

The Impact of National Funding for The Construction Of "Double First Class" Universities on University Development-- Taking Two Universities in Hunan as Examples

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Abstract. In recent years, widespread attention has been given by scholars both within and outside the country on the issue of building "Double First Class" universities. However, relatively few studies have been done on the relevant policies of "Double First Class", especially fiscal policy. This article conducts a comparative study using X University and C University in Hunan province as cases. Firstly, the overall financial income, expenses, and distribution of the two universities are sorted out, and then their construction effects are compared. It is analyzed that the increase in financial investment has a positive effect on teachers' structure, scientific research strength, innovation ability, disciplinary development, and talent cultivation, and the reasonable investment and scientific allocation of funds also have an important impact on the building of academic institutions. Based on this, this article proposes the following suggestions: The country needs to promote dynamic expansion of the "Double First Class" initiative. The government should continue to increase funding for "Double First Class" universities, expand financing channels, and adjust policies appropriately based on regional differences. School should optimize their funding allocation structure, break down resource barriers, and establish a financial transparency system.

Keywords: "Double First Class" university; educational finance; financial support policies.

1. Introduction

"Revitalizing the country through science and education and strengthening the country through talents" is the fundamental policy that China has consistently followed. The development of higher education can provide an important talent guarantee for national construction, and is an important way to improve China's core competitiveness and strengthen education. "Double First Class" is another important strategic decision in the field of higher education in China, following the "211 Project" and "985 Project". To adapt to the continuous development and changes of the country and education, higher education strategies are also constantly changing, promoting innovation in strategy and better catering to the current updated development trends. Wang believed that the construction of "Double First Class" will contribute to the Chinese dream's fulfillment [1].

The scale of higher education is gradually expanding, and the ratio of GDP to fiscal education funding is constantly increasing, reaching 4% in 2012 and remaining it up. However, this ratio is currently insufficient to meet the nation's and society's educational needs, and there is still a significant gap compared to the level of developed countries. Lulu Qian; Yanyan Wang proposed suggestions for "Double First Class" building with Chinese characteristics, including improving teacher quality, increasing investment in discipline construction, and focusing on the construction of characteristic disciplines, by summarizing the successful experience of superior discipline design abroad [2].

Studying the impact of financial investment on the construction of "Double First Class" universities has important theoretical value and practical significance. Firstly, this study can visualize the effectiveness of the "Double First Class" fiscal strategy, greatly enriching the theoretical research materials in the realm of university education. Secondly, it can provide schools with more sensible, efficient, scientific, and practical ways to distribute funds and make utilization strategies, and offer guidance plans that are practical and achievable. At the same time, by the general course of the country's development, it provides a direction for the government to improve and perfect policies,

and provides decision-making reference to build "Double First Class" universities. This article will use case analysis to study the impact of the financial assistance for university development under the "Double First Class" strategy.

2. The Function and Significance of Funding in the Development of the "Double First Class" Initiative

2.1. The Importance of Fiscal Policy for "Double First Class" Establishment

Not only has the funding for "Double First Class" greatly advanced the growth of higher education in China, but also assisted the development of the society. Zhang Hao and Hu Shu pointed out that with the support of fiscal policies, higher education has achieved many accomplishments, including scale, quality, and social contribution [3]. The "Double First Class" fiscal policy is in line with the characteristics of the times and meets the needs of current modernization development, serving the strategic needs of the country. The "Double First Class" fiscal policy focuses on supporting key fields such as artificial intelligence and quantum technology through targeted investment in universities with well-developed disciplines. It assists universities in establishing national research platforms, such as national laboratories, and carrying out national key research and development projects. This way, the advancement of science and technology can be accelerated by financial investment.

Under the requirements of "Education Modernization 2035", fiscal policy still plays an essential role in the development of higher education and plays a critical role. The evolution of higher education continues to be significantly influenced by budgetary policy. Financial investment supports the introduction of high-level talent, and universities support the goal of building the nation with talents by fostering discipline construction and talent development through scientific research and the introduction of exceptional teachers. At the same time, "Double First Class" funding is also a method for China to narrow the gap with the world's top universities. The amount of money invested in higher education in China remains much lower than that of OECD nations. Therefore, it is necessary to gradually increase the level of investment, improve the efficiency of fund utilization, and establish a scientific evaluation mechanism [3].

2.2. The Effect of Fiscal Policy on School Construction under the Background of the "Double First Class" Policy

Firstly, the financial policies of "Double First Class" universities have a positive impact on their research performance. For example, Weng concluded through 10 years of data research that research capabilities are stronger at Double First Class universities. The research output of "Double First Class" universities is much superior to that of non-Double First-Class universities, as shown by the SFA method; despite this, research efficiency is not significantly different. Research performance is strongly linked to the student-teacher ratio and the proportion of fiscal revenue in total revenue [4]. The performance of technological innovation was proposed by Chen and Shu to be highly correlated with the extent of industry-university research collaboration, government relevance, and the quality and corresponding framework of scientific research input. An appropriate resource distribution framework, a large percentage of full-time instructors with senior professional titles, and government backing are among these key characteristics that have a major beneficial influence [5].

