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# Dilemma and Countermeasures of Local Higher Education Investment in China Under Fiscal Decentralization

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**Abstract:** Under the fiscal decentralization system, China has implemented a central and provincial management system. Colleges and universities are divided into central and local colleges and universities. At present, local higher education is facing the dilemma of insufficient investment. The reasons are mainly reflected in three aspects: first, the inherent defects of China's fiscal decentralization system restrict the attention of local governments to the higher education needs of local residents; Second, the speed of local economic development can not keep up with the rapid development of the scale of local higher education, resulting in the lack of financial resources for local governments to invest in higher education; The third is the game of local governments in the direction of financial investment under the fiscal decentralization system, which leads to the reluctance of local governments to invest funds in the field of higher education. We believe that in order to alleviate the plight of insufficient investment in local higher education, we should promote the decentralization reform of higher education investment system; The local government should establish a scientific view of political achievements, improve the understanding of the importance of higher education, and speed up the financial allocation to local colleges and universities; Mobilize non-public resources to invest in local higher education and broaden the financing channels of local colleges and universities.

**Keywords:** Fiscal Decentralization, Higher Education, Local Government

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## 1. Introduction

In the world, whether developed or developing countries, the trend of fiscal decentralization is becoming more and more obvious. Fiscal decentralization means that the central government gives local governments some autonomy in debt arrangement, tax management and budget implementation, allowing them to independently determine the scale and structure of budget expenditure, so that local governments at the grass-roots level can freely choose the types of policies they need and actively participate in social management. The result is that local governments can provide more and better services. Tiebout put forward the famous idea of "voting with feet" [1], Masgrave believes that the central government should be responsible for the functions of macroeconomic stability and income redistribution, while the resource allocation policies should vary according to the preferences of local residents. In this regard, local governments are more suitable than the central government, which is more conducive

to the improvement of economic efficiency and social welfare level [2]. Oates' decentralization theorem holds that: compared with the central government, local governments are closer to their own public and better understand the utility and needs of voters in their jurisdiction. In other words [3], if the lower level government can provide the same public goods as the higher level government, the efficiency will be higher if the lower level government provides them. Since the 1980s, the federalism index, which indicates the degree of decentralization, has been growing in developed countries, developing countries and transition countries, resulting in the universal decentralization trend that the average degree of decentralization in the world rose from 1.03 in 1975 to 1.94 in 1995 [4], which promoted the development of the first generation of Political Decentralization theory. Luoweiqing compared the expenditure decentralization system of China with that of major countries in the world [5], and concluded that China is one of the countries with the highest degree of decentralization in terms of political expenditure in the world. Huangpeihua and Deepak [6] pointed out that China's

education expenditure is excessively decentralized. More than 90% of China's education expenditure is borne by local governments, which is very different from the international common decentralization model of education expenditure, which is likely to lead to a decline in the quality of education.

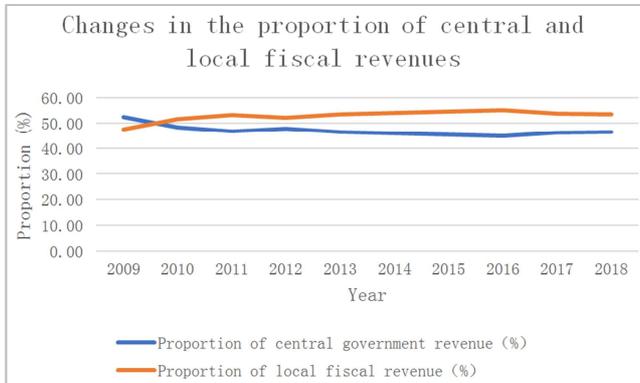


Figure 1. Changes in the proportion of central and local fiscal revenues.

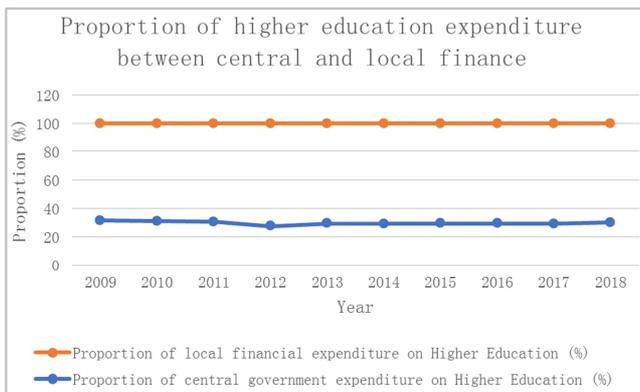


Figure 2. Changes in the proportion of central financial revenue and local financial revenue the proportion of higher education financial expenditure of central and local finance.

