

## 摘要

习近平总书记在二十大报告中指出，加快发展方式绿色转型。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。加快推动产业结构、能源结构、交通运输结构等调整优化。这是我国绿色发展、绿色转型的行动指南。在此之前，我国提出了“碳达峰、碳中和”的伟大目标，并发布了《关于加快建立健全绿色低碳循环发展经济体系的指导意见》，指出要大力发展战略性新兴产业，大力推进资源节约集约利用，推进环境污染第三方治理。企业是国民经济中最具活力和发展潜力的微观经济主体，企业的“绿色技术创新”和“绿色转型”是实现我国经济社会可持续发展的必由之路。目前我国企业，尤其是重污染企业的绿色转型仍任重道远。税收政策作为国家治理手段之一，对环境治理有着重要作用。2018年1月1日，我国正式开始实行《中华人民共和国环境保护税法》，对比之前的排污费，环境保护税在征收环节、征收率等方面都更加规范化。因此，本文研究环境保护税对重污染企业绿色技术创新的影响，具有一定的理论和实践意义。

本文深入分析环境保护税对企业绿色创新的理论依据和作用机理。从投入和产出角度梳理目前我国环境保护税和重污染行业绿色技术创新现状。在此基础上提出研究假设，运用固定时间及行业的双重固定效应模型对2012-2021年这十年的上市公司数据进行分析，得出我国的环境保护税对重污染企业的绿色创新是存在激励作用的，并对数据进行分组进行异质性分析，得出环境保护税对重污染企业中的国有企业、规模较大企业及东部企业的激励作用更明显。同时通过扩大样本容量及税收滞后一期进行分析结果的稳健性。

最后，本文通过前文的现状分析及研究结果，从如何强化环境保护税对重污染企业绿色技术创新的效应出发，提出政策建议：在现有基础上逐步提升环境保护税税率、扩大环境保护税征税范围，以及加强对中西部地区企业及民营企业激励作用等方面进行阐述。

**关键词：**重污染企业；环境保护税；绿色技术创新

## Abstract

Promoting the green and low-carbon development of the economy and society is a key link to achieving high-quality development. Accelerate the adjustment and optimization of industrial structure, energy structure, and transportation structure. This is the action guide for China's green development and green transformation. Before that, China proposed the great goal of "carbon peak and carbon neutrality," and released the "Guiding Opinion on Accelerating the Establishment of a Green, Low-carbon and Circular Economic System." It pointed out that we should vigorously develop green and low-carbon industries and promote the efficient and intensive use of resources. We should also promote the third-party governance of environmental pollution. Enterprises are the most dynamic and promising microeconomic entities in the national economy. The "green technological innovation" and "green transformation" of enterprises are the only way to achieve sustainable development of our economy and society. At present, the green transformation of Chinese enterprises, especially those with heavy pollution, is still a long way to go. Tax policy, as one of the means of state governance, plays an important role in environmental governance. On January 1, 2018, China officially implemented the "Law of the People's Republic of China on Environmental Protection Tax," which is more standardized in terms of collection procedures and rates compared to the previous pollution fees. Therefore, this paper studies the impact of environmental protection tax on the green technological innovation of heavy pollution enterprises, which has both theoretical and practical significance.

This thesis analyzes the theoretical basis and working mechanism of the impact of environmental protection tax on enterprise green innovation in depth. From the perspective of input and output, this paper analyzes the current situation of environmental protection tax and green technology innovation in heavy polluting industries in China. Based on this, the study hypotheses are proposed, and a fixed time and industry double fixed effect model is used to analyze the data of listed companies from 2012 to 2021 for the past ten years. The results show that the environmental protection tax has an incentive effect on green innovation of heavy polluting enterprises in China. The data is divided into groups for heterogeneity analysis, and it is found that the incentive effect of environmental protection tax on state-owned enterprises, large-scale enterprises and enterprises in the eastern region of heavy polluting enterprises is more obvious. At the same time, the robustness of the analysis results is improved by expanding the sample size and tax delaying one period.

