

Analysis of the Factors Affecting the Employment Quality of College Graduates: A Case Study of China

Mingyang Zhou*

Business School, Shandong University, Weihai, China

*Corresponding author: zhoumingyang@mail.sdufe.edu.cn

Abstract. The employment quality of college graduates in China is a topic of widespread concern. This paper uses authoritative data sources, including the China Labor Statistics Yearbook, China Statistical Yearbook, and data from provincial statistical bureaus, to examine the employment quality of college graduates in different regions of China. Specifically, the paper explores three aspects: salary level, job intensity, and job stability. The research results indicate that undergraduate graduates experience lower job intensity than college counterparts. However, while North, East, and South China show high salary levels and job stability, issues such as high work intensity, high cost of living, and small living space exist. Therefore, this paper offers policy development recommendations to promote job market reform and improve employment quality. These recommendations aim to address the challenges faced by college graduates in various regions of China and to promote the stability of the country's social and economic development. By examining the employment quality of college graduates in different regions of China, this paper provides valuable insights for scholars, policymakers, and practitioners.

Keywords: Employment quality, college graduates, salary level, work intensity, work stability.

1. Introduction

Employment constitutes a crucial aspect of people's livelihoods and serves as a key driver of economic development. In the past 20 years, China's economic development has entered a new normal. With the expansion of China's colleges and universities, the massification of higher education and the transformation of the economy to high quality, the structural contradictions in the employment market have become prominent under the increasing number of graduates and the impact of the COVID-19 epidemic on the economy, and the employment problem of college graduates has become increasingly prominent. From the perspective of labor market, the proportion of college graduates to unemployed people keeps increasing. According to the data of China Labor Economy Database, the national unemployment rate in China was 4.6% in 2001, and the proportion of unemployed people with undergraduate and junior college among the urban unemployed aged 20-24 was only 2.8% and 10.5% respectively, and this figure kept climbing in the next two decades; By 2020, China's national unemployment rate will be 3.9%, while the proportion of unemployed people aged 20-24 with undergraduate and specialist education has reached 36.3% and 34.1% respectively among the urban unemployed. In 2018, China officially released the urban survey unemployment rate data for the first time, which is more in line with international standards, released more frequently and with more accurate statistics than the registered unemployment rate. The urban survey unemployment rate for the employed population aged 16-24 was 11.20% in January 2018. This rate has increased to 19.90% by July 2022. Second, influenced by the rise of non-material costs in society, the lack of self-identity of college students and the change of career development, the proportion of Chinese college graduates choosing the "slow employment" employment method similar to the "gap year" in western countries, which is not employed after graduation, is gradually increasing. Tan Jie and Wu Qiang(2021) pointed out that 56% of high school and vocational graduates in some regions of China have chosen "slow employment" [1].

The causes of rising unemployment rates and "slow employment" rates among college graduates in China are multifaceted. While the impact of technological progress on the labor market and the lack of alignment between higher education and market demand are certainly factors, other socio-

economic factors also contribute to this phenomenon. China's rapid economic growth, coupled with increasing awareness of labor rights and regulations among graduates, has led to a shift in their employment-related concerns. Graduates are now more inclined to prioritize subjective factors such as salary and compensation, job satisfaction, and relevance of work to their profession. As such, a discussion of these non-technological and non-educational factors in conjunction with changing labor market demands is essential to provide a comprehensive understanding of the challenges faced by graduates in finding quality employment.

2. Literature Review

In order to measure employment quality, it is necessary to clarify the definition of "employment quality" and its measurement indicators. In the micro perspective, the indicators of employment quality are not uniform, except for the decent labor index proposed by the International Labor Organization in 1999 to measure employment quality [2]. Some scholars measure employment quality from the perspective of enterprises by the level of redundancy [3]. and other scholars construct employment quality evaluation systems based on working conditions, labor relations and social security, workers' income, employment satisfaction, and employment feelings and other micro-levels to build an employment quality evaluation system [4, 5].

