

# A COMPREHENSIVE REVIEW OF BUDGET PERFORMANCE EVALUATION RESEARCH IN CHINESE PUBLIC HIGHER EDUCATION INSTITUTIONS



<sup>1</sup>Sihai Zhang

**Panyapiwat Institute of Management, Thailand**

55477029@qq.com

**Received: May 14, 2023; Revised: June 23, 2024; Accepted: July 30, 2024**

## **Abstract**

This article provides a comprehensive review of the current state of research on the budget performance evaluation of public higher education institutions in China, delving into the theoretical foundations and practical progress. It analyzes the market characteristics of government behavior, the importance of cost-benefit analysis, and the impact of public choice theory and bureaucratic system theory on budget performance management from the perspective of public economics. Based on new institutional economics, the article discusses the core role of institutions in budget performance management, including institutional design, patterns of change, and the role of the state. The article also covers the application of principal-agent theory and stakeholder theory in the budget systems of colleges and universities, as well as the theoretical background and international experience of performance budget reform. It focuses on the research status of budget performance evaluation in local public higher education institutions, discusses innovative methods for constructing evaluation models and indicator systems, and emphasizes the role of budget performance evaluation in optimizing resource allocation. The article proposes future research directions, including strengthening basic theoretical research, developing and improving evaluation techniques, enhancing the integration of performance information with the budget management process, and expanding the depth and breadth of research.

**Keywords :** public higher education institutions, budget management, performance evaluation

## **Theoretical Research Based on Public Economics**

The Public Choice Theory utilizes economic tools to delve into the analysis of political decision-making, treating both the government and individuals as "economic men" who seek to maximize personal interests. This theory views government behavior as akin to market transactions, where self-interest is pursued with limited systemic constraints, thereby shifting public perception of the government's role. Political parties and bureaucratic

---

<sup>1</sup>Chinese Graduate School, Panyapiwat Institute of Management, Thailand

institutions, in their pursuit of their own interests over the public's during budget allocation, can lead to inefficiency and waste of resources. Niskanen's bureaucratic theory suggests that officials might influence the assessment of public goods to increase fiscal spending, necessitating the establishment of effective supervision and coordination mechanisms. This ensures a combination of autonomous decision-making by officials and accountability, enhancing administrative efficiency.

Public expenditure should adhere to principles including Pareto optimality, Samuelson's rule, and the Kaldor-Hicks criterion, with cost-benefit analysis being particularly important. This analysis aims to quantify the benefits of public goods, ensuring they exceed the costs. Since the 1940s, the United States has adopted cost-benefit analysis, drawing on methods from the private sector to achieve the greatest benefit at the lowest cost. Wang, Xiaojuan, et al. (2010) noted that in China, where government investment is growing, cost-benefit analysis is becoming increasingly important for evaluating the economic and social benefits of public expenditure projects. Although theoretically, if the social benefits of public spending outweigh the costs, the project is deemed viable, accurately assessing social benefits and costs in practice is full of challenges.

Research advocates understanding changes in regulations as assessments of benefits and costs based on uncertainty, rather than as a single calculation. Government spending covers the costs of goods and services provided within the fiscal budget. Wagner's Law suggests that as the economy and national income grow, the demand for public goods rises, increasing the proportion of the public sector. Since its inception, public economics has focused on cost-benefit analysis, and despite the challenges in assessment, the principle that "benefits should exceed costs" has become a universal standard in international performance management. Public economic behavior encompasses fiscal and regulatory activities. Li, Xiaohong, et al. (2017) proposed that public regulation achieves government objectives through legal and administrative means, including the regulation of private enterprises and local governments. Wang, Shaoguang, et al. (2016) emphasized the extensive nature of government regulation. Fan, Liping, et al. (2022) proposed new ideas for the implementation of public policy and suggested innovations in fiscal policy. Zhang, Weiying (1996) proposed the theory of incentive regulation, emphasizing the need to consider incentives and restrictions for the regulated when legislating, taking into account asymmetrical impacts and the motives of the regulator. Public regulation should go through stages of legislation, implementation, and adjustment, with legislation providing general guidance and implementation allowing flexibility for public sector departments to accommodate the needs of different interest groups.

## **The Importance of Budget Performance Expenditure Evaluation in Local Public Colleges and Universities**

### **Theoretical Research Based on New Institutional Economics**

Government budget performance management is a systematic project that requires effective institutions to constrain behavior and reduce transaction costs. Institutional design should aim for simplicity and precision while maintaining a balance between openness and stability. The understanding of institutions in economics has a long history, with Adam Smith proposing in "The Theory of Moral Sentiments" that in a free market economy, universal laws are necessary to maintain social order. Despite this, influenced by economic liberalism, "institutions" did not become a mainstream focus of study. Post-war, the rise of Keynesianism challenged traditional economic order, and the public expressed dissatisfaction with the expansion of government institutions. As the importance of institutions was recognized, people began to explore the interaction between people, institutions, and the economy, re-evaluating the role of institutions. New institutional economics views institutions as scarce elements, emphasizing the optimal allocation of resources, especially when resources are scarce, necessitating institutions to ensure fair competition and reflect systemic functions.

