

# Research on Establishing and Improving the Self-Evaluation System of Departmental Financial Fund

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**Abstract:** From the perspective of departmental financial fund, a set of sound self-evaluation system must be established to meet the needs of performance assessment, thereby improving the level of financial performance management in corporate departments. This article uses Analytical Hierarchy Process (AHP) to construct a self-evaluation system of financial fund, which is helpful to better define the actual effect of the financial performance in corporate departments, promote the departments to establish a self-evaluation system of financial fund and efficient performance management, and verify the effectiveness of the self-evaluation system so as to lay the foundation for the transformation from the departmental financial self-evaluation system to a performance management model.

## 1. Introduction

From the perspective of departmental financial fund, the significance of further establishing a sound self-evaluation system is to improve the overall level of financial performance management of the organization, and at the same time provide necessary guarantees for the fund management in different projects. Further improve the management level of the department's large-scale investment and management by establishing a self-evaluation system of departmental financial fund, so as to better improve the utilization efficiency of the departmental fund, enhance the performance management level, improve the department's management system, and realize the security and effectiveness of the departmental financial fund. So it is imperative to improve the performance evaluation system and the self-evaluation system of departmental financial fund [1].

## 2. Establishment of Indicators for the Self-Evaluation System of Departmental Financial Fund

According to the features of the self-evaluation of the departmental financial fund, 10 indicators were established as follows:

### 2.1 Budget Plan

For the self-evaluation system of departmental financial fund, it is necessary to have a budget plan to realize the effective management of fund and achieve the planned, scientific and effective utilization of fund.

### 2.2 Cost Control

In terms of cost control of the departmental financial fund, it is mainly about the effective control and reasonable estimates of costs based on the department's operation and maintenance, and whether the cost control is successful plays a pivotal role in the operation.

### 2.3 Fund Management

In the self-evaluation system of financial fund, fund management is not only about the management of cash flow, but also related to the security and expenditure details of the fund. The management of fund is actually a management on the rationality of fund utilization.

## 2.4 Assets Management

Departmental assets management has always been an important part of the self-evaluation system of financial fund. It specifies that assets, which include fixed assets and intangible assets, and especially assets management, require itemized bills.

## 2.5 Price Management

For the department, the price is formulated by the state including the price policy and price plan. The department needs to establish the departmental price management system, improve the price management rules and regulations according to the price management regulations promulgated by the state, so as to effectively organizes, coordinates and supervises the process of price setting, adjustment and execution. This is an important part of performance management.

## 2.6 Financial Report

The financial report also called financial statement, it generally refers to the three tables, but for the departmental finance, the financial report not only refers to the three tables but also includes notes, as well as a complete financial analysis. It is the concrete explanation of financial processes of a company or a department.

## 2.7 Level of Accounting

From the perspective of departmental finance, in the financial self-evaluation system, there are mainly two aspects that need to be inspected: the level of accounting practitioners and the overall level of accounting application.

## 2.8 Internal Audit

Departmental finance is audited by full-time auditors within the departments and organizations. The purpose is to help managers of departments and organizations to implement the most effective management. A major feature of modern audit is the cooperation and complementation of internal and external audit. A sound internal audit system can provide reliable information for external audit and reduce the workload of external audit. Internal audit plays a very essential role in the economic management within the departments and organizations, and it is also part of the national audit and supervision system.

## 2.9 Departmental Expenses

Administrative expenses refer to various expenses rising from organization, management and operation of the departments. Department expenses must be related to the specific project of the department, and they also occur in the operation and management of the department. They can be categorized as a part of the unit fund, such as daily expenses and hospitality expenses.

## 2.10 Department Coordination

Enhance the awareness of synergy and cooperation within the department through department coordination. At the same time, it can also lay the foundation for the coordination and cooperation with other departments. The aim of this measure is to strengthen the coordination between departments and form joint efforts. And by further strengthening effective communication and contact between departments, the departments will be more effective in problem solving.

## 3. Analysis on the Self-Evaluation System of Departmental Finance by Analytic Hierarchy Process (Ahp)

Results of AHP				
Indicator	Feature Vector	Weight	Maximum Eigenvalue	CI Value
Budget Plan	0.458	4.578%	10.510	0.057
Cost Control	1.238	12.376%		
Fund Management	1.933	19.332%		
Assets Management	1.190	11.895%		

Price Management	0.677	6.774%		
Financial Report	0.637	6.371%		
Level of Accounting	0.705	7.047%		
Internal Audit	1.245	12.453%		
Departmental Expenses	1.386	13.859%		
Department Coordination	0.532	5.316%		

The analytic hierarchy process (AHP) is used to calculate the weight of experts' scoring;

First: AHP is used to calculate the weight, and consistency test is required;

Second: Describe the weight of each indicator one by one;

Third: Use the ANC to calculate the AHP (the square root method can be another option).

