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Research on performance evaluation of provincial transportation budget project

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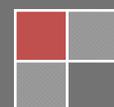
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ABSTRACT

In recent years, the financial sector focus on research of budget performance management reform in China, to meet the requirements of budget management reform and further improve the performance evaluation. For the Provincial Department of Transportation, the performance evaluation of budget project can not directly use the national way, because there are different evaluation systems for each type project, too hard evaluation work, and some work is not necessary for the local project. The paper establishes a new performance evaluation index system of provincial transportation budget project, and designs a whole evaluation system for different type project to compare with each other, simplifies the evaluation work, and adapts the actual local project.

KEYWORDS

Transportation project; Budget project; Performance evaluation; Index system; Provincial project.



INTRODUCTION

With the breadth and depth of the financial sector performance evaluation work carried out, the performance evaluation work is gradually found some problems in the transport sector, mainly performance evaluation system used is a single index system for individual types of projects, and can not constitute a complete system, and not comprehensive, specific, and can not reflect the performance of the entire industry. The paper is to conduct detailed research and analysis of project budget management of the transportation sector, and to establish a comprehensive evaluation system, and to form a scientific evaluation system to promote and develop transportation budget management.

INDEX SYSTEM CONSTRUCTION METHOD

The paper on the basis of requirements for finance budget project performance evaluation, according to the characteristics of the transportation sector builds performance evaluation system of transportation budget project. The method is to embed "3E" criteria, that the economy, efficiency and effectiveness, to analyze the formation mechanism of project performance, and to define the whole system and process from project approval, organize, implementation, to output evaluation^[1]. And to identify the key factors in various performance modules, after analyzing and organizing, then to convert these factors into practical evaluation indicators, on the basis of examination of the indicators, thus a final performance evaluation index system of transportation budget project is established^[2]. The system framework is as shown in Figure 1:

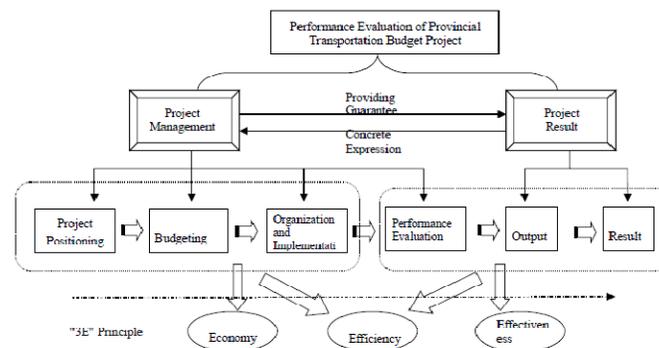


Figure 1 : Performance evaluation system framework of transportation budget project

Under the overall goal of the project budget performance evaluation, and on the basis of the evaluation content analysis of transportation projects, the performance evaluation system is divided into project management performance indicators and project result performance indicators^[3]. On the one hand, the index system should be according to the requirements of Finance Department for the budget project evaluation, on the other hand each indicator is corresponding to each link in the actual process of project implementation^[4-6]. Generally the budget project directly to the result of performance evaluation, thus, the paper gives the project management performance indicators of 40% of total score weight, and the project result performance indicators is weighted 60% of total score. Transportation budget performance evaluation system framework is established and shown in Figure 2:

PERFORMANCE EVALUATION INDEX INSPECTION OF TRANSPORTATION BUDGET PROJECT

(1) Reliability Analysis

Designing the questionnaire with the importance of the index constructed according to specifications above, each indicator is assigned to 1 to 5 five scores. When the indicator does not fully

reflect the characteristics of the object evaluated, the indicator score is 1 point; when indicators fully reflect the characteristics of the object evaluated, the indicator score is 5 points; when indicators reflecting between the two cases, a different between 1 to 5 score is given. 50 questionnaires were sent out to the related staff of Provincial Department of Transportation and Provincial Department of Finance, and questionnaires were full recovery. In this paper, SPSS17.0 software is used for processing the questionnaire, by Cronbach α coefficient to analyze reliability of the indicators and to ensure the credibility of the questionnaire. The analysis results are shown in TABLE 1:

