The Challenges and Improvement Strategies of Reasonable Allocation of Education Funding for Provincial Universities in Hubei Province--Taking H University as An Example

Yineng Du

Normal School, Hubei University, Wuhan, Hubei, China

202231126011030@stu.hubu.edu.cn

Abstract. Rational allocation of higher education funding is a key issue to promote the high-quality development of higher education. However, due to the contradiction between local financial constraints and the needs of discipline development, the difficulties in resource allocation faced by provincial universities are more prominent. Taking H University as a case study, this paper analyzes the current situation and obstacles to the allocation and improvement of education funds in provincial universities. This paper proposes a composite allocation model of "dynamic adjustment of basic guarantee performance incentives" to explore a new path for the development of university education funds. It emphasizes optimizing the discipline funding structure through differentiation coefficient design, introducing multidimensional performance evaluation indicators, and establishing a periodic evaluation and regional economic linkage mechanism. The research focuses on provincial universities, aiming to construct a dynamic funding framework that balances fairness and efficiency, providing a theoretical basis and a practical path for solving the problem of resource allocation in local universities, and providing reference value for deepening higher education financial reform and promoting fair allocation of educational resources.

Keywords: Education funding; resource allocation; provincial universities; performance evaluation; dynamic adjustment.

1. Introduction

1.1. Research Background

With the promotion of China's "Double First Class" construction and the strategy of building a strong education country, higher education has become the core support of the national innovation system. The "China Education Modernization 2035" clearly proposes the requirement of optimizing the allocation of educational resources. As the economic foundation for the development of universities, the rationality of education funding allocation directly affects the quality of university education and social service capabilities. As a major education province in central China, Hubei Province ranks among the top in terms of higher education scale in the country, but the problem of uneven distribution of resources among universities within the province is prominent [1]. Most provincial universities in Hubei Province are facing challenges such as a large funding gap and insufficient matching between discipline construction and local demand in the "Double First Class" competition, reflecting the urgency of reforming the education funding mechanism.

Under the background of fiscal decentralization between the central and local governments, there is a significant difference in funding between government affiliated universities and provincial affiliated universities. Provincial universities in Hubei Province mainly rely on local financial support within the province, but educational resources in Hubei Province are concentrated in affiliated universities such as Wuhan University and Huazhong University of Science and Technology, and provincial universities have long been marginalized. Therefore, most provincial universities in Hubei are often limited in the development of disciplines and talent introduction due to fixed funding allocation, making it difficult to achieve differentiated development. In this situation, such universities need to improve the allocation and proportion of funding to achieve higher efficiency.

1.2. Research Significance

This article focuses on the financial allocation and fund distribution issues of provincial universities in Hubei Province. Taking H University as an example, by analyzing its funding structure and efficiency, targeted improvement strategies are proposed to help it break through development bottlenecks and enhance its competitiveness among provincial universities. On this basis, explore a scalable resource allocation model for provincial universities in the central region, providing a practical path for solving the development dilemma of "double non" universities and promoting the balance of higher education.

2. Current Situation of Financial Investment in Education in Provincial Universities

2.1. Direction and Policy Suggestions for the "Double First Class" Construction of Provincial Universities

In practice, although various levels of fiscal and tax policies have achieved phased achievements, they still face practical challenges such as a small fiscal expenditure scale, low expenditure efficiency, and weak tax policy incentives. To solve such problems, universities need to start from two aspects: strengthening the development of disciplinary characteristics and optimizing resource allocation.

2.1.1 Each university needs to strengthen the development of disciplinary characteristics

According to the "Implementation Measures for Coordinating the Construction of World Class Universities and First-Class Disciplines" and other documents, the "Double First Class" construction of provincial universities should focus on advantageous disciplines and serve national strategies and local industrial needs. This requires universities to focus on cultivating characteristic disciplines and increasing their funding ratio.

2.1.2 Resource allocation in various universities should follow a performance oriented approach

The financial allocation of universities is linked to the effectiveness of discipline construction, and the weight of indicators such as talent cultivation and scientific research achievement transformation is strengthened ("Evaluation Method for the Effectiveness of Double First-Class Construction (Trial)"). It emphasizes that universities should allocate financial resources reasonably based on performance, such as dynamically adjusting the allocation amount through performance evaluation results, to motivate universities to improve their educational efficiency [2].