Secondly, the influence of Chinese universities is positively impacted by the "Double First Class" program. Propensity score matching (PSM-DID) technique is used by Shengbo Liu, Xiaoting Luo and Miaomiao Liu to measure the policy's academic impact and pointed out that the implementation of the "Double First Class" policy has a significant positive impact on the international academic influence of Chinese universities, but this promoting effect is gradually weakening [6].

3. Case Analysis

After the central government introduced the "Double First Class" university construction policy, the Hunan Provincial Government actively responded to the national call, promoted the development of "Double First Class" universities, and introduced a policy that is in line with the characteristics of the province, providing a guiding document and plan for the construction of top-notch universities and disciplines in the province. This article selects two universities in Hunan as case studies to compare and examine how the "Double First Class" fiscal policy and its distribution affect the building of schools.

3.1. Development Effectiveness Analysis

In terms of school soft power, firstly, the size and quality of the teaching staff at X University are growing simultaneously. As the total number of teachers increases, the supporting and leading role of high-level talents is strengthened. The number of educators who have senior professional designations or doctoral degrees and those with study abroad experience is gradually increasing, and the teacher structure is constantly improving and optimizing. Assisting in the implementation of the school's talent introduction plan, attracting more outstanding teachers, and possessing stronger fiscal capabilities to retain them, is also one of the benefits brought to universities by the fiscal policy aimed at the "Double First Class" construction. In contrast, although C University has a larger total number of teachers, its quality is far inferior to that of X University. In its annual budget, it stated that there is still a shortage of funds in talent introduction.

Secondly, in terms of overall discipline construction, there is still a certain gap between C University and X University, especially in the establishment of top-tier disciplines that have not yet surpassed 0. There is still a gap in the total number of cultivating top-notch disciplines and key disciplines in the 14th Five-Year Plan between the two universities. The number of doctoral programs, master's programs in first-level disciplines, and postdoctoral research stations is less than that of X University.

Thirdly, financial investment support indirectly changes students' futures and promotes regional economic development. From the standpoint of students' personal growth, the monthly income of graduates from X University is showing a continuous upward trend. Since the school entered the national "Double First Class" construction university, a total of 288 employers from the World Top 500 companies and listed companies have come to the school for recruitment in 2022, and a total of 190 employers in 2021, with a comparative increase of 51% during the period [7]. Typical employment situation of employers in 2023 includes World Top 500 companies such as China Unicom, China Construction Bank, BYD, China Telecom, Sinopec, Huawei, and so on. At the same time, the proportion of "Double First Class" in the type of further education in 2022 has increased significantly, reflecting a significant improvement in students' learning abilities. From the social perspective, the flow of graduates is mainly concentrated in Hunan Province, providing an abundance of high-quality talents for the local area and helping the rise of the central region.

Fourthly, in recent years, X University has increased its authorized patents, strengthened its innovation capabilities, and made increasingly significant contributions to society. However, the number of patents at C University is far less than that of X University, which also reflects the impact of investment on it.

In terms of hardware infrastructure investment, the asset value of X University's teaching and research internship instruments and equipment, as well as the number of books in the school, have been increasingly year by year, indicating that the school is making a gradual improvement on its educational conditions and providing better equipment support for teachers and students, which is more capable of conducting scientific research, teaching, and other activities.

3.2. Analysis of the Causes for Investing and Disbursing Funds

3.2.1 Overall investment from the country and province

After being chosen to be a 'Double First Class' university in 2022, X University began to receive government budget financial appropriations, while C University has remained at 0 [8]. This is because X University is a local university included in the scope of top-notch university and first-class discipline construction, and the funds required for such universities are coordinated and arranged by local finance, with central finance's guidance and support. The development of "Double First Class" universities is facilitated by local governments in various ways., including policies, funding, and resources. This is a part of the government's special financing for building "Double First Class" colleges, with the goal of actively promoting the construction of high-level universities and advantageous characteristic disciplines in the local area, guiding the mutual promotion and development of "Double First Class" construction universities and local area's high-level universities.

X University has consistently received more revenue from the general public budget than C University, and the gap was narrowed in 2020. The sum of 7819.114 million yuan was received by X University, while C University received 707.7656 million yuan [9,10]. But after being selected as a "Double First Class" university, the difference between it and C University continues to widen. In 2022, X University received 847. 0073 million yuan, while C University only received 666. 8567 million yuan [8,11]. C University's general public budget financial allocation revenue fluctuates constantly, with a relatively small growth rate. The government's funding for non-Double First Class" universities has not increased significantly. This reflects the principle of "supporting the strong and the excellent" in the policy, increasing support for schools with good construction effects and significant development achievements, and increasing funding, resources, policies and other support for the establishment of top-notch schools and disciplines. Non "Double First Class" schools have more limited development compared to "Double First Class" universities, so that schools must find ways to obtain more development funds through multiple channels on their own.

