Trade and the Environment with firm heterogeneity

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Abstract

I develop a monopolistic competition model with pollution to analyze the effects of environmental policy on the welfare of a country in a global economy. The paper provides an extension of Melitz's (2003) trade model that incorporates negative externality generated by firms. Given a particular distribution function of technology, I show that a stricter environmental policy will increase average productivity, and will decrease of profits and environmental damage. In addition, I show the optimal tax rate in a closed economy. In an open economy model, I show that the exposure to trade leads to a welfare loss if the pollution tax rate is inadequately low.

Keywords: environmental policy, heterogeneous firms, international trade, monopolistic competition, the Porter hypothesis, productivity