2.2. Financial Allocation Trends of Provincial Universities in Hubei Province

Overall, the funding for provincial universities in Hubei Province has been increasing year by year. So far, no "double non" first-tier university has successfully built a "double first-class" model in Hubei Province. Hubei Province has a relatively balanced support for provincial colleges and universities, and emphasizes "comprehensive" education funding without favoring any specific university. This gives provincial colleges and universities hope for promotion to the "double first-class" model.

Due to the construction of "Double First Class" universities, various provincial universities in Hubei Province have invested heavily in disciplines and infrastructure in recent years, actively responding to the education policies of the central and provincial governments. However, various schools have not shown significant results in the construction of the "Double First Class" initiative, which proves that there are still many problems with resource allocation in these schools.

2.3. Difficulties in Financial Allocation for Provincial Universities

Firstly, the current funding allocation mechanism for provincial universities in Hubei Province is relatively rigid, and the traditional factor methods used (such as subject size and number of teachers and students) are difficult to reflect the effectiveness of subject construction, making it difficult to flexibly allocate funds to the most appropriate areas. To improve the overall problem of funding structure, it needs to start with similar structural rigidity issues [3].

Furthermore, university funding comes with performance pressure and restrictions on the use of funds. Financial funding must strictly comply with the regulatory requirements of "central direct funds", and there are high requirements for fund decomposition and project execution timeliness. Most provincial universities in Hubei Province face certain performance pressures due to insufficient reserve projects, resulting in low efficiency in the use of funds.

Finally, the local supporting capacity within the province is insufficient, and some provincial universities in Hubei Province rely on central transfer payments, with limited local financial support. If they apply for "Double First Class" special funds, they need to obtain central funds through the "Reform and Development Subsidy Project" and cannot directly obtain them through local appropriations, making the process more complicated.

3. Case Study

Among numerous universities, H University, as a well-established "double non" provincial institution in Hubei Province, has a typical representative financial allocation structure. The following is an analysis of the overall finances of H University, aimed at reflecting common issues in the financial construction of provincial universities.

3.1. Financial Analysis of H University

In the past five years (2020-2024), the financial situation in Hubei Province has been stable, and the financial allocation to higher education has also shown a stable and increasing trend year by year. In this situation, the income and expenditure of H University also show a trend of increasing year by year, and the two maintain synchronous growth, as shown in Table 1. This indicates that the school's financial situation is relatively stable, and the income and expenditure are balanced.

Table 1. Statistical table of H University's income and expenditure budget and final accounts for the past five years.

Year	Total revenue budget (10000 yuan)	Total revenue settlement amount (10000 yuan)	Total expenditure budget (10000 yuan)	Total expenditure settlement amount (10000 yuan)
2020	102,453.11	135,822.16	102453.11	135,822.16
2021	109,704.00	152,714.40	109,704.00	152,714.40
2022	106,791.71	142,950.83	106,791.71	142,950.83
2023	139,078.13	177,943.75	139,078.13	177,943.75
2024	161,501.64		161,501.64	

Similar to other provincial universities, H University's income mainly comes from general public budget appropriations, government fund budget appropriations, operating income, financial special account management fund income, and other income. Among them, general public budget appropriations are the main source of income, accounting for a large proportion of total revenue and increasing year by year. At the same time, career income is also showing an increasing trend, but other income fluctuates greatly in the overall trend of growth.

The expenses of H University are mainly used for education expenses, social security and employment expenses, science and technology expenses, housing security expenses, etc. Education expenditure is the largest expenditure item, accounting for the majority of total expenditure, and it is also increasing year by year. At the same time, social security and employment expenditures are also showing an increasing trend, but data shows that their science and technology expenditures will significantly decrease in the 2024 budget.

In terms of balance, H University's balance situation is relatively stable, with a relatively small balance amount, indicating that H University's income and expenditure are balanced. However, looking at the overall situation, it is found that the proportion of personnel expenditure is too high, which has squeezed out the investment in discipline construction and infrastructure [1].

