

# Discussion on the Implications of Expansion in Postgraduate Education

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**Abstract:** This paper explores the development of postgraduate education in China, including the overall situation of postgraduate education, the trend in enrollment expansion in professional degrees as well as in various academic fields; it also triggers the impact and discussion about the postgraduate enrollment expansion, such as over-education and credential inflation, as well as the concerns about the quality of education and talent cultivation and so forth. Although the expansion brings various problems, the challenges may also become new opportunities for higher education reform, this paper also provides some suggestions on the expansion of postgraduate education.

**Keywords:** Expansion of postgraduate education; Over-education; Credential inflation; Implications; Employment crisis; Education quality

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## 1. Introduction

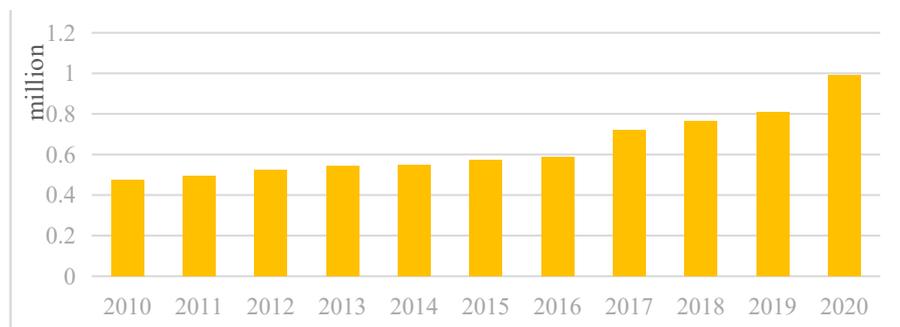
With the rapid development of knowledge and social economy, China has an increasingly urgent demand for high-quality and high-level talents from different walks of life. In the process of education internationalization, China needs to improve the competitiveness of higher education, attract more international students to study in China, and enhance its international influence, and China has expanded the enrollment of postgraduate students. In addition, the optimal allocation of domestic higher education resources and the adjustment of educational structure, as well as the severe job market in recent years also promote the expansion of the scale of graduate education to delay and ease the pressure of graduate students' employment. This decision not only has a profound impact on the higher education system but also provides an important reference for global education development. The statistics from the Ministry of Education (MOE) have shown an enrollment expansion of professional degrees and the stable development of academic degrees in recent years. Besides, different increasing trends are also presented from various disciplines. Analysis of problems such as over-education, credential inflation, and employment crisis owing to postgraduate expansion will also be discussed in this paper, which has raised concerns about the quality of education and talent cultivation of postgraduate education.

## 2. The development of postgraduate education

In 2020, the MOE held its first Press Conference since the outbreak of COVID-19. The current employment was complicated and grim due to the overlapping effects of the pandemic and economic downward pressure, in order to stabilize and promote employment, the enrollment of postgraduate students increased by 189,000 in 2020.

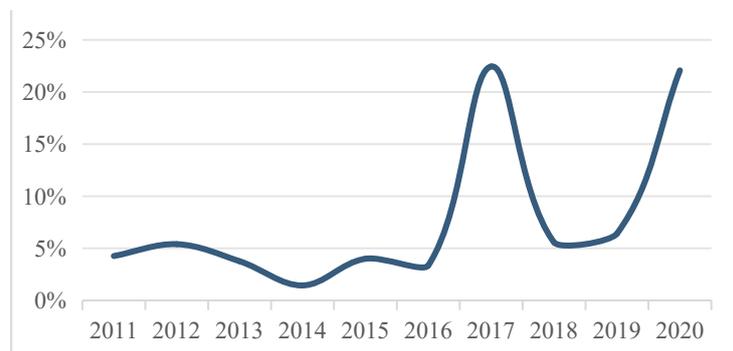
### 2.1. The overall situation of postgraduate expansion

**Figure 1** illustrates the number of entrants of master's degree students in mainland China from 2010 to 2020. Total postgraduate enrollment nationwide jumped from above 0.5 million in 2010 to nearly 1 million in 2020, nearly doubling within ten years. During this period, the scale of postgraduate students in China has been continuously expanding. It can be predicted that postgraduate education in China will continue to expand in the future <sup>[1]</sup>.