On the one hand, most domestic scholars generally regard salary level as a direct factor affecting the high or low level of employment quality, such as Gao Xuedong and Pan Yingxue (2022) pointed out that social security and labor compensation are the primary and secondary factors affecting employment quality in the study of factors affecting inter-provincial employment quality through spatial econometric analysis method [6]. Shi Shutao (2022) pointed out from the explanatory structural model that remuneration package and personal development are the most superficial and direct factors influencing the employment of college graduates [7]. Sun, Huiling and Jin, Xiangxin et al. (2022) conducted empirical tests on national panel data concluded that the government's influence on intermediate variables such as labor compensation and employment environment through fiscal incentive policies has a significant impact on achieving high-quality employment [8]. An increase in the wage can temporarily provide further livelihood security for some graduates who lack work skills and experience, thus contributing to the improvement of graduates' employment quality.

On the other hand, graduates' satisfaction with their jobs is also one of the important criteria to measure employment quality, and the higher the graduates' satisfaction with their jobs at the micro level, the higher the employment quality [9]. Qin Jianguo(2007) proposed to define employment quality in terms of the extent to which the job satisfies the requirements of college students and to use welfare and social security as indicators of college students' satisfaction in the establishment of an evaluation system for college students' employment quality [10]. Adams' equity theory suggests that if the compensation is fair, the person will gain satisfaction, so raising the minimum wage will increase graduates' satisfaction with their jobs [11]. This view is confirmed in the study of Cubitt and other scholars, Cubitt et al. (1999) found through their study that a higher minimum wage can improve the efficiency of workers and enhance their skill level, which acts as a positive incentive [12]. From the demand-side perspective, a suitable salary level will increase employees' motivation and promote the improvement of labor productivity, which is a reasonable way to allocate human resources, and increasing the minimum wage is also beneficial to the overall treatment of employees and the improvement of employment quality.

In summary, scholars have constructed various evaluation systems for employment quality components, but due to the differences in employment expectations of different workers and their personal heterogeneity, the employment quality evaluation systems constructed based on different methods have their own advantages and disadvantages. Based on the literature of previous scholars and the reality of Chinese college graduates, this paper will select some key indicators, compare and summarize the employment quality of Chinese college graduates through data statistics, and provide some policy suggestions to improve the employment quality of Chinese college graduates.

3. Research Methods and Main Findings

Subjectively, higher employment quality provides workers with material and spiritual satisfaction and sense of accomplishment, thus enhancing job sustainability and personal career development through higher work motivation; objectively, employment quality of college graduates not only reflects the degree of matching between school education and social division of labor, but also has an important impact on the harmonious development of society and stable economic growth. This paper summarizes the research on the construction of employment quality system by previous scholars, and discuss the current situation and problems of employment quality of Chinese college graduates from three aspects: salary level, work intensity and work stability. The data used in this paper are all from China Statistical Yearbook, China Labor Statistics Yearbook and provincial statistical bureaus.

3.1. Comparative Analysis of Salary Level in Each Province

Higher-paying jobs can relieve graduates' financial pressure, enhance the perceived value of their jobs, increase their career development space, and attract them to more promising career fields. The outbreak of the COVID-19 epidemic in 2020 has caused a short-term impact on China's economic development, and many companies have had to take measures such as downsizing, cutting salaries and layoffs, and shutting down their businesses to reduce costs and maintain operations due to the epidemic prevention and control policies in different cities. On this basis, since Chinese universities are mainly located in urban areas and Chinese youth prefer to find non-agricultural employment opportunities in urban areas compared to agricultural jobs under the rapid urbanization and industrialization in China, this paper selects the Per capita wage of urban units employees in 2020, the annual growth rate of the Per capita wage of urban units employees, the annual minimum wage standard (monthly minimum wage standard $\times$ 12), and the GDP growth rate of each province in China in 2020 as a comparison, to explain the connection and difference between the level of economic development and salary level among different regions in China, and reflect the regional differences in the employment quality of graduates.