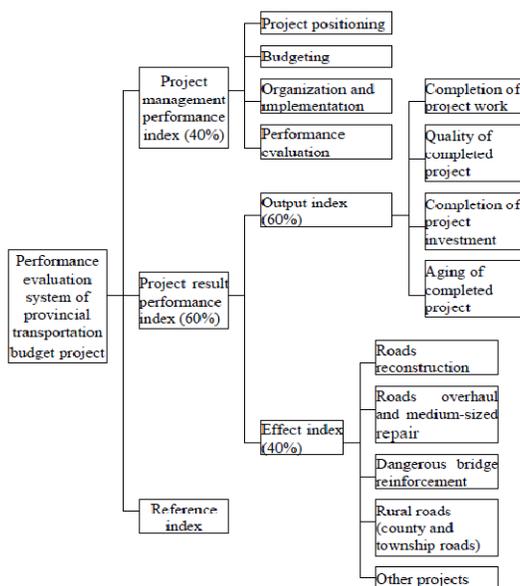


Figure 2 : Performance Evaluation System of Transportation Budget Project

TABLE 1 : Questionnaire reliability analysis

	Project Management	Project Result
Cronbach's Alpha coefficient	0.712	0.744

For Cronbach α coefficient model is concerned, if the coefficient is greater than 0.7, the result is considered credible. As can be seen through the analysis, α values of project management and project result were greater than 0.7, So that the reliability and internal consistency of the questionnaire is relatively high, and the result can be used.

(2) Importance analysis

According to the results of the questionnaire, each indicator is calculated the mean and standard deviation, as shown in TABLE 2. The higher the average of indicators score, the higher recognition degree of indicators, and the more important of the indicators.

From the TABLE 2, the means of all indicators are greater than 2.5. That these indicators were higher recognized.

(3) Validity analysis

Validity analysis is a method used to determine whether the selected indicators reflect evaluation objects. This paper uses the factor analysis method to test the structure validity. Under analysis of each dimension index, the first step is KMO Test (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) and Bartlett Test of Sphericity to determine whether the sample can do factor analysis.

TABLE 2 : Importance analysis of performance evaluation indicators of transportation budget project

	Mean	Standard deviation
Strategic Planning	4.20	0.755
Performance goals establishment	3.28	0.783
Performance indicators setting	3.04	0.902
Performance demonstration evaluation	4.08	1.026
Preparation and submitting of budget performance	4.24	0.893
Program Management	4.10	0.839
Performance monitoring	4.08	0.778
Risk Control	3.14	0.947
Capital in place	2.86	0.728
Performance regulation construction	3.46	1.031
Evaluation organization	3.24	0.959
Evaluation Report	3.24	0.846
Evaluation result application	2.96	0.698
Completion of project work	3.96	0.807
Quality of completed project	3.14	0.728
Completion of project investment	3.88	1.023
Aging of completed project	4.10	0.886
Effect index	4.18	0.873

① Validity analysis of project management index

It can be seen from TABLE 3, the indicators of KMO value of 0.678 is greater than 0.5, Bartlett's spherical test $p=0.000$ for highly significant, indicating every index have correlation between indicators, are suitable for factor analysis.

TABLE 3 : KMO and Bartlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	Bartlett' Test of Sphericity		
	Approx. Chi-Square	df	Sig.
0.678	320.986	78	0.000

Using factor analysis method to analyze 13 indexes of the project management, and the analysis method is the principal component analysis (PCA), and to select extraction factor by the method of eigenvalues greater than 1, the analysis results such as TABLE 4 and TABLE 5.

