Research on Financial Management Models of Industry-Related Universities

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Abstract: This paper explores financial management models of industry-affiliated universities, aiming to address their current dilemmas and build a sustainable development framework. Based on differences between industry-affiliated and general universities in administrative departments, budget models, and funding sources, combined with the existing administrative supervision environment, it analyzes core issues such as insufficient fiscal appropriation, low capital efficiency due to institutional constraints, and inefficient resource allocation caused by unscientific budget management. To resolve these problems, the study proposes strategy coordination between educational and industrial authorities, deepening industry-education integration to expand funding channels, and optimizing budget management and innovating financial models. Results show that establishing diversified funding sources, scientific budget systems, and market-oriented, information-based financial management can effectively promote the sustainable financial development of industry-affiliated universities, providing solid support for their service to industrial advancement and national strategic needs.

Keywords: Industry-Related Universities; Financial Management; Budget Management; Industry-Education Integration; Integration Mechanism

1. Background Analysis of Financial Management in Industry-Related Universities

1.1 Differences in Financial Management between Industry-Related and General Universities

Industry-related universities and general universities have significant differences in financial management, mainly reflected in regulatory authorities, budget management models, and funding source structures. First, industry-related universities are usually directly managed by specific industry regulatory authorities, and their financial policy formulation and implementation are deeply influenced by industry demands, while general universities rely more on unified guidance from education departments[1]. This management model requires industry-related universities to balance industrial development goals with educational needs in financial decision-making, increasing the complexity of financial management. Second, in terms of budget management models, industry-related universities often adopt more flexible budget preparation methods, managed by the budget appropriation model commonly used by administrative institutions under industry regulatory authorities. They are funded based on "bare per-student funding" (excluding general special funds) to cover insufficient parts, and need to apply separately after ensuring personnel and project funding, but it is difficult to guarantee the actual appropriation scale; in contrast, general universities mainly rely on stable educational expenditure appropriations, with relatively fixed budget preparation[2]. This difference leads to greater instability in resource allocation for industry-related universities, along with greater financial pressure.

Moreover, the differences in funding source structures have a profound impact on the financial management of the two types of universities. The funding sources of industry-related universities mainly include fiscal appropriations, education fee income, industry-specific special funds, and school-enterprise cooperation income, with the ideal proportion of industry-specific special funds being relatively high. However, the extent of industry-specific special funds varies across provinces and cities, making the presence or amount of these funds crucial for such universities; general universities, on the other hand, mainly depend on fiscal appropriations and

tuition fees[1], with relatively stable appropriation levels. Although diversified funding sources provide more development opportunities for industry-related universities, they also pose higher requirements for their financial management capabilities. For example, how to effectively integrate funds from different sources and achieve efficient utilization has become a key issue in the financial management of industry-related universities[2].Overall, industry-related universities have flexibility advantages in financial management but also face challenges of unstable funding sources and difficult management.

1.2 Administrative Supervision Environment for Financial Management in Industry-Related Universities

Industry-related universities face strict administrative supervision in fiscal appropriation, system formulation, and fund expenditure management, which has a dual effect on their financial management. On the one hand, administrative supervision provides a standardized financial management framework, helping to ensure the efficiency and compliance of fund use; on the other hand, overly strict supervision may limit the financial autonomy of universities, affecting their ability to flexibly respond to development needs[3]. In the fiscal appropriation process, the fund allocation for industry-related universities is usually strictly controlled by regulatory authorities, with clear regulations on appropriation standards and usage scope. This model ensures that funds flow in line with industrial development strategies but may also lead to a lack of sufficient fund allocation space for universities to deal with urgent needs[4].

In terms of system formulation, the financial management systems of industry-related universities often need to follow relevant policy documents issued by regulatory authorities, which set specific requirements for accounting, cost control, and performance evaluation[5].In the fund expenditure management process, administrative supervision monitors the use of funds in universities through audits and inspections, improving the transparency of fund use to a certain extent but also increasing the administrative burden on universities. Therefore, how to grant universities more financial autonomy while ensuring supervision effectiveness has become one of the urgent problems to be solved in the financial management of industry-related universities[3].