Finally, based on the current situation analysis and research results, this thesis puts forward

policy suggestions from the perspective of strengthening the effect of environmental protection tax on green technology innovation of heavy polluting enterprises: it explains in detail how to gradually increase the tax rate of environmental protection tax, expand the scope of taxation, and enhance the incentive effect on enterprises in the central and western regions and private enterprises.

**Key Words:** Heavy polluting enterprises; environmental protection taxes; green technology innovation

## 目 录

1 导论 .....	1
1.1 选题背景与意义 .....	1
1.1.1 选题背景 .....	1
1.1.2 选题意义 .....	1
1.2 国内外文献综述 .....	2
1.2.1 绿色技术创新的相关研究 .....	2
1.2.2 环境保护税与绿色技术创新的关系研究 .....	3
1.2.3 文献述评 .....	5
1.3 研究内容与方法 .....	5
1.3.1 研究内容 .....	5
1.3.2 研究方法 .....	6
1.4 创新及不足 .....	6
1.4.1 创新之处 .....	6
1.4.2 不足之处 .....	6
2 环境保护税与企业绿色技术创新的理论依据 .....	8
2.1 概念界定 .....	8
2.1.1 环境保护税 .....	8
2.1.2 绿色技术创新 .....	8
2.1.3 重污染企业 .....	9
2.2 环境保护税影响企业绿色技术创新的理论基础 .....	9
2.2.1 外部性理论 .....	9
2.2.2 波特假说 .....	10
2.3 环境保护税影响企业绿色技术创新的作用机理 .....	11
2.3.1 挤出效应 .....	11
2.3.2 补偿效应 .....	11
2.3.3 倒逼效应 .....	12
3 我国环境保护税和重污染行业绿色技术创新的现状分析 .....	13
3.1 重污染行业的绿色技术创新现状 .....	13
3.1.1 重污染行业的绿色技术创新投入 .....	13
3.1.2 重污染行业的绿色技术创新产出 .....	17
3.2 我国环境保护税的实施现状 .....	17
3.2.1 现行环境保护税制度与排污费制度的比较 .....	17

3.2.2 重污染行业企业环境保护税收入现状.....	20
3.3 环境保护税现状及存在的问题.....	22
3.3.1 收入规模较小.....	22
3.3.2 征税范围较窄.....	23
3.3.3 浮动税率设置不合理.....	24
3.3.4 税收优惠政策不科学.....	25
4 环境保护税对重污染企业绿色技术创新的实证分析.....	26
4.1 研究假设.....	26
4.2 研究设计.....	27
4.2.1 变量设计.....	27
4.2.2 数据来源.....	29
4.2.3 模型构建.....	29
4.2.4 描述性统计.....	30
4.3 实证结果.....	30
4.3.1 相关性分析.....	31
4.3.2 基准回归模型.....	31
4.3.3 稳健性检验.....	32
4.3.4 异质性分析.....	33
5 强化环境保护税对重污染企业绿色技术创新的政策建议 .....	38
5.1 适时扩大环境保护税征税范围 .....	38
5.2 优化环境保护税税率设计 .....	38
5.3 优化环境保护税的税收优惠政策 .....	39
5.4 完善相关政策支持体系 .....	39
参考文献.....	40
致 谢 .....	45

## Contents

1	Introduction .....	1
1.1	Background and significance of the topic .....	1
1.1.1	Background of the topic .....	1
1.1.2	Significance of the topic.....	1
1.2	Domestic and foreign literature review .....	2
1.2.1	Research on green technology innovation .....	2
1.2.2	Research on the relationship between environmental protection tax and green technology innovation .....	3
1.2.3	Literature review .....	5
1.3	Research contents and methods.....	5
1.3.1	Research content .....	5
1.3.2	Research Method.....	6
1.4	Innovation and less than .....	6
1.4.1	Innovations .....	6
1.4.2	Shortcomings.....	6
2	Theoretical basis of environmental protection tax and enterprise green technology innovation.....	8
2.1	Definition of Concepts .....	8
2.1.1	Environmental Protection tax.....	8
2.1.2	Green technology innovation .....	8
2.1.3	Heavy polluters .....	9
2.2	Theoretical basis of environmental protection tax affecting enterprises' green technology innovation .....	9
2.2.1	Externality Theory.....	9
2.2.2	Porter Hypothesis .....	10
2.3	Mechanism of environmental protection tax affecting green technology innovation.....	11
2.3.1	Crowding out effect.....	11
2.3.2	Compensation effect.....	11
2.3.3	Reverse force effect.....	12
3	Analysis of the current situation of environmental protection tax and green technology innovation in heavily polluting industries in China .....	13

