship can be carried out unilaterally by either the employer or the employee, or when the end of the relationship has been agreed upon by both parties. Article 1, paragraph 15 of Government Regulation No. 35 of 2021 states that termination of the employment relationship is the ending of the work relationship due to certain circumstances that result in the termination of rights and obligations between the employee and the employer. Therefore, the termination of the employment relationship refers to any form of termination of the work relationship between the worker and the employer, caused by certain pressing circumstances.

This pattern is commonly used by employers utilizing artificial intelligence as a justification for reducing or streamlining their workforce, citing the need for efficiency to prevent losses. This rationale is outlined in Article 43, paragraph 2 of Government Regulation No. 35 of 2021. Furthermore, Article 45, paragraph 2 of Government Regulation No. 35 of 2021 states that an employer may terminate the employment of an employee/worker due to force majeure circumstances, provided that such circumstances do not result in the closure of the company (Silaban et al., 2021). In this article, the law grants employers the freedom to terminate the employment of their workers. However, this regulation does not specifically or fundamentally define the conditions that qualify as force majeure in the context of labor law. This ambiguity has led employers to justify layoffs or termination of employment as part of efficiency measures, often targeting workers with fewer skills or expertise.

2. Legal Protection for Workers Threatened with Termination of Employment Due to the Presence of Artificial Intelligence

Labor law exists to provide protection for both employers and employees. The termination of employment, which is a major concern for employees—who are generally in a weaker economic position and at a disadvantage in disputes over labor relations—requires safeguards. Government Regulation No. 35 of 2021 on Fixed-Term Employment Contracts, Outsourcing, Working Hours, Rest Periods, and Termination of Employment mandates that companies are obligated to comply with labor laws or agreed employment contracts to ensure that the rights of workers affected by the termination of employment are protected and fulfilled.

A company is required to fulfill its obligations regarding the rights of workers affected by the termination of employment by ensuring the payment of wages and severance pay. Article 40, paragraph 1 of Government Regulation No. 35 of 2021 on Fixed-Term Employment Contracts, Outsourcing, Working Hours, Rest Periods, and Termination of Employment, states that in the event of termination of employment, the employer is obliged to pay severance pay, service award pay, and/or compensation for rights that should have been received. The form of legal protection provided by the government to workers is through the creation, regulation, and implementation of binding rules between both parties, as well as the company. This includes carrying out industrial processes and providing guidance to both workers and companies.

One of the regulations enacted by the government to provide legal certainty and protection in resolving employment relationships is governed by Law Number 2 of 2004 on Industrial Relations Dispute Settlement. This law offers an opportunity for the parties seeking legal protection through the following procedures:

- a) Settlement through bipartite negotiations
- b) Settlement through mediation
- c) Settlement through conciliation
- d) Settlement through the industrial relations court

The resolution of the dispute regarding termination of employment is first attempted through bipartite negotiations conducted in a deliberative manner to reach a consensus. However, if both parties fail to reach an agreement, one party may file a dispute with the relevant labor authority in the local area. The relevant labor authority will then refer the dispute to a mediator. If conciliation or mediation does not result in an agreement, either party may file a lawsuit with the Industrial Relations Court.

Article 97 of Law No. 2 of 2004 on the Settlement of Industrial Relations Disputes states that the court's decision in industrial relations cases must stipulate the obligations that must be fulfilled and/or the actions that must be accepted by the parties or one of the parties in relation to the settlement of the industrial relations dispute. Thus, the court's decision provides legal certainty and legal protection for the parties involved.

CONCLUSION

The labor situation in Indonesia from 2021 to 2023 shows an increase in the workforce by 7.56 million people, or approximately 5.39 percent. This indicates a growth in job opportunities in Indonesia. However, when compared to other ASEAN countries, Indonesia still has a relatively high open unemployment rate. The widespread presence of artificial intelligence has led to its adoption across various segments of society. However, the increasing use of artificial intelligence has raised concerns among workers, as it impacts 17 sectors of the workforce in Indonesia. This technological advancement is expected to result in job terminations by employers, leading to potential layoffs for many workers. Employers utilize artificial intelligence in their companies with the aim of improving time and cost efficiency. The termination of employment leads to an increase in unemployment and a reduction in available job opportunities, creating a significant issue in the labor sector, as it has a profound impact on workers/laborers. In this context, to ensure the protection of workers' rights, it is crucial for the government to show concern by providing legal protection for workers.

