

Research on budget performance management of universities based on balanced scorecard

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Abstract: The comprehensive implementation of budget performance management is an important measure to promote the modernization of the national governance system and governance capabilities. It is also an important path for universities to improve internal governance, optimize resource allocation, and improve school efficiency. At present, the budget performance management of colleges and universities in my country still has problems such as insufficient strategic orientation of colleges and universities, poor coordination between departments, a single performance evaluation indicator system, and insufficient application of performance evaluation results. The Balanced Scorecard (BSC), as a comprehensive strategic management tool spanning financial and non-financial, short-term and long-term, internal and external, can effectively make up for the shortcomings of traditional budget performance management. On the basis of defining the core connotations of the balanced scorecard and budget performance management in universities, this article sorts out the current status and practical problems of budget performance management in universities, demonstrates the necessity and feasibility of applying the balanced scorecard to budget performance management in universities, builds a four-dimensional integrated budget performance evaluation system including the financial dimension, customer dimension, internal business process dimension, and learning and growth dimension, and clarifies the indicator design, weight distribution, operation process and evaluation results application mechanism. Research shows that deeply embedding the balanced scorecard into the entire process of university budget performance management can achieve the organic unity of university strategic goals, budget management, performance evaluation and resource allocation. It has important theoretical value and practical significance for improving the efficiency of the use of financial funds in universities and promoting connotative high-quality development.

1. Introduction

Under the dual background of modern fiscal system reform and high-quality education development, the state's investment in higher education continues to grow, and at the same time it puts forward new requirements for the efficiency of the use of fiscal funds. In 2018, the "Opinions on the Comprehensive Implementation of Budget Performance Management" issued by the Central

Committee of China and the State Council clearly proposed the establishment of an all-round, full-process, and full-coverage budget performance management system. The Ministry of Education simultaneously issued relevant supporting documents, requiring colleges and universities to integrate performance management throughout the entire process of budget preparation, execution, supervision, and evaluation, and truly implement the principle of "asking for effectiveness when spending money, and accountability for inefficiency."

As an important position for talent training and scientific research, colleges and universities' budget performance management is not only related to the security of financial funds, but also directly affects student management, discipline construction, teaching and scientific research, teacher development, and social reputation. However, for a long time, the budget management of colleges and universities in my country has generally emphasized the phenomenon of emphasis on input and neglect of output, emphasis on allocation and neglect of performance, emphasis on post-event and neglect of the whole process, and emphasis on finance and neglect of business.

The balanced scorecard proposes to break through the traditional evaluation model with financial indicators as the core, and transform the organization's strategy into an executable and assessable indicator system from four interrelated dimensions. It has been widely used in government agencies, public institutions, and colleges and universities. Introducing the balanced scorecard into budget performance management in universities can build a closed-loop, systematic budget performance management model and provide new ideas for solving the pain points of budget performance management in universities. This article builds a balanced scorecard budget performance management system that adapts to the operating characteristics of universities, in order to provide theoretical reference and practical solutions for universities to promote governance modernization and improve financial efficiency.

2. Definition of core concepts

2.1 The core connotation of the balanced scorecard and its adaptability to universities

The balanced scorecard is a strategic performance management tool proposed by Robert Kaplan and David Norton in 1992. Its core value lies in establishing a comprehensive and balanced indicator system through the four dimensions of finance, customers, internal business processes, and learning and growth to realize the transformation of organizational strategies into specific actions. Compared with the traditional assessment model, the balanced scorecard emphasizes four major balances: the balance between financial indicators and non-financial indicators, the balance between short-term goals and long-term goals, the balance between internal evaluation and external evaluation, and the balance between result indicators and driving indicators.

Colleges and universities do not aim at profit; their mission is to educate people with moral integrity and serve society. Therefore, according to the characteristics and attributes of colleges and universities, the four dimensions of the balanced scorecard can be adapted accordingly:

Financial dimension: Focus on funding guarantee, budget execution rate, fund use efficiency, and risk prevention and control;

Customer dimension: this dimension can be transformed into the stakeholder dimension, covering students, parents, employers, government and society, etc;

Internal business process dimension: focusing on core processes such as student management, teaching operations, scientific research management, industry-education integration, and administrative services;

Learning and growth dimension: Focus on teaching staff, talent training, enrollment and employment, and sustainable development.

