

# Optimal emission tax with endogenous location choice of duopolistic firms\*

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## Abstract

This paper explores optimal environmental tax policy under which duopoly firms strategically choose the location of their plants in a simple three-stage game. We examine how the relationship between the optimal emission tax and the choice of location of duopoly firms affects the welfare of the home country. We characterize the relationship between the optimal emission tax and the fixed cost, depending on the degree of environmental damage from production. Finally, we show the existence of asymmetric equilibrium in which either firm chooses relocation of its plant even if the duopoly firms are identical ex ante.

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