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Income Inequality among Chinese Graduates: Chinese Graduates' Income Inequality in the Context of Education and Economic Growth

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Abstract. This paper discusses the phenomenon of income inequality among young people that currently appeared in China. To understand the effects on graduates' income differences that are induced by Chinese economic growth and the education system, the whole study will go through three aspects: labour market dynamics, education institutions of students, and socioeconomic status of families. Through the provision of data and explanation of empirical evidence, this paper finds out that income inequality of Chinese graduates is largely dependent on the external factors—China's economic conditions and education institutions and the internal factor—the family background of graduates. In other words, this social issue to some extent can be blamed on the deteriorating employment environment and the disparities between outstanding and privileged graduates and ordinary and underprivileged graduates, which derive from individuals' specific academic environments. With the concise and accurate supporting evidence and interpretation, this paper is attempting to help public people better understand what triggered today's income inequality of graduates as well as improve awareness of equity.

Keywords: Chinese Graduates, Income Inequality, Economic Growth, Education, Socioeconomic Status.

1. Introduction

Since the outbreak of COVID-19 in late 2019, China adopted strict prevention and control measures from 2020 to 2022, which significantly disrupted economic production activities. These measures, together with structural adjustments in the economy, accelerated the slowdown of China's long-standing high-speed growth. During this period, people were unable to go back to their workplaces, firms were unable to sustain their production and money flow, and the job market experienced severe disruption.

In the post-pandemic era, Chinese young people face many challenges, most notably the income inequality. Seeking a stable job with relatively high wages is becoming every young people's dream. However, the provision of posts cannot meet the increasing number of graduates aged 16 to 24, and transforming industries force them to do some work that they are overqualified for. This income

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inequality is not only attributable to the stagnant economy of China but also to the systematic problems of Chinese education.

With the monumental achievement of the universalization of Chinese education in 2019, the supply of graduates grew rapidly while the income gap grew far more quickly. The prestige and reputation of universities are directly linked to future income. Similarly, the socioeconomic status of graduates' families is crucial to their income, as the income and wealth of parents passes down through the educational investment in a form of human capital. This paper aims to analyze the impact of Chinese education and economic growth on the income difference for graduates aged 16 to 24 from three perspectives: job market, educational institution, and socioeconomic status. After reading, it is hopeful to see readers being correctly informed about the situation of this serious economic and social issue of income inequality among graduates, reducing the misunderstanding, confusion, and even conflicts caused by the lack of corresponding information.

2. Labor market dynamics and income inequality among Chinese graduates

To start, the recent transformations in China's labor market have intensified income inequality among graduates. First, according to the State Administration for Market Regulation's report, After COVID-19, the accumulative number of canceled market entities reached 13.23 million in 2021, including 3.5 million enterprises and 9.6 million sole-traders. For the group sole-traders, approximately 90% of them worked in tertiary industries removed from the register that once accommodated the majority of employees in China [1]. Millions of businesses went bankrupt and created a huge void in the job opportunities for those students that graduate soon. That downward shift of the job market results in the erosion of the employment situation of graduates, especially those graduates with bachelor's degrees or even lower levels.

Meanwhile, the oversupply of graduates leads to an inflation of their degrees when the supply of a well-educated labor force outpaces the economic growth. According to Boston University's study, the unemployment rate for youth reached 21.3% until 2023, leaving some graduates with no pay in the more competitive labor market due to the excessive supply of 11.6 million graduates [2]. Currently, the Chinese government plans to increase the newly created posts in urban areas by 12 million units, and yet the graduates in 2025 are estimated to number 12.22 million, merely capable of accommodating the newly created urban entrants under this surge in college graduate numbers [3]. Furthermore, the number of newly created posts implies that young people with lower degrees are nearly doomed to get stuck in unemployment, as they are less competitive compared with university students. This phenomenon literally increases the income gap between graduates who get employed and those unemployed ones. Although the youth unemployment rate fell back to 15.7% in 2024, the situation may keep deteriorating this year after the government ceased to release data in June [4].

Beyond the income inequality between employed and unemployed graduates, the mismatch between majors and occupations is another main reason. Approximately 25% graduates experience underemployment, meaning they cannot take advantage of their bachelor's degree-based knowledge to earn more in the existing job. For example, there are nearly 240 million people doing the so-called flexible job (jobs with no social security payment and injury insurance), one-third of them doing delivery service and driving service, which have no practical application of their knowledge reserve [5]. Hence, this group of underemployed graduates earns less compared with their counterparts when education is ineffective at improving productivity for their posts, equivalent to an erosion of income inequality.

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Moreover, for many graduates and young people, their income inequality may lie in the industrial transformation and upgrading instead of the shortage of job opportunities. The job market is transforming from the traditional manufacturing industry to the emerging industries that are relevant to artificial intelligence (AI) and new energy. For instance, the talent shortage index for the AI industry is 2.30 this year, exceeding the balanced value of 1 and indicating the growing demand for AI technicians. Specifically, the job vacancies of the AI industry exceed 5 million units with an expected salary of around 440k RMB [6]. However, the fierce competition in the labor market contributes to a higher demand for degrees in AI firms, where master's degrees and PhDs accounted for 67.9%, deterring the application of the majority of graduates who failed to meet this standard. Therefore, the switch from labor-intensive to talent-intensive production is inexorable in China, with the consequence that only a few talents with extremely high degrees in particular industries benefit from the change in the job market.

