

Economic Management Risk Analysis of Construction Enterprise Project Based on Low Carbon Economy

Wenxiu Zhu

Xi'an Siyuan University, Xi'an, Shaanxi, 710038, China

Email: 125846586@qq.com

Keywords: Low Carbon Economy, Construction, Engineering Project Economy, Risk

Abstract: Low Carbon Economy is a Social and Economic Model Characterized by Low Energy Consumption, Low Emissions and Low Pollution. It Provides a Win-Win Choice for Solving the Climate Warming Crisis and the Sustainable Economic Growth. Its Purpose is to Better Cope with Global Climate Change and At the Same Time to Promote Green Consumption and Finally to Better Achieve Economic Development and Environmental Protection on This Basis. the Risk of Economic Management of Engineering Project Runs through the Whole Process of Project Implementation. It is an Urgent Need for Enterprise Development to Prevent the Occurrence of Risk. to Improve the Construction and Use Effect of Engineering Projects, Generally, the Risk Prevention Strategies That Can Be Adopted Mainly Include Comprehensive Consideration of Various Economic Risks That May Occur in the Construction Process. Construction Enterprises, How to Grasp the Scientific Management in the Whole Process of Construction Projects, to Maximize the Cost Reduction, is Very Critical. Taking Economic Benefits as the Project Objective, for This Reason, If Enterprises Want to Achieve Sustainable Development, They Need to Establish a Low-Carbon Economic Awareness and Conduct a Comprehensive Analysis of the Economic Risks of the Project.

1. Introduction

For a Long Time, the Construction Units in Our Country Focus on the Maximization of Interests Before, during and after Construction. the Attention of the Construction Units to the Economic Benefits of the Project is Far Greater Than the Attention to the Construction Scheme and Construction Safety [1]. the Main Feature of Low-Carbon Economy is to Continuously Reduce Greenhouse Gas Emissions, and Finally Build a New Economic Development Model with Low Energy Consumption and Low Pollution [2]. the Development of Low-Carbon Economy is Not Only an Embodiment of Enterprises' Active Social Responsibility, But Also a Key Factor to Determine the Competitiveness of Enterprises and the Success of Their Future Development. during the Design of Construction Scheme, Whether the Construction Scheme Can Reflect the Environmental Protection and Energy Saving Characteristics of Engineering Construction Will Directly Affect the Development of Low-Carbon Economy [3]. Due to the Spontaneous Adjustment of the Market, There Are More Construction Enterprises and Fewer Buyers. in Order Not to Let the Employees and Equipment of the Enterprise Idle, the Enterprise Can Only Adopt the Method of Price Reduction to Achieve the Purpose of Winning the Bid, So as Not to Suffer Greater Losses [4]. It Seriously Restricts and Perplexes the Development of Enterprises and Industries. How to Scientifically Predict Risks, Avoid, Control and Transfer Risks, Ensure Sustainable Development of Enterprises, and Control and Manage Costs Should Also Be Well Controlled and Managed in Many Aspects Such as Project Bidding, Budget, Contract Formulation and Signing, Etc., So as to Maximize Economic Benefits and Ensure the Effective Development of Construction Enterprise Projects [5].

In the Stage of Low-Carbon Economic Transformation and in the Stage of Low-Carbon Economic Transformation, the Main Means of Participating in the Project Construction Are Still the Bidding and Quotation of the Project [6]. However, under the Current Market Economy System, the

