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Research on Performance Evaluation of Hz Construction Enterprise Based on Balanced Scorecard

Haoran Wan
(Shangqiu University, China)

Abstract: In recent years, the domestic and foreign construction industry is facing huge market pressure, fierce industry competition and constantly adjusted industrial structure. In order to stand out in the industry, construction companies must formulate appropriate strategic goals for enterprises and seize the market quickly. China's construction industry is in a critical period of economic transformation. Paying attention to improving the performance evaluation of construction projects can effectively improve the efficiency of construction enterprises and enhance the core competitiveness of construction enterprises. In this context, this paper takes HZ Construction as a research on the construction industry. At present, HZ construction enterprises have been using the simple and traditional performance appraisal methods to adapt to the rapidly changing market environment, leading to the declining performance level of HZ construction enterprises in recent years, overall in a depressed state. Therefore, HZ company is urgently needed to bring forth new things in the performance appraisal, improve the current performance evaluation methods, and establish a systematic and comprehensive performance evaluation system suitable for the development of the company. As a performance management tool, the balanced scorecard just meets the requirements of HZ Construction Company in terms of performance evaluation. Based on the company's strategic goals of the company, it can help enterprises solve the imbalance between financial and non-financial indicators and look at the development needs of the enterprise from a long-term perspective. Construction enterprises should attach great importance to performance evaluation in the future development, and use performance evaluation to improve the organizational and management ability, so as to improve the enterprise efficiency. Based on this perspective, it is practical to explore the application of balanced scorecard in performance evaluation of HZ Construction.

Key words: construction company; performance indicators; the balanced scorecard
JEL codes: R3, R31, R38

1. Introduction

As an important support in the development of the national economy, the construction industry has been occupying a dominant position in the market. In the past, most construction enterprises used extensive management, which was not detailed enough in cost and efficiency management, and was superficial (Li Liqun, 2020). Therefore, in the face of the current economic pressure, such a way has been unable to promote corporate

Haoran Wan, Undergraduate, Shangqiu University; research areas: research on performance evaluation of construction enterprises. E-mail: 2289023864@qq.com.

progress. Construction enterprises should break through traditional thinking, attach attention to transformation and upgrading and innovative development, and highlight their own advantages, so as to ensure that they will not be eliminated by The Times. In today's information age, if the past performance management method that focuses on business results continues to be implemented, it will not keep pace with enterprise development (Wang Xiuping, Ji Yuyang, Tao Yuying, 2020). Therefore, enterprises should focus on strategic management and prediction management, which is to make the enterprise improve the business performance evaluation system. Kaplan and Norton (1992) first proposed the balanced scorecard system in 1992, so far, the card has been continuously improved, forming a system of strategic description, measurement and management, providing an effective performance management basis in the strategic management of different companies. HZ Construction Engineering Ltd is a well-known construction business that has had good operating performance over the past few years. However, in recent years, due to the changes in external environmental factors and the lack of internal management, the company's benefit has become low. So the company management has shifted its focus to performance management. Thus, the company should reconstruct the innovative performance evaluation system, and fundamentally reform the performance management, so as to promote the long-term development of the enterprise. In this context, combined with the characteristics of the construction industry, through the understanding of the relevant concepts and methods, this paper discusses how HZ construction company based on the mission, vision and strategy, detailed strategic objectives, layer decomposition, so as to establish four levels of balanced scorecard, choose appropriate indicators and set weights, then analyze the results of balanced scorecard application, and finally put forward the corresponding countermeasures and suggestions.

2. Study Purposes

A more detailed research and investigation on HZ Construction Company, And in view of the company's current performance evaluation methods and existing problems, Combining the company's requirements for a balanced scorecard and its conditions, Based on the mission, vision and company strategy, Break it down by layers, Make a strategic map, Find causation, In order to establish financial dimensions, customer dimensions, dimensions of internal process dimensions and learning and growth of four dimensions of balanced scorecard, Select the indicators suitable for the actual situation of the company, Customized an index system for HZ Construction Company's performance, Then the hierarchical analysis method is weighted reasonably and scientifically, Complete the design of HZ Construction Balanced Scorecard performance evaluation system, Finally, this evaluation system was applied to Company A, Combined with the application results and the expected results, Put forward the corresponding countermeasures and suggestions, To provide the borrowing and basis for the performance evaluation after the enterprise.

