

# Institutional Mechanism Analysis of the Standardization of Interdepartmental Budget Fund Allocation Under Fiscal Digitization

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**Abstract:** Against the backdrop of advancing fiscal digitization, budget management methods and fiscal operation logic are undergoing changes. Existing studies mostly discuss the effectiveness of digital fiscal reforms from the perspective of technological application or efficiency improvement, but pay relatively insufficient attention to how it affects the standardization of interdepartmental budget fund allocation. Based on this, taking the integrated budget management reform as the entry point, this paper explores the action path of fiscal digitization on the standardization of interdepartmental budget fund allocation from two levels: institutional foundation and operational mechanism. The study holds that fiscal digitization does not directly determine the allocation result of budget funds among departments, but changes the institutional environment relied on by budget allocation behavior by unifying budget rules, connecting budget management processes, and reconstructing budget information structure, thereby forming more stable and enforceable institutional constraints on departmental budget allocation. On this basis, fiscal digitization further exerts institutional constraints during the budget execution stage by embedding supervision and auditing functions into the budget execution process and improving the transparency of budget operation, inhibiting arbitrariness and strategic adjustments in interdepartmental budget allocation. Thus, the standardization of interdepartmental budget fund allocation is gradually strengthened, and the improvement of allocation efficiency is more reflected as a natural result under standardized constraints. The analysis of this paper helps to understand the governance effect of fiscal digitization from the perspective of institutional operation and provides theoretical reference for further improving the interdepartmental budget fund allocation mechanism.

**Keywords:** Fiscal digitization; Integrated budget management; Interdepartmental budget fund allocation; Standardization of budget allocation; Fiscal governance

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## 1. Introduction

With the gradual integration of digital technology into public governance, fiscal management is shifting from

an experience-based and decentralized operation to a digital governance form characterized by data integration and system collaboration. Existing studies point out that digital finance is not a simple application of information technology, but triggers systematic adjustments in fiscal governance methods by reconstructing fiscal operation logic and budget management processes, and has become an important institutional path to improve the standardization of fiscal operation and governance capacity<sup>[1,2]</sup>.

In institutional practice, integrated budget management is regarded as an important institutional carrier of fiscal digitization. Relevant studies believe that by unifying budget management rules (such as the unification of core links such as project library management and performance-based budget management), connecting budget formulation and execution processes, and integrating fiscal business and data information, integrated budget management provides basic institutional conditions for the standardization of budget operation, and to a certain extent alleviates the problems of fragmentation and information fragmentation in traditional budget management<sup>[3,4]</sup>.

However, practice shows that fiscal digitization has not necessarily translated into a synchronous improvement in budget allocation efficiency. Insufficient institutional supporting measures, poor system collaboration, and constraints on personnel capabilities still restrict the exertion of reform effectiveness, and the problem of inefficient interdepartmental fund allocation still exists<sup>[5]</sup>. Existing studies have pointed out that budget allocation efficiency depends not only on the scale of funds, but also on the information structure and operation mode of the budget management system. When budget information is scattered within departments for a long time, interdepartmental resource allocation is prone to deviate from overall constraints<sup>[6]</sup>. This problem needs to be analyzed from the perspective of institutional operation and information structure to explore the impact mechanism of fiscal digitization on the efficiency of interdepartmental budget fund allocation.

## 2. Research on integrated budget management and modernization of fiscal governance

Existing studies generally believe that integrated budget management is a key institutional arrangement to promote the modernization of fiscal governance under the condition of digital finance. Relevant literature points out that by unifying budget management rules (such as the unification of core links such as project library management and performance-based budget management), connecting budget formulation and execution processes, and integrating fiscal business and data information, integrated budget management alleviates the problems of fragmentation and information fragmentation in traditional budget management at the institutional level, and improves the standardization and transparency of budget operation<sup>[7]</sup>.

From the perspective of digital fiscal governance logic, the institutional value of integrated budget management is not only reflected in efficiency improvement, but also in reducing interdepartmental information asymmetry by reconstructing the budget information structure (such as integrating budget application, approval, and execution data scattered in various departments into a unified platform) and operation logic, forming a transformation of fiscal governance from post-event control to whole-process governance<sup>[8,9]</sup>. The centralized presentation and process visualization of budget information provide necessary conditions for financial departments to carry out cross-departmental coordination and dynamic regulation.

However, practical research also shows that the operation of integrated budget management is still restricted by factors such as incomplete coverage of elements (for example, government procurement, asset allocation and other links in some regions have not been fully incorporated into the integrated system) and insufficient system integration. Some key matters have not been effectively incorporated into the unified management framework,

affecting the full exertion of institutional effectiveness <sup>[10]</sup>. Although integrated budget management provides an important institutional foundation, this problem needs to be analyzed at a more detailed institutional and process level.

### **3. Institutional foundation for fiscal digitization to reshape interdepartmental budget fund allocation**

The standardization of interdepartmental budget fund allocation essentially depends on the stable and enforceable constraints formed by the budget management system on allocation behavior, such constraints need to run through the entire chain from budget formulation to execution. The consensus of existing literature is that fiscal digitization does not directly intervene in fund allocation results, but reshapes the governance environment attached to budget allocation through institutional reconstruction, promoting the transformation of resource allocation logic from experience-based judgment to rule-oriented and procedure-constrained direction.