3.2. Analysis of Funding Difficulties for H University

H University has gained high recognition for its outstanding performance in discipline construction, faculty strength, and scientific research, and is in a leading position among many "double non" first-tier universities in Hubei Province. However, H University still faces problems such as funding shortage and low efficiency in fund allocation during the construction of the "Double First Class" initiative. In this case, this article attempts to draw on the good practices of other similar universities and provide ideas for them.

H University and J University are both "double non" first-tier universities in the province, and are also in the process of building "double first-class" universities. However, J University has much higher education funding than H University, as shown in Table 2.

Table 2. Table of funding statistics for J University and H University in the past five years.

Year	J University	H University
2021	1.457 billion yuan	1.097 billion yuan
2022	2.519 billion yuan	1.527 billion yuan
2023	2.402 billion yuan	1.779 billion yuan
2024	2.604 billion yuan	1.615 billion yuan
2025	3.221 billion yuan	1.90 billion yuan

Through analysis, it can be found that most provincial universities in Hubei Province, represented by H University, are facing the following financial difficulties

3.2.1 Restricted funding sources for provincial universities

The funding sources of most provincial universities in Hubei Province are the same as those of H University. As a provincial university, H University mainly relies on financial appropriations from Hubei Province. However, the total amount of higher education funding in Hubei Province is limited and needs to be shared among multiple provincial universities (such as Hubei University of Technology, Wuhan University of Science and Technology, etc.), resulting in relatively less funding received by individual universities. In addition, in recent years, Hubei Province has given priority to supporting the construction of "Double First Class" universities, but there have been no selected provincial universities, further weakening the motivation for centralized investment of funds.

As a comparison, J University is positioned as a "jointly built by provinces and cities, with the city as the main" university, directly supported by Wuhan's key financial resources. Wuhan, as the provincial capital city, has strong economic strength and invests far more in local universities than provincial finance supports provincial universities. Wuhan has 64% of the universities in the province, but all 7 "Double First Class" universities are affiliated with the government. To make up for the weakness of provincial universities, Wuhan has chosen to give priority to supporting J University, which is regarded as a benchmark for the development of local higher education and positioned as a "local university breakthrough demonstration school". It plans to promote its impact on "double first-class" through high investment, so it continues to increase investment in infrastructure construction (such as the State Key Laboratory), the introduction of full-time academicians and other aspects.

3.2.2 The grim development

Among the provincial universities in Hubei Province, there are no universities with particularly outstanding disciplinary progress. As a top-ranked university in the province, H University did not have any A-level disciplines in the fourth round of discipline evaluation, and only some disciplines (such as materials science and biotechnology) entered the provincial key construction plan. However, the development of these disciplines lacks support from national platforms. Although the gap between its 2025 budget and J University has narrowed, in the long run, H University's disciplinary development is at a bottleneck, and its lack of competitiveness in disciplines makes it difficult for it to obtain more special funding.

On the other hand, J University, as a "double non" university with "full-time academician", "State Key Laboratory" and "doctoral program" at the same time, its chemical engineering and technology discipline was rated as Grade C in the fourth round of discipline evaluation. Although it is not ranked high, it has accelerated its layout in material science, intelligent manufacturing and other fields in recent years with the support of municipal funds. Through its advantages as a scientific research platform, it attracts high-level talent. The demand for scientific research funds is large, but the supply is also sufficient.

3.2.3 Delayed performance reform in provincial universities

The performance reform of most provincial universities in Hubei Province is relatively lagging behind. Although H University implements undergraduate teaching performance rewards (such as rewarding teaching achievements and provincial-level renowned teacher studios), its emphasis on performance reform is not high, and its performance management mechanism is not fully linked to disciplinary breakthroughs. The transparency of fund allocation and incentive effects is relatively weak.

On the contrary, J University adheres to the performance evaluation-driven mechanism of "comprehensive performance evaluation for high-quality development", linking the use of funds with discipline construction and scientific research achievements. For example, in 2024, the school held a special meeting, requiring performance evaluation as the "baton" to promote the integration of "Double First Class" construction and fund allocation, and improve the efficiency of fund utilization. It is precisely through efficient performance reform that J University has entered the fast lane of development, providing a new approach for university construction.