In terms of regulations related to termination of employment, this is covered under Government Regulation Number 35 of 2021. However, the current regulation makes it relatively easy for employers to carry out the termination of employment with minimal compensation or severance pay. Article 43 of Government Regulation Number 35 of 2021 states: "The employer may terminate the employment of a worker/laborer due to company efficiency caused by the company experiencing losses". In this case, the phrase "experiencing losses" could be seen as just a pretext from the company, because to verify the truth of this claim, the government should provide an audit result to the provincial wage council or to the regional head (Governor) so that they can make decisions regarding the termination of employment. Therefore, Government Regulation Number 35 of 2021 has not adequately addressed how companies should carry out the termination of employment process.

With the advent of artificial intelligence, there will be managerial efficiencies in the workforce, leading to job reductions and consequently unemployment. This calls for the need for new legislation because Government Regulation Number 35 of 2021 makes it easier to carry out efficiency measures (reducing the workforce) by simply providing compensation or severance

pay, which is quite low. In contrast, under Law No. 13 of 2003, when termination or workforce reductions occur, workers are entitled to significantly larger severance pay.

REFERENCE

- Adhiat, A. (2023). Ini Sektor Industri yang Banyak Gunakan AI untuk Pengembangan Produk. Databoks. https://databoks.katadata.co.id/teknologitelekomunikasi/statistik/5f5a042821e6b64/ini-sektor-industri-yang-banyak-gunakanai-untuk-pengembangan-produk
- Asyhadie, Z. (2015). Hukum Kerja: Hukum Ketenagakerjaan Bidang Hubungan Kerja. Rajawali Pers.
- ATOSS Software SE. (2024). The Path from Industry 4.0 to Industry 5.0. ATOSS. https://www.atoss.com/en/insights/blog/from-industry-4-0-to-industry-5-0
- Empowered Automation Solution. (2024). 5th Industrial Revolution. Empowered Automation Solution, LLC. https://www.empoweredautomation.com/5th-industrial-revolution
- Eriana, E. S., & Zein, A. (2023). Artificial Intelligence (AI) (Kesatu). Eureka Media Aksara.
- Fosso-Wamba, S., & Guthrie, C. (2024). Artificial Intelligence and Industry 4.0 and 5.0: A Bibliometric Study and Research Agenda. Procedia Computer Science, 239, 718–725. https://doi.org/10.1016/j.procs.2024.06.228
- Hamu, M. H. A., Kalam, A. K., Megawaty, Daga, R., Katti, S. W. B., Sudirman, Sulkipli, Sujatmiko, Didiharyono, Qur'ani, B., & Jaya, A. K. (2023). Are We Ready to Face Society 5.0? Tangguh Denara Jaya.
- Iberdrola. (2024). Artificial Intelligence: Birth, Applications and Future Trends. Iberdrola. https://www.iberdrola.com/innovation/history-artificial-intelligence
- Inspektorat Jenderal Kemendikbudristek. (2023). Artificial Intelligence (AI): Bahaya atau Dukungan untuk Pekerjaan Manusia? Inspektorat Jenderal Kementerian Pendidikan, Kebudayaan, Riset, Dan Teknologi Republik Indonesia. https://itjen.kemdikbud.go.id/web/artificial-intelligence-ai-bahaya-atau-dukunganuntuk-pekerjaan-manusia/
- Konfederasi Serikat Pekerja Seluruh Indonesia. (2023). Kahar KSPSI Ingatkan Perusahaan dan Karyawan Harus Waspadai Artificial Intelijen (AI) Cegah Phk Massal. Konfederasi Serikat Pekerja Seluruh Indonesia. https://kspsi.or.id/kahar-kspsi-ingatkan-perusahaan-dan-karyawan-harus-waspadai-artificial-intelijen-ai-cegah-phk-massal/
- Kusuma, D. (2023). Implementasi AI pada Industri di Indonesia. Prosa.Ai. https://blog.prosa.ai/id/implementasi-ai-pada-industri-di-indonesia/
- Lilipaly, N. E. (2023). Ternyata Seperti Ini Kondisi Ketenagakerjaan Indonesia. Okezone. https://economy.okezone.com/read/2023/11/11/320/2918683/ternyata-seperti-ini-kondisi-ketenagakerjaan-indonesia
- Lubis, M. S. Y. (2021). Implementasi Artificial Intelligence Pada System Manufaktur Terpadu. Prosiding Seminar Nasional Teknik UISU (SEMNASTEK).
- Matheus, J., & Gunadi, A. (2024). Pembentukan Lembaga Pengawas Perlindungan Data Pribadi Di Era Ekonomi Digital: Kajian Perbandingan Dengan KPPU. JUSTISI, 10(1), 20–35.
- Puteri, M., Krisna, A., & Wisanggeni, S. (2023). Dampak AI terhadap Lapangan Usaha di Indonesia. Kompas.Id. https://www.kompas.id/baca/investigasi/2023/06/27/dampak-ai-di-lapangan-usaha
- Shen, Y., & Zhang, X. (2024). The Impact of Artificial Intelligence on Employment: The Role of Virtual Agglomeration. Humanities and Social Sciences Communications, 11(1), 122. https://doi.org/10.1057/s41599-024-02647-9