3. A Review of the 2. Literature

Domestic scholar Cui Tao (2017) summarized its content and advantages from the balanced scorecard theory. He analyzed the limitations of the current performance evaluation methods for construction enterprises, and believed that using a balanced scorecard can overcome these problems. Wang Yilin, Liu Yuanfang and Li Yimeng (2018) pointed out that the evaluation results of the balanced scorecard can scientifically and reasonably see the problems existing in financial indicators and non-financial indicators, but also can effectively investigate whether the construction unit has achieved good strategic cost management results. Zheng Yi (2018) Through the field

research of Z Company of China Construction Group and his working experience, he respectively applied the designed balanced scorecard performance evaluation system in the four construction projects of the company. And verified that it has practical operability and practical significance.

According to the evaluation theory of balanced scorecard, combined with the characteristics of project management of construction enterprises, and using the method of balanced scorecard, foreign scholars Nagarajan S (2007) have rebuilt the project management performance assessment index system, and strive to evaluate more comprehensively and accurately the project management performance of construction enterprises. Barnabe F. (2011) uses the balance scorecard and finance, through the causal relationship between customer internal management, learning and growth, and combined with the characteristics of construction enterprises, analyzed the main obstacles existing in BSC in the strategic management of construction enterprises, realized performance appraisal and performance improvement, and constructed the index system of construction enterprise implementation of BSC. Aiming at the performance indicators of the traditional four-dimensional balance scorecard in the construction industry, Jassem S., Zakaria Z. (2018) adopts the principal component analysis to evaluate the enterprise performance through comprehensive indicators, simplify and refine the enterprise performance management and performance evaluation work, and provides theoretical support for the academic research scorecard balance scorecard.

To sum up, compared with domestic performance evaluation, foreign countries have started early, and have tended to mature after continuous improvement and improvement. Although the advantages of foreign countries lie in the perfect design of a balanced scorecard performance evaluation system, the use of strategic maps to decompose strategic objectives, and how to choose appropriate indicators, there are relatively few performance evaluation systems specially designed for the construction industry.

The introduction of balanced street split card in China has lagged behind foreign countries, but it has a rapid momentum. The balanced scorecard system has experienced a perfect stage from single to comprehensive, and is now in a mature application period. Nowadays, all walks of life are keen to use this system for performance evaluation, and no lack of enterprises have achieved good results. The attributes of the enterprise industry are different, so there are also different differences when choosing indicators, and the application of performance evaluation system in each company is also very different. So far, there is no unified standard to choose indicators for the company, can only combine actual experience, consider the characteristics of the company first study the company’s business situation, and then select indicators, design system to improve performance evaluation.

4. Study Method

4.1 Dedication Research Method

By collecting a large number of related literature journals and books, the knowledge points and theories related to performance evaluation, balanced scorecard and application in the construction industry are summarized and sorted out. After mastering the theory, combined with the actual situation of the company, we designed a tailored balanced scorecard performance evaluation system for HZ Construction Company, and reasonably applied it to the practice of the company. This paper comprehensively collects relevant works on project risk management in recent years, comprehensively searched the domestic knowledge network and Founder database, and collected most of the papers on project risk management and cultural industry project management in recent years.

Advantages of the scheme:

(1) Literature law goes beyond the limitation of time and space, and the wide range of social conditions can be understood through the study of ancient, modern, Chinese and foreign literature, an advantage that is incomparable to other survey methods.

(2) The literature method is mainly written investigation, and more accurate and reliable information is available if the literature collected is true and reliable, avoiding various record errors in oral investigation.

(3) The literature method is an indirect, non-interventional investigation method that investigates only studies all kinds of literature, does not contact with the respondent, and does not interfere with the respondent's findings. This avoids a variety of reactive errors that may occur during the interaction between respondent and respondent.

(4) The literature method is a more convenient, free and safe research scheme. Literature research survey is less limited and can be studied whenever the necessary literature is found. Even if the relevant literature is wrong, it can be compensated by research, so its safety factor is high.