As shown in Table 1, The Per capita wage of urban units employees in China vary greatly among different regions, with the minimum wage standard showing less variation. Cities such as Beijing and Shanghai have high average wages due to their status as the capital and financial center, respectively, which attract high-output enterprises and offer a large number of job opportunities with high wages for graduates. Megacities and economically developed coastal provinces such as East China and South China also appeal to graduates due to their high salary levels and diverse career prospects. However, the cost of living tends to be higher in regions with higher wages, with expenses such as rent, transportation, and food outweighing the higher salary. Graduates must consider the balance between high salaries and cost of living when making location and job decisions.

Table 1. GDP growth rate and the wages of urban units employees by province

		Per capita wage of urban units employees in 2020 (yuan)	Minimum wage standard in 2020 (yuan)	Average wage growth rate of urban units employees in 2020	GDP growth rate in 2020
North China	Beijing	178,178	26,400	6.82%	1.20%
	Tianjin	114,682	24,600	6.19%	1.50%
	Hebei	77,323	22,800	5.99%	3.90%
	Shanxi	74,739	20,400	7.46%	3.60%
	Inner Mongolia	85,310	21,120	5.89%	0.20%
Northeast China	Liaoning	79,472	21,720	9.03%	0.60%
	Jilin	77,995	21,360	5.67%	2.40%
	Heilongjiang	74,554	20,160	8.97%	1.00%
East China	Shanghai	171,884	29,760	15.07%	1.70%
	Jiangsu	103,621	24,240	7.35%	3.70%
	Zhejiang	108,645	24,120	9.02%	3.60%
	Anhui	85,854	18,600	8.63%	3.90%
	Shandong	87,749	22,920	7.74%	3.60%
Central China	Jiangxi	78,182	20,160	6.05%	3.80%
	Henan	70,239	22,800	4.42%	1.30%
	Hubei	85,052	21,000	7.25%	-5.00%
	Hunan	79,122	20,400	6.47%	3.80%
South China	Fujian	88,149	21,600	7.74%	3.30%
	Guangdong	108,045	25,200	9.26%	2.30%
	Guangxi	82,751	21,720	8.20%	3.70%
	Hainan	86,609	20,040	5.33%	3.50%
Southwest China	Chongqing	93,816	21,600	8.38%	3.90%
	Sichuan	88,559	21,360	6.23%	3.80%
	Guizhou	89,228	21,480	7.12%	4.50%
	Yunnan	93,133	20,040	7.56%	4.00%
	Tibet	121,005	19,800	2.44%	7.80%
Northwest China	Shaanxi	83,520	21,600	6.58%	2.20%
	Gansu	79,730	19,440	8.32%	3.90%
	Qinghai	101,401	20,400	11.52%	1.50%
	Ningxia	97,438	19,920	16.07%	3.90%
	Xinjiang	86,343	21,840	8.72%	3.40%
Average value		94591.23	21890.32	7.79%	2.79%
Standard deviation		24297.37	2277.41	2.63%	2.04%

An interesting phenomenon that can be observed when reviewing the data is that the average wage growth rate in each province is generally higher than the local GDP growth rate. From the labor market perspective, during the epidemic period, the increase in the number of foreign talents returning to China and the number of domestic college graduates had an obvious impact on the labor market supply and demand due to policy changes. The change in labor supply has intensified the competition for employment recruitment among enterprises, and it has become common to raise salaries to hire talents in order to retain the best talents. Meanwhile, the support of the state's positive fiscal and monetary policies, such as measures to reduce fees and taxes and grant loans, and the rapid growth of some industries during the epidemic (e.g. medical, e-commerce, logistics, Internet, etc.) have contributed positively to the increase in the wage levels of employed workers.