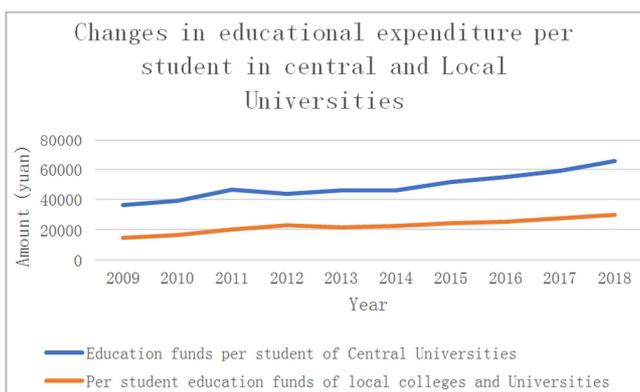


Figure 3. Changes in educational expenditure per student in central and Local Universities.

As for the investment mechanism of higher education, China currently implements a central and provincial management system [7]. By 2020, of the 2738 general colleges and universities in China, only 118 are directly under the central government, accounting for 4.31% of the total number of colleges and universities, and 2620 are under the

management of local governments, accounting for 95.69%. After China implemented the tax sharing reform in 1994, the proportion of central and local fiscal revenue has changed fundamentally. In 1993, the central fiscal revenue accounted for 22% of the national fiscal revenue, which was 45.92% in 2020. The central fiscal revenue is close to half of the national fiscal revenue [8]. Figure 1 shows the changes in the proportion of central fiscal revenue and local fiscal revenue from 2009 to 2018, figure 2 shows the proportion of central and local fiscal investment in general higher education expenditure from 2009 to 2018, and figure 3 shows the amount of education expenditure per student of central and local ordinary universities from 2009 to 2018. The data show that the scale of central fiscal revenue and local fiscal revenue is roughly the same; As for the expenditure of educational funds in the budget of colleges and universities, the proportion borne by the local finance is much higher than that borne by the central finance, and there is a significant upward trend; In the amount of education expenditure per student in ordinary colleges and universities, the amount of central colleges and universities is much higher than that of local colleges and universities.

## 2. Analysis on the Causes of Insufficient Investment in Local Higher Education Under Fiscal Decentralization

### 2.1. Inherent Defects of Fiscal Decentralization System

The research of modern fiscal theory and the practice of fiscal decentralization in the world show that fiscal decentralization system should become the most basic fiscal system, and its importance is mainly reflected in: first, local governments have a more sensitive grasp of the preferences of the public; Second, fiscal decentralization makes local governments more flexible in providing public goods; Third, local governments' competition in providing public goods can promote local governments to adopt more effective production technologies [9]; In addition, the fiscal decentralization system has the unique function of controlling the scale of the government, making the government closer to the people, realizing the good distribution of the city scale and affecting the environmental quality [10]. Since 1979, China's economic system reform has been carried out along the idea of gradual fiscal decentralization of tax reduction, decentralization and profit transfer. Especially since the reform of the tax sharing system began in 1994, the central government has continuously decentralized its powers and adjusted the financial relationship between the local government and the central government in order to stimulate the enthusiasm of local governments. The reform of the tax sharing system has had a great impact on China's overall development and promoted economic development. At the same time, it has also led to uneven supply quality of social public goods. As one of the public goods, higher education is also facing the problem of insufficient investment, especially in local higher

education. Compared with central universities, The widening gap of insufficient investment seriously restricts the development of local higher education. The inherent defects of China's current fiscal decentralization system are one of its important constraints.

Different from the fiscal decentralization based on the federal system in western countries, China's fiscal decentralization system is based on the central and superior Commission framework. To a certain extent, this system limits the attention of local governments to the needs of local residents. The long-term reform and practice have exposed the following inherent defects in the investment of China's fiscal decentralization in Higher Education: first, fiscal decentralization is regarded as a fiscal policy rather than an institutional arrangement, and the establishment of the central and local fiscal relations lacks the necessary legal basis, thus reflecting greater randomness in the implementation of specific policies; Second, the division of financial power is entirely in the hands of the central government, and many of the responsibilities that should be undertaken by the central government are actually undertaken by local governments; Third, the decentralization of expenditure responsibility has made the national policy lose the ability and effect of scale operation, and also made the local financial investment lose the necessary supervision. While the provincial government has handed over the responsibility for running some undergraduate colleges and junior colleges to the governments below the provincial level, it has not handed over the management power to the local and municipal governments; Fourth, fiscal decentralization tends to make the government prone to opportunistic tendencies. 3. It invests fiscal expenditure in areas that can significantly reflect its political achievements, thus ignoring or neglecting the investment in public goods.

