

# *Integrated Budget Management and University Project Performance Management Research*

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**Abstract:** The integrated management of budget projects consolidates business norms and technical standards, using an integrated information management system as the fundamental management platform to promote the collaborative and efficient completion of various management systems. By adopting an integrated budget management approach, it is possible to effectively control performance indicators during the project implementation process. In the management of university projects, this approach enhances project performance, identifies key points during the implementation process, and proposes optimized solutions for performance management, hoping to provide valuable references for the management of university projects.

## **1. Introduction**

The budget management of universities, combined with current big data technologies, achieves integrated budget management, which is an effective guarantee and measure for implementing financial management systems for school projects. Through the integrated management approach, a fully open, transparent, and scientifically standardized budget management system is established, implementing comprehensive performance management. On this basis, the core and key points of performance management in university projects are clarified, gradually forming an integrated management model. This approach summarizes experiences and improves existing models, thereby better facilitating the optimization and comprehensive implementation of integrated budget management, reflecting a new development in efficient project performance management.

## **2. Performance Objectives and Integrated Budget Management**

In university project management, performance indicators are key components. The establishment of a performance-based budget management system enhances the role of integrated budget management throughout the budget and performance management integration process. Firstly, performance indicators are a crucial part of the government's public budget transparency efforts. Performance objectives refer to whether the performance aligns with set goals during the audit process, whether it supports these goals without causing financial wastage, and how factors such as performance targets and spending standards can adjust the budget to align performance objectives with budget management. During the budget announcement process, performance indicators are audited and released in conjunction with the budget, and detailed budget implementation plans are

formulated based on the requirements of these indicators to achieve the performance targets<sup>[1]</sup>.

The coordination between budget and objectives exemplifies the scientific approach to budgeting, suggesting that, to some extent, indicators equal budget, and performance equals responsibility. Moreover, performance indicators guide the implementation of fiscal budgets and play a significant role in achieving budgetary objectives. Performance evaluation can influence the speed and direction of fiscal budget implementation. The level of achievement of performance indicators is a crucial measure of budget performance, assessing the budget's effectiveness. From the perspective of funding, it reflects the capability to implement the budget; from the performance perspective, it aims to meet performance indicators. Analyzing performance evaluations in universities can better reflect an institution's performance indicators and achievements, providing a basis for future annual budget planning, and promoting the coordination of integrated budget management and performance.

### **3. Some Issues in the Integrated Budget and Performance Management in Universities**

#### **3.1. Lack of Synchronization Between Budget and Performance Management**

Currently, there is a disconnection and separation between budget and performance management in universities. Although performance goals and indicators are set during the preparation phase, the results are highly random and the scope of evaluation is too broad, lacking operability. Due to the extended budgeting period in universities and the incomplete year-end tasks of various departments, it is challenging to integrate budget with performance evaluation effectively. Financial reports in universities emphasize the completeness and accuracy of projects, while performance indicators are merely "accessories." Current performance management is still in a post-evaluation phase, focusing mainly on completed quantities, payment progress, and reimbursement standards. There is insufficient attention to pre-planning and mid-execution, and these aspects are not integrated into the budgeting process.

#### **3.2. Unclear Responsibilities of Administrative Agencies**

In the current education funding management system, a prominent issue is the unclear definition of responsibilities of administrative agencies. This vague allocation of responsibilities leads to numerous issues during the implementation of budget and performance management. Particularly under the context where financial resources primarily depend on state funding, multiple internal departments of schools need to collaborate to ensure the effective use of funds. However, due to the lack of clear responsibilities and overlapping tasks, communication and coordination between departments become exceptionally complicated, thereby affecting the efficiency and effectiveness of budget management. A common phenomenon is that departments tend to pass budget management and financial responsibilities to the finance department, shirking their own responsibilities by claiming unfamiliarity with financial processes. This not only increases the workload of the finance department but also weakens the synergy and transparency of budget execution, becoming an urgent issue to resolve in university financial management.

#### **3.3. Lack of Leadership and Strategic Guidance**

When preparing budgets, universities do not strictly follow the principles of "investment direction, risk control, and responsibility implementation." Budgets are formulated based on the financial policies of the school and the needs for internal funds, without comprehensive consideration of the school's development and annual tasks. The budgeting process, including declaration, preparation, execution, and evaluation, lacks rigid constraints, leading to budget adjustments that cannot respond

effectively to performance indicators. Consequently, it becomes difficult to achieve the desired performance indicators after budget execution.

