

Article

Strategic Budgeting and Budgeting Evaluation Effects on China's Manufacturing Companies' Performance

Fengran Zhou ¹, Yaoping Liu ^{2,*} , Surachai Traiwannakij ¹ and Boge Triatmanto ¹

¹ Department of Management Science, Institute of Science Innovation and Culture, Rajamangala University of Technology Krungthep, Bangkok 10120, Thailand; 669240300055@mail.rmutk.ac.th (F.Z.); surachai.t@mail.rmutk.ac.th (S.T.); boge.t@mail.rmutk.ac.th (B.T.)

² Institute of Science Innovation and Culture, Rajamangala University of Technology Krungthep, Bangkok 10120, Thailand

* Correspondence: yaoping.l@mail.rmutk.ac.th

Abstract: This study investigates the interplay between budget planning and budgeting evaluation functions in relation to company budget management performance, specifically focusing on the phenomenon of budgetary slack among manufacturing companies in China. A total of 589 employees, including senior executives and finance managers, participated in this study to answer structured questionnaires. Structural Equation Modeling (SEM) was used to test the proposed research hypotheses; furthermore, Hayes' mediation analysis was applied to assess the direct and indirect effects of budgetary slack in mediating the relationship between the predictor variable (e.g., budget planning and budgeting evaluation) and the outcome variable (budgeting performance). The findings reveal that both budget planning and evaluation significantly mitigate budgetary slack while enhancing the overall budget management performance. The results suggest that effective budgeting performance is positively influenced by the quality of budget planning and evaluation functions, which directly and indirectly reduce budgetary slack. Such evidence underscores the critical role of the budgeting management process in achieving optimal budgeting performance, with budgeting evaluation serving as a catalyst for constructive feedback to prevent slack. This study advocates for companies to strengthen the alignment between their budgeting processes and budgeting strategies. Furthermore, this research provides a comprehensive strategy that integrates technology, strategic budget management, and financial governance, equipping business entities to navigate and thrive in a dynamic economic landscape.

Keywords: budget management; budgetary slack; budgeting performance; SEM



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1. Introduction

Comprehensive budgeting serves as a fundamental tool for internal management control, allowing enterprises to effectively forecast, make informed decisions, and align financial planning with strategic business objectives. This strategy guarantees the comprehensive and ongoing oversight of financial resources and company operations at all organizational levels (Azam & Bouckaert, 2024; Kihn & Ström, 2025). Companies require establishing a goal responsibility system that integrates with the organization's overarching objectives, optimizes resource allocation, and strengthens system implementation. In addition, budgeting performance evaluation and comprehensive budgeting support should be in line with corporate strategic goals and should reinforce budgeting accountability (Namazi & Rezaei, 2023; Y. Zhang et al., 2018). Comprehensive budget management has

four important stages, namely, budget planning, budget evaluation, budget slack, and budgeting performance. These stages are interdependent and enable companies to monitor, adjust, and improve financial strategies (Zeng et al., 2023; Zhao, 2022). Hence, effective budgeting management necessitates ensuring that the budgeting process remains dynamic and responsive to organizational and market changes (Douglas & Overmans, 2020; Zarei et al., 2024). This proves that enterprises must integrate a pivotal standard for budgeting towards financial planning, such as strategic objectives, optimizing resource distribution, and implementing budgeting evaluation, to achieve a competitive advantage.

Globally, enterprises face persistent budgeting performance issues, including rigid budget structures, inaccurate financial forecasting, and inefficient resource allocation. The dynamic business environment is driven towards rapid technological advancements and geopolitical uncertainties, which make the budgeting process detrimental. Budget planning has a crucial role in influencing business activities and utilizes comprehensive budget management (Arnold & Artz, 2019; Wagner et al., 2021). This includes predicting key financial performance and distress. In China, enterprises encounter unique budgeting challenges influenced by regulatory policies, economic transitions, and market competition. Some Chinese firms rely on traditional budgeting models that may not adequately address the complexities of modern business operations, such as budget rigidity, inadequate cost control, and misalignment. Hence, companies must embrace flexible budgeting techniques, enhance financial transparency, and leverage digital tools to optimize forecasting and decision-making. The effective implementation of a comprehensive budget management system, including budget evaluations, is an important approach to ensure the implementation of budget incentives and constraints (Bhimani et al., 2018; Fisher et al., 2002).

The fulfilment of strategic budget management's value creation objectives requires increasing the flexibility and responsiveness of the business system as an effective integration. This integration ensures robust financial risk mitigation. These issues incorporate task-budgeting slack (De Baerdemaeker & Bruggeman, 2015; Silva et al., 2023). There is also a lack of studies on the indirect effects of the budgeting system on operational management and participation in the budgeting process. In light of these variables, the core structure of a financial risk prevention-based budget management system should have four essential components: strategic management, budget management, information management, and operational management (Mthiyane et al., 2022; Parra et al., 2024). Strategic management needs to capture the corporate intent, which is thoroughly represented through budget management. Information management adeptly addresses the real-time control issues unaddressed by conventional budgeting methods, while operational management provides the foundational data for a business (Junaidi, 2024; Mthiyane et al., 2022).

Although existing research has examined various aspects of the budgeting process that promote budgeting performance, innovative business and marketing, and improved company performance towards budget planning, budgeting evaluation against budgetary slack have not been adequately investigated, particularly among Chinese companies (Azam & Bouckaert, 2024; Raudla & Bur, 2023). Most preliminary studies are more concerned with public companies and examine budgetary slack as an outcome (Nguyen et al., 2019; Shields & Shields, 1998). This is due to factors such as organizational culture, sociopolitics, and business sensitivity. In addition, corporate performance behind budgeting performance often receives insufficient attention, as well as analyses of how enterprises can dynamically adapt budgeting processes amid the technological advancements and volatile market conditions. How does the budget planning function affect budgeting as comprehensive budgeting in an enterprise? What are the key factors that enable enterprises to adapt budgeting practices to evolving business landscapes? What specific challenges of budgetary slack are there, and how could the company have mitigated it? These questions illustrate the

careful integration of budget management to prevent budgetary slack during the financial planning process.

