Analysis of the Impact of Generative Artificial Intelligence on High-Quality Employment and Corresponding Strategies

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Abstract. Achieving high-quality employment for the labor force is a key area of national concern. The emergence of generative artificial intelligence (GenAI) presents both opportunities and challenges in promoting high-quality employment. This paper explores the impact of GenAI from both macro and micro perspectives. At the macro level, it examines changes in employment structures and the social security system. At the micro level, it analyzes effects on income, job stability, working conditions, and career development. The paper identifies key challenges posed by GenAI in promoting high-quality employment, including labor skill mismatches, structural adjustments in employment, and institutional barriers in the labor market. To address these issues, the study proposes strategies at four levels: government, universities, enterprises, and university students themselves. The goal is to support the labor force in adapting to changes brought by GenAI and to ultimately achieve high-quality employment.

Keywords: Generative Artificial Intelligence; Labor Force; High-Quality Employment.

1. Introduction

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Generative Artificial Intelligence (GenAI), as a branch of AI development, refers to cutting-edge technologies that use algorithms, models, and rules to generate various types of content such as text, images, audio, video, and code. Relying on large pre-trained multimodal foundational models, GenAI integrates user input and information to accurately capture and respond to specific needs, generating content that is both logically sound and highly coherent [1]. Traditional AI is rule- and logic-based, designed to automate specific tasks using predefined algorithms and procedures. In contrast, GenAI, as a product of the digital economy era, is based on large-scale data and deep learning. Its core feature lies in the model's ability to understand, generate, and optimize language expressions through pre-training on vast amounts of textual or other data [2].

At the national level, the advent of GenAI has enhanced productivity across sectors and contributed to economic prosperity. For businesses, GenAI has replaced traditional job roles, improving production efficiency. For individuals, GenAI has become a personal assistant, boosting work performance. However, the widespread application of GenAI inevitably leads to the displacement of some jobs, resulting in unemployment for certain segments of the labor force.

In the 14th collective study session of the CPC Central Committee Political Bureau, General Secretary Xi Jinping emphasized that "promoting high-quality and sufficient employment is a new positioning and mission for employment work in the new era and on the new journey. We must adhere

to a people-centered development approach, fully implement policies that support self-employment, market-regulated employment, government-facilitated employment, and entrepreneurship encouragement, and continuously promote qualitative improvements and reasonable quantitative growth in employment."

Similarly, the 2025 Government Work Report from the Third Session of the 14th National People's Congress stated: “Greater efforts will be made to stabilize and expand employment. Employment is the foundation of people’s livelihoods. We will improve employment-first policies, enhance resource coordination, promote full employment, and improve employment quality. We will strengthen rights protection for flexible and new forms of employment and expand pilot programs for occupational injury protection. We will accelerate the development of a skills-oriented pay system to raise the income level of skilled workers, so that those who work more, those with higher skills, and those who innovate receive more rewards.” (The State Council of the People’s Republic of China, 2025)

Currently, the state places great emphasis on high-quality employment. Effectively promoting high-quality employment for the labor force has become a central topic of academic interest.

The significance of this study lies in analyzing the impacts and challenges that GenAI presents to high-quality employment. It proposes countermeasures from four perspectives—government, universities, enterprises, and university students—to help the labor force adapt to the changes brought by GenAI and achieve high-quality employment.

2. Literature Review

2.1. The Connotation and Measurement Indicators of High-Quality Employment

Fan Yuying et al. (2024) [3] pointed out that the concept of “high-quality employment” can be traced back to the International Labour Organization’s (ILO) notion of “decent work,” which refers to employment opportunities that are decent and efficient, offered under conditions of freedom, equality, safety, and individual dignity. It emphasizes the unity of both the quantity and quality of employment. With the development of the economy and society, the connotation of high-quality employment has become increasingly enriched. Shi Zheng (2022) [4] argued that high-quality employment includes both macro and micro dimensions. From a macro perspective, it encompasses more adequate employment, a rational employment structure, a sound social security system, and improved labor protection. From a micro perspective, it involves decent work for workers, stable income, promising career development, and high job satisfaction.

Kong Weiwei et al. (2019) [5] believed that high-quality employment primarily refers to a combination of fair job opportunities, a high-quality work environment, stable job positions, higher occupational status, better salary and welfare benefits, stronger social insurance coverage, and more harmonious labor relations. Since high-quality employment is a complex and multidimensional concept, a single indicator cannot comprehensively measure it, thus necessitating the development of a systematic evaluation index system.

