

# Research on the Characteristics of Performance Indicators of Government Department Budget Projects: Taking Sichuan Provincial Education Department as an Example

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**Abstract:** *The performance of government departments is the best embodiment of the government's work results, and the performance of budget projects is one of the important aspects. It is an important management mode of current government departments to use performance indicators to conduct performance management and evaluation of budget projects. This paper collects the performance indicators of budget projects disclosed by the Sichuan Provincial Education Department in the disclosure of department final accounts from 2019 to 2021, and takes it as an example to research the advantages and disadvantages of performance indicators setting, and finally puts forward suggestions for improvement. The conclusions will be helpful to improve the performance management level of government departments.*

**Keywords:** *Government Department Budget Projects; Project Performance Indicators; Characteristics of Indicators; Sichuan Provincial Education Department*

## 1. Introduction

In recent years, the Chinese government has paid more and more attention to the budget performance management of government departments [1]. The implementation of the new Budget Law has put forward more explicit requirements and higher implementation standards for the performance management of budget projects of government departments at all levels [2]. Using the principle of management by objectives to set the performance indicators of budget projects is an important method for the performance evaluation of government department budget projects [3]. Therefore, it is necessary to research the overall characteristics of the current budget project performance indicators set by government departments, evaluate its advantages and disadvantages, and put forward suggestions for improvement.

Education is an important aspect of national development, and Sichuan Province is an important province with rapid development in western China. Therefore, the setting of performance indicators of budget projects of Sichuan Provincial Education Department over the years is selected for research, which has strong representativeness and pertinence.

## 2. Requirements for budget project performance management

### 2.1. Performance management of government departments

Performance management of government departments includes overall performance management and project performance management [4-5]. Both of these two levels use performance indicator system to carry out target management, but there are some differences between them [5]. This paper discusses the project performance indicator system.

The project performance indicator system of government departments has three levels of indicators. In 2021 and previous years, the first-level indicators are completion indicators, benefit indicators and satisfaction indicators. Since 2022, the completion index has been renamed as the output index, and the cost index under the original completion index has been upgraded from the second-level index to the first-level index [1]. There are several second-level indicators under each first-level indicator, and there can be any number of third-level indicators under second-level indicators. The third-level indicator is

set according to the specific project objectives, which is the final level indicator and has no fixed name. The number of indicators set for each project is not fixed, but all three levels of indicators are required to cover all the performance objectives of the project and set specific and clear evaluation criteria.

The public disclosure of the annual final accounts of government departments requires the disclosure of the overall performance management and project performance management of the department, and at least 5 key projects are selected for detailed disclosure, including all the contents of the performance indicators of related projects and evaluation results [6].

## **2.2. Current situations of performance management in Sichuan Provincial Education Department**

According to the final accounts disclosed by the Sichuan Provincial Education Department in the past three years, the department has more than 40 directly affiliated units, most of which are colleges and universities. All these units have their own performance management system. The Sichuan Provincial Education Department supervises the subordinate units and forms a comprehensive performance management plan. The budget project information disclosed in the final accounts of department is about the key budget projects of each subordinate unit. Therefore, in essence, relevant disclosure includes two levels: subordinate unit self-evaluation and department evaluation.

However, department performance management and disclosure are still in the stage of continuous reform, and the setting of performance indicators of budget projects has not yet formed a unified standard [5-6]. Therefore, it is necessary to research the characteristics of these indicators, analyze their advantages and disadvantages, and put forward improvement suggestions for the setting of indicators.

## **3. Statistics on disclosure of final accounts data**

### **3.1. Data collection**

This paper collects the performance data of 16 key projects disclosed in the final accounts of the Sichuan Provincial Education Department from 2019 to 2021. Six key projects were disclosed in 2019 and five in 2020 and 2021 respectively. A total of 108 performance indicators were set for related projects, with 39, 42 and 27 indicators for three years respectively.

All the original data are from the official website of Sichuan Provincial Education Department.

### **3.2. Data processing**

In order to the further analysis, this paper makes statistics on all indicators by year, level and category, divides indicators into positive indicators and negative indicators according to the characteristics of indicators, and determines whether the indicator task is completed by combining the description of relevant disclosure and the target set by the indicators. Data processing and calculation are with the help of Excel software.

### **3.3. Data evaluation**

#### **3.3.1. Overall situation of the data**

The relevant performance indicators are shown in Table 1.

From the setting of the first-level indicators, there are 68 completion indicators, more than half; there are slightly more benefit indicators than satisfaction indicators, with 23 and 17 respectively. Among the second-level indicators under the completion indicator, quantity indicators account for about half; the second is quality indicators and time indicators; only three cost indicators were set in 2020. Nearly half of the second-level indicators of benefit indicators are social benefit indicators; the second is sustainable impact indicators and economic benefit indicators; similarly, only two ecological benefit indicators were set in 2020. The second-level indicators of satisfaction is not further refined.

