

Emission tax, emission quota, and partial privatization

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Abstract

The paper compares emission tax and emission quota in a mixed duopoly when the partial privatization of a public firm is allowed. Furthermore, we consider the following two cases with regard to the objective of the public firm: (1) the public firm maximizes the weighted average of its profit and welfare and (2) the public firm maximizes the weighted average of its profit and the sum of consumer surplus and producer surplus. We show that emission tax is welfare superior to emission quota regardless of the degree of partial privatization in (1), whereas the former is inferior to the latter when the degree of partial privatization is high in (2).

Key words: emission quota; emission tax; mixed duopoly; partial privatization

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