Competitiveness of the Engineering Industry is Relatively Large. the Essence of Low-Carbon Economy is to Improve the Efficiency of Energy Use, Change the Energy Structure and Reduce the Emission of Pollution. Therefore, Low Carbon Economy, a New Economic Development Model That Can Reduce Pollution Emissions and Increase Green Area, Can Find a Good Way for the Long-Term Development of China's Economy in the Future [7]. If the Enterprise Does Not Make a Good Development Plan, the Development of the Enterprise Will Be in Danger. Therefore, the Development of Low-Carbon Economy Needs to Be Considered Carefully, and We Must Not Follow Blindly. in Order to Improve the Ability and Level of Early Warning and Risk Prevention of Chinese Enterprises, and Ultimately Help Chinese Enterprises to Achieve Healthy and Stable Sustainable Development. in Addition, It Also Promotes the Enrichment, Development and Improvement of Low-Carbon Economy, Financial Risk Early Warning and Other Related Theories [8]. Using Engineering Economics to Study the Feasibility of Engineering Projects, Investment Evaluation, Technical Policy Formulation, Comparison and Selection of Construction Schemes, Prediction and Decision-Making of Engineering Economic Activities. the Government Itself Also Has the Behavior of Price Reduction. It Approaches the Project Level by Level and Operates the Calculation and Pricing of the Project, Which Hinders the Sustainable Development of Enterprises [9]. for the Selection of the Scheme and the Determination of the Greening Index, Comprehensive and Systematic Written and Digital Explanations Should Be Made, and Full Advance Prediction Should Be Made for the Uncertain Matters in the Future, So as to Make Full Preparations for the Economic and Effective Management of Future Projects. Therefore, This Paper Analyzes the Economic Management Risks of Construction Enterprises' Engineering Projects from the Perspective of Low-Carbon Economy [10].

2. Typical Engineering Economic Risks in Low Carbon Economy

2.1 Development of Low Carbon Economy

The purpose of low-carbon economy is to change a series of meteorological disasters caused by environmental pollution in the world. At present, the concept of low-carbon economy in China has not been fully popularized, which leads to the lack of awareness of the risk of engineering economy under the low-carbon economy among the builders of engineering projects, so that the construction of engineering projects can not be completely in accordance with the concept of low-carbon economy. The basic principles of risk prevention in economic management mainly include the establishment of prevention mechanism in advance, the appropriate transfer of risk and the improvement of rules and regulations of risk prevention process. In order to develop low-carbon economy and low-carbon economy, China has implemented a corresponding legal system of environmental protection. In this system, the environmental impact assessment system and the “three simultaneities” system give priority to prevention and prevention. Systematic and efficient management of the crisis faced by an organization or individual through plans and control measures can minimize the threat and damage to the organization or individual caused by the crisis.

2.2 Strategic Management in Low Carbon Economy

The core of “low carbon economy” is energy technology innovation and system innovation, and the goal is to slow down climate change and promote sustainable development of human beings. In addition, the risks in planning and design also include the problems such as the amount of drawings designed when bidding is inconsistent with the actual situation, which in fact causes the loss of economic and social benefits of the engineering construction enterprises. From the perspective of low-carbon economy, the financial risk early warning indicator level of enterprises is shown in Table 1, which is to achieve environmental protection and sustainable development of enterprises. Therefore, if enterprises want to respond to the new environmental tax, they must accelerate the development strategy transformation of enterprises and accelerate the development of low-carbon economy. Establish a low-carbon and environmentally responsible corporate image, create a good reputation for the enterprise in the society, and the reputation can make the production and

operation of the enterprise in a good cycle, and ensure the quality of the project under the premise of environmental protection. Therefore, in the construction scheme, the environmental quality measurement indicators should be clearly defined, and the construction process objectives should be from the economic benefits. Turn to green. Furthermore, the economic value and social value of enterprises are constantly improved. During the whole construction process, attention should also be paid to the issue of the cooperation between the participants and the distribution of economic benefits, so as to ensure the balance of the participants and give a correct understanding of the economic benefits of the project. The construction of the project requires the direct coordination and cooperation of all parties involved, ensuring the quality of the project and speeding up the progress of the project on the premise of protecting the environment. In the construction plan of the project, not only the concept of economic management should be reflected, but also the problem of efficient use of science and technology should be involved.