2. Dilemmas in Financial Management of Industry-Related Universities

2.1 Dilemma of Fiscal Appropriation and Funding Shortage

Industry-related universities face significant funding shortages due to differences in fiscal appropriation standards and single funding sources. Compared with general universities, the fiscal appropriation for industry-related universities is often affected by the nature of their regulatory authorities and industry characteristics, leading to large differences in appropriation standards. In addition, the funding sources of industry-related universities mainly rely on fiscal appropriations, while diversified financing channels such as social capital investment and school-enterprise cooperation have not been fully opened. This single funding source structure makes industry-related universities powerless when facing capital-intensive projects such as large-scale infrastructure construction and scientific research equipment updates, seriously restricting their sustainable development[2]. More importantly, with the increasing popularity of higher education, the number of students in industry-related universities is expanding, but the growth rate of fiscal appropriation has not kept pace, further exacerbating the funding shortage problem. This situation not only affects the improvement of teaching quality but also hinders the long-term development planning of universities.

In summary, the differences in fiscal appropriation standards and single funding sources have become one of the main dilemmas in the financial management of industry-related universities, which urgently needs to be solved through policy adjustments and system innovations.

2.2 Dilemma of Institutional Constraints and Fund Usage Efficiency

The limitations of existing financial systems on fund usage scope and processes further reduce the efficiency of fund usage in industry-related universities and increase management costs. According to relevant research, although the reform of the government accounting system provides a new normative framework for

university financial management, there are still some deficiencies in practical operations. For example, universities need to follow complex approval procedures when using funds, especially in cross-departmental cooperation or large fund expenditures, and too many approval links lead to delayed fund arrival, affecting the smooth progress of projects[1].

On the other hand, institutional constraints also increase financial management costs. Universities need to invest a lot of resources to ensure that fund usage complies with institutional requirements, inevitably increasing labor costs and operational burdens.

Systematic constraints have also led to the disunity of responsibilities and authorities in the fund utilization of industry-affiliated universities, resulting in low efficiency in expenditure approval. Since there is generally only one university within each industry sector, industry regulatory authorities have applied the financial management practices of government agencies and public institutions to these universities. This requires a step-by-step approval process for all fund expenditures: from the secondary college, the affiliated functional department, the vice-leader in charge, the financial vice-leader, to the top university leader, along with a three-level review by the finance department (including the financial officer, the financial reviewer, and the head of the finance department). Even if a two-tier financial management system is implemented—wherein all reimbursement documents undergo three-tier reviews by the finance department (financial officer, financial reviewer, and head of the finance department), with additional approvals from the financial vice-leader and the top leader for large expenditures—it still significantly differs from the expenditure management model of ordinary universities. In regular universities, "funds allocated to secondary colleges are managed and used independently by the colleges themselves, without the need for further approval from university functional departments or leaders during expenditure reimbursement." [6] As a result, secondary colleges in industry-affiliated universities struggle to gain autonomy in fund expenditure.

2.3 Dilemma of Budget Management and Resource Allocation

Industry-related universities have problems such as unscientific budget preparation and lack of rigid execution in budget management, directly leading to irrational resource allocation. First, there are common defects in the budget preparation process, making it difficult for universities to accurately reflect their actual needs. In addition, the budget preparation methods are relatively traditional, lacking data support and scientific analysis, which easily results in large budget estimation deviations. Some universities are accustomed to determining the next year's budget based on the previous year's execution, lacking the concept of zero-based budgeting.

Second, the lack of rigid constraints in the budget execution process is also an important reason for irrational resource allocation. Although some universities have formulated detailed budget plans, due to the lack of effective supervision mechanisms in actual execution, budget adjustments are frequent and arbitrary, leading to deviations between fund flows and expected goals. Moreover, the absence of a budget performance evaluation mechanism makes it difficult for universities to scientifically evaluate the execution effects, failing to timely identify and correct problems in budget management. For example, some universities fail to systematically evaluate the efficiency of fund use and project results after budget execution, causing budget management to become a mere formality and failing to play a real role in optimizing resource allocation[5]. In summary, unscientific budget preparation and lack of rigid execution have become one of the main dilemmas in the financial management of industry-related universities, which urgently need to be improved through system perfection and technical means.

3. Breakthrough Strategies for Financial Management of Industry-Related Universities

3.1 Integration of Education and Industry Regulatory Authorities

Under the continuous deepening of education system reform, breaking the dilemma of financial management in industry-related universities first requires policy coordination and resource integration between education and industry regulatory authorities. Due to the particularity of industry-related universities, their financial management often involves coordination among multiple regulatory authorities, and barriers between departments

may lead to low policy execution efficiency and unbalanced resource allocation[2]. Therefore, establishing regular communication mechanisms has become one of the key paths to break this dilemma. Through regular joint meetings or the establishment of special working groups, education and industry regulatory authorities can conduct in-depth discussions on key issues such as fiscal appropriation standards and fund usage scope, forming a unified policy framework to reduce resource waste and management inefficiency caused by policy conflicts.