The aims of this research are to establish comprehensive information for strategic budget management in manufacturing companies in China, with a particular emphasis on budgetary slack control. It provides insights into which criteria should be prioritized to achieve optimal financial risk control and budget management performance. Furthermore, it offers a detailed analysis towards evaluating and refining the strategic budget management process, including exploring specific strategies that can enhance budget management practices and financial risk control. The results provide manufacturing companies with practical recommendations and strategic options that can be tailored to their unique financial and operational contexts.

This manuscript is structured as follows: Section 2 presents a literature review and develops the hypotheses. Section 3 outlines the methodology, including the research design and data analysis. Section 4 presents the results, while Section 5 discusses the key findings, research contributions, conclusions, and limitations of this study.

2. Literature Review

This section analyzes the theoretical foundation of budget management and its applicability to manufacturing companies in China and the global context. Then, the existing literature on these topics is explored. In the next section, the research model and hypotheses are developed.

2.1. Resource-Based-View (RBV) Theory and Budgeting Performance of Companies

The Resource-Based View (RBV) is a strategic management theory that emphasizes the role of an organization's internal resources and capabilities in achieving a competitive advantage (Priem & Butler, 2001). This theory states that a company's competitive advantage should effectively utilize budgeting and valuable resources such as budget planning, evaluation, slack, and the company's performance towards budgeting management (Huang & Chen, 2022). This aligns closely with budgeting processes, as financial resources and budget planning serve as critical internal assets for the budgeting performance of companies. Budgeting performance refers to the effectiveness and efficiency with which an organization plans, allocates, and utilizes its financial resources to achieve its strategic and operational goals (Cuadrado-Ballesteros & Bisogno, 2022; Douglas & Overmans, 2020). It ensures that an enterprise can meet financial objectives; optimize costs; and enhance decision-making processes towards budget accuracy, adherence to financial plans, resource optimization, and responsiveness to market fluctuations (Figure 1).

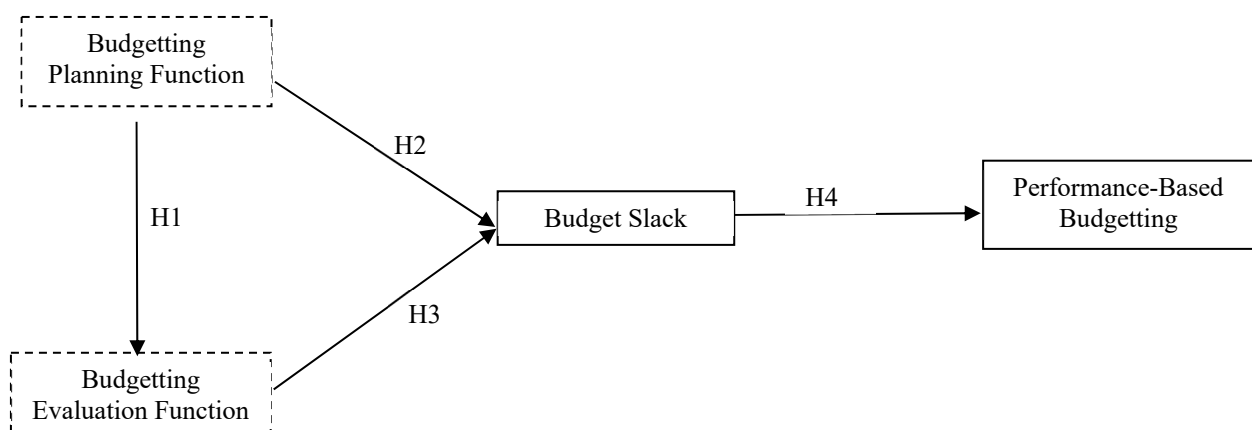


Figure 1. Proposed research model.

Organizations with a strong budgeting performance continuously monitor budget implementation, evaluate variances, and adapt their strategies to improve financial control and accountability. This allows for all budget execution information to integrate positive feedback into the strategic management cycle. Furthermore, the evaluative aspect of budget management is bidirectional, enabling a two-way interaction between financial forecasts and budget adjustments (Khalaf et al., 2023). This approach facilitates the budgeting process towards initiative and innovation goals and targets (Azam & Bouckaert, 2024; Bchennaty et al., 2024). However, some enterprises neglect the role of non-financial metrics in comprehensive budget management (Alizadeh & Gholipour Domyeh, 2024; Leotta & Ruggeri, 2022). The Guangxi principle has been applied in Chinese business culture; this refers to the system of personal connections and relationships that influence business decisions, governance, and management practices. In the context of budgeting, the Guangxi principle plays a significant role in shaping financial planning, resource allocation, and budget implementation within Chinese enterprises (Marjerison & Kim, 2022).

2.2. Budget Planning

Budget planning refers to the structured process of defining financial goals, forecasting revenues and expenditures, and strategically allocating resources to support an organization's overall objectives (Arnold & Artz, 2019; De Baerdemaeker & Bruggeman, 2015). It serves as the foundation of financial management, ensuring that businesses operate within company goals. Effective budget planning enhances financial governance towards decision-making, minimizes budgetary slack, and promotes resource optimization (Namazi & Rezaei, 2023). Budget planning is the system of policies, processes, and controls that an organization puts in place to manage its finances responsibly (Khalid et al., 2024; Srivastava, 2023). It covers various aspects, such as financial reporting, risk management, auditing, and regulatory compliance (Huang & Chen, 2022). The dimensions of budget planning include comprehensive financial policies, strong internal controls, regular audits, board oversight, and the transparency and disclosure of financial information. Hence, budget planning is an effective management and control mechanism of financial management (Li et al., 2023). Budgeting, as a management means, can plan, supervise, appraise, reward, and punish a series of economic activities in company activities.