Table 1 Early Warning Index Level of Financial Risk of Enterprises from the Perspective of Low Carbon Economy

	Turnover rate	growth rate
Carbon profitability	0.51	0.68
Carbon solvency	1.62	2.31
Carbon operation capacity	0.62	0.85

To ensure the preciseness of the project contract, all participants of the project need to sign the contract in strict accordance with the relevant construction technical specifications, so as to avoid mutual shirking of responsibility in case of problems during the construction process. In the process of our project development, every link is pursuing the maximization of economic management benefit and the minimization of cost, which puts forward a requirement for quality, which cannot be too high or too low, and too low will inevitably cause the risk of poor quality. In the bidding stage of the project, there are many enterprises participating in the bidding, and some enterprises without corresponding construction capacity and construction qualification are easy to appear. The lack of construction technology and construction experience of the construction unit will also bring certain risks to the construction of the project. In order to ensure the fairness of competition, the tenderer should take into account the actual situation to choose and formulate standards, take into account the actual situation to choose and formulate standards, to achieve the improvement of construction quality, improve the credibility of the enterprise itself, and ensure the fairness of bidding competition. The cooperation between engineering and economic workers should be strengthened, and the two should be organically combined from the organizational structure to form a team with comprehensive functions. It is true that there is no better way to implement the low-carbon economic development plan. From a policy perspective, the state is encouraging enterprises to carry out low-carbon economic development and reform.

3. Management and Prevention Measures of Low Carbon Economy for Engineering Economic Risks

3.1 Develop a Comprehensive Project Construction Plan

Under the premise of environmental protection, the quality of the project shall be guaranteed. Therefore, the measurement index of environmental quality shall be clearly specified in the construction scheme, and the goal of the construction process shall be changed from economic benefit to green environmental protection. The development of low-carbon economy will improve the technical level of enterprise projects and the carbon emission of production. Therefore, enterprises implementing low-carbon economy will increase production costs in the short term. The risks in the construction plan are also reflected in a series of management methods, such as energy-saving and environmental protection materials selected in the project construction, pollution discharge and treatment methods of the project plan, which still need to be optimized. In the industrial chain where the enterprise's products are located, find out the raw materials needed for their own products, and recycle the wastes after using these raw materials so as to generate a good

cycle, which can greatly reduce the cost input of the enterprise. Relying on the power of science and technology to improve the competitiveness of enterprises, only in this way can enterprises not be invincible. The larger the scale of production of low-carbon products, the greater the contribution of enterprises to the social environment. At the same time, it will also help enterprises to shape a good social image and promote the development of enterprises. Establishing the internal market for material turnover and allocation, improving the internal market for mechanical equipment leasing, strengthening management and improving service quality can not only reduce dependence on the external market, but also reduce costs.

3.2 Establish a Sound Economic Management System for Engineering Projects

When the cost beyond the scope of cost control can not be estimated, we should adjust the cost control in time, so as to ensure that the cost use is always in the controllable range and avoid the cost waste as much as possible. Correctly recognize the economic benefits of the project, and can't selfishly damage the benefits of others in order to pursue their own benefits. The construction of the project requires the coordination and cooperation of all participants. To solve the problem of price and standard of environmental protection materials, enterprises should use information symmetry technology to make use of management conditions in contracts, so as to avoid the waste of construction cost. During the whole project, it is necessary to purchase construction materials and related equipment, at the same time, it is also necessary to meet the welfare and remuneration of workers in a timely manner, and it is also necessary to have financial guarantee to deal with unexpected events. Secondly, choose the most reasonable construction method, whether it is pure machine operation or manual operation, or man-machine integration to carry out at the same time, sharing the risk responsibility to each unit; Through education and training to enhance the risk awareness of each employee, in the most reasonable time to ensure the normal and effective progress of the project. Fully consider the project risks, and set up a technical and economic expert review team to fully demonstrate the application team, cost and quotation, so as to provide reliable basis for bidding decisions.

If enterprises want to achieve in the development of low-carbon economy, they need to have a strategic analysis and positioning, which is simply to understand. To carry out the economic management of engineering projects, we need to do a good job in the cost budget, and comprehensively and effectively analyze and control the economic elements involved in the construction of the project. For the cost of project implementation, the cost should be forecasted in the medium and long term according to the project objectives and plans. Once the cost problem occurs beyond the cost control scope, the cost control work needs to be adjusted in time. The development of the project requires a complete and detailed construction process plan, and strict and scientific regulations on what kind of project schedule to be completed within what time. In our construction process, first of all, we need to ensure that the bid inviter's funds are in place in time to meet the normal progress of the project. Around the key links of project bidding, design change, credit evaluation and fund allocation, the construction of punishment and prevention system in the field of project construction will be implemented, and a long-term mechanism will be established to ensure the quality of the project and outstanding cadres, providing strong political and organizational guarantees for large-scale railway construction. Expanding the perspective of enterprise development and paying attention to the dynamics and sustainability of enterprise organization and its development will lead to the innovation of enterprise strategic cost concept, the openness of management, the comprehensiveness of objects, the long-term nature of objectives and the diversity of information.