3.3. Analysis of the Current Difficulties Faced by Provincial Universities

3.3.1 Insufficient dependence on local finance and funding stability of provincial universities

The education funding for key universities in Hubei Province is highly dependent on local financial support. However, local economic fluctuations and policy adjustments may lead to insufficient funding or delayed allocation. For example, H University solves the shortage of student dormitories by purchasing existing commercial housing. Although this model innovatively combines "destocking" with educational resource optimization, the total project investment of about 198 million yuan still relies on central budget investment and school self-raised funds, highlighting the limitations of local financial support.

In addition, the special funding for provincial universities also carries the risk of fragmentation, and their autonomy in use is limited. H University emphasizes budget control and risk prevention in its financial management documents, but excessive special funding (such as research projects and infrastructure projects) leads to insufficient flexibility in the use of funds. For example, special funding such as temporary difficulties subsidies for H University graduate students must strictly follow the application process, while the proportion of basic expenditure appropriations is relatively low, which limits the school's independent decision-making in areas such as discipline optimization and faculty construction.

3.3.2 Performance-oriented funding has short-term risks

In the current funding mechanism of universities, performance evaluation has gradually become an important basis, but there is a tendency towards a single indicator design. For example, performance-based funding may overemphasize research output, resulting in insufficient investment in teaching and social services. Although H University has established a dynamic evaluation system to promote the cultivation of top-notch talents, it still faces challenges in balancing the allocation of research and teaching resources. In addition, short-term performance orientation may overlook the long-term development needs of basic disciplines, leading to an imbalance in the discipline ecology. Therefore, understanding universities needs to be examined from a long-term dynamic perspective [4].

3.3.3 Misalignment of disciplinary resources and lack of dynamic adjustment mechanisms

H University actively explores the "Hu University model" in the field of teacher education, but the allocation of subject resources is still limited by the traditional funding model. For example, the dynamic adjustment mechanism of disciplines has not been fully linked to financial appropriations, and some disciplines are difficult to obtain sufficient support due to insufficient employment prospects or short-term benefits. At the same time, although the project of transforming existing commercial housing into dormitories has eased accommodation pressure, it may squeeze the funding for discipline construction and further expose structural problems in resource allocation.

4. Suggestions

4.1. Optimize the Funding Structure, Balance Basic Expenditures and Special Investments

In the context of limited total financial funding for education, it needs to pay more attention to the effectiveness of education investment and output [5]. Provincial universities need to dynamically adjust the weight of subject funding, incorporate subject development needs (such as teacher education innovation and interdisciplinary construction) into the funding formula, and establish a subject group-oriented resource allocation mechanism based on the practical experience of H University's "Top-notch Talent Training Plan". If the setting of disciplines and majors can be linked to funding, a "demand response" allocation model can be established, and the deep integration of the innovation chain, industry chain, and talent chain can be promoted to accelerate scientific research innovation and the transformation of scientific and technological achievements [3,6].

Provincial universities need to compress low-efficiency special projects and strengthen basic guarantees. Reduce the proportion of fragmented special funding, optimize the allocation of the resources, prioritize the construction of core areas such as teaching and research infrastructure, and faculty team, and avoid projects such as "purchasing instead of building" from encroaching on regular funds.

4.2. Building a Scientific Performance Evaluation System

In terms of optimizing performance management, provincial universities need to deeply link fund allocation with national-level platform construction and high-level talent introduction to improve resource utilization efficiency. At the same time, establishing a multidimensional evaluation framework, such as setting up multidimensional average indicators, adding nonquantitative indicators such as student satisfaction and social influence, can avoid excessive reliance on scientific research output and make the construction of provincial universities more scientific. Universities can serve their performance reform by constructing a three-dimensional evaluation framework of "teaching, research, social service", and can also introduce third-party evaluation institutions to enhance objectivity [7,8]. In terms of the funding mechanism under performance reform, it is necessary to dynamically adjust the degree of linkage between funding and performance, upgrade incentive targets in a gradient manner, and give universities more decision-making power in resource allocation [9].

