The Impact of Corporate Carbon Risk Exposure on Tax Avoidance Behavior-Evidence from a Quasi-Natural Experiment of the Paris Agreement

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Abstract

Against the backdrop of intensifying global climate change and the continued advancement of carbon reduction policies, corporate carbon risk has become an increasingly important factor shaping business decisions. Carbon risk exposure may not only directly increase firms' operating costs, but also affect financial decision-making and tax arrangements by altering financing conditions, business uncertainty, and external monitoring. While prior studies mainly examine the effects of carbon risk on investment, financing, and long-term value, limited attention has been paid to its impact on corporate tax avoidance. Using U.S. listed firms from 2011 to 2023, this study investigates whether and how carbon risk exposure influences tax avoidance behavior. To identify the differentiated policy effect of the 2015 Paris Agreement, we employ an intensity-based difference-in-differences design, comparing firms with different levels of carbon risk exposure before and after the policy shock. The results show that carbon risk exposure is significantly and positively associated with corporate tax avoidance, and that this effect becomes stronger after the Paris Agreement, suggesting that global climate governance has amplified the impact of carbon risk on firms' financial decisions. This effect is more pronounced among firms participating in carbon trading markets, located in regions with stricter environmental regulation, and subject to greater public scrutiny. Mechanism analysis further reveals that changes in institutional investor ownership and fluctuations in corporate earnings are two important channels, reflecting the roles of external governance pressure and internal operational uncertainty.