Budget planning significantly influences the budgeting evaluation process by setting the foundation for financial decision-making, resource allocation, and performance assessments (Lantara et al., 2022). Effective budget planning establishes clear financial goals, priorities, and expenditure limits, ensuring that resources are allocated efficiently to meet company objectives (Khoo et al., 2024). A well-structured budget plan includes projected revenues, expenses, and contingency provisions, allowing organizations to anticipate financial challenges and adjust strategies accordingly (Khalaf et al., 2023; Parra et al., 2024). During the evaluation process, budget planners compare actual results with budgeted figures to identify variances, assess financial performance, and determine areas of improvement (Madah Marzuki et al., 2024; Zheng et al., 2022). Moreover, budget planning ensures that the evaluation process remains objective and systematic. It provides performance indicators that help in analyzing financial efficiency, cost control, and return on investment. Hence, our hypothesis is as follows:

H1. *Budget planning has a positive effect on the budgeting evaluation process.*

Budget planning plays a crucial role in influencing budgetary slack, which refers to the intentional overestimation of expenses or the underestimation of revenues to create a financial cushion (Al Jasimee & Blanco-Encomienda, 2024; Boso et al., 2017). Effective budget planning can either minimize or encourage budgetary slack, depending on the

approach taken with regard to managers and employees (Huang & Chen, 2022; Namazi & Rezaei, 2023). A well-structured and transparent budgeting process helps reduce budgetary slack towards promoting accuracy, accountability, and effective strategic resource allocation. When budgets are based on realistic projections and data-driven insights, there is less room for the unnecessary padding of expenses or the suppression of income estimates. On the other hand, poor budget planning or a rigid top-down approach can pursue budgetary slack among employees. In order to protect their departments from budget cuts or to make sure that performance goals are easily attainable, employees may intentionally generate budgetary slack (Agustina et al., 2024; Arnold & Artz, 2019). In addition, poor communication and trust between management and employees can further encourage budgetary slack and can also lead to inefficient resource allocation. Therefore, effective budget planning, which includes participatory budgeting, transparent financial reviews, and regular performance evaluations, helps minimize budgetary slack while ensuring financial efficiency, resource optimization, and organizational accountability. Hence, our hypothesis is as follows:

H2. *Budget planning has a positive effect on mitigating budgetary slack.*

2.3. Budgeting Evaluation

Financial risk, a prominent economic phenomenon, has garnered extensive attention in both practical and academic domains (Fisher et al., 2002; Khoo et al., 2024). Risk is commonly associated with potential loss, denoting the uncertainty of future events and the likelihood and extent of loss. Enterprise risk prevention involves minimizing actual financial losses and budgeting evaluation (Tarjo et al., 2022; Wagner et al., 2021). Budgeting evaluation plays a significant role in reducing budgetary slack by budget planning, evaluating financial performance, ensuring accountability, and improving effective resource allocation. Furthermore, budgetary slack occurs when managers deliberately overestimate expenses or underestimate revenues to create income smoothing, which also serves as a defensive strategy to meet targets easily or to protect departmental resources and performance (Gago-Rodríguez & Naranjo-Gil, 2016; Silva et al., 2023). The evaluation process helps detect and mitigate such practices, ensuring budgets are realistic and aligned with organizational goals. Hence, a comprehensive budget evaluation process involves comparing actual financial performance with budgeted figures to identify variances. Budgetary slack also occurs when there is a significant discrepancy between the organization's goal and budgeting performance (Ramlawati et al., 2023). This proves that a company should hold managers accountable and should promote transparency for department financial projections; hence, organizations can discourage the manipulation of budget figures.

The evaluations that focus on performance-based budgeting ensure that departments justify their financial needs based on actual operational requirements rather than personal incentives. Regular budget evaluation mechanisms enhance the effectiveness of evaluations and the budgeting process (Alhasnawi et al., 2023; Zeng et al., 2023). When organizations foster open communication and trust in the budgeting process, managers feel less compelled to create slack. Encouraging participatory budgeting, where employees have a role in budget planning and evaluation, also leads to more accurate financial projections (Church et al., 2019; Felix Júnior et al., 2020). During this phase, it guarantees that resources are allocated to budget control and budget monitoring, in line with company goals and procedures. In order to summarize prior experiences and use insightful input for future planning and decision-making, the budget assessment and audit phases are essential components of contemporary budget management (Cuadrado-Ballesteros & Bisogno, 2022; Ramlall & Grobbelaar, 2024). This demonstrates how budgeting evaluation shapes the amount of budgetary slack by acting as a control mechanism. Budgetary slack may be

decreased while maintaining financial discipline, accountability, and effective resource use through a fair and open evaluation process. Hence, our hypothesis is as follows:

H3. *The budgeting evaluation function has a positive effect on mitigating budgetary slack.*

2.4. Budgetary Slack

Budget planning and assessment play an important role in mitigating budgetary slack, which has a major direct and indirect impact on budgeting performance (Fisher et al., 2002; Riyadh et al., 2023). Managers intentionally overestimate costs or underestimate revenues in order to provide a buffer and safeguard departments against distorted financial performance and ineffective budgeting procedures. Budgetary slack in budgeting has turned into a cause of a decline in budgeting performance towards the inefficient use of resources and finances (Agustina et al., 2024; Boso et al., 2017). However, in some cases, budgetary slack has a positive impact on managing uncertainties and flexible resources (Zarei et al., 2024; L.-Y. Zhang et al., 2025). Furthermore, budget planning has a positive effect on budgeting performance towards reducing budgetary slack. For instance, managers who incorporate excessive slack may have future budgets based on inflated expense estimates or underestimated revenue figures, leading to inaccurate financial planning. On the other hand, a well-managed level of slack can improve budget planning by accommodating unpredicted circumstances.