As can be seen from the above table, a total of 10 items such as, budget plan, cost control, fund management, assets management, price management, financial report, level of accounting, internal audit, departmental expenses, and department coordination are constructed as a 10-order judgment matrix to conduct AHP study (ANC is used as the calculation method). And the respective feature vectors are: 0.458, 1.238, 1.933, 1.190, 0.677, 0.637, 0.705, 1.245, 1.386, 0.532, and their weights are: 4.578%, 12.376%, 19.332%, 11.895%, 6.774%, 6.371%, 7.047%, 12.453%, 13.859%, 5.316%. In addition, the maximum eigenvalue (10.510) can be calculated according to the feature vectors, and then the maximum eigenvalue is used to calculate the CI value (0.057) [ $CI = (\text{maximum eigenvalue} - n) / (n - 1)$ ], The CI value is used for the consistency check stated below.

RI in Random Consistency														
N order	3	4	5	6	7	8	9	10	11	12	13	14	15	16
RI	0.52	0.89	1.12	1.26	1.36	1.41	1.46	1.49	1.52	1.54	1.56	1.58	1.59	1.5943
N order	17	18	19	20	21	22	23	24	25	26	27	28	29	30
RI	1.6064	1.6133	1.6207	1.6292	1.6358	1.6403	1.6462	1.6497	1.6556	1.6587	1.6631	1.6670	1.6693	1.6724

When using AHP to calculate weight, it is necessary to do consistency check and analysis;

First: in consistency check, two indicators CI and RI will be used

Second: CI values have been calculated, and RI values can be obtained by consulting corresponding table

This study constructed a 10-order judgment matrix. According to the above table, the random consistency RI value is 1.490. The RI value will be used in the calculation of the following consistency check.

Summary of Consistency Check Results				
Maximum Eigenvalue	CI	RI	CR	Results of Consistency Check
10.510	0.057	1.490	0.038	passed

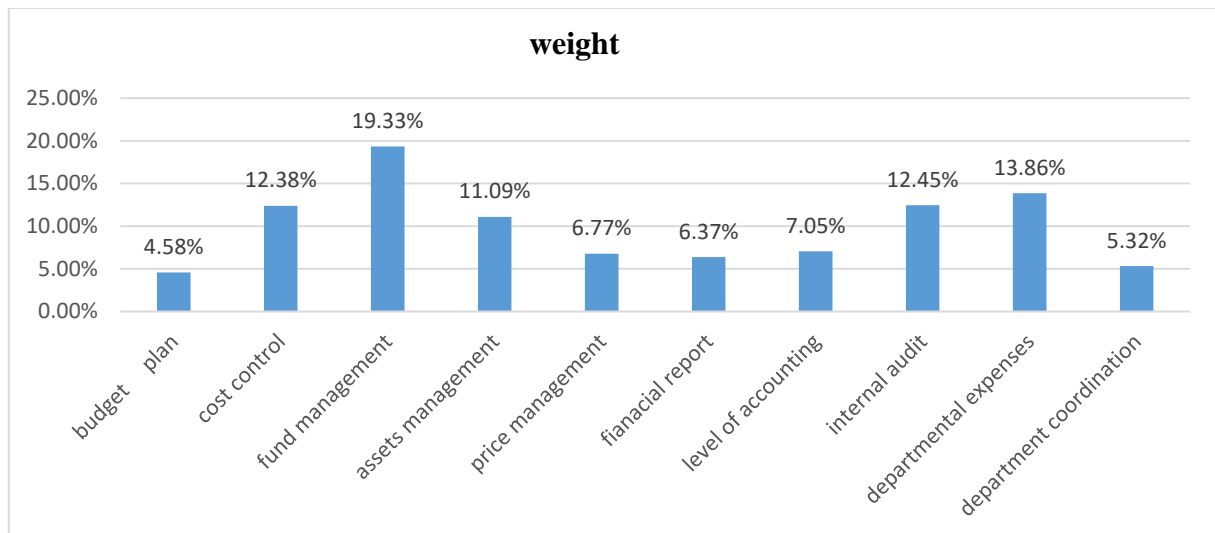
When using AHP to calculate weight, a consistency test analysis is required in order to study the consistency check results of the evaluation, that is, to calculate the consistency indicator - CR value ( $CR = CI / RI$ ).

First: present the CI values obtained by the above calculation [ $CI = (\text{maximum eigenvalue} - n) / (n - 1)$ ];

Second: the order of the judgment matrix will be combined to get the RI value;

Third: calculate CR value and make consistency judgment.

Normally, the smaller the CR value, the better the consistency of the judgment matrix. In general, if the CR value is less than 0.1, then the judgment matrix passes the consistency test; if the CR value is larger than 0.1, it means that there is no consistency. Under this circumstance, appropriate adjustments will be made before a second analysis. The CI value calculated according to the 10-order judgment matrix is 0.057, and the RI value is 1.490 according to the relevant table, so the CR value obtained is 0.038, lower than 0.1, which means that the judgment matrix in this study passes the consistency test, and the calculated weights are consistent.