(5) Literature method saves time, money and efficiency. Literature research is a second study on the labor achievements of predecessors and related scholars, which is a shortcut to obtain relevant information. This does not require a large number of researchers and dedicated equipment that can use less manpower and time to obtain more information than other research methods, so this is an efficient research method.

4.2 Case Analysis Method

This paper uses HZ Construction Company, which is representative of the construction industry. According to the analysis of the company, the deficiencies were found, and the balanced scorecard in line with the company was designed from four levels, and then collected the indicators of the company in 2017 and replaced them into the performance evaluation system for application. After the application, the specific analysis of the problems and expected effect of the company, and put forward specific countermeasures for the problem.

Advantages of the scheme:

(1) The results of case studies can show more intuitive information in front of readers, rather than limited to academic research, which can give readers a sense of reality;

(2) The case study can provide more accessible information for other similar cases.

(3) case studies may find phenomena that are easily overlooked by traditional statistical methods through different differences.

(4) case studies are more applicable to some individual investigators without the need to form research groups.

(5) The case analysis can not only detail a phenomenon, but also analyze the reasons behind it. The in-depth analysis of the cases not only answers the questions of “how” and “why”, but also helps the researchers to grasp the context and nature of the event.

(6) The case study comes from practice and does not make theoretical simplification, which is a true response to objective facts. Taking case research as the starting point of scientific research can improve the effectiveness of empirical research.

4.3 Analysis

In the design of performance evaluation index, the hierarchical analysis method is adopted to set the method. The advantage of hierarchical analysis is that it scientifically and reasonably weights each dimension and detail of the BSSC and makes the importance clear at a glance (Guan Gang, 2017).

Advantages of the scheme:

(1) Systematic analysis method

Hierarchical analysis method regards the research objects as a system, making decisions according to the decomposition, comparative judgment and comprehensive thinking mode. It has become an important systematic analysis tool after mechanism analysis and statistical analysis. The idea of the system is not to cut off the effect of the factors on the results, the setting of the layers in the hierarchical analysis method will ultimately directly or indirectly affect the results, and quantify the extent of the effect of each layer, which is very clear (Hu Yuming, 2010). The method can be applied to unstructured features, as well as to the systematic evaluation of multi-objective, multi-criterion, multi-cycle, etc.

(2) Concise and Practical Decision-Making Methods

The method is not simply the pursuit of advanced data, nor a one-sided emphasis on behavior, logic and reasoning, but an organic combination of qualitative and quantitative methods, let some complex system decomposition, into people's mathematical thinking process, more convenient for people to accept. And can also transform all goals, principles and some difficult to quantify processes, decision-making problems into single goal problems. Pairwise comparison determines the relationship between the two elements of the same level and the previous level, and finally performs a more simple operation. Its relevant calculation is simple and the results are clear, which is convenient for decision makers to understand and grasp.

(3) Less Quantitative Data Information Is Required

Hierarchical analysis (AHP) is mainly based on the evaluator's understanding of the nature and elements of evaluation problems, which pays more attention to qualitative analysis and judgment than the general quantitative methods. Because hierarchical analysis is a way to simulate people's way of thinking in the process of decision-making, so the hierarchical analysis to judge the relative importance of each elements of the steps to the brain, only retain the brain's impression of the elements, reduced to simple weight calculation, this idea can solve many traditional optimization technology cannot solve the practical problem.

4.4 Validity Coefficient Method

The application of a balanced scorecard involves the scoring of financial indicators, which are scored by the efficacy coefficient method of financial indicators. The evaluation standards shall refer to the Performance Evaluation Standards of Enterprises of the State Council. The effect of the efficacy coefficient method is to use the efficacy function to turn the financial indicators into the actual score, and add the scores of each index to get the financial score, which can analyze the company performance problems from the overall and individual indicators.

Advantages of the scheme:

(1) According to the multi-objective planning principle, the efficiency coefficient method can be adopted according to the complexity of the evaluation object. The evaluation objects are calculated and scored from different angles to meet the requirements of multi-index comprehensive evaluation of the enterprise performance evaluation system.

