

Health costs, maintenance costs and a tax scheme in an OLG economy*

Hiroshi Danbara[†]

Graduate School of Economics, Keio University

January 21, 2014

Abstract

In this paper, we introduce the environmental externality into Diamond's (1965) OLG model with production. The environmental externality affects agents' health, and therefore old agents have to pay the health costs. We define the golden rule allocation and a competitive equilibrium. Then we present an optimal tax scheme to achieve the optimal allocation.

Key words: overlapping generations economy; environmental externality; health costs; optimal tax scheme

JEL Classification Numbers: E22, H23, I18, O44, Q52

*The author is grateful to Hiroyuki Ozaki and Shuhei Shiozawa for their helpful comments. Furthermore, the author would like to thank Rintaro Yamaguchi and seminar participants at Kobe University for their comments. This work was financially supported by Mita Gakkai. Any remaining errors are the author's responsibility.

[†]E-mail: danbarah@gs.econ.keio.ac.jp