

Open-access Renewable Resources and Urban Unemployment: The Small Open Economy Case

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This paper explores how poverty reduction and environmental preservation can be compatible in modern developing economies whose production highly depends on open-access renewable resources. Building a small open dualistic economy model with urban unemployment and rural open-access resource, we investigate what is the first-best policy combination, and when a reduction in urban unemployment can be compatible with a decrease in the over-exploitation of rural resource when an export tax on the resource good increases. To create a simple and tractable model incorporating the dynamics of renewable resource stock, we use the concept of the “static sustainable yield” in resource economics. Five new results are obtained. First, the first-best policy will be a combination of urban wage subsidy and a *lower* rate of rural income subsidy, or even a *tax*. This requires the modification of the well-known first-best policy combination by Bhagwati and Srinivasan (1974). Second, the first-best policy combination is more likely to include a rural *tax* when (1) the urban fixed wage rate is lower and/or (2) the domestic price of urban manufactured good is higher (e.g. a high import tariff on the manufactured good). Third, in contrast to Abe and Saito (2015), a rise in the export tax rate generally *reduces* the urban unemployment rate, which tends to improve welfare. Fourth, even so, the *level* of urban unemployment is more likely to increase if the initial rate of export tax is lower. Finally, a rise in the export tax rate is more likely to improve welfare when trade volume of this country is smaller.

Keywords open-access renewable resource, urban unemployment, export tax on the resource good, Harris-Todaro model

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