Based on the functions of the balanced scorecard and the characteristics of budget performance

management in universities, through adaptation and adjustment, the balanced scorecard can accurately connect the mission and strategic goals of universities and become an effective starting point for budget performance management in universities.

2.2 The connotation and boundaries of budget performance management in colleges and universities

Budget performance management of colleges and universities is guided by the school's development strategy, with fiscal funds and self-owned funds as the management objects, covering the entire chain of management activities including pre-event performance evaluation, ongoing operation monitoring, and post-event performance evaluation. Its management objects include basic expenditures, project expenditures and overall unit expenditures. The management entities cover university management, functional departments, secondary colleges and project leaders. The ultimate goal is to optimize resource allocation and improve financial efficiency.

3. Current status of budget performance management practice in universities in my country

In recent years, with the strong promotion of policies, the reform of budget performance management in colleges and universities in my country has been steadily advancing.

First, the management system is becoming increasingly perfect. All colleges and universities across the country have generally formulated internal control system documents such as "Budget Performance Management Measures" and "Performance Evaluation Management Rules", established budget performance management leading groups, clarified management responsibilities and work processes, promoted the integration of budget and performance, and basically realized the basic framework of "budget preparation with goals, budget execution with monitoring, and project completion with evaluation."

Second, the scope of management continues to expand. Performance management has gradually expanded from the initial financial special project expenditures to all project expenditures, basic expenditures and even overall school expenditures; the scope of funds has expanded from financial allocations to all funds such as career income, scientific research funds, social donations, and horizontal topics, which meets the requirements of comprehensive performance management.

Third, information technology support continues to increase. Integrated budget management systems are widely used in colleges and universities across the country to realize online processing of functions such as budget declaration, budget indicator issuance, budget execution, fund payment, and performance target filling. Some universities have built financial, academic affairs, scientific research, assets, and personnel data sharing platforms to connect different system platforms, improve data acquisition, dynamic monitoring, and automatic analysis capabilities, and promote refined management.

Fourth, the evaluation model is gradually standardized. Most universities have established a mechanism of "department self-evaluation, review by the school's responsible department, and third-party evaluation of key projects" to promote the linkage of performance evaluation results with next year's budget arrangements and department assessments, gradually standardize evaluation indicators, and make the evaluation process more transparent.

Despite significant progress, there are still some obvious problems in budget performance management in colleges and universities compared with the requirements of high-quality development and comprehensive performance management.

4. Main problems existing in budget performance management in colleges and universities

4.1 Lack of strategic orientation of colleges and universities, and budget and performance are out of touch

The budget preparation of most universities is based on "maintaining operation and ensuring revenue and expenditure" as the core, and is not closely integrated with strategic goals such as medium- and long-term development plans^[1], "double first-class" construction, "double high institutions" construction, and the construction of high-level application-oriented universities. The setting of performance goals is just a formality. It may be to fulfill the application requirements of the superior authorities, but lacks the decomposition and implementation of strategic tasks, resulting in the phenomenon of "financial funds are secured, and no one follows up on performance management", and there is a disconnect between budget and performance.

4.2 Blurred boundaries of responsibilities and insufficient coordination among departments

There is a common cognitive bias in colleges and universities that "budget performance management is a matter for the financial department." Each business department regards filling in performance targets as an additional task and has low enthusiasm for participation. Generally speaking, colleges and universities generally do not have an independent budget performance management agency, and this function is mostly undertaken part-time by the financial department^[2]. Therefore, it may result in limited overall coordination capabilities and difficulty in promoting cross-departmental linkage throughout the school.

4.3 The performance evaluation index system is single and insufficiently scientific

First, there is over-reliance on financial indicators such as budget execution rate and expenditure amount, while core non-financial indicators such as the quality of talent training, scientific research and innovation results, and social satisfaction are ignored; second, there are too many qualitative indicators and too few quantitative indicators^[3], making performance evaluation highly subjective and poor in comparability; third, the indicators are highly homogeneous, with different disciplines, different projects, and different departments using the same set of indicators, which cannot reflect the characteristics of school running and the output differences of different departments; fourth, the emphasis is on output results and not on process management. At the same time, the performance evaluation indicators lack a dynamic adjustment mechanism.

4.4 Process monitoring is weak and early warning and correction are insufficient

Performance monitoring mostly focuses on summary reporting at the end of the period, with insufficient dynamic tracking and real-time warnings. Problems such as slow budget execution, financial fund accumulation, and performance deviations from targets cannot be discovered and corrected in a timely manner. For example, budgets are adjusted arbitrarily for some projects.