**Figure 1.** Expansion in China's postgraduate entrants

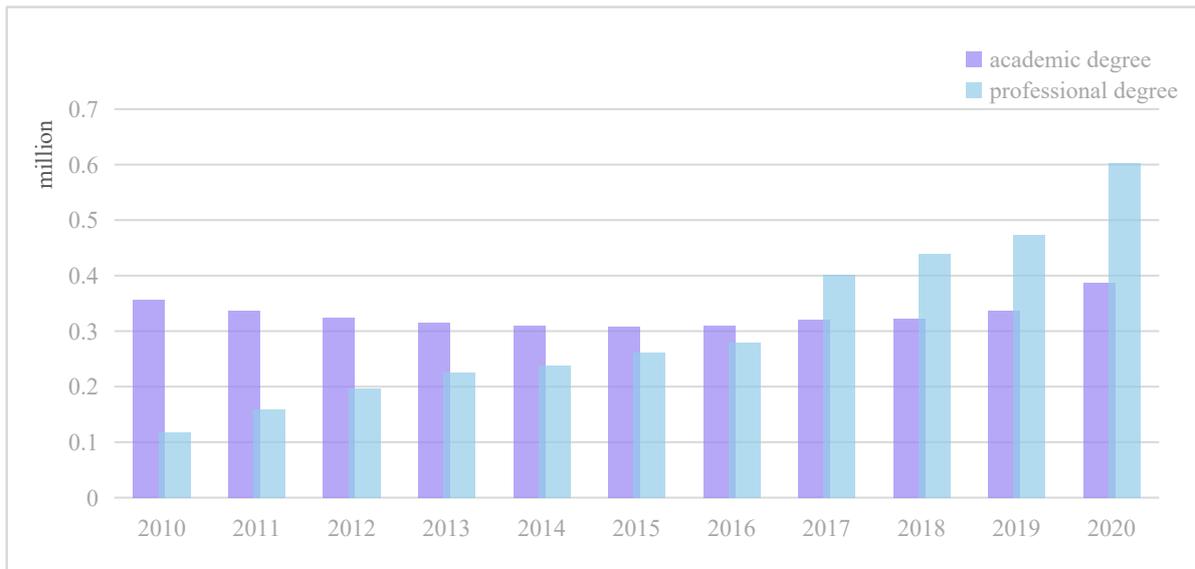
**Figure 2** presents the growth rate of postgraduate entrants from 2011 to 2020, it has shown a stable growth from 2011 to 2012. After that, the overall enrollment of postgraduate students in China continued to grow, but the annual growth rate began to decline gradually until it reached its lowest point of 1.44% in 2014, and began to show a rapid growth trend since 2016. In 2017 and 2020, it reached a peak of 22.45% and 22.08%, respectively. It can be seen that although there is occasionally a decline in growth during the ten years, generally, the speed of postgraduate enrollment expansion in China is still stable.



**Figure 2.** The growth rate of postgraduate entrants

### 2.2. The enrollment expansion of professional degrees has become a trend

**Figure 3** shows that compared with the development of academic degrees, the enrollment in professional degrees has increased rapidly from 2010 to 2020, during this period, the enrollment in academic degrees witnessed a stable development.



**Figure 3.** Enrollment expansion in academic and professional degree

In 2020, the Academic Degrees Committee of the State Council and the Ministry of Education issued the Educational Development Plan for Postgraduate Students with Professional Degrees (2020–2025). It has been pointed out that, by 2025, with the focus on major national strategies, key fields, and social needs, the number of professional master’s and doctoral degrees would be increased, and the enrollment of professional master’s degrees should be enhanced to about two-thirds of the total master’s enrollment.