The longitudinal comparison shows that the overall indicator structure of each year has little change, and the completion indicator always occupies a large proportion, among which the quantity indicator has always been the top priority. Compared with the previous two years, the number of indicators in 2021 is significantly simplified. Only 27 performance indicators are set for 5 key projects, among which only 4 performance indicators are set for the least.

*Table 1: Performance indicators composition of key items disclosed in final accounts of the Sichuan Provincial Education Department from 2019 to 2021*

Level of indicators	Indicator	2019	2020	2021	Total
First-level indicator	Completion indicator	23	27	18	68
Second-level indicator	Quantity indicator	12	11	10	33
Second-level indicator	Quality indicator	6	9	5	20
Second-level indicator	Time indicator	5	4	3	12
Second-level indicator	Cost indicator	0	3	0	3
First-level indicator	Benefit indicator	8	9	6	23
Second-level indicator	Economic benefit indicator	1	1	2	4
Second-level indicator	Social benefit indicator	5	3	3	11
Second-level indicator	Ecological benefit indicator	0	2	0	2
Second-level indicator	Sustainable impact indicators	2	3	1	6
First-level indicator	Satisfaction indicator	8	6	3	17
Second-level indicator	Satisfaction indicator	8	6	3	17
Total up		39	42	27	108

### 3.3.2. Direction of indicators

According to the evaluation direction, performance indicators can be divided into positive indicators and negative indicators [5,7]. Positive indicators are usually the target expected to be achieved. The larger the relevant number, the better, and the higher the evaluation level, the better. Negative indicators are some restrictive or limited indicators, which aim to control the quantity or evaluation at a reasonably low level [7]. The direction of disclosure performance indicators of the final accounts of the Sichuan Provincial Education Department is shown in Table 2.

*Table 2: Performance indicators of key items disclosed in final accounts of the Sichuan Provincial Education Department from 2019 to 2021*

Direction of indicators	2019	2020	2021	Total
Positive indicators	38	42	27	107
Negative indicators	1	0	0	1

It can be seen that there is only one negative indicator, indicating that the Sichuan Provincial Education Department makes little use of negative indicators in the setting of project performance indicators.

### 3.3.3. Qualitative indicators and quantitative indicators

Quantitative indicators are indicators with reference standards such as specific quantities and proportions. Qualitative indicators are descriptive targets without specific quantity or proportion requirements [8]. The combination of the two can develop qualitative and quantitative combined indicators. The types of relevant performance indicators of Sichuan Provincial Education Department are shown in Table 3.

*Table 3: Performance qualitative indicators and quantitative indicators of key projects disclosed in final accounts of the Sichuan Provincial Education Department from 2019 to 2021*

Qualitative or quantitative indicators	2019	2020	2021	Total
Qualitative indicators	5	9	7	21
Quantitative indicators	31	33	20	84
Qualitative and quantitative combined indicators	3	0	0	3

The performance indicators of related projects in Sichuan Provincial Education Department are mainly quantitative indicators, with a total of 84 in three years. At the same time there is a certain proportion of qualitative indicators. However, only three qualitative and quantitative combined indicators are set in 2019, and none is set in the following two years.

### 3.3.4. Completion of indicators

Sichuan Provincial Education Department has completed 93 of the 108 indicators in 16 key projects, and the overall completion result is good. The specific data are shown in Table 4.

*Table 4: Completion of performance indicators of key projects disclosed in final accounts of the Sichuan Provincial Education Department from 2019 to 2021*

Complete or not	2019	2020	2021	Total
Complete	37	30	26	93
Not complete	2	12	1	15
Total up	39	42	27	108

Of the six key projects disclosed in 2019, only two indicators have not been completed. In 2020, due to the impact of the macro environment, 12 indicators fell short of the expected targets, involving 3 projects. In 2021, it is restored to the ideal state, with only one indicator not completed. The classification composition of these 15 indicators is shown in Table 5.

*Table 5: Distribution of outstanding performance indicators of key projects disclosed in final accounts of the Sichuan Provincial Education Department from 2019 to 2021*

Level of indicators	Indicator	2019	2020	2021	Total
First-level indicator	Completion indicator	2	9	1	12
Second-level indicator	Quantity indicator	1	4	1	6
Second-level indicator	Quality indicator	/	3	/	3
Second-level indicator	Time indicator	1	1	/	2
Second-level indicator	Cost indicator	/	1	/	1
First-level indicator	Benefit indicator	/	1	/	1
Second-level indicator	Sustainable impact indicators	/	1	/	1
First-level indicator	Satisfaction indicator	/	2	/	2
Second-level indicator	Satisfaction indicator	/	2	/	2
Total up		2	12	1	15

The two uncompleted indicators in 2019 are: the number of talents introduced and the number of doctorates sent is lower than expected, and the completion of special training is later than the planned date. Generally speaking, the deviation of these two projects is not large and has no substantial impact on the completion of the projects.