North (1990) defined "institutions" as man-made designs that limit people's interactions, while Cowgill and Shmueli (2000) considered institutions to be rules with punitive power. Institutions are regularities that coordinate behavior, including formal institutions, informal institutions, and enforcement mechanisms. Informal institutions such as social ideas and moral norms are the starting point for institutions, which then develop into formal laws, forming social customs and ideologies that guide behavioral norms.

In new institutional economics, the "institutional variation" model is divided into induced and coercive changes, as well as radical and gradual paths. North believed that universal institutional changes are gradual, with the regularities of everyday life based on a continuous process of feedback and correction.

Formal institutions are mostly established by the state and form traditions through enforcement. Institutional change should be implemented gradually according to national conditions, through pilot programs and the accumulation of experience. The fundamental function of the state is to maintain security and property rights. New institutional economics views the state as an endogenous variable, affecting economic performance and institutional change. Coase's property rights theory emphasizes the impact of clear property rights on business efficiency, and North linked the state with the property structure, arguing that the economic performance of a country depends on its institutional arrangements.

The state is rational but limited in the allocation of public resources, promoting economic development while also potentially harming public interests due to issues such as rent-seeking. North proposed the paradox that "the state is the key to economic development and also the cause of decline," emphasizing the "trial and error" process of government policy and the possibility of government mistakes. The solution lies in whether the government can provide effective property rights incentives. Institutions, as public goods, are influenced by various factors in their supply and demand.

Economic development is closely related to changes in social and ideological concepts, and institutional innovation needs to guide a common ideological system to reduce externalities. North emphasized that the government needs to guide social thought, with ideology as an informal institution having a significant impact on formal institutions. Neoclassical economics achieves resource optimization through market mechanisms, while new institutional economics incorporates transaction costs into the analysis, with Coase's theorem pointing out the decisive role of transaction costs in resource allocation. North extended the concept of transaction costs to the political market, emphasizing that a reasonable political system design can reduce transaction costs and guide fair competition. Although transaction costs are difficult to measure, the study of them aims to understand and reduce costs, rather than to quantify them precisely.

## **Research Based on Principal-Agent Theory**

Principal-Agent theory proposes the separation of ownership and management rights, where the owner retains the right to residual claims, and the manager is granted corresponding rights. As the foundation of modern organizational governance, this theory relies on game theory concerning asymmetric information, which involves pre-contract and post-contract information asymmetry, namely adverse selection and moral hazard. In a principal-agent relationship, conflicts of interest arise due to differences in information and utility functions. Traditionally, incentive and regulatory mechanisms are used together to address these issues, but the cost of regulation can be high. By aligning the interests of both parties, a "compatible incentive" mechanism can be formed. The budget system of colleges and universities presents a complex principal-agent relationship, which is crucial for the development of higher education. Issues such as internal information asymmetry, inconsistent utilities, and mismatched power lead to moral hazard and adverse selection in budget management. When designing a performance budget system, colleges and universities need to consider principal-agent issues, prevent the abuse of information advantages, ensure the rational allocation of

resources, establish a performance budget system, improve transparency, reduce information asymmetry, construct incentive-compatible mechanisms, and improve the regulatory mechanism.

## **Research Based on Stakeholder Theory**

Stakeholder theory, proposed by Freeman in 1984, suggests that enterprises should pursue the interests of all employees, relying on their active participation. Stakeholders include shareholders, creditors, employees, government, community, and media, among others, and enterprises need to compensate each stakeholder's claims reasonably. The relationship between colleges and universities and stakeholders is mutually influential, where the development of higher education institutions drives the growth of stakeholders and vice versa. Colleges and universities should use a performance budget system to balance resource allocation and ensure impartiality. Applying stakeholder theory to performance management in colleges and universities helps to clarify objectives, streamline financial management relationships, implement long-term strategies and short-term goals, and enhance the effectiveness of performance management.

## **Research Based on Performance Budget Reform Theory**

The concept of performance budgeting was proposed by the New York City Bureau of Municipal Research in 1907, aiming at management and control. The U.S. government budget reform is divided into two stages: the performance budgeting of the 1940s, which focused on budget allocation based on outputs; and the "results-based budgeting" of the 1990s, which emphasized performance and outcomes. Cothran defined three characteristics of entrepreneurial budgeting: task-based, performance assessment, and quantified goals and performance indicators. Kate advocated for a diversified reform of the government's performance budget system, including budget control, program evaluation, and expenditure transfer, proposing a resource allocation mechanism based on strategy and performance.

