

# Research on the Influence of Artificial Intelligence on the Employment and Its Countermeasures

Haibo Liu

School of Public Management, Southwest University of Finance and Economics, Chengdu City, China

---

**Abstract:** Artificial intelligence is the main front to build new quality productive forces and is leading the fourth revolution of science and technology of human beings. The wide application of artificial intelligence technology has triggered people's concerns about unemployment. However, we do not have to worry too much. Artificial intelligence technology will not only replace human work, but also create more job opportunities and higher value-added work. It is imperative to conduct special research on labor force training and re-employment for industries and positions that may be replaced by artificial intelligence in the future, and take the initiative to respond in advance and take comprehensive and effective measures as soon as possible, so as to better adapt to the application and development of artificial intelligence technology.

**Keywords:** Artificial intelligence; Technological change; Employment; Countermeasures.

---

## 1. Introduction

As the leading technology of the fourth revolution of science and technology, artificial intelligence has completely subverted the position of human beings as the protagonist of productivity for thousands of years, and is changing the way of human production and life at an unprecedented speed and scale. It is shaping entirely new employment scenarios in a growing number of areas, most of which are augmented and automated decision-making[1]. Around the world, there is an increasingly heated discussion about whether the application of artificial intelligence will lead to mass unemployment. Admittedly, on the one hand, intelligent applications have replaced a large number of traditional labor-intensive jobs; But, on the other hand, AI technology will also create a large number of new jobs, and even the next growth miracle.

## 2. Artificial Intelligence Impacts the Job Market

AI technology is widely used in various fields, such as automated production lines, intelligent driving, generated videos or articles, which puts a large number of repetitive, low-skilled jobs at risk of being replaced. As AI technology continues to evolve and advance, especially with the advent of Chat-GPT and Sora, industries such as content creation, reactivity, and data processing are likely to be the first and most affected. Assembly line workers in traditional manufacturing, telephone receptionists in customer service, graphic design and text editing staff using computer software, and even film editors and directors are also at risk of losing their jobs. Goldman Sachs forecasts that as many as 300 million jobs around the world could be replaced by AI technology, which certainly adds to the growing concern that AI is replacing human labor in various industries. In the next few decades, 54% of jobs in China will be replaced by artificial intelligence. Relatively speaking, the head of the unit is the safest job in China, and the perceptual and manipulative task intensive job is easily replaced[2].

In legal and ethical terms, the application of AI in the job market also raises a number of questions. A large number of AI systems base their decisions on algorithms that can

introduce bias and discrimination when processing large amounts of data. The widespread application of AI involves the collection and analysis of a large amount of personal data information, raising concerns about the privacy of individuals, because personal information may be misused, which will lead to violations of individual dignity. In some areas, AI systems need to make critical decisions, however, these decisions are often made by complex algorithms such as deep learning and simulation systems, whose working principles are difficult to explain and can create significant life and economic risks. With the development of natural language processing and generative models, AI can create realistic false information. This not only poses a threat to the authenticity of the information, but can also affect the public's decision-making and trust. As robots and AI assistants become more integrated into everyday life, the ethics of human relationships are becoming more important. How to ensure that people are still treated with respect when interacting with robots and that human values are taken into account in robot decisions are also pressing issues.

## 3. Artificial Intelligence Creates New Job Opportunities

With the application of AI technology, humans can devote more time and energy to work areas that require higher levels of thinking and decision-making, thereby improving their work efficiency and competitiveness. According to research by internationally renowned recruitment agencies, a large number of new positions related to artificial intelligence will or have already appeared on job boards. For example: AI engineers who develop, program, and train AI algorithms, AI translators who ensure that humans communicate well with AI, who develop security standards, identify and assess risk factors, and find vulnerabilities within a company or organization, AI cybersecurity analysts to protect them from external cyber attacks, AI technologists and consultants working to develop tools, methods and benchmarks for assessing the reach of general AI models and assessing their risks, AI ethics officers or AI ethics judges who combine an understanding of science and technology with an awareness of ethics and human rights, and others. These new positions

require different skills and knowledge, and they need to constantly learn and update their abilities to adapt to the new job market.

Existing studies have also shown that artificial intelligence offsets the negative effects of robots on employment, increasing the number of jobs in labor-intensive industries and female workers. Regions with better digital infrastructure have stronger job creation effects[3]. There are still some limitations to the reality and possibility of artificial intelligence machines replacing people. The current artificial intelligence technology still has many limitations and cannot completely replace the creativity and interpersonal skills of human intelligence. Many professions require special human skills and experience, such as healthcare, law, and education, and robots cannot completely replace human expertise and experience.