3. The income inequality derived from different education institutions

Apart from the job market, the educational institution that young people attend is another key determining factor of their possible income in the future. In China, the hierarchy of college education is rigid and has gradually formed since the mid-90s, including the 211 Project, the 985 Project and the latest Double First Class Initiative (DFCI). So far, the income inequality is closely linked to the different levels of educational institutions, as the public sector and private sector both tend to recruit graduates from these prestigious schools that are supported and guaranteed by China's strategic program, in line with signaling theory.

There may be some truth (e.g., political reliability, knowledge reserve) to this assessment and recruitment criteria whether in China or other regions; nevertheless, it generates unfairness for the majority of young people. Through the targeted quota system, the top universities (e.g., Peking, Tsinghua) have a virtual monopoly in the civil-official recruitment, taking up 75%-90% of total occupation [7]. The existence of differences in location and admission scores of those top universities further worsens the income inequality for graduates as the distribution of top universities is normally concentrated in big cities such as Beijing and Shanghai, allowing local residents to be more accessible to educational resources than the whole educated population.

From the graduates' view, those graduating from DFCI spend less time in job searching and earn more compared with ordinary college students. A typical master's graduate is able to obtain a 12% salary premium based on their bachelor's degree from elite universities compared with other graduates with similar degrees from ordinary universities. Even after taking their human capital investment into consideration, the premium of salary remains around 9.1% [8]. The signaling mechanism of elite universities has become a strong power in the income inequality for graduates in China.

4. The impact of socioeconomic status on income inequality

The last determining factor contributing to income inequality among young people may lie in the different socioeconomic statuses of their households. To investigate disparities among graduates aged 16 to 24, the correlation between parents' income and offspring's income is a crucial variable. This is commonly measured by Intergenerational Income Elasticity (IGE), which directly demonstrates the relationship between the parents' income and their offspring's income, ranging from 0 (no relationship) to 1 (closely relevant). In statistics, the IGE for Chinese households is around 0.66, a quite high figure compared with developed Nordic countries such as Finland (0.2 to

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0.3) [9]. By looking at the specific income composition, the property income takes up 10.0% and wage and salary income takes up 60.7% for urban residents in 2024, indicating the fact that the property transferred from parents to children made up only a small proportion of income [10]. On the contrary, the investing in human capital, which plays a vital role in wage and salary income, is what sustains this strong, consistent intergenerational income link. By heavily investing in education, households with higher socioeconomic status accomplish greater human capital investment for their offspring, which directly determines the wage income of these graduates.

Someone may argue that the tuition fee for Chinese universities is relatively cheaper than those of developed nations, and income difference has no causation with the financial support from richer households. In comparison, the average bachelor's degree costs for China and U.S. total $11.3K and $255K respectively, making Chinese graduates have no need for applying for student debts [11].

However, extracurricular tutorials and activities account for the majority of costs. In recent years, the private education and training organizations seem to threaten the fairness of compulsory education. Innovation and critical thinking are not likely to exist in exam-oriented education, so parents are turning their eyes on private education providers. Leading companies such as New Oriental and TAL Education Group play a vital role in the better performance and grades of students, adding an implicit cost for cultivating a graduate. By 2024, the market of education reached 500 billion, and the private education organizations accounted for 40%, as high as 200 billion [12]. This incredible figure indicates the Chinese parents' awareness of the significance of education as well as the exorbitant price of paying for a successful education and human capital investment. Compared with schools' fixed syllabus, after-class activities normally involve physical ability, logical reasoning, and critical thinking that all require additional investment. Although they are not quantified as grades in the Gaokao, the soft power is still a valued part of top jobs and contribute to higher wages.

Apart from the support in property accumulation and human capital investment, there is another factor that cannot be ignored—social connectedness. Chinese exam-oriented education may be less important in graduates' career life (only 16.56% of enterprises care about higher academic records) compared with social networks and social practice opportunities left by their parents [13]. Since firms normally demand candidates with adequate years of working experience in recruitment, the working opportunities brought by parents' interpersonal relationships appear to be valued, for the group of college graduates commonly have no career experience. According to the China Family Panel Studies Database (CFPS), social capital can promote household income, which also can be inherited by the offspring when graduates are born in a family with relatively higher socioeconomic status [14]. Hence, the close intergenerational relationship between parents and young graduates in China indeed causes the income inequality for graduates with different backgrounds.

5. Conclusion

The income inequality of Chinese graduates aged 16 to 24 is closely interrelated with the change of job market, the educational institutions they attend, and the socioeconomic status of their parents situated. From the demand side, structural unemployment for graduates does exist. From the supply side, an increase of new graduates leads to a credential inflation. Under these changes in the job market, income inequality emerges for graduates in different industries and with different degrees. The signaling effect of elite universities also contributes to the income difference when enterprises and government put too much emphasis on it. Eventually, different family backgrounds do affect graduates' income through passing down parents' property, human capital, and social capital.

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Frankly speaking, the limitations of this paper may be the lack of more specific data evidence due to the lack of corresponding statistics. Regarding the socioeconomic status of graduates' families, it is difficult to quantify the degree of impact with figures, as only a few scholars in China have estimated and surveyed this indicator; nevertheless, it is still a vital indicator that relates to income inequality, as the correlation between parents' income and graduates' income is quite close. Apart from inadequate statistics, the adjustment of policies may interrupt the evaluation of the usefulness of human capital theory that applies to extracurricular training. The Chinese government has already regulated the market of private education organizations, so it may be hard to say that the income inequality originated from heavy investment in private training programs for rich families. The rationalization of the public education system these years indeed improves the fairness of education and reduces the uneven distribution of educational resources but may challenge some points of view in this essay. In the future, this research may concentrate on the real solutions for income inequality of graduates and mainly discuss the effectiveness and limitations of possible proposals that deal with it.

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