TABLE 4 : Project management component matrix

	Component			
	1	2	3	4
Strategic Planning	0.800	0.227	0.025	-0.216
Performance goals establishment	0.697	0.437	-0.190	0.350
Performance indicators setting	0.549	-0.131	0.427	-0.524
Performance demonstration evaluation	0.595	0.479	-0.401	0.309
Preparation and submitting of budget performance	-0.375	0.374	0.021	0.709
Program Management	-0.391	0.729	0.246	-0.123
Performance monitoring	-0.431	0.752	0.240	-0.167
Risk Control	-0.290	0.816	0.113	0.012
Capital in place	-0.217	0.694	0.331	0.070
Performance regulation construction	-0.277	0.523	-0.243	0.142
Evaluation organization	0.469	-0.009	0.619	0.324
Evaluation Report	0.338	-0.163	0.714	0.397
Evaluation result application	-0.306	0.375	0.633	-0.079

Extraction Method: Principal Component Analysis.

It can be seen from TABLE 4, four principal components can be extracted from 13 indicators of project management, each indicator in 4 principal components is to coincide with the

situation of setting index. TABLE 5 shows that total contribution rate has reached 73.56%, and displays that these indicators structure is reasonable.

TABLE 5 : Total variance explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.564	27.418	27.418	3.564	27.418	27.418
2	3.315	25.501	52.919	3.315	25.501	52.919
3	1.668	12.827	65.746	1.668	12.827	65.746
4	1.016	7.816	73.562	1.016	7.816	73.562
5	0.736	5.664	79.227			
6	0.614	4.721	83.947			
7	0.601	4.622	88.569			
8	0.446	3.435	92.003			
9	0.330	2.538	94.541			
10	0.254	1.951	96.493			
11	0.201	1.546	98.039			
12	0.136	1.049	99.088			
13	0.119	0.912	100.000			

Extraction Method: Principal Component Analysis.

② Validity analysis of project result index

The validity analysis of project result index is the same like above that of project management index. The index includes completion of project work, quality of completed project, completion of project investment, aging of completed project, and effect index. And all the indicators has passed the reliability, importance and validity test.

DETAIL INDICATORS SETTING

(1) project management index

In accordance with the requirements of the provincial finance department, performance evaluation index should be from four respective aspects: project positioning, budgeting, organization and implementation, performance evaluation, to refine and score^[7]. Weight of project management performance indicator is about 40% of total comprehensive value. As shown in TABLE 6:

(2) Project result performance index

Performance indicators of project result are divided into output indicators and effect indicators to reflect the situation of project result, and are accounted for 60% of total comprehensive score weighting.

① Output index

Output index describes the situation of product and service completed, including four indicators of completion of project work, quality of completed project, completion of project investment and aging of completed project^[8]. The output index is suitable to each type of projects.

② Effect indicators

The indicators are to measure the implementation degree of fiscal expenditure expected results, and here are divided into 12 categories, as shown from TABLE 7 to TABLE 19:

(3) Reference index

The reference index is to reflect the overall situation of the each city and the province, and does not assign scores^[9-10]. These indicators are divided into eight categories, As shown in TABLE 20:

A CASE OF THE PRACTICE OF PERFORMANCE EVALUATION ANALYSIS OF TRANSPORTATION BUDGET PROJECT

(1) Overview of Ice mountain ridge tourist highway project

Ice mountain ridge scenic area tourism highway project is located in chicheng county, Hebei, China. The Route from the intersection of county road Baisi line and provincial road Baoping line, passing through Mashenmiao village, Yangpo village, Pandaogou village, Sandaolin

forest farm, to Guyuan, ChiCheng, and the route 19.9 km long. This highway project is in third Level construction, subgrade 7.5 m, road width 6.5 m, pavement structure is 5 cm asphalt concrete pavement, 15 cm lime and natural sand subbase, 16 cm cement and macadam subbase, design speed is 40 km/h. The project budget is 33.04 million RMB yuan, provincial capital of 19.9 million RMB yuan, local self-financing 13.14 million yuan. The project influences 2 towns, around 30 villages, four thousands households, more than fifteen thousand people.