Martin summarized four characteristics of the new performance budget: centralized control of objectives and scale, decentralized methods, accountability for outcomes, and improved transparency and communication. Williams emphasized the importance of performance assessment in budget management. Christine and others, from the perspective of the Government Accountability Office (GAO), suggested that performance budgeting promotes project review and public information transparency.

Niu Meili (2003), based on Hick's theory, believed that the main line of U.S. budget reform is control, management, and planning functions. Ma Hai (2004) analyzed the characteristics of performance budget systems in Europe and America, proposing a performance contract core budget system. Zhan Guobin (2005) evaluated the performance budget system of new public sectors. Chen Gong (2006) and Fu Daozhong et al. (2006) introduced the performance budget systems of the UK, the USA, Australia, and the OECD, respectively. Li Hui and Zhang Zhichao (2007) studied the background and challenges of U.S. performance budgeting, providing insights for China. Deng Yi (2008) emphasized the complexity of reform and the promotion of a performance culture. Wu Xun and Zhang Xiaolan (2008) reviewed the international experience of government performance budgeting.

## **Empirical Research on the Effectiveness of Performance Budget Reform**

Melkers and Willoughby pointed out that performance-based budget reforms were widely implemented in the 1990s across U.S. states. They studied the performance budget practices of 47 U.S. states and found that 31 states enforced them through legislation, while

the rest used administrative orders or budget guidelines. A questionnaire survey showed that budget officials generally believe that performance information can enhance planning effectiveness and decision-making quality. Jordan and Hackbart conducted a similar survey, finding that 46 states used performance budgets, 42 states used performance indicators, but only 13 states allocated funds based on them.

Wang Xiaohu's research showed that performance assessment is widely used in the budget process of local governments in the United States, with 77.7% of agencies initiating assessments when applying for budgets to clarify expected project outcomes. Hubner and Rau introduced performance budgets in higher education through case studies, and the U.S. Government Accountability Office (GAO) examined the use of project rating tools. Hong Cheng used event history analysis to understand the adoption of performance budget reforms, finding that state governments with decentralized management and a small number of financial staff were more likely to adopt them. Mark and Brian used panel data to test the impact of performance budgets on expenditures, finding that at least 2% of capital expenditures could be saved. Brauer suggested that the trend of budget reform in China is to adopt a formalized version of the U.S. performance budget model.

Nispen and Posseth reviewed the international performance budget reforms of the 1990s and the implementation in the Netherlands, believing that despite the challenges, performance budgeting is still worth promoting. McCormack, Hawke, Kim, and Park summarized the implementation experience of performance budgets in Canada, Australia, and South Korea. Shea, Noman, and others examined the current state and challenges of reforms in the United States, the United Kingdom, and Sweden. Han Kun (2006) believed that the government's reform ability and power configuration mechanism are key to implementing performance budgets. Wang Yanjie and Zheng Sihai (2006) proposed a framework for establishing a performance budget system, including evaluation entities, indicators, processes, and methods. Xing Tiantian (2006) suggested incorporating political, economic, and systemic factors into the reform to gradually achieve budget transformation. Zhao Heyun (2007) pointed out the challenges faced by performance budgets in China, and Cai Hongying (2007) summarized the predicaments and conditions of performance budget management in China. Wang Qiyang (2007) believed that it is currently difficult for China to implement performance budgets, due to constraints in concepts, systems, technology, and management factors.

## **Research on the Implementation Framework of Performance Budgeting**

Joyce pointed out that governments need to respond to the demands of various stakeholders, who often find it difficult to reach a consensus on performance targets. Gilmir and Lewis suggested that the challenge of performance budgeting lies in the adjustment of budgets when project performance is poor. Smith emphasized the weak links in the execution of performance budgeting, including the complexity of linking finances with performance, over-reliance on performance, and the lack of authenticity and timeliness of information, which stem from multiple factors at the systemic, technical, and political levels. Pitsvada and LoStmeco highlighted the difficulty of outcome assessment due to its long-term and uncertain nature. Tate believed that ensuring the authenticity of performance data is key to improving the reliability of assessment information. Lu Yi analyzed the performance budget system of local governments, emphasizing the importance of enhancing the ability to utilize performance information and improving the quality of assessments. Broom and McGuire pointed out the challenges of assessing the outcomes of public sector actions, emphasizing the consideration of the duration of output effects during assessment.

