

摘要

党的二十大报告明确提出“推动经济社会发展绿色化、低碳化是实现高质量发展的关键环节”的发展方针。作为绿色发展的微观主体，企业承担了协调经济价值、社会价值和环境价值的重要任务。而由“环境”（Environment）、“社会”（Social）和“公司治理”（Governance）组成的 ESG 体系高度契合企业高质量可持续发展目标，是推动企业绿色低碳转型的有效方法。ESG 体系由 ESG 表现、信息披露与评价、投资三部分组成，其中，现有评价体系大多借鉴国外 ESG 评级的方案，在实际运用中出现了指标选取、权重设定偏离我国行业实际的现象。以国民经济支柱石化行业为例，石化行业存在污染物成分复杂且危害严重、碳排放问题严峻、安全生产基础不牢等生产经营特点，且行业内央企众多，具有鲜明的社会责任和公司治理属性，现有通用型 ESG 评价体系难以反映行业实际。因此，当前中国亟待构建能够突出石化行业实际情况的 ESG 评价体系。

本文首先研究了 ESG 的相关文献，总结现有评价体系的构建方法。其次，对比明晟、汤森路透、商道融绿和华证四家 ESG 机构的评价方法，分析国内外主要 ESG 评价体系的差异和发展趋势。整理石化行业在污染物治理、能源消耗、绿色转型和安全生产四个方面的生产经营特点，为构建石化行业 ESG 评价体系打好基础。然后，充分融合石化行业在生产经营和产权属性两方面的特征，并以商道融绿为基础，依据污染物排放标准、央企履行社会责任的指导意见、工业能效标杆等重要文件，构建包含 3 个一级指标、20 个二级指标、41 个三级指标的 ESG 指标体系。采用 AHP-熵值组合赋权法对指标进行逐层赋权，得到石化行业 ESG 评价体系。最后，以“中国石化”为案例，结合十家石化上市公司进行打分和排名，分析构建出的石化 ESG 评价体系的应用效果。

研究发现，石化行业 ESG 评价体系具有以下特征：第一，需要强调石化污染物治理的政策要求；第二，需要重视石化能源消耗的行业特征；第三，需要突出石化低碳转型的战略目标；第四，需要反映石化行业安全生产的发展关系。此外，石油化工行业中的央企较多，在社会和公司治理履责方面应当切实发挥先锋模范作用。现有的通用型 ESG 评价体系难以反映上述特征。而构建的石化 ESG 评价体系在指标选择和权重构成上能够较好地突出石化行业在生产经营和产权属性两方面的特点。从案例来看，十家上市公司在 2022 年的 ESG 表现整体较好但差异较大，而中国石化 ESG 评分排名第二，在高水平样本内仍能表现突出，值得学习。本文丰富了行业 ESG 评价体系的相关研究，对石化行业构建具有行业特色、符合企业实际的 ESG 评价体系具有重要参考意义。

关键词：石化行业；ESG 理念；ESG 评价体系

Abstract

The report of the Party's 20th National Congress clearly put forward the development policy of "promoting green and low-carbon economic and social development is the key link to achieve high-quality development". As the micro-main body of green development, enterprises undertake the important task of coordinating economic value, social value and environmental value. The overall framework ESG system composed of "Environment", "Social" and "corporate Governance" is highly compatible with the high-quality sustainable development goals of enterprises, and is an effective way to promote the green and low-carbon transformation of enterprises. The ESG system consists of three parts: ESG performance, information disclosure and evaluation, and investment. Among them, a good evaluation system can not only promote capital flow into enterprises with good environmental, social and corporate governance performance, but also further guide enterprises to actively assume environmental and social responsibilities, improve corporate governance, and form a positive cycle. However, since most of the existing evaluation systems draw on the design schemes of foreign ESG ratings, the selection of indicators and the setting of weights deviate from China's national conditions and industry realities in practical application. Therefore, it is particularly important and urgent to explore and establish an ESG evaluation system that is in line with international standards and in line with China's national conditions. Petrochemical industry is the economic pillar of our country, due to its complex pollutant composition and serious harm, huge consumption of energy and water resources, severe carbon emission problems, safety production foundation is not solid production and operation characteristics, and many central state-owned enterprises in the industry, with distinct environmental responsibility, social responsibility and corporate governance attributes, the existing universal ESG evaluation system is difficult to reflect the actual industry. Therefore, at present, China urgently needs to build an ESG evaluation system that can highlight the actual situation of the petrochemical industry.

This thesis first studies the concept of ESG and related literature of ESG evaluation system, and summarizes the existing construction methods of ESG evaluation system. Secondly, it compares the composition of four ESG evaluation systems, namely, MSCI, Thomson Reuters, Shangdao Ronglu and Huaseng, and then summarizes the differences and development trends of major ESG evaluation systems at home and abroad. Sort out the

production and operation characteristics of the petrochemical industry in the four aspects of pollutant control, energy consumption, green transformation and safe production, and lay a good foundation for the construction of ESG evaluation system of the petrochemical industry. Then, fully integrate the characteristics of the petrochemical industry in the production and operation and the property rights of state-owned enterprises, and based on the core indicators of the commercial road green melt, according to important documents such as pollutant emission standards, the guidance of central enterprises to fulfill social responsibilities, industrial energy efficiency benchmarks, and build an ESG index system containing 3 first-level indicators, 20 second-level indicators, and 41 third-level indicators. Then, the index is weighted layer by layer by AHP and entropy, and the ESG evaluation system of petrochemical industry is obtained. Finally, taking "Sinopec" as an example, combined with ten listed petrochemical companies with high ESG level, the ESG index scoring and ranking were carried out to further analyze the application effect of the ESG evaluation system constructed in the petrochemical industry.

It is found that the ESG evaluation system of petrochemical industry has the following characteristics: First, it needs to emphasize the policy requirements of petrochemical pollution control; Second, it is necessary to pay attention to the industry characteristics of petrochemical energy consumption; Third, it is necessary to highlight the strategic goal of petrochemical low-carbon transition; Fourth, it is necessary to reflect the development relationship of safety production in the petrochemical industry. In addition, there are many central state-owned enterprises in the petrochemical industry, and they should effectively play a pioneering demonstration role in social and corporate governance. The existing general ESG evaluation system is difficult to reflect the above characteristics. In terms of index selection and weight composition, the ESG evaluation system can better highlight the characteristics of the petrochemical industry in production and management and property rights. From the case point of view, the ESG performance of the ten listed companies in 2022 is generally good, but the difference is large, while Sinopec's ESG score ranks second, and it can still perform prominently in the high-level sample, which is worth learning. This thesis enriches the relevant research of industrial ESG evaluation system, and has important reference significance for the petrochemical industry to build an ESG evaluation system with industry characteristics and in line with the actual situation of enterprises.

Key Words: Petrochemical industry; ESG philosophy; ESG evaluation system

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