In 2020, a number of categories of indicators have not been completed, and the implementation of a number of projects has been delayed. If sufficient attention is paid to relevant key projects, relevant performance targets can still be achieved at a later stage. However, it also reflects that the performance indicators of the Sichuan Provincial Education Department lack a response plan for emergencies, which is a major difficulty in related work.

One of the indicators not completed in 2021 is that the number of new laboratories is less than planned. However, the overall completion of the corresponding project is good, and the completed laboratory basically meets the performance target. Given the sustainability of the management work, unfinished tasks can also be continued at a later stage.

#### **4. Characteristics of performance indicators of budget projects**

##### **4.1. Advantages of indicator setting**

###### **4.1.1. Make full use of quantitative indicators**

The biggest advantage of quantitative indicators is that there are quantitative measurement standards for related targets, which is easy to judge whether the targets are achieved or not, and also conducive to target management. The quantitative indicators account for nearly 80% of the performance indicators of key projects in the Sichuan Provincial Education Department. Therefore, it is easy to evaluate the degree of the realization of the overall targets of the projects and find the weak links of project management.

###### **4.1.2. High pertinence of indicators**

The performance indicators are set around the overall goal of the project, which better reflects the important aspects of the project targets and makes the specific implementation of the project more directional. In particular, the setting of project performance indicators in 2021 is more streamlined and focus on key points under the premise of covering all project contents, thus further improving the pertinence of indicators and improving the efficiency of project performance management.

#### ***4.1.3. High feasibility of indicators***

In normal years, the performance indicators of key projects of the Sichuan Provincial Education Department are well completed. Even in 2020, the targets completion after the exclusion of irresistible factors are still impressive. It can be seen that the feasibility of indicators is high, which reflects the high degree of realistic project targets and the overall feasibility of the projects is also high.

#### ***4.2. Disadvantages of indicator setting***

##### ***4.2.1. Lack of qualitative and quantitative combined indicators***

The qualitative and quantitative combined indicators can not only evaluate the degree of realization of project targets, but also evaluate the completion quality of project targets [8]. However, in the key projects of the Sichuan Provincial Education Department, only 3 qualitative and quantitative combined indicators were set in 2019. This is not conducive to the evaluation of the quality of the completion of related projects, and also affects the continuity of project targets.

##### ***4.2.2. Lack of negative indicators***

Only one negative indicator was set in 2019 for one project, indicating that the completion of the project targets is insufficient. This may lead to problems such as external diseconomy or inefficient use of funds.

##### ***4.2.3. Lack of cost indicators***

In the adjusted indicator system in 2022, the cost indicators become the first-level indicators, and their importance has been significantly increased. In the past three years, there was only one cost indicator for one of the projects, which was also related to the lack of cost management system. Reasonable use of cost indicators will help to combine performance management and cost management, and then improve the overall level of project management.

#### ***4.3. Suggestions on indicator setting***

##### ***4.3.1. Adjust the structure of indicators appropriately***

The performance indicators of key projects in Sichuan Provincial Education Department are generally reasonable, but it is necessary to adjust them. The comprehensive use of qualitative indicators and quantitative indicators is helpful to better evaluate the completion quality of project targets, and accordingly it is necessary to appropriately increase the proportion of quality indicators. Appropriate increase of negative indicators and cost indicators, in order to strengthen the binding of project targets, and more conducive to the control of project targets.

##### ***4.3.2. Strengthen the control of indicator risks***

While making project targets, we should also take into account the risks of project execution, including both controllable factors and uncontrollable factors. Therefore, when setting the performance indicators of projects, the plan should be taken into account when the targets are difficult to achieve or cannot be achieved. Consider extending the execution time of the project and reducing the expected targets of the project and other coping plans, and strive to minimize the loss caused by the unfavorable situation.

##### ***4.3.3. Attach importance to the application of indicator evaluation results***

The setting, implementation and evaluation of project indicators are a circular mechanism. The results of indicator evaluation are not the end of project performance management. Therefore, it is necessary to apply the results of indicator evaluation to the subsequent performance management work to ensure the continuity of relevant work. Although the current budget project management is managed on a yearly basis, some projects will last for several years, while some projects are executed in different years but are also intrinsically related. Therefore, it is worth thinking about how to use the performance evaluation results of previous projects to guide the development of follow-up projects.

#### **5. Conclusion**

The current government department budget project performance indicator system has been preliminarily formed, and its overall structure is relatively complete. The indicator data collected from

the case makes full use of the evaluation advantages of quantitative indicators, and has the advantages of strong pertinence and high feasibility. However, there are still deficiencies in the application of qualitative and quantitative combined indicators, and the lack of sufficient negative indicators and cost indicators. Therefore, it is suggested that relevant departments optimize the setting of project performance indicators and adjust the indicator structure appropriately; pay attention to the risks behind the indicators, and carry out necessary control of the indicator risks; finally, we should attach importance to the application of the evaluation results of the project indicators and constantly improve the performance management level of government departments.

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