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July 15, 2004

Professor Akira YOKOYAMA
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Dear Professor YOKOYAMA,

We are sending herewith the abstract of our manuscript entitled “Sustainable Constant Consumption in a Semi-open Economy with Exhaustible Resources” for your consideration, which we would like to present in the session under the theme of “Resource and Environmental Policies”, in the upcoming JEPA Third Conference to be held at Meiji University.

Please address all correspondence concerning this paper to the presenter:

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We would appreciate your letting us know the outcome of our paper as soon as possible.

Yours Sincerely,

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Sustainable Constant Consumption in a Semi-open Economy with Exhaustible Resources

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Abstract. To sustain constant consumption in a closed economy, the Hartwick rule prescribes reinvesting all resource rents in reproducible capital. However, the Hartwick rule is an ad hoc arrangement in that it is not invoked by the optimality conditions of competitive firms. In this paper, we address this insufficiency by deriving a constant consumption path endogenously in a semi-open economy, i.e., an economy with full access to world goods and capital markets while the mobility of the exhaustible resource is largely restricted within national borders. We examine the related paths of capital and resources and show that the Hartwick rule seems to be redundant and is not optimal in a semi-open economy. Our findings show that the economy transforms its domestic assets into foreign assets over time, ending up consuming a constant interest flow from the latter in the steady state. We argue that this is due to the essentiality of the both capital and resource input to the production process.

Key words: exhaustible resources; Hartwick's rule; international finance; steady state; sustainable constant consumption

JEL classification: D90; Q32; F32