

THE INFLUENCE OF TECHNOLOGY ON LABOR USE: THE IMPACT OF ARTIFICIAL INTELLIGENCE

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Abstract: We can no longer avoid technological advances. Technology is now increasingly evenly distributed and present in various aspects of life, including in the field of education, so humans must follow this trend of development. In the 21st century education era, technology has become an essential element. New innovations continue to emerge to support the teaching and learning process, as one of the impacts of the rapid development of technology. Many influences have been created from this technological advance. The current digital era is experiencing rapid technological advancements. The application of digital technology can be adjusted to human needs, making manual labor more efficient and relevant. The reduction of direct interaction, the use of machines to replace human tasks in certain fields are some of the impacts of the development of digital technology. Labor productivity is one of the key indicators in assessing the success of economic development. The high productivity of the workforce indicates that a country is able to produce a larger output with the same amount of inputs. This contributes to improving people's welfare and economic competitiveness. Technology is one of the factors that affect labor productivity. With technology, efficiency and effectiveness in the production process can be improved, allowing for the achievement of greater output with the same input. In addition, technology also allows the creation of new products and services that add value to the economy.

Keywords: *Technology, Labor, Artificial Intelligence*

Introduction

The competition between humans and technology is increasingly felt along with the rapid development of technology. On the one hand, technology is created by humans to make life easier, increase efficiency, and speed up problem solving. However, technology also presents challenges, especially when sophisticated tools begin to be able to perform tasks that previously only humans could do. A real example is automation and artificial intelligence (AI), where technology is a serious competitor for humans in the world of work. Artificial intelligence is an area of research, applications and instructions related to computer programming to do something that is, in the view of humans, intelligent (Bapeda, 2016). Society is also divided between those who are optimistic about cooperation between humans and technology, and those who are worried that technology will eventually override the role of humans entirely. However, this competition does not have to be considered a threat. Finally, the competition between humans and technology reminds us to continue to innovate and adapt. By understanding how technology works and making it a partner, not a threat, humans can maintain its relevance and superiority in an increasingly advanced society. This competition, if managed well, can bring a balance between technological advances and human well-being, as well as create a more inclusive and collaborative future. The rapid development of digital technology has had a striking impact on various aspects of human life, leaving a significant footprint, both in positive and negative aspects. (Fahmi, et al., 2024). One of the national developments that is currently being promoted by the

Indonesian government is the development of industrial facilities (Mustika Pamungkas, 2022). In line with industrial development, the need for labor is very necessary.

Labor is an important component in the development and progress of a country. They play a key role in the production of goods and services, which in turn supports economic growth. The workforce includes all individuals who have the ability to work, both physically and intellectually, and contribute to value creation in various sectors, including industry, services, education, and agriculture. Wages show the income received by workers in return for the work they do. Wages can be given in cash or other forms as agreed, or in cash but in goods according to the needs of workers. In its implementation, the wage system in Indonesia is generally based on the level of wage function, which is to ensure a decent life for workers and their families, reflect the rewards for a person's work, and provide intensive to encourage increased work productivity. (Endah Suhatini, et al, 2020).

Literature Review

Globalization has affected the development of increasingly sophisticated technology. Industry is a fairly large user of technology, even technology has become a basic need for an industry. Technological advances allow the dissemination of information from different countries with very easy access. However, this development is like a double-edged sword that has both positive and negative impacts (Tranggono, et al, 2023). Indonesia is one of the countries that is categorized as a developing country. In developing countries, employment problems generally include limited job opportunities, high unemployment rates, low quality of human resources, low wage levels, and lack of social security. Kresna explained that Indonesia seeks to improve the welfare of its people through development, by developing industrial sectors, both small, medium, and large scale (Kresna Wijaya, 2016). Workers play a role in processing the capital owned by entrepreneurs, either in the form of money or raw materials, which are then converted into the goods and services needed. An interesting topic to discuss in the pattern of relationships between workers and employers, one of which is the system of employers' wages to workers. In discussing wages, not only entrepreneurs and workers have interests, but the government, and the community also generally have interests (Rachmad Abduh, 2022). Wages earned by workers based on worker performance. With the development of technology it is a big challenge for workers. Many fields of work that have been using human labor have been replaced by technology. This has a negative impact on workers, with reduced human use can result in a high unemployment rate.