Organizations that recognize the impact of slack in past budgets can adjust their planning processes to improve accuracy and flexibility, ensuring financial resilience. Budgetary slack influences budgeting evaluation, which subsequently influences a company's financial performance (Nguyen et al., 2019; Tarjo et al., 2022). If slack exists, performance evaluations may not reflect actual efficiency, as departments can easily meet or exceed artificially low targets (Mthiyane et al., 2022; Srivastava, 2023). This can lead to misleading performance assessments, where departments appear financially efficient despite having excess resources. Moreover, budgetary slack can create challenges in identifying real performance gaps. If evaluations focus solely on meeting budgeted figures rather than actual efficiency, organizations may overlook areas where improvements are needed (Azam & Bouckaert, 2024; Ramlawati et al., 2023). In addition, excessive slack can result in inefficient resource allocation, as departments may hold onto unused funds instead of redirecting them to areas with greater needs (Kihn & Ström, 2025; SeTin & Natalia, 2024). This inefficiency can hinder overall organizational growth and innovation. Conversely, reducing slack too aggressively may lead to budgetary constraints that limit operational flexibility. A balanced approach is crucial; organizations should implement transparent budget monitoring and performance metrics to ensure that resources are allocated effectively. By addressing budgetary slack, organizations can enhance financial integrity, drive efficiency, and support long-term sustainability. Hence, our hypotheses are as follows:

H4. *Budgetary slack has a positive effect on performance-based budgeting.*

H5. *Budgetary slack has a positive effect in mediating the relationship between budget planning and performance-based budgeting.*

H6. *Budgetary slack has a positive effect in mediating the relationship between budgeting evaluation and performance-based budgeting.*

3. Methodology

The participants of this study were senior executives and finance managers from Chinese manufacturing companies in the Shandong district. Shandong is one of the leading

manufacturing companies in China. A number of manufacturing companies are in the locus of this study area; hence, a random sampling approach was applied for several important reasons, such as to ensure that the sample reflects the broader population. When each individual has an equal chance of being selected, the sample is more likely to mirror the characteristics of the entire population, minimizing biases. Furthermore, the results from a random sample can be generalized to the larger population with greater confidence. Without randomness, findings could be skewed, leading to inaccurate conclusions that may not apply to the broader group (Hair et al., 2019). This implies that the participants have a positive impact on the company's budgeting process (e.g., accounting and financial department).

The data collection was carried out using a formal letter to the company before the questionnaires were sent to the participants. Conversely, control was anonymous, and random sampling was carried out to avoid biases and enhance the validity of the results. The purpose of this approach was to ensure that the participants fit the two basic constraints, namely, an employee working in the financial department, who directly has personal experience in the budgeting process in their workplace. However, before deploying a formal test, a pre-test and pilot test were conducted, including inviting two experts, one from the accounting and financial field and a professional English–Chinese translator who was consulted to validate the survey's readability and clarity. They assessed whether the questionnaire was easy to understand and whether any questions were confusing or overly complex. Based on their feedback, minor revisions were made to enhance clarity and comprehension. Subsequently, a pilot test was carried out to confirm the final wordings of the formal investigation. The pilot test aimed to identify various responses and implications of the participants related to the questions in the pre-test. A total of 20 participants were recommended for each construct to increase the quality of the instruments. Subsequently, a pilot test was implemented on 100 participants. This was acceptable for further statistical analyses and formal study (Hair et al., 2019). Conversely, control was anonymous, and random sampling was carried out to avoid biases and enhance the validity of the results (Podsakoff et al., 2003). A seven-point Likert scale, ranging from 1 ("strongly disagree") to 7 ("strongly agree"), was used for all scale items. This study was conducted from 1 October to 31 December 2024. A total of 589 participants filled out the questionnaires. However, only 527 samples were valid; this indicates a completion rate of 89.47% (see Table 1).

Table 1. Respondent demographics.

Demographic Items	Frequency	Percentage (%)
Gender		
Male	365	47.2
Female	329	82.8
Age		
Under 30 years old	205	34.8
26~45 years old	196	33.3
Over 45 years old	188	31.9
Education		
Bachelor's and below	301	51.1
Post-graduate	288	48.9
Working experience		
Below 5 years	95	16.1
6~10 years	144	24.4
11~15 years	183	31.1
Over 15 years	167	28.3

3.1. Measures

Based on theoretical research and prior recommendations, this paper constructs observational scales for the strategic budget system, budget organization, and budget environment based on financial risk control. Firstly, the budget system refers to a series of procedures or guidelines followed during the budgeting process. For strategic budget management based on financial risk control to be effective, it must institutionalize the budgeting process to standardize behaviors, ensuring budgets are adhered to and thereby enhancing management efficiency. In order to advocate for full participation in the budgeting process, it is crucial that responsibilities, authority, and benefits are balanced and clearly defined within the budget system. Secondly, budget organization refers to the structure set up within a company to improve budget efficiency and achieve budget objectives. This includes both budget management and execution bodies. The budget planning function refers to the budget planning process that employs employees as a team (Chong & Mahama, 2014). The budgeting evaluation was adopted from Chong and Mahama (2014). Furthermore, budgetary slack comprises employees' attitudes, manipulation, slack detection, authoritarianism, and budget relevancy, as referred to by Dunk (1993) and Maiga and Jacobs (2007). In this study, five items of performance dimension-based budgeting, such as the budget standard, budget achievement, budget emphasis, budget efficiency, and target budget, were adopted from Anthony and Govindarajan (1998) (see Appendix A).

3.2. Common Method Variance (CMV)

A recent study adopted anticipation and post-detection procedures to reduce certain issues associated with the common method variance (CMV) (Podsakoff et al., 2003). Eichhorn (2014) offered Harman's single-factor analysis to validate the common latent factor (CLF) for post-detection to carry out post-detection to detect the CMV. The result of the first factor was 45.52%, which is less than 50.00%. This result shows that no significant problem was associated with the CMV. Therefore, the use of CFA and hypothesis tests is justified. Common method variance (CMV) was also used in this study as a post-detection strategy of biases.