The proportion of the general public budget fiscal appropriations to total revenue at X University has always been higher than that at C University. In 2020, X University accounted for 60. 01% and C University accounted for 51.33% [9,10]. In 2022, X University accounted for 61. 38%, while C University accounted for 40.64% [8,11]. In 2022 and 2023, X University also received government budget fiscal appropriations, and the gap between the proportion of fiscal appropriations in X University's total revenue and that of C University is even more pronounced. C University relies less on financial appropriations and mainly relies on its operations to obtain funds. The income structure, mainly funded by the government, has stronger stability, focuses more on academic research, and undertakes more public service functions. This forms a typical comparison between the two models of "government blood transfusion" and "market hematopoiesis".

3.2.2 School financial allocation

The total amount and proportion of science and technology expenditures at X University are higher than those at C University, indicating a higher investment in scientific research. It can be seen that the two schools have chosen different strategies in fund allocation, which will result in different construction results. X University places greater emphasis on the development of scientific research and is willing to invest more funds in it. And C University spends more on education, social security, and employment expenses than X University.

Both schools have invested in infrastructure construction, and the difference is not significant. Both schools are continuously building and renovating teaching buildings, laboratories, dormitories, and other facilities to enhance their hardware facilities and soft power, to support high-quality teaching and research, and provide better living, learning, and working environments for students and teachers. In comparison, X University focuses more on the discipline characteristic of the Mao Zedong Thought Research Building. Both schools have stated in their annual financial statements that the contradiction between their development needs and insufficient funding still exists, and there is a serious funding gap in campus construction.

4. Suggestion

4.1. Improve Top-Level Design

The country should combine the current development status with the strategy known as "building a strong education country", continually broadening the "Double First Class" construction's scope, allowing more disciplines and schools to develop [12]. Expand the coverage of disciplines, add quotas for emerging interdisciplinary fields, and offer assistance for the development of integrated disciplines that adapt to the trend of the times [13]. Secondly, implement regional compensation plans and implement evaluation criteria that are different for universities in provinces with limited development, and make sure to include a school from a province where there are no "Double First Class" universities in the sequence.

At the same time, it is necessary to optimize its dynamic access mechanism and introduce third-party monitoring agencies. Entrust professional institutions to track universities, with a focus on discipline construction and fund utilization efficiency. Improve its evaluation indicators and continuous evaluation system to ensure strict entry and exit. It can also set up a waiting list and provide certain financial support to schools with development potential to transition and stimulate competitive vitality.

4.2. Strengthen Financial Security

Firstly, gradually expand funding for higher education, especially for those "Double First Class" colleges, raise the benchmark for financial investment in university education and the amount of special funds, and support their development with financial investment. Expand funding sources and encourage social capital participation. Improve donation incentive policies, for example, by implementing tax incentives for corporate donations to those universities.

Secondly, formulate long-term and short-term education investment plans to maximize the distribution of resources for higher education and improve personnel allocation efficiency [12]. At the same time, investment policies can be oriented towards disciplines rather than universities to support the development of disciplinary construction [1].

Thirdly, considering the differences between regions, the government can adjust its policies accordingly to improve overall allocation efficiency and effectiveness [12].

4.3. Deepen Internal Reforms

Firstly, school should continuously optimize their resource allocation structure, establish and improve coordination mechanisms for resource allocation, allocate funds reasonably, optimize expenditure structures, determine priority levels for resource allocation, tilt towards core areas, and improve the effectiveness of university construction. At the same time, infrastructure construction is also an indispensable part of the development of university construction [12]. Schools need to coordinate the relationship between software construction and hardware facilities [14]. Continuously improve the hardware conditions and campus environment, and provide basic guarantees for the development of the school and students. Secondly, promote inter-agency cooperation and joint construction, break down resource barriers [15]. At the same time, the school should implement a disclosure system of finance, and accept supervision from all teachers and students in the school.

5. Conclusion

This article analyzes the effectiveness of "Double First Class" universities' financial policies and draws the following conclusions: Firstly, the government's fiscal policy towards "Double First Class" has indeed promoted the development of universities. Secondly, financial support for "Double First Class" universities can enable them to attract and retain more high-quality teachers with more attractive conditions and welfare guarantees. Thirdly, "Double First Class" universities can obtain more funds to purchase more and higher-quality equipment, providing strong support for teaching

and research. Fourthly, the special funds are invested in cultivating innovative talents and empowering the construction of key disciplines. Fifth, the investment will ultimately be transformed into output to society, cultivating and exporting high-quality talents to support regional economic development. Further in-depth research is needed in the future to integrate long-term research data and explore a more scientific and reasonable development model for higher education.

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