Zhang Xin and Yuan Xinghou (2005) believed that China's fiscal system reform should be performance-oriented, requiring a transformation of the government's fiscal system to alleviate fiscal pressure. Chen Xudong (2005) proposed that performance budgeting is an effective method for optimizing resource allocation and overcoming government failure. Wang Guijuan (2007) analyzed the particularity of public goods supply, noting that its supply and

demand relationship is a variation of the principal-agent relationship. Mao Ying'e (2007) emphasized that the foundation of building a local government performance evaluation system is "public goods." Xing Tiantian (2007) proposed that "New Public Management" provides a theoretical basis for government performance budget reform. Cai Zili (2005) suggested establishing performance budgeting objectives and a scientific performance evaluation system.

Li Xiaodi (2007) recommended that implementing performance budgeting requires a change in concept, the establishment of a performance management committee and assessment organization, the construction of a concise performance budget indicator system, and the strengthening of budgetary legal systems. Hao Shuchen and Wang Jinjie (2007) believed that performance budget management should comprehensively consider macro performance and resource utilization efficiency, focusing on the performance and benefits at the departmental level during the implementation phase.

## **Theoretical Model Research on the Integration of Performance Evaluation and Budget Resource Allocation in Public Colleges and Universities**

Gilmour and Lewis believe that the key to government adoption of performance evaluation and budgeting is to determine the outcomes of projects and the corresponding increases or decreases in the budget, making performance evaluation results a part of the budget process. Unlike in China, performance evaluations under the performance budget framework internationally focus more on the achievements of the institution's development. OECD member countries have reached a consensus on promoting reform by increasing the use of performance information in the budget.

Accountability actions have given rise to performance projects such as performance reports, funds, and budgets. Performance reports are based on the assumption that performance improvement is unrelated to the allocation of funds. The performance elements in the college budget include both funds and budgets, covering project objectives, external responsibilities, performance enhancement, and the achievement of indicators. Burke and others published several studies between 1997 and 2003, exploring the current state, prospects, prevalence, effectiveness, and integration with financial grants of performance funding in American public universities.

From the assessment reports of the 1980s to the performance funds of the 1990s, accountability actions have undergone a transformation. Shefos's 1994 study showed that 9 states had adopted performance fund policies, with 10 states considering them. A 1996 study showed that 14 states had included "quality outcome factors" in their budgets. By the mid-1990s, 40% of state university boards believed that funding should be linked to performance. Burke and Modarresi's annual report showed that 30 states used performance funds and budget assessments, while 9 states used one of them, with legislative bodies agreeing that performance should affect funding allocations. Performance funds or budgets combine school performance with factors such as cost, enrollment, and inflation, neglecting the number and quality of students and public services. Integrating performance evaluation into the budget process and linking it to allocation decisions helps to combine planning with budgeting.

Hoyt views performance funding as the process of investing funds in performance indicators, including the selection of assessments and the evaluation of results. Gaither and others believe that evaluation, performance indicators, and funding together aim to demonstrate the responsibility of colleges and universities, to achieve their missions and goals. Layzell essentially defines performance funding as an accountability system, a direct link between performance and funding levels based on a set of performance indicators. Serban and others propose that implementing performance fund projects requires considering elements such as objectives and performance measurement standards, emphasizing the importance of indicator weighting and funding methods. Burke believes that the performance evaluation

mechanism is both an opportunity and a challenge, requiring a balance of internal and external concerns and the interests of various levels of government, considering the selection and weighting of indicators.

Incentive grants in the performance budget system are based on the performance evaluation of colleges and universities and are not directly linked to the base budget. Carter's research shows that the characteristics of performance budgeting include the establishment of assessment criteria, cost classification comparison, focus on performance reporting, and management flexibility. The performance assessment method proposed for the government accountability mechanism can be used to assess government accountability and achieve state performance standards. Performance funding links funding allocation with the results of indicator assessments, forming an automatic and clear relationship. Performance budgeting allows the government and legislative bodies to consider the performance of schools, and performance distribution as an incentive measure, with a flexible relationship.

Shen Chunli, based on the role of performance information in the budget, divides it into four types: report form, cognitive foundation, decision-making basis, and theoretical performance budgeting. She points out that the performance funds and budgets in college budgets are consistent with the other three, with the difference lying in the use of performance information.

Burke and others' research in 1997 and 1998 aimed to distinguish the differences between performance funding and budgeting, defining performance funds as state funds directly related to colleges, based on performance standards, with an automatic procedural link to school performance. Performance budgeting, on the other hand, is an overall budget based on performance that is not directly reported. They point out that performance funds are related to operating budgets, while performance budgets are more stable, and using a diversified target assessment can avoid issues of efficiency and reliability.

Davis summarizes the differences between performance funds and budgets as the allocation of basic budgets and performance-related funds, and flexible budget execution and distribution processes. In the performance funding system, the relationship between performance results and resources is clear, providing an incentive mechanism. In performance budgeting, incentive funds are allocated according to performance assessments, with a flexible and random relationship. Jiang Bo (2011) constructed a "three-dimensional" performance budget management model for colleges and universities, emphasizing the integration of strategic planning, indicator systems, and three-dimensional integration. Wang Dan and Dai Feng (2012) proposed a performance-oriented performance budget management model, constructing a performance analysis framework and a reward system.