### 2.2. The Contradiction Between the Rapid Expansion of the Scale of Local Higher Education and the Limited Financial Resources of Local Governments

In terms of the amount of investment, the absolute value of local higher education investment is increasing, while the educational expenditure within the average student budget is decreasing year by year. Behind the change of data is the further development of the popularization of higher education in China. Since the expansion of college enrollment in 1999, the scale of China's higher education has been expanding rapidly. In 2009, the total number of Chinese Ordinary Colleges and universities was 2305, and in 2018, the total number of Chinese Ordinary Colleges and universities was 2663, an increase of 358 in 10 years, with an overall growth rate of 15.53%; In 2009, the number of college students in China was 21.447 million. In 2018, the number of college students in China was 28.31 million, an increase of 6.863 million over the past 10 years, with an overall growth rate of 32.00%. Figure 4 and figure 5 respectively show the changes in the number of colleges and students in central and local ordinary colleges and universities from 2009 to 2018. The data show that since the

expansion of college enrollment in 1999, the number of Chinese colleges and universities and the number of students in school have achieved a leap forward growth, but the number of central colleges and universities after merger and adjustment has remained unchanged, and the growth of the number of students in central colleges and universities is relatively flat, It can be seen that the rapid expansion of the scale of China's higher education is mainly due to the rapid expansion of the scale of local higher education. Although China's overall and local GDP has been growing at a rate close to double digits in recent years, and the comprehensive national strength and local economic strength have been greatly enhanced, these are dwarfed by the rapid development of higher education. All these show that China has entered a further development period of the popularization of higher education, which is basically reflected in the development of local higher education. Under the decentralized system of higher education investment, the investment of local higher education is far from meeting the needs of higher education development.

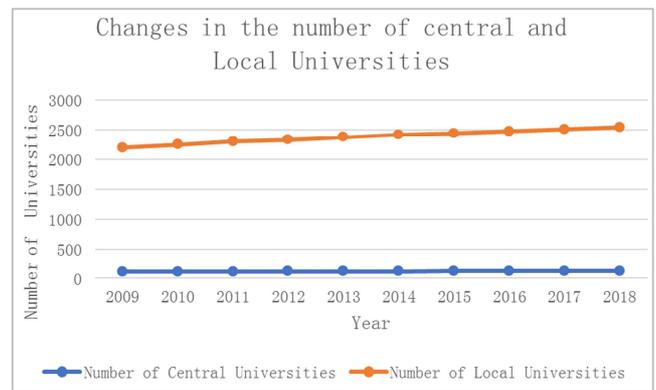


Figure 4. Changes in the number of central and Local Universities.

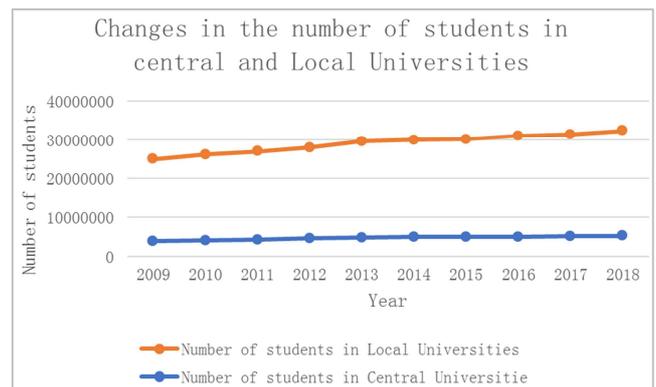


Figure 5. Changes in the number of students in central and Local Universities.