The Future of Jobs 2023 report released by the World Economic Forum estimates that businesses around the world are expected to create about 69 million new jobs over the next five years. The wide application of artificial intelligence in the fields of health care, education, finance, manufacturing, etc., will promote the development of the field and will drive the increase of related jobs, we can believe that the fastest growing types of work are overwhelmingly driven by artificial intelligence and digitalization. In addition, on the way to accelerate the development of new quality productivity, new employment forms will also emerge in an endless stream.

#### **4. Effective Measures to Cope with the Impact of Artificial Intelligence**

“I don't think AI will affect services more than other technologies because of the end of new technology jobs, but I still don't think it will replace the vast majority of jobs.” Nobel laureate economist Christopher Pissarides spoke at the China Development Forum about the impact of technological development on employment. Industrial technological innovation generally leads to workers entering the service sector. The service sector is the largest employment sector. Therefore, in order to expand employment, we must attach importance to the service industry and develop service infrastructure.

Microsoft founder Bill Gates has proposed a tax on robots to solve the problem of job losses caused by automation. This recommendation has attracted widespread attention, and many countries have begun to study how to regulate the impact of AI on the job market through tax policy. The government can encourage enterprises and individuals to invest in the field of artificial intelligence through funding, taxation, reducing administrative approval and other ways to improve their competitiveness, thus creating more jobs.

Research has shown that innovative companies that focus more on AI technology have a greater impact on job creation[4]. The government should also actively promote educational reforms to train talents for the AI era. Governments can work with businesses to develop targeted education and training programs to help affected workers make a smooth transition to new career fields. At the same time, organizations are actively responding to the challenges posed by AI. Many companies are starting to implement retraining programs to help employees upgrade their skills and adapt to the development of AI technology.

The development of AI is transnational and requires global cooperation to develop common ethical and legal standards.

The international community should strengthen cooperation to jointly face the ethical challenges posed by AI and ensure that the application of the technology does not undermine social justice and dignity. Understanding the potential future of AI will enable governments, businesses, and society at large to prepare for its challenges and opportunities. We can avoid being driven by AI, and the world needs to embrace its dreams with unity[5].

#### **5. Conclusion**

Overall, artificial intelligence is a double-edged sword, which brings great opportunities and challenges. The impact of AI on employment is complex and multifaceted, and while certain industries and jobs are at risk of being replaced by AI technology, the technology also has the potential to improve work efficiency and create new jobs. The key is how to balance technological advances with human needs to ensure that everyone benefits from them. In response to the rapid development of artificial intelligence, we must pay close attention to the formulation of relevant policies and measures. These responses must be comprehensive and multifaceted, covering areas such as education, job research, government policies, and society's attitudes towards employment and technology.

Firstly, education and continuous learning should be strengthened. To accelerate the reform and innovation of the education system and mechanism, individuals and organizations need to actively embrace change, and seize the new opportunities in the era of artificial intelligence through continuous learning and skill upgrading. Second, it is necessary to formulate and improve laws and regulations for the development and deployment of AI to ensure that AI continues to enhance human capabilities, rather than completely replace human labor. Third, support career transition. It is necessary to carefully study the characteristics and demands of the "new employees" group, and provide them with more targeted vocational skills improvement services. Fourth, strengthen global cooperation. Governments should reach an international agreement on the development and use of artificial intelligence and formulate global guidelines, so that people around the world can share the dividends brought by the progress and application of artificial intelligence technology.

Throughout the history of human civilization, every upgrade of productivity will cause a large number of changes in jobs, while eliminating some old jobs, it will create some new jobs, so our anxiety is not how to keep the old jobs, but how to think about how to enter the new jobs brought by the development of artificial intelligence. Therefore, we should maintain a proactive attitude, constantly adapt to technological changes and enhance innovation capabilities, in order to achieve sustainable economic development and common prosperity of human society.

#### **References**

- [1] Lukács Adrienn, Váradi Szilvia, “ GDPR-compliant AI-based automated decision-making in the world of work, ” *Computer Law & Security Review: The International Journal of Technology Law and Practice*, vol. 50. 2023.
- [2] Wang Chengzhang, Zheng Min, Bai Xiaoming and Li Youwei, Shen Wei, “ Future of jobs in China under the impact of artificial intelligence, ” *Finance Research Letters*, vol. 55, PA. 2023.

- [3] Shen Yang, "Future jobs: analyzing the impact of artificial intelligence on employment and its mechanisms," *Economic Change and Restructuring*, vol. 57, 2. 2024.
- [4] Giacomo Damioli, Vincent Van Roy, Dániel Vértesy and Marco Vivarelli, "Drivers of employment dynamics of AI innovators," *Technological Forecasting & Social Change*, vol. 201, 2024. pp. 123249-.
- [5] Andreas Kaplan, Michael Haenlein, "Rulers of the world, unite! The challenges and opportunities of artificial intelligence," *Business Horizons*, vol. 63 , 2020. pp. 37-50.