

The Optimal Environmental Tax and Urban Unemployment in a Small Open Dualistic Economy with Intersectoral Capital

Mobility:

Does Environmental Protection Reduce Urban Unemployment in the Long-run?

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Abstract: This paper investigates how a rise in the urban pollution tax rate may affect urban unemployment and welfare in a small open Harris–Todaro (HT) model with intersectoral capital mobility. First, by formulating urban pollution as a dirty input in manufacturing, we find that an increase in the urban pollution tax rate can increase the level of urban unemployment even with intersectoral capital mobility. That is, the optimistic finding by Rapanos (2007) that environmental protection policy reduces urban unemployment in the long run does not always hold. Second, we derive the (sub)optimal pollution tax rate under urban unemployment. We find that the optimal urban pollution tax rate in an open HT economy should be *higher* than the Pigouvian tax rate (the marginal damage of pollution). This result opposes that of Beladi and Chao (2006) for a closed HT economy.

Key Words: Harris–Todaro model, industrial pollution, optimal pollution tax,
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