TABLE 6 : Project management performance index

Management process	Management performance indicator	Scoring criteria	Score
Project positioning	Strategic planning	Whether develop a three-year rolling strategic plan	1
		Whether strategic planning meets the provincial government overall economic and social development plan	1
		Whether strategic planning are clear about total long-Term goal and progress goal	1
		Whether Department determines the tasks around the strategic planning goals	1
		Whether the multi-year implementation project prepares the project planning	2
		Whether the project has a basis of central or provincial (municipal and county) government policy	1
	Performance goals establishment	Whether the project establishes performance goal	2
		Whether project performance objective is consistent with the overall goal and progress goal identified in the strategic plan	2
		Whether Performance goal is scientific and clear	3
	Performance indicators setting	Whether the project is set performance indicators	2
		Whether performance index setting is fully explain the extent of performance goals to achieve	2
		Whether Performance indicators setting is scientific, rational, quantified and measurable	3
	Performance demonstration evaluation	Whether the project is identified in the strategic planning	1
		Whether the scientific and effective feasibility, necessity, and effectiveness argument is done for the project, and whether large medium-sized projects are organized experts to participate in demonstration	2
		Whether the decision-making is in scientific, democratic and standardized procedure	1
Whether repeats with other projects		1	
Whether the expected performance self-assessment is done for the project		2	
The assessment situation of Financial sector performance audit		2	
Budgeting	Preparation and submitting of budget performance	whether budgeting is on the basis of time, format, content provided by the financial sector	2
		If it is competitive allocation project, whether there is a competitive allocation scheme; If it is not competitive allocation project, whether to adopt the scientific capital allocation method, such as factor method, etc.	4
		Project fund requirements are estimated according to the standard	2
		Degree of dispersion of the allocation of funds used for the project (whether the scattered issue of funds allocation is under effective control)	2

Organization and implementation	Program management	Whether setting a feasible implementation plan around achieving the performance objective	2
		Whether project accountability mechanism is sound	2
		Whether the implementation plan is strictly done	2
	Performance monitoring	Whether performance information is applied on the monitoring completion of the project performance, whether based on the problems identified, timely correcting the project	3
		Whether collection and feedback mechanisms of project performance information are established	2
		Whether the performance information is effective used to take incentives, penalties and other measures to effectively promote the performance achieving	2
		Whether to submit the required budget performance report regularly to the government and the financial sector	2
	Risk control	Whether effective identification and evaluation can be done for possible risk factors that affecting performance goals achieving (including cost, technology, quality and organization inherent risks and natural, market extrinsic risk), and whether the medium-sized projects are established risk treatment plan and risk management measures	3
		Capital in place	3
	Performance regulation construction	If the matching funds is needed, whether the funds are ensured and as planned disbursement of funds in a timely manner (to score according to funds availability rate, the appropriate funding rate)	3
Whether problems found during the use of funds are promptly reported to the competent authorities and the financial sector		3	
Whether to establish a sound specific project finance and performance management system		3	
Whether the system is consistent with the relevant requirements of the provincial Department of Finance		3	
Performance evaluation	Evaluation organization	Whether evaluation work is organized according to the requirements of the financial sector	5
		Whether problems are detected in the performance evaluation, and whether to take effective measures to solve the problem (no problems are found no score)	5
	Evaluation report	Whether the evaluation report is on time	3
		Whether the evaluation results are objective and accurate measure of project results	4
		Whether evaluation report content is in accordance with required reporting format	3
	Evaluation result application	Whether the evaluation results are disclosed in a government-wide	3
		Whether the evaluation results are linked to the annual budget arrangements of next year	3
Whether accountability mechanisms is establish, and incentives related units and the responsible person according to the evaluation results	4		