(2) In order to reduce the single evaluation standard caused by the deviation of the efficacy coefficient method, it established the evaluation index under the same conditions. According to the standard range of the actual measurement value, the score calculated by positioning not only conforms to the enterprise performance evaluation, but also meets the fitness evaluation standard. It can meet the evaluation purpose of relatively different indicators of Chinese enterprises, objectively reflect the enterprise performance, and accurately evaluate the enterprise performance.

(3) The efficiency function model can be used for both manual scoring and computer processing, which is conducive to the generalized application of the evaluation system.

5. Results of the Study

5.1 Calculation and Analysis of the Index Weight Results of HZ Construction Company

(1) Rebuild the Company Hierarchy Model

According to the strategic objectives of HZ Construction Company, and after combining the actual situation of the company, 12 evaluation indicators were selected. In terms of finance, the net output value, return on total assets, asset-liability ratio, the market share, customer satisfaction and market acceptance rate, the construction period realization rate, project acceptance rate and the field fund payment rate, the assessment passing rate and regular wage growth rate.

(2) Establish a Comparative Judgment Matrix

When scoring the importance of HZ Construction Company evaluation indicators, choose the expert scoring method. Through collecting calculation and sorting, the relevant data, take out the average, calculate the score of each dimension, each index. The contents of the four-dimensional judgment matrices are shown in Table 1.

Table 1 Four-dimensional Judgment Matrices

HZ Company performance evaluation	Customer dimension	Financial dimension	Learning and growth dimensions	Internal flow dimension
Financial dimension	2	1	4	1.5
Customer dimension	1	0.5	2	0.5
Internal flow dimension	2	0.667	3	1
Learning and growth dimensions	0.5	0.25	1	0.333

(3) Calculate the Maximum Characteristic Root

Each row of elements is multiplied and the product is recorded as Mi. The product of the elements in each line is calculated as follows:

M1 = 12, M2 = 0.5, M3 = 4.0002, M4 = 0.0417;

The root of multiplication is obtained and the calculation is as follows:

$\overline{W_i} = n\sqrt{M_i}$ i =1, 2 … …, n (of which n = 4);

$\overline{W_1}$ =1.8612, = 0.8409, = 1.4142, and = 0.4519, respectively; $\overline{W_2}$ $\overline{W_3}$ $\overline{W_4}$

Next, the data to calculate the weights, available:

W1 = 1.8612/(1.8612+0.8409+1.4142+0.4519) = 0.4074;

W2 = 0.8409/(1.8612+0.8409+1.4142+0.4519) = 0.1841;

W3 = 1.4142/(1.8612+0.8409+1.4142+0.4519) = 0.3096;

W4 = 0.4519/(1.8612+0.8409+1.4142+0.4519) = 0.0989;

Maximum feature root λ max: λ max = (Σ (AW/W)) 4.0163/n = was calculated

(4) Conduct consistency test less than 0.1, meet the requirements and obtain consistency index C.R.;

C.I. =λ max-n/n-1 = (4.0163-4)/3 = 0.0054

C.R. = C.I./R.I. = 0.0054/0.90=0.0061 < 0.1 (R. I. See the values in Tables 4-7)

(5) Get the Weights for Each Dimension

Finally, the weight allocation of HZ Construction balanced scorecard is obtained as shown in Table 2.

Table 2 Weight Tables of All Dimensions of the HZ Construction Corporation Balanced Scorecard

HZ Company performance evaluation	Internal flow dimension	Customer dimension	Financial dimension	Learning and growth dimensions	weight (Wi)
Financial dimension	1.5	2	1	4	0.4074
Customer dimension	0.5	1	0.5	2	0.1841
Internal flow dimension	1	2	0.667	3	0.3096
Learning and growth dimensions	0.333	0.5	0.25	1	0.0989

According to the above statistical results, the weight of the four dimensions is from high to low: financial level accounting for 40.74%, internal process level weight is 30.96%, customer level weight is 18.41%, and learning growth level is 9.89%. These data shows that HZ Construction is more financial and always puts benefits first. Only the financial security, can provide a guarantee for other aspects. Second, the internal process level. As mentioned above, the characteristics of the internal process of the construction company are introduced, and the company attaches more importance to this aspect, which reflects both efficiency and efficiency. If the company can have an efficient internal business process, it is bound to reduce costs and improve efficiency. Third, the customer process. After the internal structure adjustment of the company, to put customers in a key position. Customers can create word of mouth for the company and win the market. The last dimension is the learning and growth dimension, which occupies a low proportion. However, it also reflects that HZ Construction Company's hopes to start from this respect, make up for the past shortcomings, and strive to improve its capabilities in all aspects and achieve balanced development in the future development.