## **Research on the Budget Performance Evaluation of Local Public Higher Education Institutions in China**

The performance fund model in South Carolina, USA, is based on 9 performance levels and 37 indicators, covering aspects such as educational quality, teacher quality, and management effectiveness. Burke and Serban studied the performance fund plans of 11 states in the United States and found that there was a lack of unified standards in the allocation of funds among the states, with indicator types including input, process, output, and outcome methods. Their research also pointed out that the selection of internal control indicators in colleges and universities is unrelated to external decision-makers, and the current trend is to reduce attention to inputs and increase the assessment of outputs, outcomes, and processes.

Jongbloed and Vossensteyn's empirical research on the performance funds of 11 OECD countries' colleges and universities showed that performance orientation is gradually strengthening in colleges and universities that aim for output. Commonly used performance evaluation indicators internationally include accumulated credits, the number of graduates, research results published, and the number of doctoral degrees awarded. The Project Performance Assessment Tool (PART) developed by the U.S. Office of Management and

Budget (OMB) has been widely referenced, using survey responses for scoring to assess the implementation of projects. Florida's "Draft Higher Education Performance Fund System" proposed a scoring system from 0 to 100 and a "7-dimension" performance measurement method, allowing colleges and universities to adjust the weight of indicators according to their own circumstances.

The integration of performance evaluation information with the budget management process has attracted attention. Burke and others believe that the combination of budget and performance is a hot topic, and a survey by Rockefeller showed that 30 states are considering incorporating performance into the budget process. Wang Xiaohu pointed out that the government can use performance evaluation in the stages of budget formulation, deliberation, execution, and evaluation and audit. Joyce and Sieg explored the framework for using performance information in the budget process, emphasizing its application at each stage.

Joyce and other scholars believe that performance information is crucial for management decisions. Although research based on performance budgeting helps to understand the role of performance information in the budget process, there are limitations. These limitations include a narrow definition of performance-based budgeting, over-reliance on individual surveys and questionnaire feedback, and a small sample size, leading to the incredibility and subjectivity of the conclusions. In the budget process, performance information is applied to strategic formulation, performance assessment, and cost accounting, with a special emphasis on benefit and performance assessment.

Wu Jianan and Li Guoning (2004) constructed a performance evaluation index system for educational financial expenditures with fairness and efficiency as the core, covering multiple aspects of educational expenditure. Li Shuning and others (2004) proposed a financial expenditure management model based on "project type" and "department type." Xu Rongdi and Wu Jijun (2005) believed that budget management should serve as a means of connecting college strategy and performance, rather than an ultimate goal. Wang Mingxiu and Sun Haibo (2005) analyzed the performance of college budgets from multiple perspectives. Chen Ruyuan (2006) discussed effective measures for colleges to implement budget performance evaluation. Xu Rongdi (2006) emphasized the necessity of effectively integrating budget management and performance management. Zhang Keyou (2007) emphasized the importance of comprehensive supervision and evaluation of budget performance assessment. Zhang Xiaolan and Wu Xun (2007) believed that the establishment and improvement of a budget performance evaluation system are key to college budget management.

Wang Tongxiao, Li Aiguo, and others (2008) emphasized the key role of budget performance evaluation in budget management. Meng Xiangxia (2009) pointed out that as the reform of the budget management system deepens, the requirements for college budget management increase, and the traditional model needs to shift towards a more "output or result" oriented assessment. Zhang Wenli (2009) used the AHP method to construct a college budget performance evaluation system. Cai Chenyan (2009) emphasized the urgency of building and improving a government budget performance evaluation system. Xu Zhensheng (2009) proved the effectiveness of the Balanced Scorecard (BSC) in college budgeting and performance assessment.

Zhang Zeming, Wang Liping, and Zhou Yin (2009) emphasized the importance of implementing a performance-oriented budget management system in Chinese colleges and universities, and discussed the principles and strategies for building a college budget performance evaluation system from the perspective of systems and institutional theory.

Zhang Fuxiang and Zhang Jian (2010) studied the evaluation index system for the performance deviation of college budgets in China, proposing 22 operational evaluation indicators. Lu Ping, Wu Jing, and Zhang Fuxiang (2010) discussed the role of budget performance evaluation in improving budget management and the efficiency of fund use, and proposed principles and implementation precautions for college budget performance evaluation. Wu Xun and Zhang Xiaolan (2010) analyzed the current state of China's higher education system and budget management, and made suggestions for building a government

budget performance evaluation system. Chu Shan and Li Hong (2010) emphasized the core position of budget management in college financial management, and proposed that strengthening budget management is key to improving the quality of internal control and sustainable development of colleges. Wang Jianhua (2010) proposed that building a scientific and practical performance evaluation method is key to financial management reform, and put forward principles for improving the budget performance indicator system.