### 2.3. The Game of Fiscal Expenditure Direction of Local Government Under Fiscal Decentralization

Under China's fiscal decentralization system, the responsibility of public investment falls more on local governments. Different from the traditional decentralization theory and practice in the world, Chinese local governments

have an obvious bias in the arrangement of fiscal expenditure structure: high enthusiasm or even excessive supply in the investment of material capital, while lack of motivation and insufficient supply in human capital and public services [11]. Since the reform and opening up, the state has implemented the basic policy of taking economic construction as the center for a long time. This not only emphasizes the economic responsibility of local governments, but also becomes the main evaluation basis and performance situation of local government performance. Local government performance is the unity of work performance, direct achievements and final benefits of local governments at different levels to achieve their goals and meet the needs of social public goods. Each local government will take how to effectively improve government performance as its main task during its term of office, and strive to achieve the best political performance. Therefore, based on the principle of maximizing benefits, there is no doubt that whoever has the best benefits and can best reflect the value of political achievements will get more funds. As a result, the investment behavior of local governments tends to be more "rational" [12]. This rationality of pursuing the maximization of economic interests often leads to the focus of government investment on economic construction and the formation of a "GDP only" view of political achievements [13], which seriously restricts the development of local higher education and makes the mechanism of "voting with feet" and "voting with hands" lose its due effect: as higher education is under the strict control of the central government, students are basically unable to If the learning environment is poor and the application is transferred to other regions, the "voting with feet" mechanism in the mainstream Western fiscal decentralization theory will lose its effectiveness [14]; At the same time, the central government is responsible for assessing the promotion of local officials [15]. Local residents have no decision-making power in the process of official promotion, and the mechanism of "voting by hand" is also difficult to play a role in China. Therefore, fiscal decentralization to increase public expenditure on higher education is not necessarily established [16]. Because the investment in higher education is not only long-term, but also delayed, most of which are contrary to the investment philosophy of local governments previously analyzed [17]. The local government's investment in higher education often does not get immediate benefits during their tenure, which can not well reflect the government performance, and the educated people only account for a small part of the total population in the region. Then the "rational" government will make the choice of reducing or not investing in higher education on the basis of weighing the costs and benefits [18].

### 3. Conclusions and Countermeasures

#### 3.1. Promote the Decentralization Reform of Higher Education Investment System

First, it is necessary to straighten out the relationship between the power and responsibility of the government in the

management of higher education. In the decentralization reform of higher education, it is necessary to make the decentralization of school running responsibility and management power synchronous. First of all, in terms of the power responsibility relationship between the central government and local governments, the central government has delegated the responsibility for running schools to the local governments, so that they can serve the regional economic development. At the same time, their decision-making power and management power should also be delegated to the local governments. At the same time, if the central government has delegated the management power of schools to the local governments, the corresponding school running funds should be borne by the local governments. Secondly, within the local government, the relationship between the management rights and responsibilities of some colleges and universities at the provincial and municipal levels should also be matched. Thirdly, for the co construction colleges and universities that still exist at present, such as the co construction between the central and local governments, and the co construction between provinces and cities, the management power and school running responsibility should also be clear.

Second, an effective transfer payment system should be established to solve the problem of unbalanced investment in local higher education. In accordance with the principle of "eating from different stoves", local governments are responsible for the funds of their local colleges and universities. Due to the differences in local financial resources, there are also great differences in the educational investment of local colleges and Universities under the jurisdiction of provinces and cities. Due to sufficient funds in coastal and other economically developed areas, local colleges and universities have relatively sufficient funds, while the central and western provinces and cities have relatively weak financial resources, so they have very tight investment in education funds for the development of local colleges and universities. For example, in 2006, the average student budget of local colleges and universities in Beijing was 18228 yuan, 8.2 times the 2219 yuan in Jiangxi Province. Obviously, this kind of expenditure structure of financial education funds can not meet the development of local colleges and universities, but also cause the inequality of development among colleges and universities. In this case, we must coordinate and solve the unbalanced development of higher education among provinces and cities, especially the problems of enrollment and fund sharing. At the same time, the central government should make financial transfer payments to poor areas with underdeveloped higher education, and help economically underdeveloped provinces and cities develop higher education.

Third, improve the decentralization system of higher education investment. At present, there are 111 Central Universities in China. These universities have concentrated China's high-quality higher education resources, resulting in many consequences. First, the gap in the level of economic development between regions has been widened. The central

colleges and universities have gathered high-quality students from all over the country and obtained a favorable training environment. Most of these graduates are employed in economically developed areas and serve the economic and social development of economically developed areas. Secondly, it reduces the enthusiasm of local governments in economically developed areas to invest in higher education. For economically developed regions, on the one hand, there are many central universities with the support of the central government. On the other hand, due to the sufficient talent attraction, they can smoothly obtain high-quality talents through talent flow. On the contrary, their efforts in higher education investment will be reduced. Thirdly, the central government's excessive investment in higher education has reduced the central government's investment in compulsory education and basic education, and increased the investment pressure of local governments. Therefore, under the current decentralization system of higher education, we should reduce the number of Central Universities and allocate some funds to support the development of local higher education, national compulsory education and basic education.