3.3. Data Analysis

Data were analyzed using Structural Equation Modeling (SEM) with AMOS and the SPSS software 22, enabling the examination of complex relationships between latent variables within the research model. SEM was chosen for its ability to address complex decision-making problems that require the simultaneous consideration of multiple factors or criteria. The distinct factor and regression analyses for examining the model are the main benefit of using SEM to simultaneously estimate all path coefficients. This study focuses on prioritizing managerial strategies that are more orientated toward financial performance rather than operational decision-making, with the aim of offering a new and more precise decision-making method (Byrne, 2016). Each sub-criterion was thoroughly examined to assess its impact on the overall managerial strategy, allowing for the development of accurate and comprehensive recommendations. The results provide insights into the integration of expert judgements and empirical data into a structured hierarchy. They also provide a clear prioritization of strategies that address budgeting.

4. Results

The values of standard deviations for all research instruments prove that the employees' who work in the Chinese manufacturing companies are more prone to adopting performance-based budgeting once compliance with budget planning, evaluation, and management is effective (see Table 2). The results from the Pearson correlation analysis

are shown in a bivariate correlation, and these were used to measure the direction and size of the relationship between the investigated variables. The square root of the AVE results for each construct also showed values higher than the coefficients, indicating their relationships with other constructs (Byrne, 2016; Hair et al., 2019).

Table 2. Correlation matrix for measurement scales.

Constructs	Mean	SD	BPF	BEF	BM	PBB
BPF	5.41	1.41	0.833			
BEF	5.71	1.22	0.132 **	0.771		
BS	5.57	1.28	0.080 *	0.166 **	0.782	
PBB	5.83	1.63	0.098 *	0.363 **	0.346 **	0.787

Note: BPF: budget planning function; BEF: budget evaluation function; BS: budgetary slack; PBB: performance-based budgeting. Diagonal elements and bold numbers are the square roots of the AVE for each construct. Pearson correlations are shown below the diagonal. Statistical significance: *: $p < 0.05$; **: $p < 0.01$.

4.1. Measurement Model

Table 3 shows the confirmatory factor analysis (CFA) results, which indicate a good convergent validity and reliability for all measurement items and constructs (Byrne, 2016; Hair et al., 2019). First, the measurement model was based on the confirmatory factor analysis (CFA) to examine the reliabilities and validities of the research constructs. The structural model was used to test the strength and direction of the proposed relationships among the constructs. The CFA results of the remaining 27 items show that the data had a good fit. The covariance matrix of the variables with an adequate fit (Hair et al., 2019; Byrne, 2016) includes the value-of-model fit, namely, $\chi^2/df = 3.765$; the goodness-of-fit index (GFI) = 0.932; the non-normed fit index (NFI) = 0.938; the comparative-fit index (CFI) = 0.938; the incremental-fit index (IFI) = 0.941; the root-mean-square error of approximation (RMSEA) = 0.068; composite reliabilities (CRs); and the average of variance extracted (AVE) for each construct, which was greater than 0.700 and 0.500. In addition, each item's factor loading and multiple square correlations were greater than 0.647 and 0.400. Furthermore, the Cronbach's α for all constructs was determined to be greater than 0.700, a good representative reliability for all measurement items (Table 3), constructs, and convergent validities (Hair et al., 2019). The results from the analysis explain the use of the CFA, as all the criteria well surpassed the hypothesis testing.

Table 3. Measurement results.

Constructs	MLE Estimate Factor Loading/Measurement Error		Squared Multiple Correlation (SMC)	Composite Reliability (CR)	Average of Variance Extracted (AVE)	Cronbach's α
Budget Planning				0.891	0.540	0.778
BP1	0.741	0.451	0.549			
BP2	0.725	0.474	0.526			
BP3	0.695	0.517	0.483			
BP4	0.687	0.528	0.472			
BP5	0.705	0.503	0.497			
BP6	0.788	0.379	0.621			
BP7	0.793	0.371	0.629			
Budget Evaluation				0.923	0.666	0.857
BE1	0.834	0.304	0.696			
BE2	0.788	0.379	0.621			
BE3	0.797	0.365	0.635			
BE4	0.856	0.267	0.733			
BE5	0.782	0.388	0.612			
BE6	0.835	0.303	0.697			

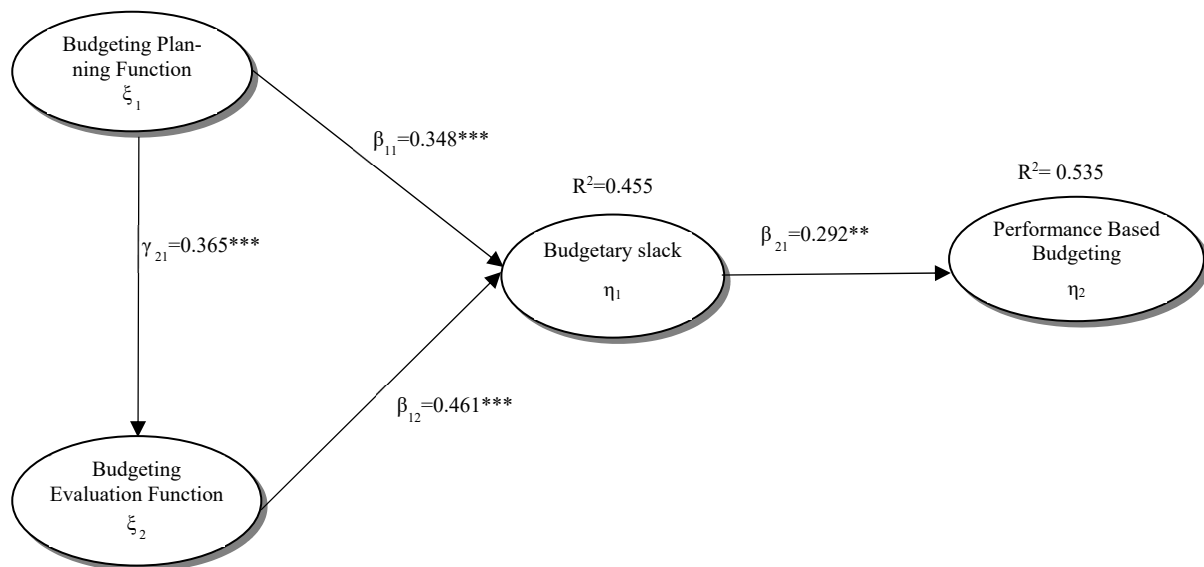
Table 3. Cont.