Li Yanli and Li Genwang (2012) believed that establishing a performance-oriented budget management system is crucial for improving the management quality of colleges and universities. Tian Jingren and Li Sicheng (2012) pointed out that the effectiveness of college performance management is valued by the government and society, emphasizing the role of performance in competition. Qiao Chunhua (2012) discussed the contradictions between the practice of college performance management and the characteristics of educational economics, advocating for a gradual performance assessment. Chang Jianjun and Wang Linchang (2012) proposed that implementing budget performance evaluation can improve the efficiency of educational fund use and promote the rational allocation of resources, emphasizing the importance of establishing scientific evaluation indicators. Tian Jingren (2012) emphasized the importance of implementing comprehensive budget performance management and the necessity of establishing a performance target evaluation index system. Wu Jing, Lu Ping, and Zhang Fuxiang (2012) proposed that the goal of college budget performance evaluation is to fully reflect the implementation of the budget and optimize resource allocation. Liu Congbing (2012) emphasized the importance of establishing a scientific and systematic performance evaluation index system, and constructed a college budget performance evaluation index system. Zhang Xuexin (2012) believed that the Balanced Scorecard is an advanced tool for performance and strategic management, suitable for the performance evaluation of colleges' internal schools, and designed a corresponding evaluation system.

Zhang Fuxiang (2012) explored the practical path of self-evaluation for colleges under the jurisdiction of Jiangsu Province, proposing an operable evaluation system as a means for financial and education departments to evaluate college budget management. Chen Mengtao (2012), in response to the funding issues of newly established undergraduate colleges, proposed the importance of budget expenditure performance evaluation and elaborated on the assessment methods. Li Bin (2014) analyzed the theory and problems of budget performance evaluation in Chinese colleges and universities, and proposed suggestions for improving the level of evaluation, accelerating fund use, and improving the evaluation system. Xiang Huahua (2015) proposed a multi-governance college asset budget performance evaluation model, including evaluation of decision-making, execution process, and results, and put forward suggestions for improvement. Ling Yun (2015) pointed out the impact of budget management quality on the financial situation of colleges and universities, analyzed the budget performance model, and proposed improvement measures through a questionnaire survey. Liu Guobin and Ji Jingyan (2015) emphasized the deficiencies of the college performance budget evaluation system in a changing environment, and advocated the use of the Balanced Scorecard (BSC) and Key Performance Indicators (KPI) to improve the evaluation system.

Zhang Yifei, Zhu Yingying, and Yang Mingna (2016) emphasized the importance of performance evaluation of fiscal expenditure in local applied colleges and universities, and designed an evaluation index system for CD colleges. Xia Xue (2016) discussed the importance of performance budget evaluation and system implementation in the process of massification of higher education. Peng Qiulian and Yang Yundong (2016) explored the path to building a college budget performance evaluation mechanism, proposing a method that combines the Balanced Scorecard with Key Performance Indicators. Gu Shuiping and Li Xun (2016) pointed out that college budget management has not been given enough attention, leading to low efficiency in the use of funds, and proposed suggestions to improve evaluation efficiency. Wei Yaqi and Chen Pingze (2016) used the concept of the Balanced Scorecard to construct an evaluation system, and proposed an effective way to advance the refinement and scientification of budget management through the Analytic Hierarchy Process.

Zhang Li (2017) emphasized the importance of college budget management and proposed that to improve management performance, it is necessary to clarify the multi-dimensional goals of colleges and establish a scientific budget performance evaluation system. She applied the Fuzzy Comprehensive Evaluation method to evaluate various aspects of college financial budgets to improve budget management efficiency. Zhang Jie, Ni Huiqun, and others (2019) discussed the role of colleges in the execution of fiscal scientific and technological expenditures, emphasized the importance of performance management in improving the efficiency of fund use, and proposed the idea of integrating the concept of performance throughout the entire process of fund management. Shi Shuxia (2019) pointed out the limitations of the traditional budget management model and introduced the Balanced Scorecard and Strategy Map theory to construct a college budget management performance evaluation system, exploring effective performance evaluation methods through empirical analysis of T University's data.