TABLE 7 : Output index

Performance evaluation indicator	Score	Scoring criteria
		A, B, C, D, E-class score in order for the index score of 100%, 80%, 60%, 20%, 0%
Completion of project work	20	The index evaluates the completion of the main indicators of project (with approval in accordance with the approval index), and if project has multiple indicators, listed with sub-indicators, calculated as follows: project Index completion rate = actual results / expected goal * 100%. (If there are main indicators and subsidiary indicators, the main index scores of 15 points, the other subsidiary index scores of 5)
Quality of completed project	15	The indicator evaluates the project for the need to quality acceptance, to the project of completion and acceptance the score is based on completion and acceptance result; to the project before the completion and acceptance the score is based on the test report issued by the quality inspection departments; to the project that has been completed but has not been organized acceptance the score is according to commissioner score by B grade. Other projects will adjust the score to "Completion of project work" indicator.
Completion of project investment	15	The indicator evaluates the actual investment of project funds, listed with the sub-indicators, calculated as follows: Investment completion rate = actual result / expected goal * 100%, capital payment rate = actual disbursement of funds / investment of project completed, illegal funds rate = funds of not going as planned use / actual disbursement of funds
Aging of completed project	10	Strict completion according to plan time. (Operating rate is 100% about rural road construction, dangerous bridge reinforcement, rural passenger transport network project by city or county summary evaluation)

TABLE 8 : Performance evaluation indicator of roads reconstruction

Performance evaluation indicator	Score	Scoring criteria
		A, B, C, D, E-class score in order for the index score of 100%, 80%, 60%, 20%, 0%
Special fund impact coefficient	10	Special fund impact coefficient=Total fund of project /Financial fund×100%
Road average daily traffic volume	8	If daily traffic volume after project implementation ≤Design standard, it gets full mark, otherwise deducts marks at the discretion.
Driving time saved ratio	5	Driving time saved ratio=(Average journey time before project implementation-Average journey time after project implementation)/ Average journey time before project implementation×100%
Driving speed increasing proportion	5	Driving speed increasing proportion =Driving speed after project implementation/Driving speed before project implementation×100%
Public satisfying degree (Questionnaire)	6	This index is used to measure the degree of satisfaction of the public to project implementation. It needs government departments, masses surrounding roads and passengers, these three types of people to do a sampling survey of public satisfaction of the project implementation, then get the index score from the mean after collecting data.
Contribution to the regional economy	6	Contribution of main road to the regional economy is as follows: First, to promote economic development in the region in highway construction; Second, after the road was built and operated, road operating to create value; Third, towns along the road to exchange goods and information with the outside.

TABLE 9 : Performance evaluation indicator of Roads overhaul and medium-sized repair

Performance evaluation indicator	Score	Scoring criteria
		A, B, C, D, E-class score in order for the index score of 100%, 80%, 60%, 20%, 0%
Project achieving function	15	Evaluation according to the project whether to restore the original design function or to improve the traffic conditions.
Driving speed increasing proportion	5	Driving speed increasing proportion= Driving speed after project implementation/Driving speed before project implementation×100%
Public satisfaction (Questionnaire)	10	This index is used to measure the degree of satisfaction of the public to project implementation. It needs government departments, masses surrounding roads and passengers, these three types of people to do a sampling survey of public satisfaction of the project implementation, then get the index score from the mean after collecting data.
Contribution to the regional economy	10	Contribution of main road to the regional economy is as follows: First, to promote economic development in the region in highway construction; Second, after the road was built and operated, road operating to create value; Third, towns along the road to exchange goods and information with the outside.

TABLE 10 : Performance evaluation indicator of dangerous bridge reinforcement

Performance evaluation indicator	Score	Scoring criteria
		A, B, C, D, E-class score in order for the index score of 100%, 80%, 60%, 20%, 0%
Project achieving function	15	Evaluation according to the project whether to restore the original design function or to improve the traffic conditions.
Driving speed increasing proportion	5	Driving speed increasing proportion= Driving speed after project implementation/Driving speed before project implementation×100%
Public satisfaction (Questionnaire)	10	This index is used to measure the degree of satisfaction of the public to project implementation. It needs government departments, masses surrounding roads and passengers, these three types of people to do a sampling survey of public satisfaction of the project implementation, then get the index score from the mean after collecting data.
Contribution to the regional economy	10	Contribution of main road to the regional economy is as follows: First, to promote economic development in the region in highway construction; Second, after the road was built and operated, road operating to create value; Third, towns along the road to exchange goods and information with the outside.

