

# NEW TRADE MODELS, SAME OLD EMISSIONS?

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## Abstract

*This paper investigates the elusive role of productivity heterogeneity in new trade models in the trade and environment nexus. We contrast the Eaton-Kortum and the Melitz model with firm heterogeneity to the Armington model without heterogeneity and show that if firms have a constant emission share in terms of sales — as they do in a wide range of trade and environment models — the three models' emission predictions exactly coincide. On the other hand, if firms have a constant emission intensity per quantity — a prominent alternative in the literature — the emission equivalence between the three models breaks. We provide a generalization of the three models which nests both constant emission shares in sales and constant quantity emission intensities as special cases, and calibrate these models. We demonstrate how different models produce various emission predictions from trade liberalization.*

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