4.5 Inadequate application of performance evaluation results and insufficient incentives and constraints

Performance evaluation results are mostly used for reporting materials and file retention, and are not rigidly linked to next year's budget arrangements and department performance appraisals^[4]. The accountability mechanism for budget performance management is missing, and the "baton" role of

performance cannot be exerted, making it difficult to form a virtuous cycle.

5. The necessity and feasibility of applying the balanced scorecard to budget performance management in universities

5.1 Necessity

5.1.1 Solve the problem of strategic disconnection in universities

The balanced scorecard takes strategy as the starting point and breaks down the school's top-level goals and annual key tasks into budget goals, performance goals, department goals and position goals, so that every fund expenditure corresponds to the school's strategic tasks, and solves the problem of disconnection between budget and performance from the root cause and specific work items^[5].

5.1.2 Build a comprehensive and balanced performance evaluation index system

Taking into account financial and non-financial, long-term and short-term, internal and external, results and drivers, it comprehensively reflects the effectiveness of running colleges and universities and overcomes the shortcomings of single and one-sided traditional evaluation indicators.

5.1.3 Promote the integration of industry and finance and strengthen collaboration between departments.

Break down the performance goals into teaching, scientific research, student work, logistics, assets and other business-focused departments, clarify the responsibilities of each department in budget and performance^[6], and promote the integration mechanism of "business drives budget, budget supports performance, and performance feeds back to business". This process mechanism can be seen in Figure 1 below.

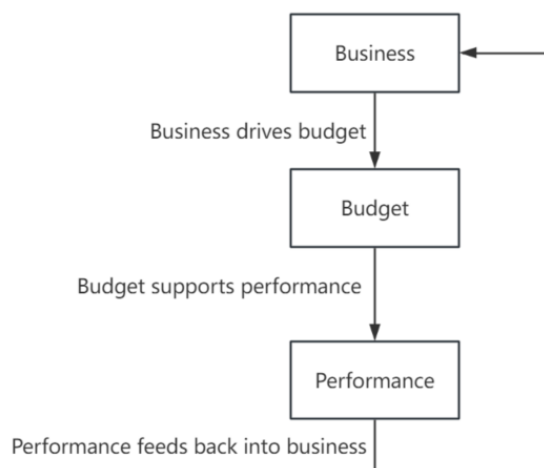


Figure 1 Business, budget, and performance integration mechanism diagram

5.1.4 Build closed-loop management

Cover the entire process before, during and after the event, strengthen the closed loop of performance monitoring, performance evaluation, and performance evaluation application, achieve full-process control over the use of funds, and effectively improve resource allocation efficiency

and use efficiency^[7].

5.1.5 Adapt to the attributes of running colleges and universities

Through appropriate adjustments, the balanced scorecard can be consistent with the core educational mission of colleges and universities, highlight important tasks such as talent training, teacher development, and social services, and help colleges and universities develop in a connotative and sustainable direction^[8].

5.2 Feasibility

5.2.1 Mature policy environment

Comprehensive budget performance management is strongly promoted at the national level, and the Ministry of Education also requires universities to fully implement budget performance management policies to provide clear policy support and institutional guarantees for the use of balanced scorecards in university budget performance management^[9].

5.2.2 Solid theoretical and practical foundation

A large number of general universities and higher vocational colleges in China have carried out research on budget performance management based on the balanced scorecard, and have actually applied the balanced scorecard to budget performance management, forming mature theoretical results and practical cases that can be referenced.

5.2.3 Complete organizational structure

Colleges and universities generally establish decision-making bodies such as budget management committees and financial work leading groups, which have an organizational structure foundation for layer-by-layer promotion and implementation of responsibilities.

5.2.4 Improved technical support

Information resources such as budget integration systems and industry-finance sharing platforms for budget performance management can provide stable technical support for the definition of different evaluation indicators, data acquisition, dynamic monitoring, automatic evaluation, etc.

5.2.5 The personnel base is gradually improved

The budget performance management concept of university leaders, relevant managers of various departments, financial personnel, and information technology personnel has been significantly enhanced, and they have the personnel foundation to promote the practical application of the balanced scorecard in university budget performance management.