In addition, provincial universities can conduct long-term performance tracking, adopt dynamic evaluation mechanisms (such as a 5-year cycle evaluation) for long-term projects such as top-notch talent cultivation, and combine with H University's information management platform to achieve data-driven resource optimization.

4.3. Expand Funding Channels and Reduce Fiscal Dependence

Deepening the integration of industry and education is a popular strategy for reducing the dependence on financial appropriations in current university construction. Provincial universities within Hubei Province can rely on industrial clusters such as optoelectronics and biomedicine to jointly establish laboratories or training projects with enterprises, and strive for donations and horizontal project funding from enterprises. In international experience, the expansion of social donations and corporate cooperation by universities is also a new trend [10,11]. Meanwhile, universities can also explore new models such as education bonds. Referring to international experience, alleviate financial pressure by issuing education bonds or collaborating with social capital (such as existing dormitory renovation projects).

4.4. Improve Budget Management and Risk Prevention Mechanisms

In terms of rational allocation of funds, refined budget preparation has also become a necessary path for provincial universities to improve resource allocation efficiency. Strengthen budget execution monitoring, incorporate economic contract management and debt risk warning into the financial information system, and avoid implicit debt accumulation. Under a unified financial framework, each school can also allow its various levels of colleges to flexibly adjust the use of funds based on the characteristics of their disciplines, such as piloting the "discipline-independent funding package" system to ensure the flexible use of funds.

5. Conclusion

Taking H University as an example, the dilemma of reasonable allocation of education funding for provincial universities in Hubei Province is mainly reflected in local financial dependence, biased performance orientation, mismatched subject resources, and limited autonomy. The improvement strategy needs to be synergistically promoted from five aspects: optimizing the funding structure, conducting scientific evaluations, expanding fundraising channels, improving budget management, and seeking policy support. In the future, provincial universities can explore the "discipline industry finance" linkage model in conjunction with regional economic development (such as the "Central Rise" strategy), providing replicable experience for resource allocation.

References

[1] Chen J, Jie F. Analysis of the Expenditure Structure of Education Funds in Key Universities in Hubei Province: A Case Study of H School. Higher Education Management, 2011, 5(04): 26-32.

[2] Zhang X. Research on the Funding System for Higher Education in China. China University of Political Science and Law Press, 2020.

[3] Tian X. Dynamic Adjustment of Disciplines and Majors in Higher Education Institutions: Analysis Perspective, Contradiction Representation, and Mechanism Optimization. Science and Technology of Chinese Universities, 2021, (11): 19-23.

[4] Liu X. Research on the Impact of Higher Education Funding Reform on University Performance: Based on Quasi-Natural Experimental Evidence Analysis. Finance and Accounting Research, 2025, (01): 3-14.

[5] Xu L, Cao Y. Strategies and practical implications for fiscal austerity in higher education from an international perspective. Education and Economics, 2024, 40(05): 69-77.

[6] Xie J, Wang W. The internal logic and practical approach of fiscal and tax policies promote the integrated development of education, technology, and talent. Contemporary Finance and Economics, 2020, 1-15.

[7] Li Y. The Construction and Implementation of the Performance based Funding Framework System for Higher Education Institutions. Education Development Research, 2016, 36(21): 49-55.

[8] Du P, He W. Research on the Optimization of Financial Allocation Mechanism for Higher Education under Performance Orientation. Guangxi Social Sciences, 2024, (02):164-171.

[9] Wang S. Exploration of the System for Building Chinese Characteristics and World Class Universities: A Review of "Research on Research Performance Evaluation and Funding Mechanism of 'Double First Class' Construction Universities". Education Economics Review, 2024, 9(06): 123-125.

[10] Johnstone D B. The economics and politics of cost sharing in higher education: comparative perspectives. Economics of education review, 2004, 23(4): 403-410.

[11] Altbach G P. Sustaining Change in Universities: Continuities in Case Studies and Concepts. The Journal of Higher Education, 2006, 77(5): 932-934.