TABLE 11 : Performance evaluation indicator of rural roads (county and township roads)

Performance evaluation indicator	Score	Scoring criteria A, B, C, D, E-class score in order for the index score of 100%, 80%, 60%, 20%, 0%
Project achieving function	10	Whether the project meets the needs of planning and construction of road network, road network reconstruction and regional economic development etc.
Township (town) proportion of accessing the third grade (or more) road	5	Township (town) proportion of accessing the third grade or more road=Township (town) number of accessing the third grade or more road/The total number of towns in the region
Cement or asphalt road pavement rate of rural roads	5	Cement or asphalt road pavement rate of rural roads=Cement or asphalt road pavement mileage/ The total mileage of rural roads in the region
Traffic capacity situation	5	After the project implementation, if the average daily traffic volume is less than the design standards, the evaluation result is full mark, otherwise deducts marks at the discretion.
Public satisfaction (Questionnaire)	5	This index is used to measure the degree of satisfaction of the public to project implementation. It needs government departments, masses surrounding roads and passengers, these three types of people to do a sampling survey of public satisfaction of the project implementation, then get the index score from the mean after collecting data.
Contribution to the regional economy	10	Contribution of road to the regional economy is as follows: First, to promote economic development in the region in highway construction; Second, after the road was built and operated, road operating to create value; Third, towns along the road to exchange goods and information with the outside.

TABLE 12 : Performance evaluation indicator of rural roads (village Road)

Performance evaluation indicator	Score	Scoring criteria A, B, C, D, E-class score in order for the index score of 100%, 80%, 60%, 20%, 0%
Project achieving function	10	Whether the project meets the needs of planning and construction of road network, road network reconstruction and regional economic development etc.
Township (town) proportion of accessing the third grade (or more) road	5	Township (town) proportion of accessing the third grade or more road=Township (town) number of accessing the third grade or more road/The total number of towns in the region
Cement or asphalt road pavement rate of rural roads	5	Cement or asphalt road pavement rate of rural roads=Cement or asphalt road pavement mileage/ The total mileage of rural roads in the region
Traffic capacity situation	5	After the project implementation, if the average daily traffic volume is less than the design standards, the evaluation result is full mark, otherwise deducts marks at the discretion.
Public satisfaction (Questionnaire)	5	This index is used to measure the degree of satisfaction of the public to project implementation. It needs government departments, masses surrounding roads and passengers, these three types of people to do a sampling survey of public satisfaction of the project implementation, then get the index score from the mean after collecting data.
Contribution to the regional economy	10	Contribution of road to the regional economy is as follows: First, to promote economic development in the region in highway construction; Second, after the road was built and operated, road operating to create value; Third, towns along the road to exchange goods and information with the outside.

TABLE 13 : Performance evaluation indicator of passenger and cargo terminals

Performance evaluation indicator	Score	Scoring criteria A, B, C, D, E-class score in order for the index score of 100%, 80%, 60%, 20%, 0%
Daily passenger volume/ Daily cargo equivalent throughput of automobile freight station	15	Daily passenger volume(person)= Number of passengers dispatched within a certain time after the project operation/Number of days Daily cargo equivalent throughput(ton)=Cargo equivalent throughput within a certain time after the project operation/Number of days
Rate of return on capital employed	10	Rate of return on capital employed=Net profits of passenger(freight) station after the project operation/Paid-up capital*100%
Public satisfaction (Questionnaire)	8	This index is used to measure the degree of satisfaction of the public to project implementation. It needs government departments, operators, customers and surrounding masses, these four types of people to do a sampling survey of public satisfaction of the project implementation, get the index score from the mean after collecting data.
Contribution to the regional economy	7	The indicator is used to measure the contribution of project implementation to the regional economy, it is showed as follows: First, the contribution of construction of passenger and cargo terminals to economic development in the region; Second, the contribution to local urban transport, regional tourism and employment.