3.2. Comparative Analysis of Work Intensity Based on Education and Age Group

The impact of work intensity on graduates is reflected in job satisfaction and physical and mental health. Under prolonged high intensity work, graduates may feel emotionally unstable and experience physical and mental health problems such as fatigue, insomnia and physical discomfort, which affect the quality of work and life. Under such circumstances, it may further lead to problems in graduates' work efficiency and work motivation, thus affecting their work ability and future career development. This paper selects data on the average weekly working hours (hours/week) of selected urban employed persons surveyed in each interval of one year since 2012 to show the changes and trends of work intensity of Chinese youth in the past ten years.

According to the relevant provisions of the Labor Law of the People's Republic of China, workers should work no more than eight hours per day and no more than 44 hours per week on average. From the data in Table 2, the overall work intensity has shown a small increase level in the last decade, and the average weekly working hours of Chinese youth aged 20-29 are generally higher than the level of 44 hours/week. However, from the grouping of education levels, only graduates with specialist degrees are slightly higher than this level, which may indicate that the work intensity of Chinese youths is stronger at lower education levels and is mainly biased toward labor-intensive industries, and as the education level increases, the work intensity will gradually decrease and the type of work will be more biased toward capital-intensive and technology-intensive industries.

Table 2. Weekly working hours of urban employees (hours/per week)

	2012	2014	2016	2018	2020
By Age					
20-24	47.1	47.7	46.7	46.8	47.0
25-29	46.8	47.2	46.3	46.6	47.2
By Educational Level					
College	44.0	44.5	44.0	44.3	45.2
University	42.4	42.6	42.3	42.3	42.8
Graduate and Higher Level	41.6	41.4	41.7	41.5	42.0

It is worth noting that although the average weekly working hours of graduates with graduate degrees and above are less, the reality is that graduates with high education and excellent professional skills may usually be more inclined to choose more high-end industries and positions when choosing jobs, which may be very intensive and require employees to spend a lot of energy and time to complete their work, and they will choose to sacrifice more rest time to participate in the work in order to get high compensation.

3.3. Comparative Analysis of Job Stability in Different Regions

Job stability refers to the continuity and stability of a job or labor relationship, and is an important indicator of whether a position has long-term employment sustainability. For college graduates, a job with a high degree of stability can give them a sense of security and psychological well-being, while providing stable economic income and social security, on the basis of which the sustainable and healthy development of local production and consumption can be promoted. In order to explore the job stability of college graduates with different levels of education in different regions of China, this paper will select the unemployment rate of college graduates aged 16-24 years old with a specialist degree and a bachelor's degree in different provinces for discussion. Unemployment rate and job stability are two closely related indicators, and the unemployment rate reflects to a certain extent the supply and demand in the labor market and the quality of the employment environment. The unemployment rates of different regions can reveal the differences in economy, culture and industrial structure of different regions, and help the government and related departments to optimize and adjust the employment policies, so as to improve the efficiency of the labor market and alleviate the unemployment problem.

Table 3. Unemployment rates by education level among the 16-24 age group

	Province	College	University
North China	Beijing	7.47%	7.04%
	Tianjin	10.83%	9.99%
	Hebei	12.53%	11.69%
	Shanxi	10.85%	10.12%
	Inner Mongolia	14.91%	13.89%
Northeast China	Liaoning	16.55%	15.12%
	Jilin	13.21%	12.45%
	Heilongjiang	16.01%	15.38%
East China	Shanghai	13.74%	12.79%
	Jiangsu	10.26%	9.76%
	Zhejiang	13.73%	12.66%
	Anhui	13.78%	13.11%
	Shandong	11.99%	11.16%
Central China	Jiangxi	9.03%	8.59%
	Henan	10.74%	10.22%
	Hubei	14.06%	13.38%
	Hunan	15.26%	14.38%
South China	Fujian	12.25%	11.19%
	Guangdong	7.62%	6.96%
	Guangxi	12.48%	11.63%
	Hainan	12.04%	11.33%
Southwest China (Tibet data is temporarily missing)	Chongqing	13.73%	13.07%
	Sichuan	16.36%	15.24%
	Guizhou	11.74%	11.05%
	Yunnan	16.66%	15.53%
Northwest China	Shaanxi	13.10%	12.08%
	Gansu	8.73%	8.31%
	Qinghai	12.31%	11.24%
	Ningxia	18.16%	16.77%
	Xinjiang	15.26%	14.66%