The development of the professional degree is the strategic focus of postgraduate education reform and development. For a long time, the goal of postgraduate education has been to train teaching and research personnel, and colleges, universities, and research institutions are the main channels for postgraduate employment. However, with the development of economic society, the demand structure of the talent market has undergone great changes, the proportion of postgraduate employment in the industry has increased year by year, and the demand for high-level application-oriented professionals with strong professional ability and quality who can creatively engage in practical work is increasing in all walks of life.

What’s more, with the goal of improving the ability of practice and innovation, professional degrees have unique advantages in adapting to the increasingly refined and specialized social division of labor and the diversified demands for talent. It has become the main field of high-level applied talent training.

The School of Economics at Fudan University claimed that they would not enroll the master’s students for academic degrees from 2022. In addition, Peking University, Sichuan University, Southwest University, and other well-known universities in China have suspended the enrollment of some academic master’s degrees in certain disciplines. Moreover, colleges and universities are now making the best effort to gradually adjust the professional degree to two-thirds by 2025.

### 2.3. The enrollment expansion in various academic fields

However, there is a great difference in the enrollments of postgraduate students in different academic fields. Students have been choosing their majors of focus according to the demands of the labor market <sup>[2]</sup>.

As shown in **Figure 4**, Engineering remains the top choice of study, the number of Engineering postgraduate students increased more than doubled from 129,727 in 2010 to 345,836 in 2020. Medicine and Administrators have seen a rapid increase in enrollment as well. Due to the stability of career development,

Education also has become an increasingly attractive course. At the same time, the outbreak of COVID-19 in early 2020 also poses challenges to the cultivation of high-level application-oriented talents in public health. However, the enrollment expansion of social and cultural disciplines such as philosophy, literature, and history is relatively small, but it can be seen that it also shows a slowly rising trend. Overall, the enrollment expansion of all disciplines in China is increasing, however, with various growth rates respectively.