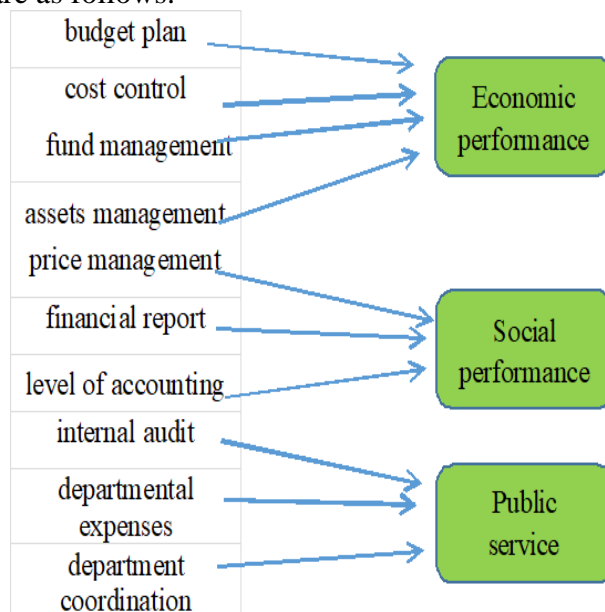


#### 4. Discussions and Strategies

Judging from the empirical results of the AHP on the self-evaluation system of the departmental financial fund, it is necessary to further strengthen the budget plan, price management, financial report, level of accounting, and the department coordination, because these indicators have relatively low weights. And the strategies are as follows:

##### 4.1 Integrate the Self-Evaluation System of Departmental Financial Fund into the Performance Evaluation System

The self-evaluation of departmental financial fund is relatively independent, but it is not the same for the overall financial demands. Therefore, it is necessary to establish a unified self-evaluation system of departmental financial fund to support the performance management and evaluation system. For the organization, the fund performance evaluation system generally includes three main indicators namely economic performance indicator, social performance indicator, and public service performance indicator<sup>[2]</sup>, and their corresponding relationships in the self-evaluation system are as follows:



##### 4.2 Fully Clarify the Subject of the Departmental Financial Self-Evaluation

The subject of the departmental financial self-evaluation should be correctly clarified, and the subjects are mostly the operators and managers of the department. In the self-evaluation system, the

relevance between the utilization of fund and the individual should be clarified. If any staff uses the fund for the good of the department, then the expenditure should also be calculated into the departmental financial fund. Meanwhile, it also should be noted that the satisfaction survey of the departmental financial fund self-evaluation system should also be conducted if the fund involves public special fund projects, then corresponding indicators such as social contribution rate and public satisfaction need to be properly added <sup>[3]</sup>. To improve the departmental financial self-evaluation system, evaluation department within the organization should actively carry out scientific investigation, evaluation, and analysis on the beneficiaries. Only in this way can the value and role of the departmental financial self-evaluation system be better reflected. Besides, it's necessary to carry out independent external evaluation with the department as the subject, and strictly supervise and manage the indicators of the independent external evaluation.

#### **4.3 Improve the Process of Departmental Financial Self-Evaluation**

The self-evaluation work of the departmental financial fund mainly includes three aspects. First, the pre-examination and evaluation. This phase is part of daily review. The department is required to do clear financial fund declaration in advance, subscribe feasibility reports, provide fund establishment basis, list details of expenditures, forecast project output, effects, and project implementation process, and put forward measures to ensure performance targets. According to the level of demand and priority of financial fund, the performance evaluation of projects will be carried out in order, and for projects that with low performance target or no performance target, no fund shall be offered. Second, tracking evaluation during the process, in the implementation of the project, various aspects of the project should be reviewed, the risks of the project should be predicted and analyzed, and stage tracking evaluation should be actively carried out, such as accomplishments of goals, completion progress, difference between goals and actual situation. What's more, costs should be strictly controlled in project execution, cost control should also be evaluated to realize the scientific and rational utilization of departmental fund. Third, post inspection and evaluation. At this stage, inspection mainly refers to two parts, one is to check defects and make them up. The other is to organize an expert team to analyze and actually conduct spot checks, evaluations, and inspections on the cash flow and implementation of self-evaluation system. From the perspective of financial risk management, further evaluation of financial security should be made and reports will be submitted for record.

#### **5. Conclusion**

It is of great significance to establish and improve the self-evaluation system of departmental financial fund, which mainly reflects the sound operation of the self-evaluation system and the management of fund, and meanwhile, it can be effectively integrated into the performance evaluation in organizations, but there are still many problems with the self-evaluation system of departmental financial fund. As can be seen in the weight of the indicators, some indicators are still weak, and need to be further strengthened and improved, so as to meet the needs of departmental financial fund management.

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