

Abstract: We investigate the impacts of market-based environmental policies on intra-industry reallocations of output and emissions in the dynamic industry model of Melitz (*Econometrica*, 2003). In the model, firms anticipating heterogeneous productivity shocks make endogenous entry, use labor and emissions as inputs for production, and make pricing/output decisions in the monopolistically competitive commodity markets. We show how different policy instruments induce different intra-industry reallocations of output and emissions in the stationary equilibria of the economy. We find, contrary to conventional wisdom, that for a given price of pollution, a tax policy results in more aggregate emissions than a permit-trading policy, despite the fact that the tax policy induces entry of more productive firms. We also examine the long-run implications of Clean Development Mechanism (CDM) or an incomplete emissions market. Our finding suggests that in the absence of the additionality problem, aggregate emissions would be unambiguously lower under CDM than with no regulation, and may be even lower than under the complete emissions market. Yet, CDM may still result in a net increase in combined aggregate emissions from home and sponsoring countries if the price of credits is sufficiently low. These counter-intuitive results occur because firms adjust their efficiency scales and increase (decrease) emissions input per unit of labor to make up for the additional tax burden (gains from credit sales).