Under the traditional budget management system, budget rules are fragmented, the accounting standards for various funds lack unified standards, and budget application materials among departments are difficult to compare horizontally due to inconsistent standards. Financial departments often rely on historical bases and experience judgments in allocation decisions, which leaves room for interest games and discretion among departments, and ultimately weakens the standardization of budget allocation <sup>[11]</sup>. Through the integrated budget management reform, fiscal digitization incorporates budget items, project classification, and fund uses into a unified rule system, compressing the discretionary space of departments in budget allocation at the institutional level <sup>[12]</sup>.

At the same time, integrated budget management breaks down the barriers between budget formulation, execution, and supervision processes, eliminating the long-standing problem of separation among “formulation, execution, and supervision” in traditional budget management. This makes budget allocation no longer an isolated pre-event decision, but embedded in the whole process of budget execution and subject to procedural constraints in dynamic operation, thereby enhancing the consistency and predictability of allocation results. Furthermore, by centrally storing and standardizing budget information, fiscal digitization effectively alleviates the problem of information asymmetry among departments. Financial departments are able to conduct horizontal comparisons and overall judgments at the macro level, thereby inhibiting the strategic behavior of departments to distort allocation results by virtue of information advantages <sup>[13]</sup>.

In summary, through the three paths of unifying the rule system, connecting management processes, and reconstructing the information structure, fiscal digitization has built a clear and rigid institutional boundary for interdepartmental budget fund allocation. Under the synergy of normalized supervision and execution mechanisms, such institutional constraints are gradually solidified into stable constraints in budget allocation <sup>[14]</sup>.

### **4. Operational mechanism for fiscal digitization to promote the standardization of interdepartmental budget fund allocation**

After the institutional foundation of budget management is reshaped, the realization of the standardization of interdepartmental budget fund allocation depends on the role of institutional constraints in the budget execution process. The significance of fiscal digitization at the operational level is not to replace administrative decisions, but to transform rules, procedures, and constraints into sustainable operational institutional mechanisms through technical embedding, so that interdepartmental budget allocation no longer relies on temporary coordination and

individual intervention<sup>[15]</sup>. The strategies are as follows:

- (1) By embedding supervision functions into the budget management system, fiscal digitization strengthens the practical binding force of budget rules during the execution stage. Compared with the traditional supervision method relying on post-event verification, under the digital condition, budget execution data is synchronously connected with the supervision system, and the flow, use, and execution progress of budget funds can be continuously recorded and tracked during operation. Thus, behaviors of interdepartmental budget allocation deviating from rules are no longer only identified after the event, but subject to institutional constraints during operation, and budget rules are transformed from static requirements to dynamic execution standards;
- (2) Budget execution auditing under the digital condition changes the way budget allocation constraints function. Budget execution auditing is no longer limited to compliance judgment, but gradually embedded into the whole process of budget execution, forming a feedback linkage mechanism with the budget management system. Through in-operation supervision and result application, the auditing mechanism strengthens the external constraints on departmental budget execution behavior, weakens the space for departments to redistribute by adjusting fund rhythm or uses during the execution stage, and thus stabilizes the operational order of interdepartmental budget fund allocation;
- (3) By improving the transparency of budget operation, fiscal digitization changes the behavioral expectations of departments in budget allocation. Under the unified platform, the budget execution status of departments can be compared horizontally, and allocation results are more likely to be subject to institutional inspection. This improvement in transparency makes departments more inclined to follow established rules rather than relying on strategic games in budget allocation and execution, strengthening the standardization of budget allocation at the behavioral level.

Fiscal digitization realizes the standardization of interdepartmental budget allocation not through a single institutional design, but through operational mechanisms such as supervision embedding, auditing linkage, and transparent operation, continuously strengthening rule constraints in the budget execution process. The role of this mechanism is not completed at one time, but exerts its effect in budget operation, enabling the standardization of budget allocation to be stably maintained.

At the operational level, fiscal digitization provides a sustainable constraint mechanism for interdepartmental budget fund allocation, making the standardization of budget allocation gradually shift from institutional rules to normalized behaviors in the budget execution process. This operational mechanism is connected with the institutional foundation discussed in the previous chapter, jointly forming a complete logic for fiscal digitization to promote the standardization of interdepartmental budget fund allocation.

## 5. Conclusion

This paper systematically analyzes the action logic of fiscal digitization in promoting the standardization of interdepartmental budget fund allocation from two levels: institutional foundation and operational mechanism. The study shows that fiscal digitization reshapes the budget management system environment, changes the constraint conditions of interdepartmental budget allocation, and thus promotes the transformation of allocation behavior from experience-based judgment and departmental games to rule and procedure constraints. From the institutional level, through the integrated budget management reform, fiscal digitization unifies budget rules, connects

management processes, and reconstructs the information structure, providing a stable institutional boundary for interdepartmental budget fund allocation. This institutional foundation compresses the discretionary space of departments, gradually embedding budget allocation into a unified rule system. From the operational level, through supervision embedding, auditing linkage, and transparent operation, fiscal digitization enables institutional constraints to play a role in the budget execution process. The standardization of budget allocation gradually shifts from relying on pre-event design to continuous strengthening through dynamic supervision in the execution process, thereby avoiding the amplification of allocation deviations during the operation stage.

The improvement of budget allocation efficiency is not a direct goal of fiscal digitization, but a natural result after the gradual realization of budget allocation standardization. This problem needs to be understood from the perspective of standardization rather than mere efficiency to grasp the governance effect of fiscal digitization. Based on the above conclusions, fiscal digitization reform should pay more attention to the coordinated advancement of institutional construction and operational constraints, preventing digital reform from staying at the system integration level. Only when the institutional foundation and operational mechanism form a joint force can fiscal digitization achieve the standardized transformation of interdepartmental budget fund allocation.

## Disclosure statement

The author declares no conflict of interest.

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