A General Equilibrium Analysis of Over-tourism

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Abstract

To explore the desirable policy for over-tourism, this paper constructs a general equilibrium model of small open economy with pollution generated by consumption of tourism service. There are two types of consumers in the home country: domestic residents and foreign tourists, with possibly different rates of emission per unit of tourism consumption. Under constant expenditure of tourists (the case of exogenous tourism), we examine the effect of pollution tax on the tourism terms of trade, pollution, and welfare. The increase in pollution tax deteriorates the tourism terms of trade. Counterintuitively, the amount of pollution can *increase* with pollution tax. The increase (decrease) in pollution tax for only foreign tourists (domestic residents) can improve domestic welfare. The increase in pollution taxes for both types of consumers improves domestic welfare if emission per unit of tourism consumption by foreign tourists is no less than that by domestic residents and the pollution tax rate does not exceed the Pigouvian level. The case of endogenous tourism is also examined.

Keywords: Over-tourism, Consumption-generated pollution, Pollution tax, Tourism terms-of-trade effect, Welfare, Endogenous tourism

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