#### **4. Enhancing Project Performance Management Measures under the Integration of Budget Management in Higher Education Institutions**

The integration of budget management unifies the entire process of project planning, budget formulation, budget execution, and performance evaluation. It organically combines the flow of funds with business processes, significantly enhancing the level of budget management and increasing the transparency of funds. This integration is a crucial measure to ensure the implementation of various policies. Higher education institutions should seize this opportunity to strengthen top-level design, streamline internal management procedures and mechanisms, optimize financial management, and establish a project-oriented business philosophy, thereby truly enhancing the school's performance management<sup>[2]</sup>.

##### **4.1. Actively Coordinating Data for Project Implementation**

The integrated management model of budgeting accelerates the shift from rapid to high-quality development in schools. Following the central government's approach to concentrate resources on major initiatives, funding for operational projects is relatively stable. Higher education institutions must grasp the national strategic direction, actively plan specific target projects to meet the needs of national and local economic development, and steadily advance the preparatory work of the projects based on their actual conditions to enhance the efficiency of fund utilization.

It is crucial to strictly differentiate between operational and special indicators, integrate equipment procurement and maintenance, and, following the principle of "prefer larger over smaller," unify specific target projects that can be combined into equipment procurement and maintenance. Projects are to be declared and managed based on their specific targets to avoid categorizing them under operational project management. This strengthens project management while preventing financial risks. Strict control over non-staff and long-term hires is necessary, with clear identification of funding sources; universities should pay high-level talent special allowances as per contracts signed with them. Labor dispatch fees refer to costs incurred by labor dispatch staff who sign contracts with and provide services to the school upon its approval.

Based on the principle of "seeking truth from facts," in line with the school's development and annual work plans, and considering the specific circumstances of the school, relevant project requirements are proposed. The development strategy, annual plans, and goals of higher education institutions form the basis for compiling annual plans and objectives. Universities need to make reasonable forecasts of construction funds each year, demanding a fully rational basis for such estimates. Multi-year project declarations should be made annually, with funds arranged in the annual plan to be fully utilized within the year.

##### **4.2. Strengthening the Presetting and Integration of Budget Performance**

When compiling budgets, it is essential to consider the overall objectives of educational development and annual work plans, taking into account the financial situation of the school, and to reasonably determine the funding to drive the development of higher education institutions with the achievement of project performance indicators as a prerequisite. The operational goals of university management systems are "operation, stability, efficiency," tasked with nurturing talent, conducting research, and providing social services. The development of universities is a regular task, encompassing significant tasks at national, provincial, city, and local levels, including time-bound,

binding tasks, tasks with bonus incentives, and basic construction tasks of schools. Therefore, the performance objectives of universities should be centered around the responsibilities of the schools.

Politically, it is necessary to effectively implement the management of educational funds, strengthen the assessment of these funds to align with national fiscal policies. Based on the characteristics of engineering projects and the differences in performance indicators, solutions involving third-party intermediaries leading and budget departments participating together have been proposed. A comprehensive and personalized evaluation system needs to be established. Comprehensive evaluation indicators include budget execution progress, financial management, asset management, issues identified in dynamic monitoring, and findings from internal and external audits. Personalized indicators are set based on the characteristics of each relevant department or project to evaluate the performance of each unit or project and apply these evaluations to all relevant units.

### **4.3. Integrating Performance Management into Budget Consolidation**

In the contemporary management systems of higher education, integrating performance management into the budget consolidation process is a key strategy to enhance financial efficiency and project success rates. This approach requires that at every stage of budget formulation and execution, activities must be closely aligned with project performance indicators, ensuring that each allocation and utilization of the budget directly supports the achievement of project objectives. Specifically, this means that from the onset of budget preparation, performance goals must be clearly considered and translated into specific, actionable performance indicators. This not only enhances the targeted nature and precision of budget allocations but also ensures that financial resources are effectively directed towards projects that are critical for the long-term development of higher education institutions.

During the execution phase of the budget, implementing dynamic performance monitoring and assessment becomes particularly crucial. This includes continuous tracking of project progress and comparative analysis with preset performance indicators, promptly identifying any potential deviations or deficiencies, and making necessary adjustments. This flexibility in adjustment enables universities to effectively handle various challenges and variables that arise during project implementation, ensuring smooth project completion and the achievement of predetermined objectives. Furthermore, the performance evaluation at the end of a project should not be seen as an endpoint but as an important opportunity for learning and improvement. By systematically feeding back evaluation results into future budget preparations and project planning, universities can continuously enhance their financial and project management efficiency and optimize resource allocation.