6. Construction of university budget performance management system based on balanced scorecard

6.1 Construction principles

Strategic orientation principle: The indicator system closely follows the school's strategic development plan to ensure that limited resources are invested in key areas^[10];

Comprehensive and balanced principle: combine long-term and short-term, pay equal attention

to finance and non-financial, combine internal and external, combine results and drivers;

Quantitative and qualitative principles: Combining quantitative indicators with qualitative indicators, the data can be obtained, compared, and assessed;

Principle of differential adaptation: Set differentiated indicators based on school type, school running characteristics, subject characteristics, and project nature;

Closed-loop management and control principle: covering the entire process and strengthening the application of performance evaluation results.

6.2 Overall logical framework

The overall research logical framework of this article can be seen in Figure 2 below.

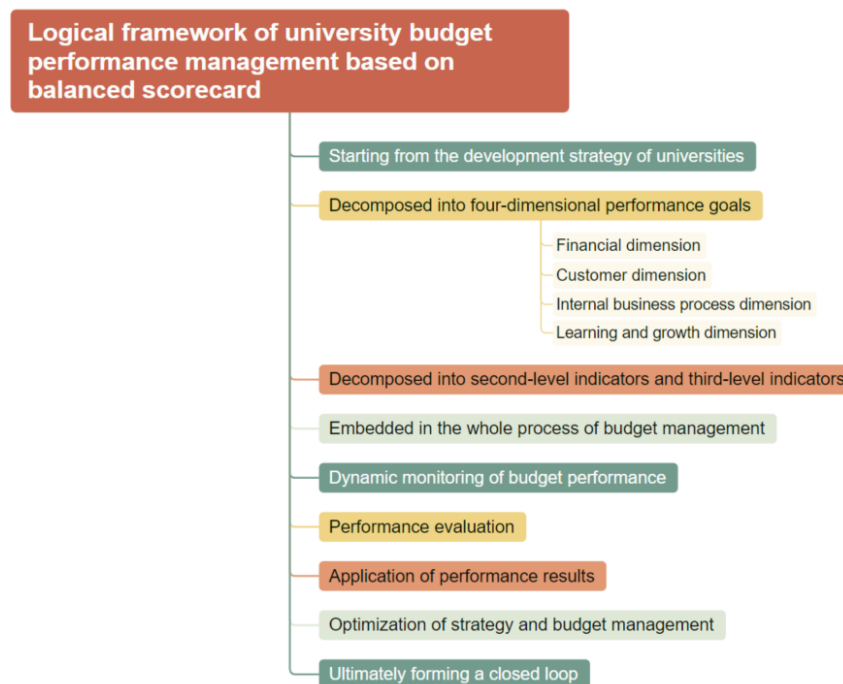


Figure 2 Logical framework diagram of university budget performance management based on balanced scorecard

6.3 Implementation process

The implementation process of this article can be seen in Figure 3 below.

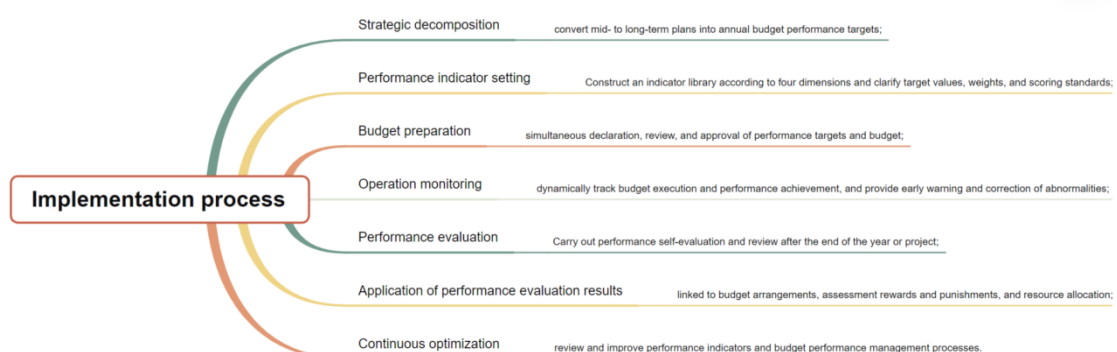


Figure 3 Implementation flow chart of university budget performance management based on balanced scorecard

6.4 Four-dimensional budget performance evaluation index system

Combining the rules of running colleges and universities and the practical experience of budget performance management, an evaluation system of 4 first-level dimensions, 12 second-level indicators, and 36 third-level indicators is constructed, figand the analytical hierarchy process (AHP) and Delphi method are used to determine the weights, the details can be seen Table 1 below.

