Stuck In The Middle With You: The Impact of Intermediaries In Credit-Based Environmental Markets

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Abstract

This article investigates the impact of market intermediaries in credit-based environmental markets, such as carbon or biodiversity credit markets. We develop a model in which firms can participate in the market either directly or via an intermediary. We focus on a market with demand uncertainty and evaluate two common forms of contracts between firms and the intermediary: a fixed-price contract and a share-price contract. Our theory predicts that introducing a dominant intermediary, under either contract type, increases the overall supply of credits but has an ambiguous impact on industry profits. A trade-off exists, where the intermediary enables firms with high entry costs (but low marginal costs) to enter the market but this is at the expense of incumbent firms, who reduce their supply and profits. We design a laboratory experiment to test our theoretical predictions for the case of positive intermediary effects. The results are largely consistent with theory and confirm the benefits of intermediaries over a range of parameter values that reflect varying demand and supply conditions. We additionally find a fixed-price contract is more effective at increasing supply than a share-price contract.

Keywords: Carbon Credits; Biodiversity Credits; Intermediary; Experiment; Transaction Costs

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