5.2 Calculation and Analysis of the Outcome Weight of Secondary Indicators

Determine the score value of each index. After determining the first weights of the four dimensions of the balanced scorecard, the second index weights within the each dimension are combined with the same method. Since the calculation method is completely identical, the secondary weight calculation procedure is shown in Table 3:

Table 3 The Secondary Weight of Each Index in Its Financial Dimension Is

Financial dimension	Net profit of output value	Return on net assets	Cash current debt to debt ratio
Output profit margin	1	2	4
Total assets yield	0.5	1	0.5
Asset liability rate	0.25	2	1

M1 = 0.5; M2 = 0.25; M3 = 8

$\overline{W_1}$ = 1.6817

$\overline{W_2}$ = 0.7071

$\overline{W_3}$ = 0.8408

W1 = 1.6817/(0.8408+0.7071+1.6817) = 0.5207;

W2 = 0.7071/(0.8408+0.7071+1.6817) = 0.2189;

W3 = 0.8408/(0.8408+0.7071+1.6817) = 0.2603;

Table 4 The Secondary Weights of Each Index in The Customer Dimension Are

Customer dimension	Market share	Market bid rate	Customer satisfaction
Market share	1	2	3
Market winning rate	0.5	1	2
Customer satisfaction	0.333	0.5	1

M1 = 6; M2 = 1; M3 = 0.1665

$\overline{W_1}$ = 1.5650

$\overline{W_2}$ = 1

$\overline{W_3}$ = 0.6387

W1 = 1.5650/(1.5650+1+0.6387) = 0.4884；

W2 = 1/(1.5650+1+0.6387) = 0.3121；

W3 = 0.6387/(1.5650+1+0.6387) = 0.1993；

Table 5 The Secondary Weights of Its Internal Process Dimension Are

Internal flow dimension	Qualification rate of the project	Construction period realization rate	On-site fund payment rate
Construction project settlement rate	1	2	4
Construction period realization rate	0.5	1	0.5
On-site fund payment rate	0.25	2	1

M1 = 0.5; M2 = 0.25; M3 = 8

$\overline{W_1}$ = 1.6817

$\overline{W_2}$ = 0.7071

$\overline{W_3}$ = 0.8408

W1 = 1.6817/(0.8408+0.7071+1.6817) = 0.5207;

W2 = 0.7071/(0.8408+0.7071+1.6817) = 0.2189;

W3 = 0.8408/(0.8408+0.7071+1.6817) = 0.2603;

Table 6 The Secondary Weights of the Learning and Growth Dimensions Are

Learning and growth dimensions	Talent introduction rate	Regular assessment pass rate	High-skilled employee ratio
Staff education and training rate	1	3	1.5
Regular assessment pass rate	0.333	1	0.5
Employee wage growth rate	0.666	2	1

M1 = 4.5; M2 = 0.1665; M3 = 1.332

$\overline{W_1}$ = 1.4564

$\overline{W_2}$ = 0.6387

$\overline{W_3}$ = 1.0743

W1 = 1.4564/(1.4564+0.6387+1.0743) = 0.4595;

W2 = 0.6387/(1.4564+0.6387+1.0743) = 0.2015;

W3 = 1.0743/(1.4564+0.6387+1.0743) = 0.3389;

After obtaining the quadratic weights, multiplying the two layers of weights yields the final weight value of each indicator. After reaching the weight value. After obtaining the weight value, and then rounded as the corresponding score value of each index to facilitate the evaluation and calculation, the calculation formula is M = (a*b) * 100;

Thus, the calculation process is as follows:

Its financial dimension score is:

B11 = 40.74%*52.07%*100 = 21;

B12 = 40.74%*21.89%*100 = 9;

B12 = 40.74%*26.03%*100 =10;

Its customer dimension score value is:

