

# Free Trade May Save a Renewable Resource from Exhaustion\*

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## Abstract

This paper develops a small-open-economy model in which two tradable final goods are produced by using a primary factor and a non-tradable resource good, which has an open-access property and is produced from the primary factor. If the intrinsic growth rate of the resource is sufficiently high, there exists a unique non-trivial steady state that is globally stable. However, if the growth rate of the resource is relatively low, there may be no non-trivial steady state or multiple steady states. This implies that, in comparison with autarky, free trade may save the renewable resource of the economy from exhaustion.

**Key Words:** International trade; Open-access renewable resource; Intermediate good; Multiple steady states; Resource depletion

**JEL classification:** F11; Q27

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\*Very preliminary draft: Please do not quote without permission. Comments welcome.

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