TABLE 14 : Performance evaluation indicator of rural passenger stations

Performance evaluation indicator	Score	Scoring criteria
		A, B, C, D, E-class score in order for the index score of 100%, 80%, 60%, 20%, 0%
Township bus traffic rate	20	Township bus traffic rate=Township number of Bus passed/Total number of township×100%
Bus traffic rate of administrative villages	10	Bus traffic rate of administrative villages=Number of administrative villages passing bus/Total number of administrative villages×100%
Public satisfaction (Questionnaire)	10	This index is used to measure the degree of satisfaction of the public to construction of rural passenger stations. It needs government departments, rural operators and rural masses, these three types of people to do a sampling survey of public satisfaction of the project implementation, get the index score from the mean after collecting data.

TABLE 15 : Performance evaluation indicator of network toll collection of toll highway

Performance evaluation indicator	Score	Scoring criteria
		A, B, C, D, E-class score in order for the index score of 100%, 80%, 60%, 20%, 0%
Pre-splitting funds transfer speed of area settlement center	15	No exceptional circumstances, around 90% of toll income of area member are generally received to account the next day all the year round.
Precise split aging of area settlement center	15	No special circumstances, exact split time of area toll income averagely delay within 10 days all the year round.
Public satisfaction (Questionnaire)	10	The indicator is used to measure the level of user satisfaction. Rate of user satisfaction=The number of more than great satisfaction/Total number of survey questionnaires

TABLE 16 : Performance evaluation indicator of toll roads electromechanical equipment

Performance evaluation indicator	Score	Scoring criteria
		A, B, C, D, E-class score in order for the index score of 100%, 80%, 60%, 20%, 0%
Electronic toll collection lanes growth rate	10	The indicator is used to measure the adding ETC lanes completion after the project implementation. Electronic toll collection lanes growth rate=Number of new ETC lanes this year/Number of ETC lanes last year×100%
Whole monitoring coverage rate	10	The indicator is used to measure the coverage extent of the whole monitoring after the project acceptance and operation. The whole monitoring coverage rate= The whole monitoring coverage mileage/The total length of the road×100%
Information dissemination board density	10	The indicator assesses the induction performance of information dissemination.
Charging efficiency	10	Charging efficiency indicator refers to the service promoting degree of charging system after the transformation is complete, and is determined by the average time of vehicle accessing charging station.

TABLE 17 : Performance evaluation indicator of highway service

Performance evaluation indicator	Score	Scoring criteria
		A, B, C, D, E-class score in order for the index score of 100%, 80%, 60%, 20%, 0%
Target completion rate of highway law enforcement	10	The main business of road administration work is to maintain the road property and protect the road right, the working key is reflected by three rate, such as incidence rate, solving crime rate and closing case rate.
Overloading rate	10	Overloading rate is an important indicator of governing overload work. Overloading rate=Number of vehicles overloading/Total number of vehicles detected
Public satisfaction (Questionnaire)	20	After project implementation, 20 law enforcement comment cards are randomly selected from the detachments involved, card content is set by several options, "Good, Not so good, Not good", "Accurate, Basically accurate, Inaccurate", "Fair, Not so fair, Unfair", "Appropriate, Not so appropriate, Inappropriate".

TABLE 18 : Performance evaluation indicator of toll roads capital

Performance evaluation indicator	Score	Scoring criteria
		A, B, C, D, E-class score in order for the index score of 100%, 80%, 60%, 20%, 0%
Special fund impact coefficient	20	Special fund impact coefficient=Total fund of project /Financial fund×100%
Capital in-place rate	20	The indicator is used to measure the comparison between highway construction capital and accumulated fund in place of the project. Capital in place rate=Highway construction capital/accumulated funds in place of the project

TABLE 19 : Performance evaluation indicator of funds of repayment for loans

Performance evaluation indicator	Score	Scoring criteria
		A, B, C, D, E-class score in order for the index score of 100%, 80%, 60%, 20%, 0%
Probability of default	20	Due for repayment, the loan default rate is zero
Credit rating	20	Maintaining a good credit record, and maintaining good credit reputation.