B21 = 18.41%*48.84%*100 = 9;

B22 = 18.41%*31.21%*100 = 5;

B23 = 18.41%*19.93%*100 = 3;

Its internal process dimension score is:

B31 = 30.96%*52.07%*100 = 16;

B32 = 30.96%*21.89%*100 = 6;

B33 = 30.96%*26.03%*100 = 8;

Its learning and growth dimension score is as follows:

B41 = 9.89%*45.95%*100 = 4;

B42 = 9.89%*20.15%*100 = 2;

B43 = 9.89%*33.89%*100 = 3;

Its final specific performance rating scores are shown in Table 7 below:

Table 7 Performance Ratings Points Table

Target layer	Level I performance indicators	Level 1 Weight (a)	Secondary performance indicators	Secondary weights (b)	Final Absolute Weight (a*b)	Points value (a*b) * 100
HZ construction enterprise performance evaluation	B1 financial dimension	40.74%	Output profit margin	52.07%	0.212	21
			Total assets yield	21.89%	0.089	9
			Asset liability rate	26.03%	0.106	10
	B2 customer dimension	18.41%	Market share	48.84%	0.089	9
			Market winning rate	31.21%	0.057	5
			Customer satisfaction	19.93%	0.036	3
	B3 internal process dimensions	30.96%	Construction project settlement rate	52.07%	0.161	16
			Construction period realization rate	21.89%	0.067	6
			On-site fund payment rate	26.03%	0.080	8
	B4 learning and growth dimension	9.89%	Staff education and training rate	45.95%	0.045	4
			Regular assessment pass rate	20.15%	0.019	2
			Employee wage growth rate	33.89%	0.033	3

After obtaining the specific assessment score, due to the different measurement methods of relevant indicators, the evaluation of different indicators before the performance evaluation of HZ construction enterprises should ensure the unity of different indicators, which is conducive to the timeliness of performance evaluation, and the evaluation of each indicators should be carried out under the same standard. HZ construction enterprises adopt undimensionless treatment of the index, first calculate the actual completion value of the index, and then compare with the target value as the reference value, so as to calculate whether the specific index completion rate of each dimension meets the expected requirements.

Results of performance evaluation under the new system. This paper selects the data of HZ construction enterprises in 2019 for performance evaluation. Its financial indicators are mainly derived from the financial statements of HZ construction enterprises in 2019 and the relevant approved budget statements. The other indicators are mainly obtained through the corresponding statistical departments of HZ construction enterprises. The specific performance indicators are shown in Table 8.

Table 8 Performance Index Score Table

Indicator dimension	Indicator name	Differences (A)	Target value (Q)	Complete the value (W)	Single metric values I = (W/Q)	score K= (I*A)	Dimension score (M)
Financial dimension	Output profit margin	21	6%	4.75%	0.79	15.01	32.86
	Total assets yield	9	20%	15%	0.75	6.75	
	Asset liability rate	10	45%	50%	1.11	11.1	
Customer dimension	Market share	9	20%	9%	0.45	4.05	11.65
	Market winning rate	5	20%	10%	0.5	2.5	
	Customer satisfaction	3	95%	81%	0.85	5.1	
Internal flow dimension	Construction project settlement rate	16	100%	94%	0.94	6.58	24.94
	Construction period realization rate	6	100%	73%	0.76	11.4	
	On-site fund payment rate	8	100%	87%	0.87	6.96	
Learning and growth dimensions	Staff education and training rate	4	30%	13%	0.43	1.29	6.35
	Regular assessment pass rate	2	100%	95%	0.95	1.9	
	Employee wage growth rate	3	24%	19%	0.79	3.16	

According to the performance index score table, the calculated score of each index adds total sum, and the total performance score of HZ construction enterprise balanced scorecard is 75.8. Among them, financial, internal process and learning and growth dimensions were scored at 32.86, 11.65, 24.95 and 6.35 respectively.

Comparing the evaluation results with the performance evaluation method of HZ construction enterprises can determine the overall performance level of HZ construction enterprises. The results of the assessment to determine through the assessment scores are divided into four grades, as follows:

(1) 85 points (including 85) above is superior;

(2) Good score between 70 and 85 points (including 70);

(3) points 60-70 (including 60) are medium;

(4) 60 The following are poor.