Different scholars have adopted various measurement indicators. Qi Yudong et al. (2020) [6] designed a provincial-level employment quality evaluation system in China based on four primary indicators: employment environment, employment capability, labor remuneration, and labor protection. Sui Shumin et al. (2024) [7] assessed employment quality from four aspects: salary and benefits, employment security, labor intensity, and job satisfaction. Lai Desheng et al. (2011) [8] evaluated employment quality across different regions in China through six dimensions: employment environment, employment capacity, employment status, labor remuneration, social protection, and labor relations. Based on the high-quality employment indicator systems developed by scholars, I constructed the employment indicator system shown in Table 1. This system includes 20 indicators selected across four dimensions: compensation and benefits, employability, employment security, and work environment.

Table 1. Employment Indicator System

First-level indicator	Second-level indicator
Compensation and benefits	Average salary
	Wage growth rate
	Number of welfare and subsidy programs
	Contribution rate to the five social insurances and one housing fund
	Level of year-end bonuses and performance-based incentives
Employability	Educational attainment distribution of the labor force
	Participation rate in vocational skills training
	Major-to-job relevance rate
	Frequency of promotion opportunities
	Success rate of self-employment or entrepreneurship
Employment security	Labor contract signing rate
	Unemployment insurance coverage rate
	Layoff rate
	Years of employment stability
	Fairness in labor dispute resolution
Work environment	Compliance rate of occupational safety and health standards
	Reasonableness of working hours
	Work intensity index
	Job environment satisfaction level
	Rate of digital office equipment availability

2.2. Current Analysis of the Impact of Generative Artificial Intelligence on High-Quality Employment

Impact on Workers of Varying Skill Levels:

On one hand, generative artificial intelligence (GAI) has had differential impacts on high-quality employment depending on workers' skill levels. Huang Xu et al. (2023) [9] found that intelligent enterprises generally increase demand for high-skilled labor while reducing demand for low-skilled workers. In contrast, non-intelligent enterprises tend to increase demand for low-skilled labor, and their demand for high-skilled workers depends on their development stage. Wang Chunchao et al. (2024) [10] noted that the development of AI leads to a divergence in employment quality among workers of different skill levels—positively impacting high-skilled workers but significantly lowering employment quality for low-skilled workers. Li Lei et al. (2024) [11] pointed out that as the application of next-generation AI (such as GAI) deepens, with its powerful natural language processing and content-generation capabilities, AI is increasingly affecting jobs traditionally held by high-skilled workers in fields like data processing and text analysis—posing a risk of replacement even for those positions.

Impact on Different Sectors:

On the other hand, GAI has also affected high-quality employment across various sectors. Chen Zhi et al. (2022) [12] found that the role of AI in improving employment quality is more evident in central and western regions of China compared to the eastern region. Qi Le et al. (2023) [13] argued that in areas with weaker labor protection, industrial intelligence significantly worsens the employment quality of migrant workers. However, in regions with strong labor protections, this

negative impact is not significant. Han Rong (2024) [14] asserted that GAI will directly impact roles in the service sector involving writing and verbal interaction—such as marketing and customer service—causing job displacement. In contrast, its impact on employment in the manufacturing sector is relatively minor. This is because manufacturing already features a high degree of informatization and automation (hence fewer job opportunities), and GAI is not yet widely applied in that sector.

2.3. Theoretical Frameworks Related to the Impact of GAI on High-Quality Employment

Skill-Biased Technological Change Theory: The widespread application of GAI increases demand for high-skilled labor while decreasing demand for low-skilled labor. Acemoglu (2002b) [15] analyzed how skill-biased technological change separates high- and low-skilled labor. When skilled and unskilled labor work together, the latter may reduce the productivity of the former. Skill-biased technological change raises the productivity of skilled labor, and continuing to employ unskilled workers may reduce overall efficiency. Therefore, firms tend to use skilled and unskilled labor separately, reducing demand for the latter and increasing the skill premium.

Creative Effect Theory: GAI has created many new job opportunities. Li Jianan et al. (2024) [16] argued that GAI would create a large number of jobs, especially in industries and sectors closely related to its development and application. Huang Xu et al. (2024) [2] described GAI's job-creation effect as its ability to generate new job types and occupational categories through its development and application, thereby positively influencing the labor market. This includes not only highly skilled positions but also interdisciplinary collaborative roles.