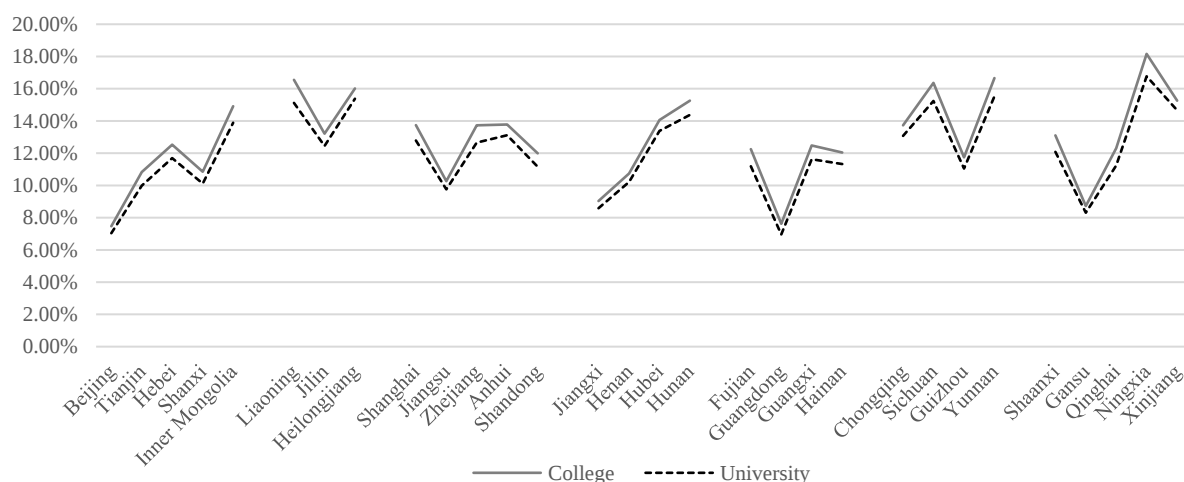


Fig. 1 Unemployment rates by educational level among the 16-24 age group (grouped by region)

According to Table 3 and Figure 1, the unemployment rate of undergraduate graduates is generally slightly lower than that of college graduates, and the overall unemployment rate in North, East and South China is lower than that of other provinces, which can be explained from three aspects: job market, economic development and education level.

First, these three regions have a more active and diversified job market and industrial structure. North China, as the political and cultural center of China, has many national units and large enterprises, which have a very wide and stable demand and provide sufficient employment opportunities. Meanwhile, East and South China are one of the important gateways for China's opening to the outside world, with more developed manufacturing and service industries. These dynamically developing industries bring more opportunities in terms of the size and number of jobs, so it is easier for graduates to find jobs and maintain employment stability.

Second, these three regions have three national strategic economic development and construction areas, namely Beijing-Tianjin-Tanggu Industrial Zone, Yangtze River Delta Economic Circle and Guangdong-Hong Kong-Macao Greater Bay Area, which have good industrial foundation and development history as well as strong development momentum and policy support, and have made great contributions to the economies of the three regions, driving the high-speed and synergistic development of the economies of the three regions. On this basis, these three regions have more employment opportunities and better career development prospects, and it is relatively easier for college graduates to get employment opportunities compared with other regions, so the unemployment rate is relatively low.

Third, these three regions, as important centers of China's economy, culture and education, have a high level of education, which is reflected in the long history of colleges and universities, open educational concepts, concentrated distribution locations, many higher education institutions and close cooperation between schools and enterprises, etc. While providing local enterprises with excellent talents, enterprises feed back to college education to make it more market-oriented, so as to better meet the needs of the job market.