Therefore, the overall performance assessment results of the balanced scorecard of HZ construction enterprises in the 2019 assessment period are good.

6. Summary

6.1 Strive for the Recognition and Support of the Senior Managers of the Company

HZ construction enterprises implement a balanced scorecard-based performance evaluation system, first be recognized and supported by the company's senior management. Whether senior leaders can agree directly determines whether the new system can take the first step. First, those responsible for performance evaluation are required to communicate with senior management the steps and advantages of the balanced scorecard. Let senior managers have a specific understanding of it and see how enforced it can be. Middle and senior managers should strive to design and innovate evaluation indicators. The task of grassroots managers is to formulate the work objectives of the department and adapt to the company's strategy at any time. Employees at all levels should communicate at any time, maintain an objective attitude towards the balanced scorecard, express their opinions, and finally determine the final strategic implementation plan through discussion. In this way, the BSC will gradually advance from the bottom up, enabling all employees of HZ construction companies to work together around their strategic goals to reduce the barriers to implementing the BSC.

6.2 Continue to Adjust and Improve the Balanced Scorecard Index System

After HZ construction enterprises have designed the performance evaluation system, the indicators selected by various dimensions are not unchanged, but dynamic indicators. After the design of the index system of the balanced scorecard is completed, it needs to be constantly adjusted and improved. Different jobs should be treated differently. The assessment of departments and employees should consider the increase or decrease of the indicators according to the business situation, eliminate the indicators not suitable for the current business, and increase the indicators that meet the requirements. The company shall establish a system of performance communication and feedback system, and track and improve the indicators through communication and feedback. Changes in the external markets will have more impact on the company. HZ construction enterprises should constantly improve the index system to adapt to the changing environment. When adjusting the performance evaluation index system, the management should adjust the index system to the most suitable state of the company in four dimensions: the index selection, the weight setting and the strategy, so as to effectively improve the performance level of the company.

6.3 The Evaluation Results of the Balanced Scorecard Should Be Combined With the Incentive System

The last link of the performance evaluation is the application of the evaluation results. In order to realize the role of the performance management, the performance appraisal results must be reasonably applied to the personnel management. The traditional performance appraisal method only links the assessment results to the related wage distribution. The new balanced scorecard performance assessment system requires to break through the past limitations, combine the performance assessment results with the incentive reward and punishment system, and extend its role to the post adjustment, honor award and promotion and other aspects, which can mobilize the enthusiasm of employees. The evaluation results of the balanced scorecard should be closely combined with the company's incentive mechanism to give full play to its advantages. In particular, for key departments and key individuals, special rewards and punishments should be given according to the performance appraisal results. In this way, employees can actively accept the performance appraisal, strive to meet the job performance requirements, and finally contribute to the realization of the strategic goals.

6.4 Build a Construction Enterprise Culture With the Spirit of Innovation and Change

Corporate culture is the internal driving force to promote the sustainable development of enterprises and achieve strategic goals. HZ Construction Enterprise is a traditional construction enterprise with a relatively conservative corporate culture, lagging behind modern management. The smooth implementation of the Balanced Scorecard must involve organization and process changes. Therefore, it is necessary for HZ construction enterprises to break the traditional concept and build a pioneering enterprise culture with the spirit of innovation and change. With the deepening of the construction of innovative enterprise culture, the idea of balanced scorecard is naturally injected into the thoughts of employees, so that employees can quickly accept the new performance appraisal system. This is an invisible mechanism of influence. At the same time, the balanced scorecard performance evaluation system can also respond to corporate culture, inject a steady stream of power into HZ enterprises, and transform its corporate culture to a positive and healthy direction.