### ***3.2. Establish a Scientific View of Political Achievements***

As mentioned above, under the fiscal decentralization system, local governments will have a "rational" balance on the direction of financial investment. The investment in higher education cannot reflect the achievements of local officials in a short time. At the same time, due to the cross regional flow of talents, local governments have the opportunity to seek suitable talents through the talent market, so as to "free ride" in the cultivation of human resources and are unwilling to increase investment in education. Therefore, it is necessary for local governments to establish a scientific view of political achievements, establish the understanding of the development of higher education on the basis of the national development strategy, and speed up the support for local higher education. According to the 5th national census, the per capita length of education of China's large labor force is only 8 years, which is 13.4 years lower than that of the United States and 11.5 years lower than that of South Korea. Among the labor force, 18% have a high school education or above, and 4.7% have a college education or above. In the same period, among the labor forces of nearly 30 economically developed countries in the world, more than 80% had a high school education and 25% had a college education. The overall low quality of Chinese workers has become a major factor seriously restricting China's economic development and international competitiveness. In today's world, many countries have made strict regulations on the proportion of national financial education expenditure in the GNP. For example, Article 127 of the amendment to the U.S. Constitution stipulates that the financial education expenditure of governments at all levels in the United States shall not be less than 5% of the GNP of that year. Under the current background of popular education in China, higher education is a quasi public product, and the state is the biggest beneficiary of the development of higher education.

The corresponding level of government should become the burden of the cost of local higher education, and the investment of local governments in higher education is still the main source of local higher education funds. At the same time, local governments should further explore and improve the existing financial allocation mechanism for higher education, improve the utilization efficiency of existing funds, introduce the performance budget management mechanism, establish a whole process monitoring system in advance, during and after the event, appropriately introduce and cultivate intermediary evaluation agencies, evaluate the efficiency of Universities' utilization of funds and their contribution to local and national economic and social development, and take this as the basis for government capital investment.

### ***3.3. Broaden the Financing Channels of Local Universities***

In the context of mass higher education, although the economic strength of all parts of China has increased significantly in recent years, compared with the development scale of local higher education, the economic development is still relatively lagging behind. On the one hand, China's investment in education still can not meet the target of accounting for 4% of the total GDP, on the other hand, the speed of economic development can not keep up with the pace of the development of higher education, Local financial input alone cannot meet the development needs of local higher education. "In any country, higher education is a specialized and high-cost activity". Even the most developed countries in the world can not fundamentally solve the problem of higher education funding shortage [8]. Therefore, in order to fundamentally alleviate the bottleneck of insufficient financial education funds for the further development of local higher education, we need to use system reform and mechanism innovation to release the huge energy of the resource market, and use non-traditional financing to break through the restriction of investment bottleneck. Attracting non-public resources into higher education, or directly running higher education by private capital, is one of the magic weapons for the success of higher education in developed countries in the world. Colleges and universities in western countries have the tradition and practice of successfully running schools by relying on various donations. Among them, 30% of the investment in American higher education is donated by various social forces. Moreover, the American government has also actively introduced various preferential policies to encourage donation, such as tax exemption. It is under the impetus of this policy that many famous universities in the United States have established their own professional fund-raising institutions around the world.

China now has the economic foundation to release and raise non-public resources for local higher education. In 2020, the balance of personal savings of Chinese residents was close to 227.21 trillion yuan, which became the potential foundation for non-public resources to invest in higher education. In addition, the polarization of income gap at all levels of Chinese

society has been quite serious. According to the latest global wealth report jointly released by Merrill Lynch and Capgemini consulting in June 2010, the total number of wealthy people in China increased by 30% in 2009, becoming one of the countries with the fastest growth in wealth, And led Asia to surpass Europe in terms of total wealth. The report classified people with net assets (excluding major real estate) worth more than US \$1million as rich. According to this standard, the total number of rich people in China reached 477000 in 2009, an increase of 31% over 2008, continuing to rank fourth in the world, and the distance from Britain, the fifth. In 2008, the number of wealthy people in China exceeded that in the UK for the first time against the background of the great decline of global wealth [9]. Moreover, with the development of the economy, the social wealth is still continuously concentrated to a small number of wealthy classes. Therefore, as long as governments at all levels can change their ideas, modify outdated legal provisions, vigorously introduce policies, broaden financing channels, improve market access, allow non common resources to invest in education, and take obtaining a reasonable return on investment as the guide, it will greatly promote the further development of local higher education.

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