In summary, making performance management a core objective of budget integration not only aids universities in enhancing financial management transparency and accountability but also significantly improves the quality and efficiency of project execution. Through this approach, universities can ensure that their financial resources are utilized in areas that most contribute to the institution's long-term success and continuous improvement, while also providing greater strategic flexibility and competitive advantage.

### **4.4. The Application of Big Data and AI in Budget Framework Optimization**

In the realm of budget management, advances in big data and artificial intelligence (AI) technologies have brought about fundamental transformations to the traditional processes of budget preparation and execution. The integration of these technologies enables universities to manage budgets with unprecedented precision and efficiency, significantly enhancing the scientific nature and adaptability of budget management<sup>[3]</sup>.

By deeply analyzing vast amounts of historical data, big data technologies enable managers to discern the complex relationships between project costs and benefits, revealing optimal paths for resource allocation. This insight provides a solid scientific basis for budget allocation decisions, ensuring that each expenditure achieves the maximum benefit. Meanwhile, the application of artificial intelligence, especially machine learning and predictive analytics, allows universities to predict potential risks and challenges before project execution, enabling timely strategic adjustments and optimization of resource allocation. Furthermore, AI's real-time monitoring capabilities assist project managers in tracking project progress, promptly identifying issues, and making necessary budget adjustments to ensure smooth project completion and achievement of predetermined goals.

Through the strategies outlined above, the fusion of big data and AI technologies not only provides new perspectives and tools for university budget management but also greatly enhances the overall efficiency and effectiveness of budget management. Under this new management paradigm, universities can allocate and utilize financial resources more scientifically and rationally, providing a solid foundation for the success of educational and research activities<sup>[4]</sup>.

#### **4.5. Interdepartmental Collaboration and Clarification of Budget Execution**

In the optimization process of project performance management in universities, the clarity of interdepartmental collaboration and budget execution is particularly crucial. By promoting close cooperation and information sharing between different departments, universities can ensure that resources are effectively integrated, thereby significantly improving the accuracy and efficiency of budget execution. For this purpose, universities must develop a series of clear policies and procedures that define the responsibilities and duties of each department in budget management and execution. This institutionalized collaboration mechanism not only facilitates communication between the finance department and project execution departments but also covers the important role of the administrative management layer in supervising the budget execution process. Through such mechanisms, every decision and adjustment in the budget is based on ample information exchange and in-depth consultation, thereby enhancing the transparency and fairness of budget management. Moreover, this interdepartmental collaboration also helps to form a common goal and vision, enabling departments to work together to advance the developmental goals of the university, thus enhancing both project performance and the overall cooperation and cohesion of the institution<sup>[5]</sup>.

#### **4.6. Dynamic Budget Adjustments and Performance Feedback**

In the integrated practice of budget management in universities, dynamic budget adjustments and performance feedback mechanisms are not only central to management but are also essential tools for adapting to the constantly changing educational environment, optimizing resource allocation, and enhancing project execution effectiveness. This mechanism requires universities to continually assess, learn, and adjust throughout the project's entire lifecycle—from the detailed budget planning stage, through actual execution, to the ultimate evaluation after project completion. By establishing a comprehensive performance assessment system and regularly convening performance review meetings, it is possible to promptly identify and address issues in project execution and to uncover and replicate key factors of project success, thereby providing strong support for future budget preparation and resource allocation. Effective feedback from performance evaluations makes the resource allocation and budget management processes more aligned with actual needs, further supporting and facilitating the achievement of project goals. This shift from a passive to a proactive budget management optimization fosters a positive cycle based on continuous learning and improvement. To implement this mechanism, universities also need to innovate deeply in organizational culture and management concepts, fostering a budget management culture that actively

explores, tolerates failure, and values learning and continuous improvement. With such a culture in place, universities can flexibly respond to rapid changes in the education sector, not only maintaining their competitiveness but also continuously improving management efficiency and the likelihood of project success, thus achieving the long-term goal of integrated budget management and steering universities toward more efficient, transparent, and sustainable management models<sup>[6]</sup>.

## 5. Conclusion

In summary, the implementation of integrated budget management in universities has significantly enhanced the efficiency and effectiveness of budget management. By strictly adhering to the norms and standards of the integrated management system, universities can ensure the scientific and systematic nature of project performance management, thereby optimizing resource allocation and increasing the success rate of project implementation. This process not only requires continuous innovation in management concepts and tools but also involves establishing a budget management culture participated in by the entire faculty and student body, promoting steady development in a constantly changing educational environment and achieving long-term goals. Thus, integrated budget management in universities is not only a necessity for management reform but also a key support for the sustainable development of higher education.

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