Constructs	MLE Estimate Factor Loading/Measurement Error		Squared Multiple Correlation (SMC)	Composite Reliability (CR)	Average of Variance Extracted (AVE)	Cronbach's α
Budgetary Slack				0.845	0.658	0.778
BS1	0.785	0.384	0.616			
BS2	0.845	0.286	0.714			
BS3	0.827	0.316	0.684			
BS4	0.886	0.215	0.785			
BS5	0.825	0.319	0.681			
BS6	0.721	0.480	0.520			
BS7	0.778	0.395	0.605			
BS8	0.853	0.272	0.728			
BS9	0.767	0.412	0.588			
Performance-based budgeting				0.797	0.573	0.809
PB1	0.763	0.418	0.582			
PB2	0.788	0.379	0.621			
PB3	0.839	0.296	0.704			
PB4	0.877	0.231	0.769			
PB5	0.798	0.363	0.637			

Note: model fit: $\chi^2/df = 3.765$, GFI = 0.932, NFI = 0.938, CFI = 0.938, IFI = 0.941, and RMSEA = 0.068.

4.2. Structural Model

The results of this study demonstrate a strong fit between the data and the proposed model, as confirmed by established criteria (Byrne, 2016; Hair et al., 2019). The analysis empirically validated that the budget planning function has a significant and positive influence on the budgeting evaluation process ($\gamma_{21} = 0.365$; $p < 0.001$), which supports H1. This finding emphasizes that the evaluation index system within a comprehensive budget management framework is fundamentally focused on financial risk control and budgetary slack. Furthermore, this study utilized real-world cases from a large enterprise group to validate the effectiveness of the identified indicators and their respective weights, leading to recommendations for improving the enterprise's comprehensive budget management system. Further analysis confirmed that both the budget planning function and the budgeting evaluation function significantly enhance the overall company budget management performance ($\beta_{11} = 0.348$; $p < 0.001$; $\beta_{12} = 0.461$; $p < 0.001$), hence, H2 and H3 are supported. The results indicate that the budgeting evaluation process has a particularly strong impact on reinforcing the comprehensive budget management system, especially regarding financial risk control. This highlights the importance of both basic and developmental elements within the budgeting management system. Moreover, the influence of these elements on company budgeting outcomes is evidenced by their values ($\beta_{21} = 0.292$; $p < 0.01$), supporting H4. These findings suggest that while basic elements show slight variations in their impact, the supporting elements are even more critical than the developmental ones. This proves that the basic components exhibit a hierarchical structure within the budgeting management system. The relationships and effects identified in this study are visually represented in Figure 2.



Statistical significance: **: $p < 0.01$; ***: $p < 0.001$

Figure 2. Structural results.

4.3. Mediating Effect

This study utilized the mediating variables procedure, as recommended by Hayes (2018), to analyze the relationships between budgetary slack, budgeting basic elements, and company performance. As illustrated in Table 4, budgetary slack has both direct and indirect effects on the fundamental components of budgeting, such as budget planning and evaluation functions, which in turn influence the overall company performance, which supports H5 and H6. The analysis revealed that all confidence intervals for both the percentile method and the bias-corrected method excluded zero, indicating that all mediation effects are statistically significant. Specifically, the findings demonstrate that budgetary slack, as a partial mediator in the relationship between budget planning and evaluation, serves as a predictor of budgeting performance, which is the outcome variable. This suggests that while budgetary slack does influence the effectiveness of budget planning and evaluation, it does not completely account for this relationship. Instead, it highlights the importance of these basic budgeting elements in enhancing a company's financial performance. Companies can better manage the budgeting process, ultimately leading to improved financial outcomes and more effective resource allocation. This study underscores the critical role of budgeting practices in achieving organizational success.

Table 4. Mediation effects.

IV	M	DV	IV->DV (c)	IV->M (a)	IV + M->DV		Bootstrapping 95% CI	
					IV (c')	M (b)	Percentile Method	Bias-Corrected
BP	BS	PB	0.215 ***	0.326 ***	0.257 **	0.189 **	[0.097, 0.058]	[0.131, 0.071]
	Standard Error		0.087	0.071	0.082	0.068		
BE	BS	PB	0.253 **	0.267 ***	0.267 *	0.189 **	[0.174, 0.073]	[0.178, 0.081]
	Standard Error		0.085	0.075	0.086	0.068		

Note: BP: budget planning function; BE: budget evaluation function; BS: budgetary slack; PB: performance-based budgeting. Statistical significance: *: $p < 0.05$; **: $p < 0.01$; ***: $p < 0.001$.

