

Optimal Environmental Policy in an Endogenous Growth Model with Habit Formation*

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Abstract

This paper studies what tax policy is effective in terms of welfare when individuals take care their habits but ignore environmental externality. We introduce capital income tax, consumption tax, and pollution tax into an endogenous growth model in which the agents derive utility from their consumption and disutility from the reference stock and pollution. We show that the capital income tax and the pollution tax affect the steady-state growth rate, whereas all taxes affect the transition to the steady-state which is saddle path stable. We derive the optimal environmental policy instruments that depends on the speed of habit formation and the degree of consideration of the reference stock, which suggests that the government should take into account agents' habit formation in order to achieve optimal growth.

Keywords: habit formation, consumption externalities, environment, Economic growth.

JEL Classification Numbers: D91, H21, O40.

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