7. Discussion

This paper studies the performance evaluation index of HZ construction enterprises, which are very important for construction enterprises and construction industry and are the core elements of construction enterprises. Therefore, to improve the performance evaluation level of construction enterprises, we should start from the construction project as its constituent unit. The performance evaluation of construction projects can affect the overall performance of enterprises from bottom to up and promote the development of enterprises. In addition, in view of the complexity, long cycle and one-time characteristics of construction projects, the balanced scorecard theory is more suitable for the performance evaluation of construction projects, because each detailed performance evaluation index based on the balanced scorecard can better reflect the overall strategic objectives of the enterprise. Using this set of performance evaluation indicators in the construction project, we can integrate the enterprise strategic objectives into the construction project, and organically unify the enterprise level and the project level. This can solve the problem of previous performance evaluation of construction project and enterprise objectives, and maximize the use value of performance evaluation results. Finally, this paper combines the characteristics of HZ construction enterprises, designs the evaluation indicators of HZ construction enterprises from four aspects of financial, customer, internal process and learning growth, and forms a complete performance evaluation system. Then through the index calculation, get the application effect, find out the indicators with serious problems at all levels, to avoid such problems in the future work. Combine the company’s performance evaluation system with strategic objectives to improve the sustainable development ability of construction enterprises. At the same time, in order to implement the balanced score card in HZ construction enterprises, we need to get the support and recognition of senior management personnel, constantly adjust and improve the index system, effectively use the assessment results after the completion of the assessment, and truly mobilize the enthusiasm of employees. At the same time, it should also pay attention to the construction of construction enterprise culture, break the inherent thinking, have the courage to innovate and reform, to ensure the implementation of the balanced scorecard.

References

Li Liqun (2020). “Application of balanced scorecard in enterprise budget management —Takes macro architecture as an example”, *Fortune Life*, No. 18, pp. 32-35.

Cui Tao (2017). "Application of balanced scorecard in the new era of company strategic management and performance evaluation", *Finance and Accounting*, No. 7, pp. 51-54.

Wang Xiuping, Ji Yuyang and Tao Yuyin (2020). "Research on the performance evaluation system of rail transit PPP project based on the balanced scorecard", *Construction Economy*, No. 2, pp. 44-49.

Guan Complementary Gang (2017). "Thinking on the performance management system based on the enterprise development strategy", *Global Market Information Guide*, No. 43, pp. 58-58.

Hu Yuming (2010). "Balanced Scorecard: A strategic performance evaluation philosophy", *Friends of Accounting* (Next Ten), No. 4, pp. 4-11.

Kuang Yuning and Wang Xinli (2018). "Application of balanced scorecard in performance management of high-tech enterprises", *Modern Camp Sales (Lower ten)*, No. 5, p. 169.

Liu Yun and Chen Guofu (2007). "Enterprise performance evaluation study combining BSC and EVA — Based on case analysis of GP Enterprise Group", *Accounting Research*, No. 9, pp. 50-59.

Wu Jie and Zhou Wei (2015). "Financial shared service center performance evaluation system design — Based on balanced scorecard and subanalysis method", *Accounting Monthly*, No. 5, pp. 10-15.

Wang Yilin, Liu Yuanfang, and Li Yimeng (2018). "Application of PESTEL analysis model and balanced scorecard in enterprise strategy management of a group", *Finance and Accounting*, No. 16, pp. 37-39.

Yu Rui (2011). "Analysis of the application of balance scorecard in Chinese enterprises", *Modern Business*, No. 21, pp. 130-131.

Zheng Yi (2018). "Apply an improved balanced scorecard to evaluate the performance of building enterprises", *Statistics and Decision Making*, No. 23, pp. 176-177.

Nagarajan S. (2007). "Customer relationship-based strategic planning using balanced scorecard — A case study", *International Journal of Enterprise Network Management*, No. 23, pp. 24-34

Barnabe F. (2011). "A system dynamics-based balanced scorecard", *Work Study*, Vol. 60, No. 5-6, pp. 446-473.

Kang J. S., Chunfang C. and Huangthanapan K. et al. (2015). "Corporate social responsibility and sustainability balanced scorecard: The case study of family-owned hotels", *International Journal of Hospitality Management*, Vol. 48, pp. 124-134.

Nasrulloh (2018). "The implementation of balanced scorecard toward work performance through competency and work discipline", *International Journal of Scientific and Research Publications*, pp. 344-350.

Jassem S. and Zakaria Z. (2018). "Sustainability balanced scorecard architecture and environmental performance outcomes: A systematic review", *International Journal of Productivity and Performance Management*, No. 9, pp. 52-59.