5. Discussion

5.1. Key Findings

The budget planning function is essential in shaping the budgeting evaluation process. This positive relationship indicates that improvements in budgeting and planning directly affect how financial performance is assessed. For instance, when companies implement well-structured budget planning processes, they enhance the accuracy, transparency, and effectiveness of budgeting evaluations (Majerowicz & De Medeiros, 2018). Budget planning involves setting financial goals, estimating future revenues and expenses, and strategically allocating resources. This structured approach helps reduce uncertainty and provides a clear framework for financial decision-making towards the budgeting process (Lantara et al., 2022). The evaluation function benefits from more realistic and achievable financial targets, which helps prevent distortions in performance assessments caused by budgetary slack or overly optimistic projections towards budget planning (Agustina et al., 2024; Khoo et al., 2024; Silva et al., 2023). Furthermore, prioritizing alternative strategies, including effective budget management, lays a solid foundation for the budgeting process. In this context, aligning strategic objectives with the effectiveness of the budgeting system becomes crucial for mitigating budgetary slack.

The importance of budget planning in the budgeting evaluation process is highlighted by the square multiple correlation coefficient, with an R^2 value of 48.9%. This indicates that budget planning plays a critical role in ensuring an effective budgeting evaluation process. Conversely, this also means that 51.1% of the variance remains unexplained and may be influenced by other factors, such as ethical leadership, internal controls, and business systems. This study supports previous research that identifies budget planning as a key factor in enhancing budget management control (Azam & Bouckaert, 2024; Bchennaty et al., 2024). Chinese manufacturing firms often face internal challenges, including high operating expenses, low profit margins, and limited financial flexibility due to traditional cost structures. These challenges necessitate a strategic approach to budget management that incorporates risk-control systems and optimizes resource allocation. Effective budget management not only streamlines operations but also strengthens a firm's resilience against budgetary slack (Wagner et al., 2021). Given the capital-intensive nature of a company and its vulnerability to financial risks, strategic budget management is essential for mitigating these risks (Jiménez et al., 2024; Khalid et al., 2024). By adopting a strategic approach to budgeting, organizations can improve budgetary slack and enhance the company's financial performance.

The budget planning function significantly impacts budgetary slack, indicating that improvements in budget planning can reduce the amount of slack present in financial budgets. While a certain level of slack can provide flexibility, budgetary slack can lead to inefficiencies and a misallocation of resources. Budget planning involves setting financial objectives, forecasting revenues and expenses, and allocating, which play an important role in mitigating budgetary slack. For instance, when these planning processes are well-structured and based on accurate data, organizations can minimize budgetary slack, ensuring that budget estimates are realistic and aligned with actual operational needs. However, it is important to note that while effective budget planning can greatly reduce budgetary slack, it cannot eliminate it entirely. Budgetary slack is also influenced by factors such as organizational policies, managerial behavior, and external economic conditions. One reason for why budget planning affects slack is its role in determining how resources are allocated, which may lead departments to create slack as a buffer against financial uncertainty. This finding aligns with earlier studies suggesting that enhancing budget planning improves managerial oversight, making it easier to identify and address unnecessary slack (Namazi & Rezaei, 2023; Parra et al., 2024; Zheng et al., 2022). Furthermore, employing data-driven budgeting,

conducting periodic financial reviews, and implementing performance-based budgeting can significantly help control the presence of budgetary slack in financial processes (Khoo et al., 2024; Madah Marzuki et al., 2024; Raudla & Bur, 2023).

The budgeting evaluation function plays a crucial role in influencing budgetary slack within organizations. This means that the way organizations assess their budgets directly impacts the level of slack present. Effective budgeting evaluation enables organizations to identify and address budgetary slack, ensuring that financial resources are allocated efficiently and that evaluations are accurate. Budgeting evaluation involves several key activities, including assessing financial performance, comparing actual expenditures against budgeted figures, and determining whether financial goals have been achieved. As the business environment continues to change, manufacturing companies must regularly assess the effectiveness of their budget management strategies. This requires the implementation of advanced financial management techniques, such as stress testing, scenario analysis, and the development of contingency plans. This finding aligns with previous research indicating that inadequate budget planning and evaluation can significantly encourage managers to create budgetary slack (Boso et al., 2017; Namazi & Rezaei, 2023). Therefore, budgeting evaluation serves as a foundational element for effective strategic budget management, highlighting the necessity for organizations to conduct these evaluations thoroughly and systematically (SeTin & Natalia, 2024).

The results of this study corroborate earlier findings by Al Jasimee and Blanco-Encomienda (2024) and Felix Júnior et al. (2020), which indicate that participation in budgeting, particularly in the budgeting evaluation process, positively impacts the reduction in budgetary slack, including issues like inefficiency and fraud. This study further demonstrates that the involvement of employees and company managers in strategic planning not only diminishes budgetary slack but also strengthens the strategic financial management system (Silva et al., 2023; Zeng et al., 2023). These findings suggest that stakeholders recognize the importance of the overall environment surrounding the budgeting process, which encompasses both external and internal factors influencing budgeting and financial performance. The R^2 value of 0.455 indicates that 45.5% of the variance in budgetary slack can be attributed to the participation of employees and managers in budgeting activities, such as planning and evaluation. This underscores the critical role of the budgeting process in achieving organizational goals and maintaining financial stability. This highlights that effective budgeting not only directly influences budgeting performance through its fundamental elements but also indirectly supports budgeting management oversights.

This study highlights that budgetary slack serves as a vital mediator that enhances the connections between the core components of budgeting, such as the planning and evaluation processes. The effectiveness of the entire budgeting process relies heavily on the active participation of employees and company management. The R^2 value of 0.535 indicates that 53.5% of performance-based budgeting is influenced by these fundamental principles of the budgeting process, specifically budget planning and evaluation, in relation to budgetary slack. This also means that 46.5% of the variance remains unexplained and may be affected by other factors. These findings align with previous research by Al Jasimee and Blanco-Encomienda (2024), Azam and Bouckaert (2024), Khalid et al. (2024), and Namazi and Rezaei (2023), which established that budgetary slack plays a critical role in linking budget planning and evaluation to the overall budgeting performance of companies. A company must have a designated finance firm to oversee the group's and its subsidiaries' budgeting and financial system. The budget management committee and the board of directors of the enterprise group would then have to approve the subsidiary, which makes resource allocation more efficient (Arnold & Artz, 2019; Huang & Chen, 2022).