Substitution Effect Theory: GAI also replaces certain jobs. Li Jianan et al. (2024) [16] suggested that GAI may displace many positions previously held by humans, triggering a substitution effect. Huang Xu et al. (2024) [2] explained this as GAI replacing tasks originally performed by humans, leading to reduced or eliminated demand for those jobs. This effect is not limited to low-skilled work—it also affects knowledge-based and creative jobs, thereby having a far-reaching impact on the labor market.

In summary, scholars have defined the connotations of high-quality employment and constructed various indicator systems to measure it. Research also shows that GAI has differing impacts on workers depending on skill level—particularly diminishing the employment quality of low-skilled labor—and increases disparities across sectors. Finally, scholars have elaborated on relevant theoretical perspectives, including skill-biased technological change, the creative effect, and the substitution effect.

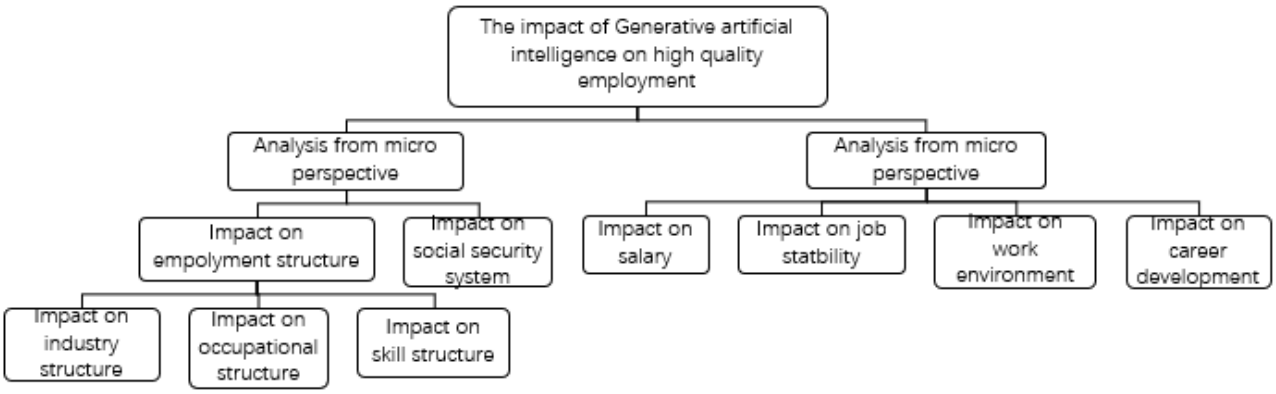

Figure 1. Flowchart of Part Three

3. The Impact of Generative Artificial Intelligence on High-Quality Employment

Huang Xu et al. (2024) [2] analyze the impact of generative artificial intelligence (GAI) on employment structure from four dimensions: employment transfer effects, skill structure adjustment, transformation of industry and occupation structures, and changes in labor supply-demand dynamics. They also assess GAI's impact on employment quality from five aspects: wage income, job stability, work environment, social security, and career development. Inspired by Shi Zheng's (2022) [4] macro and micro definition of high-quality employment, this study integrates both scholars' frameworks to analyze GAI's impact on labor quality employment from macro and micro perspectives. The following analysis will proceed according to the process outlined in Figure 1.

Macro-Level Analysis

1. Impact on Employment Structure

Industry Structure

GAI has promoted automation and intelligence in traditional sectors, especially manufacturing and services. It raises automation levels, reduces repetitive jobs, and increases the skill requirements for labor. Simultaneously, GAI-related industries are emerging, generating high-skill, high-wage job opportunities.

(2) Occupational Structure

GAI replaces repetitive jobs like customer service, data entry, and basic translation. It also creates roles requiring creativity and interdisciplinary skills, such as GAI application engineers, algorithm engineers, and creative designers.

(3) Skills Structure

GAI raises the bar for employment skills. Workers now need expertise in data science, machine learning, and software development. Tools like ChatGPT entering business workflows increase demand for professionals who can handle and interpret big data [17]. This skews demand in favor of high-skilled workers who possess irreplaceable capabilities, thereby increasing their skill premium. Conversely, mid- and low-skilled workers are more likely to be replaced. However, they can remain competitive by upskilling and adapting to "human-AI collaboration" work models.

2. Impact on Social Security System

GAI may increase unemployment among low-skilled workers, jeopardizing social stability. This necessitates government intervention via unemployment benefits and insurance to maintain basic living standards. However, this can strain public finances, possibly prompting higher taxation of employed workers, adversely affecting their welfare. Additionally, job loss may interrupt insurance payments, threatening future benefits.