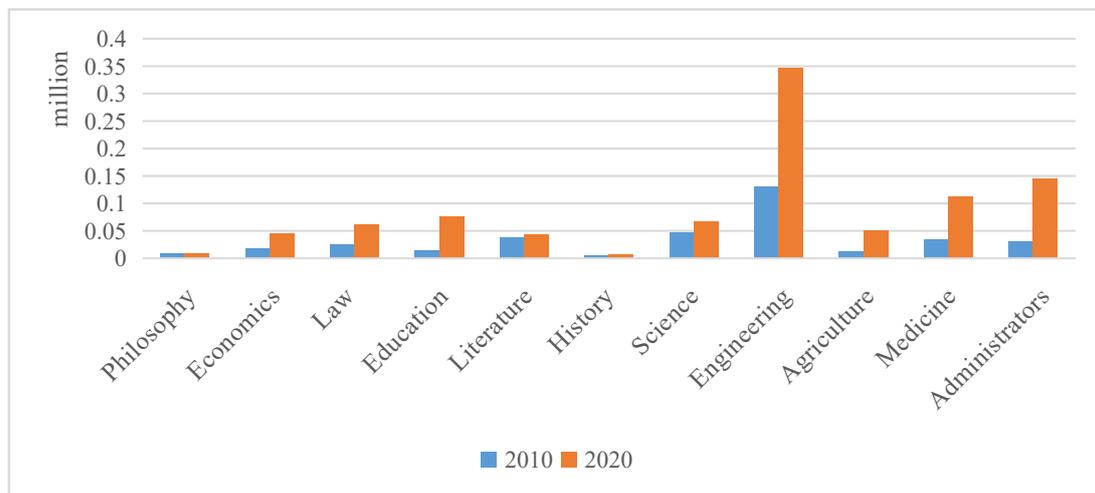


Figure 4. Distribution of master's entrants by academic field

### 3. The implications of postgraduate enrollment expansion

Some challenges and implications are encountered with the rapid expansion of postgraduate education these years, such as the involution of postgraduate entrance examination, over-education, credential inflation, employment crisis, and the decline of postgraduate education quality. Based on this, issues on how to ensure the effective use of educational resources and avoid the decline of educational quality caused by enrollment expansion, how to ensure the quality and level of graduate education, and deal with the expansion of enrollment intensifying the job market competition have attracted attention. These problems need to be solved by the joint efforts of the government, universities, and all sectors of society.

#### 3.1. The postgraduate entrance examination is more likely to be the continuous existence of *gaokao*

*Gaokao* is considered among the most competitive globally, its importance cannot be understated<sup>[3]</sup>, however, the admission rate is increasing every year<sup>[4]</sup>, from 4.8% in 1977 to approximately 81.13% in 2018. In other words, almost all high school students can go to college, the differences are the reputations and rankings of universities and colleges they are entering.

By contrast, the admission rate for postgraduate entrance examinations is less optimistic. In 2020, for example, the number of applicants was 3.41 million, and the number of enrollments was about 1.11 million, the admission rate is around 32.6%, which has a wide disparity compared with *gaokao*. If there was no enrollment expansion in 2021, the admission rate may drop to less than 30% according to the current growth rate of applicants. Undoubtedly, the number of test-takers has reached a record high of 3.77 million in 2021, with the enrollment rate at 26.8% over the past three years<sup>[5]</sup>. To some extent, it seems like the postgraduate entrance examination is more competitive than the college entrance examination, which causes severe involution among applicants.

Since postgraduate education has a trend to be mass education, it can be assumed that in the near future, the postgraduate entrance examination is more like an educational experience that must be passed after *gaokao*. The postgraduate students are at the starting point of employment, parents would prepare and struggle with the tuition fees so that their children do not lose at the starting line. However, the increasing tuition fees and shrinking funds from the government have made access to postgraduate education more difficult for rural and urban lower-income families; taking the standard tuition fees of postgraduate education at Tsinghua University as an example, in 2022, the tuition fees of all the academic degrees are 8,000 yuan per academic year, while the tuition fees for professional degrees are from 1,000–340,000 yuan per academic year in various fields of study; generally, the fees of professional degrees are more expensive than academic degrees. What's more, China is vigorously developing professional degree education, more students would prefer professional degree education, which increases the economic burden for some families with lower socioeconomic status and results in an increase in educational inequality.

### 3.2. Over-education and credential inflation

The increasing enrollment in postgraduate education means more and more postgraduates entering society after graduation in China. As the workforce becomes more educated, employment growth among highly educated workers is higher than average. If the supply of highly educated workers grows faster than demand, it could lead to an over-education of the workforce<sup>[6]</sup>. McGuinness<sup>[7]</sup> defined over-education as an individual acquiring a higher education level than his or her job requires. Basically, due to the expansion of education, the rapidly growing number of higher education graduates exceeds the actual needs of the labor market, graduates with higher education qualifications would face the dilemma of “graduation equals unemployment” or engaged in jobs with mismatched degrees, which means, more and more highly educated workers are doing jobs that less-educated workers can do, and their actual educational level exceeds the level required for the job. As a result, income has fallen and educational resources have been wasted. Just as Chevalier<sup>[8]</sup> mentioned, over-education is considered a waste of public resources.

Furthermore, some scholars argued that credential inflation may occur owing to over-education. Bills and Brown<sup>[9]</sup> claimed that credentialism has led to a trend of increasing educational demands on jobs, which is the so-called credential inflation, which is clearly associated with “over-education” or “over-qualification.” Credential inflation is an employer-led trend of increasing credential requirements for jobs due to the expansion of higher education<sup>[10]</sup>.

