

Does R&D for Environmental Improvements

Increase Firm Value?

Evidence from Japanese manufacturing firm level data

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Abstract

Environment-related investments represent challenges for private sector firms due to uncertainty about their future impact on corporate value and capital formation. Previous empirical research has overlooked such incentive structures. Following the approach of Brynjolfsson, Rock and Syverson (2021), we estimated a firm value function with multiple assets including environment-related R&D as explanatory variables, based on the concept that associated costs of capital accumulation can contribute to future productivity improvements. Our estimation for manufacturing firms finds that environmental R&D contributes to firm value positively and significantly. These effects are particularly evident in large firms and those engaging in technology trade. This suggests that such investments facilitate technological accumulation to meet the demands of international consumers and regulatory frameworks.

However, recent shifts in global policy such as the U.S. withdrawal from the Paris Agreement may weaken incentives for Japanese firms with close ties to U.S. markets. If Japan wants to continue to pursue policy that is aligned with the Paris Agreement, stronger government support for private sector environmental initiatives will be necessary.