Table 1. University budget performance evaluation index system based on balanced Scorecard

First-level dimension	Second-level indicator	Third-level indicator	Indicator attribute	Reference weight
Financial dimension (30%)	Funding guarantee level	Financial appropriation change rate, amount of own funds, per-student funding guarantee level	Quantitative	10%
	Efficiency of fund use	overall budget execution rate of universities, optimization rate of expenditure structure, and carryover and balance fund stocks	Quantitative	12%
	Financial risk prevention and control	Asset-liability ratio, internal control compliance rate, illegal expenditure incidence rate	Quantitative	8%
Stakeholder dimension (25%)	Student development effectiveness	Graduate employment rate, professional relevance, student satisfaction	Quantitative+Qualitative	10%
	Social recognition level	employer satisfaction, number of school-enterprise cooperation, level of industry-education integration, social service income	Quantitative+Qualitative	8%
	Policy fit	key task completion rate, financial performance evaluation level	Quantitative+Qualitative	7%
Internal business process dimension (25%)	Teaching operation efficiency	Teacher-student ratio, teacher doctoral degree rate, proportion of practical teaching, number of teaching achievement awards	Quantitative	9%
	Scientific research and innovation capabilities	Number of scientific research projects, achievement transformation rate, scientific research funding execution rate	Quantitative	8%
	Management service level	Process handling efficiency, service satisfaction, information coverage	Quantitative+Qualitative	8%
Dimension of learning and growth (20%)	Teacher team construction	Number of high-level talent introductions, proportion of dual-qualified personnel, teacher training coverage rate	Quantitative	7%
	Quality of talent training	Number of awards in subject competitions, number of practice bases, graduates's further study rate	Quantitative	7%
	Sustainable development	strategic goal completion rate, development plan achievement, campus document construction	Quantitative+Qualitative	6%

6.5 Key operating mechanisms

Target synchronization: Budget declaration and performance targets are filled in, reviewed, and approved simultaneously.

Dual monitoring: Dual monitoring of budget execution progress and achievement of

performance goals, including monthly monitoring, quarterly monitoring, semi-annual monitoring, and annual monitoring.

Multi-subject performance evaluation: Implement department self-evaluation, school department review, expert review, third-party evaluation and other methods to improve the objectivity of performance evaluation.

Rigid application of performance evaluation results: Different management mechanisms are adopted for departments with different performance evaluations. For departments with excellent evaluation results, the next year's budget can be prioritized or the budget quota can be increased; qualified departments can maintain the existing quota; unqualified departments can reduce the budget or make rectification within a time limit^[11], etc.

6.6 Implementation safeguard measures

Organizational guarantee: Establish a budget performance management team to clarify the responsibilities of finance, business, information technology, auditing and supervision, administrative logistics, etc., and build a responsibility system for all employees^[12].

System guarantee: Improve corresponding systems such as budget performance target management, operation monitoring, evaluation management, application of performance evaluation results, and accountability.

Technical guarantee: Break down data barriers in finance, academic affairs, academic affairs, scientific research, assets, personnel, etc., achieve rapid and accurate acquisition of data, and simultaneously realize intelligent monitoring and visual analysis.

Cultural guarantee: Carry out training and publicity on budget performance management, and establish a campus governance culture that emphasizes budget and performance^[13].

7. Conclusion

The comprehensive implementation of budget performance management is an important choice for colleges and universities to deepen governance reforms and improve school-running efficiency, and the balanced scorecard provides a scientific and effective tool for colleges and universities to break through the dilemma of traditional budget performance management. Practice has shown that the balanced scorecard can effectively solve problems such as the disconnect between university budgets and performance, poor department coordination, a single indicator system, and insufficient application of evaluation results, and promote more accurate fund allocation, more efficient management and operation, and more rigid responsibility constraints in universities.

In the future, with the deepening of digital transformation, universities can further combine the balanced scorecard with big data and artificial intelligence to achieve intelligent management and continue to improve the modernization level of budget performance management in universities. During the implementation process, each university should base on its own characteristics and actual management foundation, flexibly adjust the performance indicator system and operating procedures, gradually form a budget performance management model that adapts to its own development, truly use budget performance management to promote the high-quality development of the school, and provide a solid guarantee for the construction of a powerful country in higher education.

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