In addition, jointly formulating policies is also an important means to promote departmental integration. Education and industry regulatory authorities can jointly issue supportive policies, such as special fund preferences and tax incentives, to encourage industry-related universities to conduct innovative practices in financial management. This policy coordination can not only alleviate the financial pressure of industry-related universities but also provide them with more flexible management space, thereby improving overall financial management levels.

3.2 Deep Integration of Industry and Universities

The injection of industry resources is another important way to break the dilemma of financial management in industry-related universities. Under the current requirements of high-quality development in higher education, school-enterprise cooperation projects and industry-university-research integration have gradually become important means to enhance the self-sustaining ability of universities[7]. By deepening the cooperation between industry and universities, universities can not only broaden funding channels but also enhance their ability to serve society, achieving sustainable development.

School-enterprise cooperation projects are one of the important forms of industry resource injection. Through cooperation with industry enterprises, universities can introduce advanced information technology and management experience, jointly develop intelligent financial systems, and optimize financial management processes. At the same time, school-enterprise cooperation projects can also bring stable horizontal scientific research income to universities, alleviating the problem of insufficient fiscal appropriation and improving the flexibility and efficiency of fund use.

Industry-university-research integration is another effective resource integration method. Driven by the "Double First-Class" and "Double High" construction, the fierce talent competition among universities has led to continuous changes in salary differences, putting higher requirements on universities' fund management capabilities. Through industry-university-research integration, universities can transform scientific research achievements into productive forces, attracting more social capital investment. This not only improves resource input efficiency but also motivates universities to continuously accumulate funds to alleviate resource pressure.

Moreover, the deep integration of industry and universities also needs to focus on the introduction of market-oriented operation mechanisms. By establishing market-oriented financial management models, universities can better adapt to social needs and market changes, enhancing their competitiveness and risk resistance[7]. Wang Shoujun, Vice President of Beijing National Accounting Institute, pointed out that the government should guide the diversification of university income sources by forming a reasonable tuition pricing system and encouraging open and internationalized school-running[2]. This market-oriented operation mechanism can not only broaden funding channels but also inject new vitality into university financial management, helping them achieve high-quality development.

4. Building a New Horizon for Financial Management of Industry-Related Universities

4.1 Broadening Funding Channels

Under the background of "Double First-Class" and "Double High" construction, industry-related universities need to explore diversified funding channels to alleviate funding shortages by leveraging their unique industry background advantages. First, attracting social donations is an important way to broaden funding sources. By establishing a sound donation management system and incentive mechanism, universities can better integrate alumni, enterprise, and social public welfare resources, forming a stable donation income flow. Second, carrying out horizontal scientific research cooperation is also an effective means to broaden funding sources. Industry-related universities usually have strong

industry relevance and technical application capabilities, so they can obtain external funding support by jointly conducting scientific research projects and technology transfer with industry enterprises. This model can not only enhance the self-sustaining ability of universities but also promote deep industry-university-research integration, providing sustainable power for school development.

4.2 Optimizing the Budget Management Model

As the core link of university financial management, the scientific nature and effectiveness of budget management are directly related to the rationality of resource allocation. To adapt to the development needs of the new horizon, industry-related universities need to innovate budget preparation methods and strengthen budget execution supervision and performance evaluation. On the one hand, budget preparation should pay more attention to goal orientation and performance orientation. University budget management can form a closed-loop management system according to the process of "planning, resource allocation, performance verification, and rewarding the advanced," ensuring the efficient use of budget funds[2]. On the other hand, strengthening supervision and control in the budget execution process is equally important, introducing information management tools to improve the refinement of budget management. In addition, optimizing the integrated budget system design can effectively meet budget management needs and improve the transparency and rigidity of budget execution. In summary, optimizing the budget management model is not only conducive to improving fund use efficiency but also lays a solid foundation for the long-term development of universities.