Yang Yanyan and He Zhiqin (2019) used the "input-output" model to evaluate the effectiveness of performance budget implementation in Yunnan colleges and universities, and proposed improvement measures to enhance the level of scientific research management and the efficiency of fund use. Xia Dan and Du Guoliang (2019) constructed a multi-level budget performance evaluation model based on the functions of colleges and universities, aiming to optimize resource allocation and improve the quality of education. Wang Hainan (2019) introduced the Balanced Scorecard into budget performance evaluation, proposed an evaluation method, and conducted empirical research to improve the refinement and standardization of financial budget work. Sun He and Chen Gang (2020) discussed the impact of the government accounting system on budget management and proposed the construction of a budget performance evaluation system based on academic disciplines. Gong Jingyu (2020) designed a budget performance evaluation system based on the Balanced Scorecard, providing a reference for budget performance management in Chinese colleges and universities through comparative analysis. Wang Xue Dong (2020) constructed a budget performance evaluation index system for applied undergraduate colleges, and improved the measurability and accuracy of the evaluation through the Delphi method and the Analytic Hierarchy Process (AHP). Xia Dan (2020) used KPI and AHP methods to evaluate the budget performance of colleges and universities and proposed a new evaluation method to improve the scientific and effective management of the budget.

Shi Yongxia and Yin Junming (2022) proposed that the concept of the Balanced Scorecard can optimize the budget performance evaluation system of colleges and universities, and improve management through strategic map design to promote sustainable development. Cheng Limin (2022) emphasized the importance of financial project funds for colleges and universities, and believed that budget performance evaluation is crucial for the development of the cause. Peng Manru and Tan Yuanyi (2022) advocated for the construction of a comprehensive budget performance management system to address the challenges of performance management in colleges and universities, and strengthen the design and feedback of performance evaluation indicators through the Balanced Scorecard, building a four-level management system to improve governance efficiency.

Zhang Huili, Pan Haoqiang, and Xu Yu (2022) pointed out the lag in setting budget performance targets for "Double First-Class" colleges and universities, which fails to reflect the school's mission and construction goals. Qiao Chunhua (2022) advocated that college budget performance evaluation should shift from "outcome evaluation" to "process evaluation" to improve the quality of the evaluation and achieve value-added. Li Suying and Xie Mingming (2022) emphasized the importance of budget management performance evaluation, and evaluated the budget management performance of S University through the Analytic Hierarchy Process and the grey relational analysis, proposing development suggestions and improvement measures.

Zhou Qijie, Tang Wanhong, and Gao Zheng (2022) explored a fiscal higher education fund performance evaluation model to achieve comprehensive budget performance

management. Jintian and Chen Xiaoyu (2022) discussed the application of "zero-based budgeting" in Chinese colleges and universities, proposing new ideas to improve the efficiency of budget use. Wang Chunhui, Yao Guanxin, and Liu Mu (2022) constructed a framework for financial governance of colleges and universities based on the Balanced Scorecard, providing a reference for the assessment of financial management level. Liu Chao, Cui Long, and Dong Liuli (2022) emphasized the necessity of implementing college budget performance management, constructing a whole-process tracking evaluation index system, and optimizing resource allocation. Zhang Chuan and Zhang Jingke (2022) proposed combining the budget with performance evaluation to build a dynamic cyclic linkage mechanism, promoting the integration of performance into budget management. Liu Yingzi (2022) proposed measures to construct a budget performance evaluation index system to improve the level of budget management. Yi Hua (2022) constructed budget performance evaluation indicators and models for central special funds of colleges and universities, enhancing the efficiency and benefit of resource allocation and use. Dong Hui, Xu Chaoyang, and Tian Huiyu (2023) proposed the construction of a scientific local college budget performance index system, strengthening the awareness of budget performance management, improving governance capacity, and increasing the efficiency and benefit of fund use.

## Concluding Remarks

This article summarizes the current state of research on the budget performance evaluation of public higher education institutions in China, covering a wide range of theoretical foundations and empirical research results. Through multidimensional analysis of public economics, new institutional economics, principal-agent theory, stakeholder theory, and performance budget reform theory, it reveals the importance and complexity of budget performance evaluation in higher education management. It also points out the deficiencies in current research, including weak theoretical support, the singularity of evaluation techniques, and the limited integration of performance information with the budget process.

With the rapid development of China's economy and society, budget performance management in colleges and universities is also facing new opportunities and challenges. Therefore, researchers and practitioners need to closely monitor changes in national policies and new trends in higher education reform, continuously updating and improving the methods and tools for budget performance evaluation. Through continuous research and practice, it is expected that a more scientific, rational, and efficient budget performance evaluation system will be established, providing strong support for the sustainable development of higher education in China.

Future research needs to delve into the following areas: first, strengthen basic theoretical research and construct a more systematic and comprehensive theoretical framework to support the scientific and effective nature of budget performance evaluation; second, develop and improve evaluation techniques, especially the comprehensive use of financial and non-financial indicators to fully reflect the performance of colleges and universities; third, strengthen the integration of performance information with the budget management process to ensure that performance evaluation can truly guide and optimize budget allocation; and finally, enhance the depth and breadth of research, using a variety of research methods to explore the establishment of a performance evaluation system suitable for the characteristics of Chinese colleges and universities.