Technological developments, especially artificial intelligence or artificial intelligence, have become a new trend in the world of technology. Artificial intelligence can replace human tasks. Artificial Intelligence (AI) is a branch of computer science that focuses on solving cognitive problems that are typically related to human abilities, such as learning, creating, and recognizing images. Modern organizations collect vast amounts of data from a variety of sources, including smart sensors, human-generated content, monitoring tools, and system records. AI is used to develop systems that can learn on their own and gain insights from data. Furthermore, AI can use that knowledge to tackle new problems in a similar way to a human approach. Technological developments, especially AI, have accelerated global digital transformation. AI is used to process data efficiently, make predictions, and automate like never before.

The main advantage of this use of artificial intelligence is its ability to improve efficiency and productivity in various fields. AI can process data quickly and accurately, identify patterns that are difficult for humans to detect, and make decisions based on in-depth data analysis. This can result in time and cost savings, as well as improve the quality of product services. Additionally, AI can be used to execute repetitive tasks automatically,

allowing humans to focus on more creative work, and think strategically. On the other hand, the main risk associated with AI is the potential loss of human jobs due to automation. When routine tasks are replaced by AI, human workers in some sectors may lose their jobs. In addition, concerns about data privacy and security also arise because AI can be used to collect, analyze, and store personal data at scale. In the development and use of AI, there needs to be attention that ensures that its benefits can be felt by the community at large (Ajeng Hanafi, et al, 2016)

Method

Research must of course be designed in such a way, so that researchers can have clear direction guidelines in accordance with the goals that have been set (Tengku Erwin Syahbana, et al., 2017). Research cannot be called research if it does not have a research method. Research methods are a systematic process of collecting and analyzing data to achieve specific goals. The process of data collection and analysis is carried out naturally, both with quantitative and qualitative approaches, experimentally or non-experimentally, as well as interactively and non-interactively. The research method applied is the normative juridical method, which is a legal research method carried out by examining literature materials or secondary data. In qualitative research, the process of obtaining data in accordance with the research objectives or problems, is studied in depth and with a comprehensive approach (Ismail Koto, et al, 2023). Library research uses written documents as data and data sources that include primary legal materials, secondary legal materials and tertiary legal materials. (MHD. Teguh Syuhada, Asliani, 2021).

Result and Discussion

1. The Influence of *Artificial Intelligence* on the Use of Labor

The increase in the population indirectly results in the need for (Rahmat Rahmadani , 2021) a job to meet the needs of his and his family's lives. In this life, humans have various needs, to be able to meet these needs, humans are required to work. In terms of striving to meet these diverse needs, there are 2 (two) types of definitions of work, namely:

1. Self-employed work means working on one's own efforts, capital and responsibilities and the results are for one's own interests. Such work without binding oneself to the commands of others and not dependent on others.
2. Working for others means working by depending on another person who gives orders and he must be subject to all rules or regulations held by the person who gives the work. (Rachmad Abduh, 2020).

The current problem is not only limited jobs, but also with technology, especially *artificial intelligence* (AI) which is currently developing. The development of AI technology has an effect on the use of human labor. Job replacement by automation. AI and automation threaten routine and manual work. For example, in the manufacturing sector, many production processes are now carried out by robots and automated systems. This makes human labor in this field at risk of losing their jobs. Changes in skills needed. AI demands the workforce to have new skills, especially in the fields of technology, data analysis, and programming. Workers who do not have or cannot learn these skills may have difficulty competing in the labor market. Increasing skills gap, Not all workers have equal access to training new skills. This could lead to a growing gap between workers who are skilled in technology and those who are not. As a result, less skilled workers can fall behind in the competition.

The uncertainty of the future of work makes many workers anxious. They may be worried about the possibility of AI replacing their role or feel insecure in their careers, especially if their jobs are particularly vulnerable to automation. Job transformation and productivity Some jobs are not completely gone, but they are changing significantly. AI improves efficiency, but it also changes the traditional way of working. Workers must adjust to these changes, which can be difficult and require time to adapt. Ethical and social challenges The use of AI in business decisions also poses ethical challenges, such as algorithmic discrimination or strict oversight of employees. Automated decisions made by AI can have an impact on the well-being of the workforce, for example in hiring or performance appraisals.