However, Li *et al.*<sup>[11]</sup> were optimistic about over-education in China and illustrated that the problem of over-education may be alleviated with continuing Chinese economic market reform. It is hard to define whether over-education would lead to credential inflation. The employment of graduates is a complex problem involving a wide range of aspects, which is related to social demand, the quality of postgraduate education, individual ability and development potential, etc. The value of postgraduate education is directly related to the strict control of training quality. In the era of universalization of higher education, social evaluation of talents should not only look at the diploma but must start from the ability and quality of talents themselves.

### 3.3. The increase in the employment crisis

Fewer graduates are entering society every year with the enrollment expansion, which can temporarily ease the employment pressure for most people. At the same time, some employees have the opportunity to further study for a master's degree and some positions are vacant, which relieves the employment pressure on graduates to a certain extent<sup>[12]</sup>. However, it does not mean relieving the employment pressure in the long run.

Under the expansion circumstance, increasing numbers of highly educated job seekers enter the job market after graduation, which will have an obvious influence on the supply and demand of society. This affects not only those who acquire higher education qualifications but also those who do not. When the quantity and growth of higher education graduates are small, it is easier for higher education applicants to find satisfactory and rewarding jobs. Yet, as higher education expands, recent graduate students may find it more troublesome to find satisfying jobs than those who enter the labor market earlier. In other words, it is much more difficult for graduates with higher education qualifications to get a job with the increasing numbers of graduates, and the job market becomes even more severe for those without higher education qualifications such as a bachelor's degree or even lower.

### **3.4. The concerns about the quality of education and talent cultivation**

The expansion has provided increasing numbers of high-score and skilled students for universities. Some stated that more students would diffuse the energy of the supervisors in universities and research institutes, which leads to the decreasing quality of education and students' academic performances.

Besides, it is "difficult to enter while easy to graduate" in China education, it is uncommon for students to fail to graduate from university, and the quality of education varies among graduates<sup>[13]</sup>.

As postgraduate education is more likely to be a mass education, the factors that affect students receiving postgraduate education are varied, some parents and students consider a master's degree as a necessary qualification and one should have this certificate if they do not want to fall behind. This neglects the main purpose of cultivating high-level and high-quality talents since student motivation is the factor leading to students' attitude towards the learning process and it is an important issue of academic performance in higher education, which means students who are more motivated perform better<sup>[14]</sup>.

## **4. Suggestions**

Thus, colleges and universities should ensure the quality of enrollment and pay attention to optimizing the enrollment structure, such as rational enrollment plans by region, institution, and degree type, as well as give priority to supporting the central and western regions and "double first-class" universities.

Furthermore, to ensure education quality, universities are allowed to improve the tutor system and guide the tutor to put efforts into guiding students. At the same time, the ongoing strict evaluation also should be well-implemented to ensure the continuous development of postgraduate education.

After enrollment expansion, graduate education should focus on the job market, closely combine with social needs, and improve the employment competitiveness of graduate students. It is also necessary to strengthen career planning guidance for graduate students to help them better adapt to society and realize their self-worth.

## **5. Conclusion**

Postgraduate education is important in cultivating high-quality talents in China. The quality of postgraduate education should become the top concern of education departments. The expansion of graduate enrollment is a complex systematic project, which requires making a scientific enrollment plan and allocating educational resources reasonably on the premise of ensuring the quality of education, so as to meet the needs of society for high-quality talents. While the expansion of graduate enrollment can lead to various problems, the challenges presented by the expansion may become new opportunities for higher education reform to better meet the

unique needs of a country's own society <sup>[15]</sup>. We still hold an optimistic and hopeful attitude to the future development of postgraduate education, believing that there is a more positive aspect that the expansion brought to us. Through continued reform and innovation, China's higher education is expected to achieve a higher level of development in the context of globalization, providing strong talent support for the country's sustainable development.

## Disclosure statement

The author declares no conflict of interest.

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