

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，需要突出石化绿色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

目录

1	引言	1
1.1	研究背景和研究意义	1
1.1.1	研究背景	1
1.1.2	研究意义	1
1.2	文献综述	2
1.2.1	ESG 概念的研究	2
1.2.2	ESG 评价体系的研究	4
1.2.3	石化行业 ESG 评价的研究	5
1.2.4	文献评述	6
1.3	研究思路与方法	6
1.3.1	研究思路	6
1.3.2	研究方法	6
1.4	本文研究框架	6
2	石化行业 ESG 评价理论概述	9
2.1	相关概念界定	9
2.1.1	ESG 理念	9
2.1.2	ESG 评价	9
2.2	国内外主要 ESG 评价体系对比	10
2.2.1	MSCI (明晟) ESG 评级	10
2.2.2	Thomson Reuters (汤森路透) ESG 评级	11
2.2.3	华证 ESG 评级	11
2.2.4	商道融绿 ESG 评级	13
2.2.5	国内外 ESG 评价体系分析	15
2.3	石化行业 ESG 评价体系的特点	15
2.3.1	强调石化污染治理的政策要求	15
2.3.2	重视石化能源消耗的行业特征	16
2.3.3	突出石化低碳转型的战略目标	17
2.3.4	反映石化安全生产的发展关系	19
2.4	理论基础	19
2.4.1	利益相关者理论	19
2.4.2	声誉理论	19

2.4.3	可持续发展理论	20
3	石化行业 ESG 评价体系的构建	21
3.1	石化行业 ESG 评价体系构建必要性	21
3.1.1	未突出石油化工生产特征	21
3.1.2	未强调石化央国企责任要求	23
3.2	选取石化行业环境责任评价指标	24
3.2.1	石化环境指标选取依据	24
3.2.2	选取三废减排及循环利用率、新污染物排放等污染治理指标	24
3.2.3	选择石化能耗种类、工业水重复利用率等资源投入指标	25
3.3	选取石化行业社会责任评价指标	26
3.3.1	石化社会指标选取依据	26
3.3.2	选择员工、客户、石化科技创新等通用社会指标	27
3.3.3	选择化学品转移、储存和处理等石化安全生产指标	28
3.3.4	选择行政处罚额、环保处罚额两个社会负面事件评价指标	28
3.3.5	选择乡村振兴、一带一路履责两份社会责任指标	28
3.4	选取石化行业公司治理评价指标	29
3.4.1	石化公司治理指标选取依据	29
3.4.2	选择独立董事占比、内部控制等治理结构指标	29
3.4.3	选择党建工作、内部审计等指标	29
3.5	石化行业 ESG 评价指标汇总、对比及赋权	30
3.5.1	石化行业 ESG 评价指标汇总及对比	30
3.5.2	AHP-熵值组合赋权	34
3.5.3	确定 ESG 评价指标权重	35
4	石化 ESG 评价体系在中国石化的应用	39
4.1	中国石化企业概况	39
4.2	中国石化 ESG 评价	39
4.2.1	ESG 评价的数据来源及评分方法	39
4.2.2	中国石化环境维度指标评分	40
4.2.3	中国石化社会维度指标评分	43
4.2.4	中国石化公司治理指标评分	47
4.2.5	确定中国石化 ESG 评分	49
4.3	中国石化 ESG 评价结果分析	51

目录

4.3.1 选取十家石化上市公司对比测评	51
4.3.2 中国石化环境评价结果分析	53
4.3.3 中国石化社会评价结果分析	54
4.3.4 中国石化治理评价结果分析	55
5 结论与启示	57
5.1 结论	57
5.2 启示	58
参考文献	59