Potential workforce reduction in several sectors. Certain sectors, such as transportation (with the advent of autonomous vehicles) and customer service (with chatbots), could see a significant reduction in human labor needs. This results in an imbalance in the amount of available labor compared to demand. New jobs that are not yet widely available. While AI creates new job opportunities, such as data specialists and AI engineers, these jobs require specialized training. Transitioning to these roles can be a major challenge, especially for an older or less trained workforce. Obstacles in education and retraining. Education systems and retraining programs are sometimes not responsive enough to prepare the workforce for the changes brought about by AI. Great efforts are needed to design relevant and effective education so that the workforce can compete. Stress in work-life balance. The increase in technology and the integration of AI in work can lead to pressure to work faster and more efficiently, potentially disrupting the work-life balance of employees.

AI-based supervision can also add stress in the work environment. With these challenges, it is important for governments, companies, and educational institutions to work together in preparing the workforce for the AI era. Measures such as retraining, adaptive work policies, and social support will be crucial to mitigate the negative impact of AI developments. The adoption of AI demands a more skilled and highly educated workforce, particularly in the fields of technology and data analytics.

2. The Role of the Government in Protecting the Workforce Against the Influence of Artificial Intelligence (AI)

Indonesia is currently actively carrying out development efforts, especially (Ramlan, 2022) in the economic sector, especially in the labor sector. According to Law No. 13 of 2003 Chapter I Article 1 paragraph 2 states that the workforce is every person who is able to do work to produce goods or services both to meet their own needs and for the community. Broadly speaking, the population of a country is divided into two groups, namely labor and non-labor. Labor law (Labour Law) is part of the law related to regulations regarding individual and collective employment relations (Junaidi et al 2023).

Residents are classified as labor force if the population has entered working age. The applicable working age limit in Indonesia is 15 years old and 64 years old. In this sense, everyone who is able to work is called a workforce. There are many opinions regarding the age of these workers, some say they are over 17 years old, some say they are over 20 years old, and some even say they are over 7 years old because street children are already part of the workforce (Ida Hanifah, 2021). Legal protection is the protection of dignity and dignity, as well as the recognition of human rights owned by legal subjects based on legal provisions from arbitrariness or as a set of regulations or rules that will be able to protect one thing from other things (Anna Triningsih, 2020). So good planning is needed. The meaning of macro workforce planning is the process of preparing a systematic employment plan that contains optimal and productive labor utilization to support economic and social growth both nationally, regionally and sectorally (Muhammad Azhar, 2015).

Answering the challenges of AI development, the government has an important role, including:

a. Progressive Labor Regulations and Policies.

Such as policies that prevent mass replacement of human labor. In addition, the government can set limits on the use of AI in sectors that are at high risk of disruption, such as manufacturing and customer service.

b. Workforce Training and Retraining Program.

To deal with the changes brought about by AI, the government can offer training and retraining programs for the workforce.

c. Economic Development and New Job Opportunities.

The government can direct economic development to be open to new job opportunities that arise from AI advancements, such as jobs in the fields of technology development, data analysis, and cybersecurity.

d. Improvement of the Social Security System.

The impact of AI on jobs could lead to economic uncertainty for some groups of workers.

Thus, workers have competency standards. Strengthening the role of the state both at the central and regional levels shows the state's commitment to providing protection for workers. (Ida Hanfah, 2020).

Conclusion

The use of AI in the world of work is inevitable, but its impact on the workforce is manageable. Governments have an important responsibility to protect the workforce from the negative impacts of AI through regulation, training, the creation of new opportunities, and increased social security. With the right policies, governments can not only protect workers but also harness the potential of AI for the overall economic advancement. progressive labor regulations and policies are key in dealing with the development of AI technology. By establishing policies that protect workers from mass replacement, implementing strict ethical standards, providing incentives for human resource development, and encouraging inclusivity, governments can create a safe, adaptive, and sustainable employment ecosystem. AI can be used wisely and in a balanced way, so that this technology does not threaten the existence of human labor, but instead improves the quality of life and overall welfare of society. The challenges of using AI in employment include major changes to the structure of the job market and the types of jobs available. On the one hand, AI is able to increase efficiency, productivity, and create new opportunities in various sectors. However, AI can also replace the role of human workers, especially in routine or easily automated jobs. This can result in a reduction in the number of certain jobs, increase the risk of unemployment, and demand rapid adjustment of job skills.

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