3.1 Green technology innovation status in heavily polluting industries .....	13
3.1.1 Investment in green technology innovation in heavily polluting industries .....	13
3.1.2 Green technology innovation output of heavily polluting industries.....	17
3.2 Implementation status of China's environmental protection tax .....	17
3.2.1 Comparison between the current environmental protection tax system and the sewage charge system.....	17
3.2.2 Status quo of environmental protection tax revenue of enterprises in heavily polluting industries .....	20
3.3 Problems of environmental protection tax .....	22
3.3.1 Small income scale.....	22
3.3.2 The scope of taxation is narrower .....	23
3.3.3 The floating Tax rate is improperly set.....	24
3.3.4 Preferential tax policies are not scientific .....	24
4 Empirical analysis of environmental protection tax on green technology innovation of heavily polluting enterprises .....	26
4.1 Research hypothesis .....	26
4.2 Study Design .....	27
4.2.1 Variable design .....	27
4.2.2 Data Source .....	29
4.2.3 Model construction.....	29
4.2.4 Descriptive Statistics .....	30
4.3 Empirical results.....	30
4.3.1 Correlation analysis.....	31
4.3.2 Benchmark regression Model.....	31
4.3.3 Robustness Test .....	32
4.3.5 Heterogeneity analysis .....	33
5 Policy suggestions for strengthening environmental protection tax on green technology innovation of heavy polluting enterprises .....	38
5.1 Expand the scope of environmental protection tax in a timely manner .....	38
5.2 Improve the design of tax rates for environmental protection .....	38
5.3 Improve preferential tax policies for environmental protection taxes .....	39
5.4 Improving relevant policy support system .....	39
References .....	40

## Contents

---

Thanks .....	45
--------------	----

## 图目录

图 3.1 2013-2022 年重污染行业 R&D 经费支出 .....	13
图 3.2 重污染行业 R&D 经费支出占营业收入的比重 .....	14
图 3.3 重污染行业企业 R&D 人员 .....	16
图 3.4 环境保护税演变重要节点时间轴 .....	18
图 3.5 我国 2014-2022 年环境保护税收入 .....	20

## 表目录

表 3.1 2022 年重污染行业企业 R&D 经费总额 .....	15
表 3.2 2022 年重污染各行业 R&D 人员总数 .....	16
表 3.3 重污染行业历年的绿色专利数据 .....	17
表 3.4 环境保护税制度和排污费制度的比较 .....	19
表 3.5 2021 年重污染细分行业环境保护税缴纳情况 .....	21
表 3.6 重污染企业环境保护税总额及比重 .....	22
表 3.7 环境保护税历年收入及占比 .....	23
表 3.8 2021 年重污染行业二氧化碳排放量 .....	24
表 3.9 各省份环境保护税税额标准    单位：元/当量 .....	25
表 4.1 变量定义、名称与说明 .....	28
表 4.2 描述性统计 .....	30
表 4.3 相关性分析 .....	31
表 4.4 基准回归模型实证结果 .....	32
表 4.5 稳健性检验回归结果 .....	33
表 4.6 异质性分析 1 .....	34
表 4.7 异质性分析 2 .....	35
表 4.8 异质性分析 3 .....	36

以上内容仅为本文档的试下载部分，为可阅读页数的一半内容。如要下载或阅读全文，请访问：<https://d.book118.com/755321220203012011>