TABLE OF CONTENTS

1 Introduction	1
1.1 Research background and significance	1
1.1.1 Research background.....	1
1.1.2 Research significance	1
1.2 Literature review	2
1.2.1 Research on ESG concept	2
1.2.2 Research on ESG evaluation system.....	4
1.2.3 Research on ESG evaluation in petrochemical industry.....	5
1.2.4 Literature review.....	6
1.3 Research ideas and methods.....	6
1.3.1 Research Ideas	6
1.3.2 Research methods	6
1.4 Research framework 6 of this paper.....	6
2 Overview of ESG evaluation theory in petrochemical industry	9
2.1 Definition of related concepts.....	9
2.1.1 ESG Concept	9
2.1.2 ESG Evaluation.....	9
2.2 Comparison of major ESG evaluation systems at home and abroad	10
2.2.1 MSCI (ESG) Rating.....	10
2.2.2 Thomson Reuters ESG rating.....	11
2.2.3 China Securities ESG rating	11
2.2.4 ESG rating of Business Road Ronggreen is	13
2.2.5 Analysis of ESG evaluation system at home and abroad	15
2.3 Characteristics of ESG evaluation system in petrochemical industry	15
2.3.1 Emphasize the policy requirements for petrochemical pollution control.....	15
2.3.2 Industry characteristics that attach importance to petrochemical energy consumption	16
2.3.3 Highlight the strategic goal of petrochemical low-carbon transition	17
2.3.4 Reflect the development relationship of petrochemical safety production	19

TABLE OF CONTENTS

2.4 Theoretical Basis	19
2.4.1 Stakeholder Theory	19
2.4.2 Reputation Theory.....	19
2.4.3 Sustainable Development theory	20
3 Construction of ESG evaluation system in petrochemical industry.....	21
3.1 The necessity of constructing ESG evaluation system in Petrochemical industry	21
3.1.1 Petrochemical production features are not highlighted.....	21
3.1.2 The responsibility requirements of central state-owned enterprises in petrochemical industry are not emphasized.....	23
3.2 Select environmental responsibility evaluation indicators of the petrochemical industry	24
3.2.1 Petrochemical environmental indicators are selected according to	24
3.2.2 Select pollution control indicators such as emission reduction and recycling rate of three wastes and emission of new pollutants.....	24
3.2.3 Select resource input indicators such as petrochemical energy consumption type and industrial water reuse rate	25
3.3 Select the social responsibility evaluation indicators of the petrochemical industry	26
3.3.1 The selection of petrochemical social indicators is based on	26
3.3.2 Select common social indicators such as employees, customers, petrochemical technological innovation.....	27
3.3.3 Select petrochemical safety production indicators such as chemical transfer, storage and handling	28
3.3.4 Select two evaluation indicators of negative social events, the amount of administrative penalty and the amount of environmental penalty	28
3.3.5 Select two social responsibility indicators: Rural revitalization and Belt and Road Responsibility.....	28
3.4 Select the evaluation indicators of corporate governance in the petrochemical industry	29
3.4.1 The selection of governance indicators of petrochemical companies is based on.....	29

3.4.2	Select governance structure indicators such as the proportion of independent directors and internal control.....	29
3.4.3	Selecting indicators such as party building work and internal audit	29
3.5	Summary, comparison and empowerment of ESG evaluation indicators in the petrochemical industry.....	30
3.5.1	Summary and comparison of ESG evaluation indicators in the petrochemical industry.....	30
3.5.2	AHP-entropy combination weights	34
3.5.3	Determine the weight of ESG evaluation indicators	35
4	Application of petrochemical ESG evaluation system in Sinopec.....	39
4.1	Overview of China Petrochemical Enterprises	39
4.2	Sinopec ESG evaluation.....	39
4.2.1	Data sources and scoring methods of ESG evaluation.....	39
4.2.2	Sinopec environmental dimension index score	40
4.2.3	Sinopec social dimension index score	43
4.2.4	Sinopec's governance index score	47
4.2.5	Determine Sinopec's ESG score of.....	49
4.3	Analysis of ESG evaluation results of Sinopec.....	51
4.3.1	Comparative evaluation of ten listed petrochemical companies	51
4.3.2	Analysis of the environmental evaluation results of Sinopec.....	53
4.3.3	Analysis of social evaluation results of Sinopec	54
4.3.4	Analysis of Sinopec governance evaluation results.....	55
5	Conclusions and Enlightenment.....	57
5.1	Conclusion	57
5.2	Revelation	58
	References	59

图目录

图 1.1 论文基本框架	8
图 2.1 我国主要能源进口量 (单位: 万吨)	16
图 2.2 石油与化工行业能源消耗总量 (单位: 万吨标准煤)	17
图 2.3 石化行业二氧化碳排放总量 (单位: 万吨)	18
图 3.1 2022 年各工业行业挥发性有机物排放情况	21
图 3.2 2022 年各工业行业危险废物产生情况	22

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