4.3 Innovating the Financial Management Model

With the rapid development of information technology, the innovation of financial management models in industry-related universities has become an inevitable trend. Introducing market-oriented operation mechanisms and strengthening financial informatization construction are important measures to adapt to the development needs of the new horizon. First, the introduction of market-oriented operation mechanisms can stimulate the vitality of university financial management. By building regional financial shared service centers, universities can achieve integration of financial and business operations, reduce operating costs, and improve management efficiency. Second, financial informatization construction is a key measure to promote the transformation of university financial management. Wang Sha pointed out that under the background of the big data era, universities should actively promote the construction of financial management informatization to deal with the challenges and opportunities brought by information technology[8]. Universities can build a unified data platform to integrate information from finance, assets, scientific research, and other departments, achieving data sharing and analysis, and providing a scientific basis for decision-making. In addition, the research of Zhang Hong also shows that the construction of information platforms can solve some problems in university financial management to a certain extent, such as scattered data statistics and high informatization construction costs[9]. In short, innovating financial management models is not only a technical innovation but also a profound transformation of traditional financial management concepts, injecting new vitality into the financial management of industry-related universities.

5. Conclusion

Industry-related universities are facing significant financial management challenges, including insufficient fiscal appropriations, institutional constraints, and inefficient budget management. Regarding fiscal appropriations, these universities suffer from varying appropriation standards due to the nature of their supervising departments and industry characteristics. Their funding sources mainly rely on fiscal appropriations, while diversified financing channels—such as social capital investment and university-enterprise cooperation—have not been fully developed, resulting in prominent funding shortages. In terms of institutional constraints, existing financial systems restrict the scope and processes of fund usage, increasing management costs and reducing fund efficiency. For budget management, unscientific budget formulation and a lack of rigidity in execution lead to unreasonable resource allocation.

To address these issues, it is essential to broaden funding channels through collaboration between educational and industry supervising departments and deepen the integration of industry and education. Educational and industry supervising departments should establish regular communication mechanisms and jointly develop supportive policies, such as preferential measures for special funds and tax incentives. Meanwhile, industry-related universities can leverage their industry background advantages to carry out university-enterprise cooperation projects and industry-education-research integration initiatives, introducing external funding to enhance their self-sustaining capabilities.

Additionally, it is crucial to optimize the budget management model and innovate financial management approaches. Budget formulation should focus on goal and performance orientation, with strengthened supervision and control during execution, and the introduction of information technology tools to improve precision. In innovating financial management, market-oriented operational mechanisms can be adopted, such as establishing regional financial shared service centers to reduce operating costs. Furthermore, enhancing financial information construction—by building a unified data platform to integrate information from multiple departments, enabling data sharing and analysis—can provide scientific support for decision-making.

Building a new financial landscape requires expanding funding sources, optimizing the budget system, and introducing market-oriented mechanisms and information technology. This not only helps resolve current financial management dilemmas but also provides solid support for the sustainable development of industry-related universities, enabling them to better serve industry advancement and national strategic needs.

References

[1] Yang Xingyun; Huang Xichun; Li Shuzheng; Peng Xianghai; Yang Yaokun. Research on Strategies to Improve the Financial Management Level of Universities Based on the Reform of Government Accounting System. Business Accounting, 2023, (14): 95-99.

[2] Wang Dan. A Review of Domestic Literature on Financial and Asset Management Issues in the Context of "Double First-Class" Construction. Knowledge Economy, 2017, (19): 23-23.

[3] Zhao Lihui; Yang Zihui. Research Review on University Financial Management under the New Government Accounting System. Assets and Finance of Administrative Institutions, 2020, (21): 104-106.

[4] Shao Ya. Dilemmas and Solutions for University Financial Management in the New Era. Business Observation, 2023, 9(22): 85-88.

[5] Editorial Department of This Journal. Innovative Proposals for the Transformation of University Financial Management. New Accounting, 2019, (11): 1-1.

[6] Implementation Measures for Two-tier Financial Budget Management of Shanghai University of Political Science and Law (2023): Performance Evaluation of Expenditure for Funds Used by Secondary Colleges:5.

[7] Ding Tingxuan; Ma Hao; Guo Lingling. Research on the Motivation Mechanism of University Financial Transformation from a Game Theory Perspective. Friends of Accounting, 2023, (9): 96-101.

[8] Wang Sha. Thoughts and Practice of University Financial Management Informatization Construction from a Big Data Perspective. China Market, 2020, (29): 192-193.

[9] Zhong Fusheng. Research on the Transformation of University Financial Management Based on the Concept of Financial Sharing. Assets and Finance of Administrative Institutions, 2020, (3): 94-95.

