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RESEARCH ON COST MANAGEMENT BASED ON THE CONCEPT OF ECOLOGICAL ECONOMY

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ABSTRACT

The model of cost management needs to adapt to specific economic environments in order to promote economic development. Under the background of currently advocating the development of ecological economy, it is necessary to explore the new mode of ecological economy cost management to achieve the vision that economic development and environmental protection could be homogeneously balanced. This paper uses the basic principle of economics to analyze the evolution trend of cost management, summarizes the relevant references, and finally proposes the problems that still need to be solved in the general trend of ecological economy.

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It is of great practical significance to study the cost management from the perspective of ecological economy. The national economy underwent a rapid development over the past decades. However, this inspiring development also brings a series of ecological and environmental problems, especially some high pollution and high energy consumption industries, such as steel, power, and coal industries. Since the second half of the 20th century, sustainable development has attracted increasing attention from both academia and industry and main efforts are focused on the relationship between economic and ecological. Kenneth Polding, an American economist, proposed the circular economy thought, "spaceship theory", which shows that our earth is just a small spaceship in the vast space and the disorderly growth of population and economy will exhaust the limited resources, to avoid this tragedy, we must change this economic growth mode, from "consumption" to "ecological"; from "open" to "closed". With the help of AHP theoretical tools, Cheng Yueming, Huang Qiming, Cheng Yi, and Chen Decheng (2020) established an ecological cost management evaluation model, in which the relevant factors of ecological cost management could be directly analyzed from four dimensions of resources, environment, economy, and society. The associated results also further confirm that the AHP theoretical model can assist management to analyze the benefits and proportion of ecological investment, and reduce ecological loss by improving pollution treatment technology and purchasing environmental protection equipment [1].

Analysis on the evolution mechanism of ecological cost management.

The analysis of the evolution mechanism in economics is gradually improved with the idea of biological evolution. Darwin's biological evolution and Lamack's genetic theory can serve as guiding ideas for the laws of socio-economic fundamental evolution. Zhang Jianmei and Pan Ailing (2013) pointed out that three cores of socio-economic evolution are conventions, variation and choice. Cost management is the enterprise using certain rules to summarize costs and here the rules are enterprise usual practice, which is very similar to biological gene [2]. In the process of economic development, there would be changes happened in the economic environment and the internal operation of the

RS Global 1

enterprise, namely the so-called variation, hence we have to change the rule at the macro and micro levels and to choose methods that can adapt to the current economy to manage costs. Andreas Manntz (2003), Commercial Director at Sortimo International GmbH (Zusmarshausen), also mentioned that cutting material costs and reducing environmental burdens, we also expect a pay-off in the form of optimized materials management and improved production planning [3].

From the perspective of the evolution motivation of cost management, there are two main factors, namely external factors and internal factors. External factors are mainly attributed to changes in the economic environment, while include other factors, like political, legal, social and cultural factors and so on. Internal factors have the changes of the enterprise internal management system and the changes of operating business and so on. Zhou Yali (2005) believes that cost management is an applied discipline, and the innovation in its content and management methods must be coordinated with the enterprise management environment [4].

The evolution of cost management can also reflect the management consciousness of managers. Different managers may deal with costs differently, and the evolution results of costs may be different. From the micro level, there are also individual differences. Therefore, the evolution of cost management is also a process of interactive development between economic subjects and other factors such as economic environment.

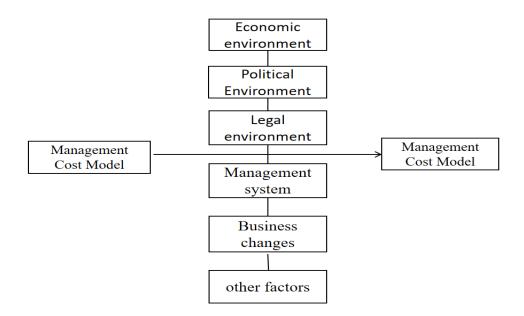


Fig. 1. Ecological cost management evolution model

Trends analysis of ecological cost management. The study of ecological and environmental cost is also the study of environmental compensation, which can standardize the environmental cost accounting system, and is a more scientific and standardized ecological cost management system. Feng Yuan (2016) proposed the cost of embedded environment. It is necessary to enhance the awareness of environmental protection in enterprises or enterprise groups and optimize the way of business activities. At the same time, through the integration of government guidance and enterprise autonomy, the pollutant discharge cost management would have a positive effect and the consciousness of environmental management would be improved simultaneously [5].

Environmental problems have always been a global ecological problem, and we can make some analysis of the trends in cost management by studying the policies and regulations in different regions. From the policy level, the implementation of policies and regulations can promote enterprise cost management. In 1999, the government issued the first Environmental Accounting Guide, which was revised and promulgated in 2000, 2002 and 2005. In recent years, Japan studied German experience to combine material management with discharge costs and actively developed cost innovation practices in environmental operations (Kono, 2005). In December 2004, the Financial Reporting Interpretation Commission (FRIC) revised the 2002 draft and officially issued the announcement of interpretation of emissions rights, Announcement No.3(IFRIC3), providing formal

2 RS Global

norms for sewer transaction costs (since 2005) [6]. In this year, the Chinese government has also issued a number of environmental management regulations to guide and promote the formulation and implementation of national environmental protection regulations and environmental and economic policies. On November 5, 2020, the Ministry of Ecology and Environment meeting approved the ecological and environmental standards management measures, which are used to standardize the formulation, implementation, the record and evaluation. On December 9, 2020, the executive meeting of the Chinese government deliberated and adopted the regulations on the administration of pollutant discharge permits, which is served to strengthen the management of pollutant discharge permits, to regulate the discharge behavior of enterprises, institutions and other producers and operators, to control the discharge of pollutants, as well as to protect the ecological environment [7]. This shows that many countries have incorporated the ecological environment costs into an important part of the economic operation reform in policy. From the ideological analysis of the producers and operators, the key to the effect of environmental cost management is that producers and operators actively fulfill their environmental protection responsibilities and actively strengthen the management of pollutant discharge cost. In recent years, the author has conducted a follow-up survey on small and mediumsized production and operation entities in many regions of China, and found that the use of "benefit oriented cost management method" can effectively supervise and manage costs.

Conclusions. Ecological cost management can contribute to the realization of sustainable development of economy, reflect the consciousness and efficiency of internal environmental governance of enterprises, as well as implement the principle of "Whoever pollutes will govern". In the process of ecological cost management, the development of ecological economy is an inevitable trend. It can be seen from the above analysis: a) all governments attach great importance to the environmental problems caused by population growth and economic development. In order to promote the coordinated development of the economy, society and the environment, governments and international organizations have introduced some relevant policies and laws, which will be a long-term inevitable trend. b) In cost management research, current cost accounting methods can not accurately evaluate and calculate the value of pollution in both potential and already caused, and are not able to accurately provide information on the utilization efficiency of resources. The cost management of enterprises should also pay more attention to ecological and environmental benefits when paying attention to economic benefits. At the same time, the management of environmental pollution will be a mainstream trend of cost management.

I believe that the development of enterprises is an important part of the process of national economic construction. The concept of low-carbon economy is an indispensable part of the construction of my country's ecological civilization. The environment brings huge negative pressure. Low-carbon economy is an imperative development trend in the development of enterprises. Conducting environmental cost management research will help enterprises achieve low-carbon economic development and fundamentally solve the problem of energy waste in enterprises.

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