

Navigating the Dual Challenge: Corporate Climate Strategies under Climate Policy and Energy Market Shocks

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Abstract

We study how firms balance the dual challenge of energy security and decarbonization when exposed to contrasting external shocks: climate policy and energy-market disruption. Using two quasi-natural experiments, the European Green Deal in 2020 and the Russia–Ukraine War in 2022, we examine adjustments in (i) renewable energy adoption, (ii) voluntary carbon market (VCM) activity, and (iii) total energy consumption. We find that the Green Deal induces gradual transition responses concentrated among large firms, while the War generates immediate, broad cuts in energy use that are short-lived and rely primarily on VCM purchases rather than structural shifts in energy portfolios. In contrast, firms with Science-Based Targets initiative (SBTi) commitments exhibit persistent decarbonization efforts irrespective of the shock. Low-energy firms experience reduced cost of debt. Our findings highlight a key asymmetry in corporate climate strategies: policy-driven, commitment-based mechanisms support durable transition paths, whereas energy-market-driven shocks prompt only temporary adaptations.

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