4. Conclusion and Recommendation

As China's economy advances and living standards improve, the employment quality of college graduates also improves, with transportation advancements facilitating their movement to regions with higher employment quality. North, East, and South China offer higher salary compensation, numerous high-quality educational institutions, and lower unemployment risks, making them the top choices for higher education and employment. However, remote provinces like Tibet and Qinghai, despite higher salary levels, have lower employment quality due to factors such as harsh natural environments, underdeveloped economies, and inadequate transportation.

Higher education levels help to improve employment quality and reduce employment pressure and intensity. Nevertheless, the growing popularity of higher education and the saturated job market contribute to increasing employment pressure for Chinese college graduates. Although developed regions offer better salaries and employment security, they also demand higher skills and longer working hours. Furthermore, the continuous inflow of talent from the western to the eastern regions leads to a vicious cycle marked by reduced work intensity in the west, increased pressure on urban carrying capacity, and intensified competition for a higher quality of life. Accordingly, this paper puts forward the following policy recommendations based on the research findings:

Accelerate economic transformation: Diversify and improve job opportunities for college graduates to reduce the structural contradiction between supply and demand in the employment market. The current labor demand market does not adequately meet the diverse professional skills of Chinese college graduates, highlighting a disconnect between labor market demand and supply. Accelerating economic transformation in each region can effectively alleviate this issue.

Promote balanced regional economic development and urban-rural integration: China's unbalanced and insufficient economic development has led to a continuous talent migration from

less-developed regions to more-developed regions, which cannot absorb the population inflow in the short term. This results in further decline in less-developed regions and a lack of engagement in agricultural development. Policies should be introduced to develop western regions and rural areas, encouraging college graduates to contribute to their hometowns for nationwide synergistic development.

Optimize the ratio of higher education qualifications to majors: Align higher education with the evolving demands of the job market. Universities should enhance school-enterprise cooperation, avoid over-enrollment in low employment quality majors, understand local economic development needs, promote students' early engagement with enterprises to develop professional skills, and guide students towards suitable employment directions and locations.

References

- [1] Tan Jie, Wu Qiang. New trends in the characteristics of Nietzschean groups in the new era - An analysis based on empirical surveys in four counties of Guangdong. *Chinese Youth Studies*, 2021, 304(6): 84-93.
- [2] International labor Conference. Decent work: Report of the Director-General to the International labor Conference (87th Session), 1999.
- [3] Cao Chunfang, Deng Songlin. Government unemployment target adjustment and employment quality - Evidence from the micro firm level. *Financial Studies*, 2022, 504(6): 115-132.
- [4] Yang Heqing, Li Jia. An empirical analysis of employment quality of college graduates. *China Labor*, 2007, 264(12): 26-28.
- [5] Xu Changxin, Ling Long. Micro employment quality in China: Performance evaluation, influencing factors and optimization path. *Journal of Jianghai*, 2020, 330(6): 110-115+254.
- [6] Gao Xuedong, Pan Yingxue, Bo Qixin. Spatial econometric analysis of factors influencing employment quality between provinces in China. *Geographical Research and Development*, 2022, 41(4): 13-18.
- [7] Shi Shutao. Analysis of factors influencing employment quality of college graduates based on explanatory structural model. *Henan Social Science*, 2022, 30(1): 112-118.
- [8] Sun Huiling, Jin Xiangxin, Li Wantao. High-quality employment and fiscal policy incentive effects - An empirical test based on national panel data from 2010-2019. *Business Research*, 2022, 531(1): 85-94.
- [9] Zhao W. Factors influencing the employment quality of college graduates and strategies to improve it. *Heilongjiang Higher Education Research*, 2022, 40(2): 133-138.
- [10] Qin Jianguo. Exploring the evaluation system of college students' employment quality. *China Youth Studies*, 2007, 133(3): 71-74.
- [11] Adams JS. Inequity in social-exchange. *Advances in Experimental Social Psychology*, 1965, 2(4): 267-299.
- [12] Cubitt RP, Heap S. Minimum wage legislation, investment and human capital. *Scottish Journal of Political Economy*, 1999, 46(2): 135-157.