4. Conclusion

This paper analyzes the economic management risk of construction enterprise project from the perspective of low-carbon economy. With the development of low-carbon economy, the new elements of China's engineering economy are gradually increasing, which to some extent promotes the diversified development of the engineering economy. It is under the role of the new engineering

economic model that it brings certain benefits to the low-carbon economy. At present, the economic management of engineering project is easy to be limited and influenced by many factors, and there are many risks, which are not conducive to the smooth progress of the work. It is necessary to comprehensively and carefully analyze and control the risks. The innovation of low-carbon technology conforms to the international environment, and can make the enterprise obtain long-term development. Institutional innovation provides conditions and guarantees for the implementation of low-carbon technologies. Under the blessing of the newly introduced environmental protection tax, enterprises should also respond to the call to develop a low-carbon economy. Enterprises actively formulate new development plans and carry out reasonable cost management. There is no time to delay the analysis task of economic management risks of engineering projects. We should foresee risks in time and take targeted preventive and management measures on economic management risks of engineering projects. As a risk controller, we have changed from extensive management mode to refined management mode. Only in this way can the development of the enterprise be sustained and stable, promote the enterprise to become bigger and stronger, and achieve higher economic benefits.

References

- [1] Zhang C, Randhir T O, Zhang Y. (2018). Theory and practice of enterprise carbon asset management from the perspective of low-carbon transformation. *Carbon Management*, no. 4, pp. 1-8.
- [2] (2015). Feasibility analysis of nuclear-coal hybrid energy systems from the perspective of low-carbon development. *Applied Energy*, vol. 158, pp. 619-630.
- [3] Aven E, Aven T. (2015). On the Need for Rethinking Current Practice that Highlights Goal Achievement Risk in an Enterprise Context. *Risk Analysis*, vol. 35, no. 9, pp. 1706-1716.
- [4] Shoi-Tehrani B, Akimoto K, Sano F. (2018). Low-carbon investments from the perspective of electric utilities: The burden of the past. *Utilities Policy*, vol. 51, pp. 18-32.
- [5] Mu X Z, Hu G W. (2018). Analysis of Venezuela's oil-oriented economy: from the perspective of entropy. *Petroleum Science*, vol. 15, no. 3, pp. 1-10.
- [6] Yaoqing Y, Maozhu J, Jinfei R, et al. (2014). The Dynamic Coordinated Development of a Regional Environment-Tourism-Economy System: A Case Study, from Western Hunan Province, China. *Sustainability*, vol. 6, no. 8, pp. 5231-5251.
- [7] Khan W S, Asmatulu R, Davuluri S, et al. (2014). Improving the Economic Values of the Recycled Plastics Using Nanotechnology Associated Studies. *Journal of Materials Science & Technology*, vol. 30, no. 9, pp. 854-859.
- [8] Sellami N, Dewar M, Stahl H, et al. (2015). Dynamics of rising CO₂ bubble plumes in the QICS field experiment. *International Journal of Greenhouse Gas Control*, vol. 38, pp. 44-51.
- [9] Fenling F, Chengguang L, Haihong L, et al. (2016). Research on Price of Railway Freight Based on Low-Carbon Economy. *Mathematical Problems in Engineering*, vol. 2016, pp. 1-7.
- [10] Nansai K, Nakajima K, Kagawa S, et al. (2014). Global Flows of Critical Metals Necessary for Low-Carbon Technologies: The Case of Neodymium, Cobalt, and Platinum. *Environmental Science & Technology*, vol. 48, no. 3, pp. 1391-1400.