TABLE 20 : Reference index

1.Completion of fixed asset investment	
(1)Completed investment rate of road construction	The number of completed investment of road construction/The number of planned investment of road construction×100%
① Completed investment rate of highway	The number of completed investment of highway/The number of planned investment of highway×100%
② Completed investment rate of common main line	The number of completed investment of common main line/The number of planned investment of common main line×100%
③ Completed investment rate of rural road	The number of completed investment of rural road/The number of planned investment of rural road×100%
(2)Completed investment rate of harbor construction	The number of completed investment of harbor construction/The number of planned investment of harbor construction×100%
(3)Completed investment rate of local railway	The number of completed investment of local railway/The number of planned investment of local railway×100%
(4)Completed investment rate of civil airport construction	The number of completed investment of civil airport construction /The number of planned investment of civil airport construction×100%
(5)Completed investment rate of transportation terminal construction	The number of completed investment of transportation terminal construction /The number of planned investment of transportation terminal construction×100%
2. Density rate of road network (kilometer/hundred square kilometer)	Road length/Total regional area
(1)Density rate of highway network	Highway length/Total regional area
(2)Density rate of road network of common main line	Length of common main line /Total regional area
(3)Density rate of rural road network	Length of rural road/Total regional area
3. Road proportion of national and provincial main line or above second-class	Total mileage of common national and provincial main line or above second-class /Total mileage of common national and provincial main line
4. Overloading rate	Number of overloading vehicles/Total vehicles detected
5. Growth rate of passenger volume of commercial highway	(Highway passenger volume this year - Highway passenger volume last year)/ Highway passenger volume last year×100%
6. Growth rate of passenger turnover of commercial highway	(Highway passenger turnover this year - Highway passenger turnover last year)/ Highway passenger turnover last year×100%
7. Growth rate of freight volume of commercial highway	(Highway freight volume this year - Highway passenger volume last year)/ Highway freight volume last year×100%
8. Growth rate of freight turnover of commercial highway	(Highway freight turnover this year - Highway passenger turnover last year)/ Highway freight turnover last year×100%

TABLE 21 : Comprehensive comment of project performance evaluation

Comprehensive evaluation grade	<p style="text-align: center;"> <input checked="" type="checkbox"/>Excellent <input type="checkbox"/>Good <input type="checkbox"/>Qualified <input type="checkbox"/>Bad </p>
Comprehensive comment of evaluation	Project management performance scores 99 points, evaluation result of project performance scores 86 pints, comprehensive score: 99 × 40% + 86 × 60% = 91 points. Assessed as excellent.

(2) Analysis of Performance evaluation for Ice mountain ridge tourist highway project

According to the above index evaluation system constructed, ice barrier tourism highway budget project comprehensive evaluation is shown in TABLE 21.

CONCLUSION

Compared with the budget project performance evaluation system of State Department of Transportation, the index system in the paper has the following characteristics:

(1) Designing the effect indicators in to 12 categories in index system, which makes different types of projects can be simultaneously compared with each other the in the index system, and to examine the use of financial resources. While in the performance evaluation index system of the State Ministry of Transportation, different index systems are designed to the different types of projects, so the index system is suitable to compare to similar projects.

(2) Reducing the number of social benefit indicators and reducing the social benefit index score. Performance Evaluation of State Department of Transportation, social benefits indicators accounted for 30%-40%, while the paper's social benefits indicators are divided into public satisfaction and impact on technological progress, accounting for 20%.

(3) The index system not only satisfies the need of Department of Finance, but also appropriate to practice for provincial transportation budget project for Provincial Department of Transportation to use.

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