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New Trade Models, Same Old Emissions?

(with Robin Sogalla and Yuta Watabe)

This paper investigates the role of firm heterogeneity in environmentally extended new trade models, contrasting Eaton-Kortum and Melitz models to Armington and Krugman models. We show that when emissions per sales are constant across firms – a standard assumption in the literature – all four models predict identical emission responses. However, when emissions per quantity are constant across firms, this equivalence breaks. We propose a generalized framework that nests both assumptions. Calibrating the model with multiple industries and estimating the key elasticity between emission intensity and productivity using German firm-level data, we find that firm heterogeneity considerably raises emissions from trade liberalization.