In summary, this article provides a comprehensive perspective on the research of budget performance evaluation in public higher education institutions in China and offers suggestions on how to further promote research in this field. Through systematic theoretical research and practical exploration, it can promote the continuous improvement and optimization of budget performance management in Chinese colleges and universities, contributing to the enhancement of the quality and efficiency of higher education.

## References

- Aaron Wildavsky. Translated by Gou Yanan. *Budgeting and Governance* [M]. Shanghai: Shanghai University of Finance and Economics Press, 2010.
- Beijing Guoyu Accounting Firm Co., Ltd. *Practice of Budget Performance Management* [M]. Beijing: China Financial and Economic Publishing House, 2021.
- International Department of the Ministry of Finance. *The Enlightenment of Italy's Performance Budget Reform on China's Budget Performance Management Work* [J]. *Economic Research Reference*, 2013(1): 43.
- Chen Juan. Current Status, Issues, and Development Trend of Performance Management Research in Chinese Colleges and Universities. *Journal of Xidian University (Social Sciences Edition)*, 2010(6): 120-124.
- Chen Tong, Ren Ming, Gong Lixin. The Governance Model of French Universities and Its Enlightenment to China [J]. *Journal of Xidian University*, 2006(7): 81-85.
- Cheng Zhuolei, Hu Zhenhua, Liu Wenbin. Research on the Application of Stakeholder Theory in University Performance Management [J]. *Journal of Hunan University (Social Sciences Edition)*, 2011(2): 63-67.
- Deng Deqiang, Liu Haotian, Xie Hua, et al. The Role of External Control and Self-Control in Suppressing Budget Slack: An Experimental Study Based on Differential Survey and Moral Cognition [J]. *Accounting Research*, 2014(4): 49-57.
- Feng Xuejun. *Research on the Unbalanced Financial Input of Compulsory Education in China* [D]. Liaoning University, 2013.
- Gong Qiaoli, Fang Xueyan. An Empirical Analysis of the Impact of University Budget Preparation on Budget Slack [J]. *Journal of Xinjiang University (Philosophy, Humanities, and Social Sciences Edition)*, 2011, (9): 13-15.
- Hu Rui. A Literature Analysis of Research on Performance Management in Chinese Colleges and Universities [J]. *Theory and Practice of Education*, 2011, 28: 61-64.
- Zheng Fanghui, Fei Rui. Performance Evaluation of Fiscal Revenue: A Value Tool for Fulfilling the Goals of Tax Cuts and Fee Reductions [J]. *Chinese Social Sciences*, 2019(6): 85-105.
- Zheng Fanghui, Fei Rui. Performance Evaluation of Special Fiscal Funds at the Provincial Level in Guangdong Province [J]. *Journal of South China University of Technology (Social Science Edition)*, 2017(03).
- Qiao Chunhua. *70 Years of Financial History in New China's Colleges and Universities* [M]. Nanjing: Southeast University Press, 2019.
- Wang Shengjiao. *Research on Budget Performance Management of Applied Undergraduate Colleges under the New Government Accounting System* [M]. Beijing: China Financial and Economic Publishing House, 2022.
- Yang Yundong, Dong Shaoxian, Liu Weimin. Research on the Path to Achieving Performance Budgets in Colleges and Universities Based on SWOT—Taking S University in Guangdong Province as an Example [J]. *Friends of Accounting*, 2014(28): 37-39.
- China Development Foundation. *A Reader on Comprehensive Budget Performance Management* [M]. Beijing: China Development Press, 2020.
- Behn, R. D. (2014). *The performance stat revolution: Understanding and managing the leap from measurement to management*. Brookings Institution Press.
- Behn, R. D. (2017). Performance leadership. *Public Administration Review*, 77(1), 24-34.
- Bouckaert, G., & Halligan, J. (Eds.). (2017). *Performance management in the public sector*. Routledge.
- Boyne, G. A., & Walker, R. M. (2018). Performance management and evaluation: An appraisal of the literature. *Public Administration*, 96(1), 158-173.
- Bryson, J. M., Crosby, B. C., & Bloomberg, L. (2019). *Creating public value in practice: Advancing the common good in a multi-sector, shared-power, no-one-wholly-in-charge world*. Routledge.

- Christensen, T., Lægheid, P., & Rykkja, L. H. (2019). *The Oxford handbook of governance*. Oxford University Press.
- Jann, W., & Wegrich, K. (2019). Theories of the policy process: State of the research and emerging trends. *Policy Sciences*, 52(4), 635-642.
- Kickert, W. J. (2017). Public governance in the twenty-first century: A democratic perspective. *Oxford Research Encyclopedia of Communication*.
- Radin, B. A. (2018). Beyond Machiavelli: Policy analysis reaches midlife. *Journal of Policy Analysis and Management*, 37(1), 50-58.