(2) Micro-Level Analysis

1. Wage Income

GAI boosts wages for skilled professionals due to high demand and scarcity. However, GAI's substitutability gives companies more bargaining power, potentially suppressing wages for less-skilled workers [11].

2. Job Stability

GAI can improve enterprise productivity, scale, and competitiveness, increasing job stability. On the flip side, it reduces labor costs by replacing repetitive jobs, which can result in layoffs and less job security.

3. Work Environment

GAI can support employees with repetitive tasks and help troubleshoot. But it can also intensify workplace stress ("involution") as workers compete to avoid being replaced.

4. Career Development

GAI creates new occupations such as AI trainers and solution architects, benefiting high-skilled workers. However, low- and mid-skilled workers may face limited prospects as their jobs are more easily replaced and they lack technical qualifications.

4. Challenges to Promoting High-Quality Employment via GAI

(1) Skill Mismatch

1. Gap Between Existing Skills and GAI Requirements

GAI's rapid development demands more advanced skills. Displaced workers often cannot upskill quickly enough to meet these new demands (e.g., machine learning, Python, NLP). Traditional education often emphasizes theory over practical tech skills, leaving many underprepared for AI-related jobs.

2. Inadequate Training Systems

Current training is limited to basic coding and lacks depth in GAI-related skills. Training is often short-term, preventing workers from building a systematic knowledge base. This results in a slow upskilling process, limiting job quality.

(2) Disruption from Employment Structure Adjustment

1. Risk of Job Loss in Traditional Roles

GAI displaces repetitive tasks in services (e.g., customer service, marketing) and manufacturing (e.g., through robotics). Content creators, editors, and designers are also affected. Large-scale job losses burden welfare systems and create social instability.

2. Regional and Industrial Imbalances

Developed regions attract more AI jobs due to better resources. Underdeveloped regions face slow transitions, limited job growth, and job reductions. Sectors like finance and tech benefit from GAI, while traditional sectors like agriculture may struggle or lose jobs.

(3) Institutional Barriers in the Labor Market

1. Social Security System Misalignment

Flexible employment (e.g., freelancers, gig workers) lacks stable employers, requiring higher self-funded insurance contributions. Current systems are ill-equipped for these forms of work, offering limited coverage and unclear rights (e.g., for injuries or job protection).

2. Incomplete Labor Laws and Regulations

GAI often requires processing personal data, raising privacy concerns. Data misuse can harm reputations and reduce job opportunities, especially in roles requiring strong creditworthiness. Legal loopholes around data protection exacerbate this issue.

5. Policy Recommendations

(1) Government

1. Strengthen Policy Guidance and Support

Encourage AI-industry integration and emerging industries. Offer tax incentives, subsidies, and startup support for GAI-related enterprises.

2. Improve Employment Services

Build intelligent job platforms, offer personalized guidance (e.g., resume help, mock interviews), and organize reskilling programs focused on GAI skills.

(2) Higher Education Institutions

1. Optimize Curriculum

Introduce AI and interdisciplinary courses to enhance students' technical and innovative abilities. Update teaching content with the latest GAI applications.

2. Strengthen Practical Training

Promote GAI-focused practice courses and industry partnerships for real-world exposure.

3. Enhance Career Counseling

Offer tailored job planning and host industry lectures to prepare students for market demands.

(3) Enterprises

1. Foster Industry-Academia Collaboration

Contribute to curriculum design and offer internships related to GAI applications.

2. Offer Training and Development Opportunities

Provide internal training, incentives for certification, and cross-department collaboration to enhance GAI understanding.

(4) University Students

1. Improve Technical Skills

Learn GAI-relevant skills (e.g., Python, machine learning) through online or offline training programs.

2. Cultivate Interdisciplinary Thinking

Combine knowledge across fields (e.g., finance + AI) to enhance innovation and problem-solving.

3. Strengthen Career Planning

Proactively explore career goals and acquire necessary GAI skills during college to improve employability.

6. Conclusion

This study examines the dual impact of GAI on high-quality employment from macro and micro levels. On the macro side, GAI fosters industrial upgrades and creates high-skill jobs, improving employment quality for skilled labor and prompting social security reform. However, it also replaces repetitive jobs, threatening job stability for low-skilled workers and burdening social welfare.

On the micro level, GAI affects wages, job stability, work conditions, and career development—both positively and negatively. This research identifies three key challenges: skill mismatch, employment structure shocks, and institutional labor market barriers. Policy responses are proposed at four levels—government, universities, enterprises, and students—to help workers adapt to GAI and realize high-quality employment.

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