- Silaban, E. S., Dwi Arini, D. G., & Suryani, L. P. (2021). Perlindungan Hukum bagi Pekerja Akibat Pemutusan Hubungan Kerja pada Masa Pandemi Covid-19. Jurnal Preferensi Hukum, 2(3), 543–547. https://doi.org/10.22225/jph.2.3.3998.543-547
- Smith, C., McGuire, B., Huang, T., & Yang, G. (2006). The History of Artificial Intelligence. University of Washington.
- Suratman. (2019). Pengantar Hukum Ketenagakerjaan Indonesia. Rajawali Pers.
- Tegmark, M. (2021). Life 3.0 : Menjadi Manusia Pada Era Kecerdasan Buatan (Kesatu). Elex Media Komputindo.
- Universitas Airlangga. (2024). AI Mengancam Stabilitas Ketenagakerjaan? Begini Kata Pakar Ekonomi. Universitas Airlangga. https://unair.ac.id/ai-mengancam-stabilitasketenagakerjaan-begini-kata-pakar-unair/
- Violleta, P. T. (2024). Menaker: Kondisi Ketenagakerjaan Indonesia Terus Alami Perbaikan. ANTARA. https://www.antaranews.com/berita/4220407/menaker-kondisiketenagakerjaan-indonesia-terus-alami-perbaikan
- Wibowo, S. H., & Matheus, J. (2023). Tinjauan Yuridis Pemberian Uang Pesangon Kepada Karyawan yang Di-PHK Pasca Pengesahan Perppu Cipta Kerja. NUSANTARA: Jurnal Ilmu Pengetahuan Sosial, 10(5), 2560–2565. https://doi.org/http://dx.doi.org/10.31604/jips.v10i5.2023.2560-2565
- Xu, Y., Liu, X., Cao, X., Huang, C., Liu, E., Qian, S., Liu, X., Wu, Y., Dong, F., Qiu, C.-W., Qiu, J., Hua, K., Su, W., Wu, J., Xu, H., Han, Y., Fu, C., Yin, Z., Liu, M., ... Zhang, J. (2021). Artificial intelligence: A powerful paradigm for scientific research. The Innovation, 2(4), 100179. https://doi.org/10.1016/j.xinn.2021.100179
- Zirar, A., Ali, S. I., & Islam, N. (2023). Worker and Workplace Artificial Intelligence (AI) Coexistence: Emerging Themes and Research Agenda. Technovation, 124, 102747. https://doi.org/10.1016/j.technovation.2023.102747.