Insuring the Risks of Fertility Choices: The Macroeconomic Roles of Education Subsidy*

Kanato Nakakuni[†]

August 19, 2024 Click here for the latest version

Abstract

This paper studies the macroeconomic roles of college education subsidies by constructing a new general-equilibrium (GE) model with fertility choices. Fertility choices are irreversible, and thus, having (more) children will result in very low consumption upon future bad income shock, which comes at substantial utility costs. My calibrated and validated model demonstrates that an income-tested college subsidy provides partial insurance against such costly states associated with having children under income uncertainty. More educated parents benefit more from this insurance, and the associated fertility responses amplify the policy effects on inequality reduction, welfare improvement, and raising educational attainment and aggregate output in the long run, operating through the GE effects and intergenerational linkages.

Keywords: Fertility, education, overlapping-generations, college subsidy

JEL codes: C68, I28, J13, J24

[†]University of Tokyo, Japan. Email address: nakakunik@gmail.com.

^{*}I am deeply indebted to my advisors, Makoto Nirei and Sagiri Kitao, for their continuous guidance and support. I am also grateful to Minsu Chang, James Graham, Fergal Hanks, Chihiro Inoue, Akira Ishide, Yusuke Ishihata, Ryo Jinnai, Akihisa Kato, Tomoaki Kotera, Minjoon Lee, Kazushige Matsuda, Colin McKenzie, Toshihiko Mukoyama, Tomoyuki Nakajima, Yena Park, Ponpoje Porapakkarm, Xavier Ragot, Yuta Takahashi, Satoshi Tanaka, Kazuhiro Teramoto, Makoto Watanabe, Tomoaki Yamada, Shintaro Yamaguchi, Minchul Yum, and seminar participants at the Annual Macro Conference at Osaka University, Hitotsubashi University, OzMac workshop at Monash University, Waseda University, 2024 Spring Meeting of Japanese Economic Association, Meeting of the Society of Economics of the Household, 30th CEF Conference, and the Summer Workshop on Economic Theory for their many helpful comments. This study is financially supported by the Japan Society for the Promotion of Science (23KJ0374).