

摘 要

水既是人类赖以生存的物质基础，又是推动社会生产进步的战略资源。纵观人类发展历程，人类对水资源的控制和利用程度与社会生产水平存在正向关联。随着社会的发展、生产力的提高，人类对水资源的耗用量也日益增加。为了管理和保护水资源，根据国务院的规定，2016年7月1日河北首先展开水资源税试点工作，2017年12月1日起试点范围扩大，新的试点地区包括北京、天津、山西、内蒙古、河南、山东、四川、陕西、宁夏9个省（市、自治区）。其中，9个试点扩围地区中近半数为西部地区，是我国水资源供需矛盾突出的地区。近年来，在“西部大开发”和“一带一路”的助力下，西部地区工业增长态势明显。然而，随之增长的还有当地的资源环境承载压力，其中以水资源供给压力为甚，当地工业用水效率较低的问题亟需解决。通过对我国水资源税试点改革对西部地区工业用水效率的影响展开研究，有助于识别并比较水资源税试点政策在西部各个试点地区的政策效果，为我国绿色税制体系积累有益经验。

本文主要采用回归控制法，选取来自于中国水资源公报和国家统计局2004年到2021年间25个地区的省级面板数据对西部四个试点地区（内蒙古、四川、宁夏、陕西）的税改效果进行实证分析。首先，本文回顾了国内外与水资源税相关的文献，对水资源税相关概念加以界定，并从地租理论、外部性理论及可持续发展理论三方面出发，为水资源税的开征奠定理论基础，从水资源税的实施所带来的替代效应和收入效应两方面对水资源税的作用机理进行阐述。其次，介绍西部地区水资源税试点的实施现状，探析目前水资源税制度存在的问题。最后，借助回归控制法，以第二次水资源税试点工作开展时间2017年为政策实施基期，以西部水资源税改革试点扩围地区为处理组，未试点地区为控制组构造研究所选地区的“反事实替身”，以此评估水资源税对工业用水效率的影响，并对研究结果进行稳健性检验。

实证结果表明水资源税试点扩围政策有效降低了本文研究选定的四个示例地区的万元工业增加值用水量，证实水资源税试点工作的开展在提升工业用水效率方面取得了阶段性成果，为我国绿色税制体系开辟新的道路，积累有益经验。但在政策推进进程中现行的水资源税试点政策暴露出的问题需要在后续的改革中加以考虑和完善。根据当前水资源税试点改革中的问题，从如下三方面提出了政策建议：完善水资源税制度设计、完善水资源相关配套措施、强化水资源税的激励机制。通过解决目前水资源税试点中的问题，更加科学有效地利用水资源，加快生态文明建设的脚步。

关键词：水资源税；工业用水效率；回归控制法；中国西部地区

Abstract

Water is not only the material basis for human survival, but also a strategic resource to promote the progress of social production. Throughout the course of human development, the degree of human control and utilization of water resources is positively correlated with the level of social production. With the development of society and the improvement of productivity, human consumption of water resources is also increasing day by day. In order to manage and protect water resources, according to the regulations of The State Council, Hebei first launched the pilot work of water resource tax on July 1, 2016, and the pilot scope was expanded from December 1, 2017, including Beijing, Tianjin, Shanxi, Inner Mongolia, Henan, Shandong, Sichuan, Shaanxi and Ningxia nine provinces (municipalities and autonomous regions). Among them, nearly half of the 9 pilot expansion areas are in the western region, which is the region with prominent contradiction between supply and demand of water resources in China. In recent years, with the help of the "Western Development" and the "Belt and Road" initiative, the industrial growth trend in the western region is obvious. However, with the increasing pressure of local resources and environment, especially the pressure of water supply, the problem of low efficiency of local industrial water use needs to be solved urgently. Research on the impact of pilot water resource tax reform on industrial water use efficiency in western China will be helpful to identify and compare the policy effects of pilot water resource tax policy in various pilot areas in western China, and accumulate useful experience for China's green tax system.

This paper mainly adopts the regression control method and selects the provincial panel data of 25 regions from China Water Resources Bulletin and the National Bureau of Statistics from 2004 to 2021 to conduct an empirical analysis on the tax reform effect of four pilot regions in western China (Inner Mongolia, Sichuan, Ningxia and Shaanxi). Firstly, this paper reviews the domestic and foreign literature related to water resource tax, defines the related concepts of water resource tax, and starts from the land rent theory, externality theory and sustainable development theory to lay the theoretical foundation for the introduction of water resource tax, and expounds the action mechanism of water resource tax from the substitution effect and income effect brought by the implementation of water resource tax. Secondly, the paper introduces the implementation status of the pilot water resource tax in western China, and analyzes the problems existing in the current water resource tax system. Finally, the regression control method is used to evaluate the impact of water resource tax on industrial water use efficiency by taking the second water resource tax pilot in 2017 as the base period

of policy implementation, taking the western water resource tax reform pilot areas as the treatment group, and the non-pilot areas as the control group to construct the "counterfactual proxy" of the selected areas.

The empirical results show that the water resource tax pilot expansion policy effectively reduces the water consumption of 10,000 yuan of industrial added value in the four sample areas selected in this study, confirming that the implementation of the water resource tax pilot work has achieved phased results in improving industrial water efficiency, opening up a new road for China's green tax system and accumulating useful experience. However, in the process of policy promotion, the problems exposed by the current water resource tax pilot policy need to be considered and improved in the subsequent reform. According to the problems in the current water resource tax pilot reform, this thesis puts forward policy suggestions from the following three aspects: actively promote the legislation of water resource tax, improve the supporting measures related to water resource tax, and strengthen the incentive mechanism of water resource tax. By solving the problems in the current water resource tax pilot, we can make more scientific and effective use of water resources and accelerate the pace of ecological civilization construction.

Key Words:water resource tax; industrial water use efficiency; regression control method; western China

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