5.2. Summary and Conclusions

The most important factors in strategic budget management for financial risk control are basic elements. These elements emphasize the need for strong financial structures, effective governance, and clearly defined operational frameworks. Such foundational components are essential for stabilizing the budget management system and preventing financial disruptions. Furthermore, companies can better align their budgeting efforts with broader organizational goals towards these basic dimensions to improve the company's and the employee's ability to mitigate financial risks. This also indicates that key aspects such as budgeting, setting clear financial targets, and implementing budgets are fundamental to the budgeting process and form the core of effective financial management. Moreover, a robust corporate governance structure and a high level of corporate integration are crucial for ensuring transparency and efficient resource allocation, including establishing a strategic company objective, positioning, and fostering synergy, which are vital for aligning the budgeting system with corporate goals. These provide a framework to companies to address critical aspects of budget management, enabling them to effectively control financial risks and budgetary slack.

5.3. Theoretical Implications

The present study significantly contributes to theoretical understanding by examining the interplay between cooperation and learning, both of which are crucial for organizational development. By doing so, it enhances the Resource-Based View (RBV) by demonstrating how effective financial resource management directly influences organizational performance. The findings indicate that allocating budgetary slack to refine budgeting processes can lead to increased resource efficiency and can strengthen a company's competitive advantage. Moreover, organizations that prioritize cooperation and teamwork can enhance productivity and cultivate a positive work environment that minimizes conflicts. Companies can unlock the full potential of their employees, leading to improved output and a sustained competitive edge in the marketplace towards fostering a culture of learning and collaboration. This perspective is further supported with regard to strategic management theory, which emphasizes the necessity for companies to remain agile in their resource allocation and risk management strategies. In rapidly evolving industries, adaptability is key; organizations must be able to respond swiftly to changes in the market and leverage their resources effectively to maintain competitiveness. Ultimately, this study underscores the importance of integrating cooperation and learning into financial management practices to drive organizational success and resilience in a dynamic business landscape.

5.4. Practical Implications

Effective budget planning and evaluation to mitigate budgetary slack is a vital tool for organizations seeking to enhance their financial efficiency, transparency, and sustainability. Businesses, governments, and non-profit organizations can enhance their budgeting procedures and make wise financial judgments by comprehending these relationships. First, organizations should prioritize improving their budget planning to minimize budgetary slack. A well-structured planning process ensures that budgets are realistic, data-driven, and aligned with the company's strategic goals. This approach enables organizations to manage financial resources more effectively and mitigate the budgetary slack associated with financial uncertainties, ultimately providing a competitive advantage. Second, strengthening the budgeting evaluation process is essential for ensuring accountability. Companies must implement rigorous performance assessments to ensure that the budgeting process aligns with the established budget plan. This includes evaluating the efficiency and effectiveness of resource allocation. Furthermore, companies should es-

establish transparent budget monitoring mechanisms to regularly track expenditures and financial performance, allowing for timely adjustments as needed. Finally, fostering a culture of collaboration and continuous learning will empower employees to innovate and adapt to market changes effectively. Companies that prioritize these practices are likely to experience enhanced financial stability and a sustained competitive advantage in a dynamic business environment. Firms can achieve better financial stability, which is crucial for sustaining operations and funding growth initiatives in an increasingly competitive global market towards improving an effective budget management practice.

5.5. Limitations and Future Research Directions

This study focuses on financial risk prevention and follows a logical progression from a theoretical analysis of the strategic budget management system through its construction and evaluation to its optimization. However, the concept of strategic budget management as financial risk prevention was primarily derived from a literature review and theoretical analysis. Future studies need to integrate financial risk prevention and strategic budget management for corporations. In addition, the mechanism by which strategic budget management mitigates financial risk needs to be extended. Future studies should also confirm their effectiveness in ensuring the implementation of corporate management strategies and the prevention of financial risks. This study analyses corporate budget cooperation from the perspective of employees and business managers of manufacturing companies in China; hence, the results of this study do not represent all companies in China. Future studies should include investigations across companies and regions to validate and compare the results of this study. Building on this understanding, there is potential to apply more fundamental economic theories and methods to further systematically reflect on the relationship between budget management and other related theories and practices.

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Appendix A

Budget planning:

1. We are enabling discussion as teamwork.
2. We are enabled to continually challenge and debate underlying data and action plans.
3. We are providing a common view of your team
4. We are tied as a budgeting team work
5. We are able to focus on company goals
6. We can concentrate on important success aspects.
7. We are developing a specific goal in our team

Budget evaluation:

How much of the funding is presently used by upper management to:

1. Monitor your team's advancement towards objectives.
2. Track the outcomes of your team.
3. Examine the results of your team against the expectations.
4. Examine the main actions taken by your team.
5. Our budgetary procedures have more advantages than disadvantages.
6. Verify that the budgetary procedure is the most appropriate instrument for overseeing this business division.

Budgetary slack:

1. I can easily meet the budgets set for my area of responsibility.
2. I often keep a sizable portion of the budget set aside for unanticipated demands or requests.
3. My area of responsibility does not have very demanding budgets.
4. At the moment, the company's financial situation is satisfactory.
5. The company can easily obtain financial capital to help us achieve our objectives.
6. If required, the company can obtain the money.
7. In general, our budgetary procedures have more advantages than disadvantages.
8. I really believe that the best instrument for running this business unit is our budgeting procedure.
9. I firmly believe that this business unit can be effectively managed with the information technology we utilize for our budgetary procedure.

Performance-Based budgeting:

1. The strategic plan's determination
2. The work plan's strategic plan
3. Establishing performance metrics
4. Budgeting performance evaluation by the application of conventional cost analysis.
5. The company income financial performance based on budget and company target.

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