

The Demand for Money and the Liquidity Trap:

A Dynamic Optimization Approach*

Takayuki Ogawa†

Abstract

Using a money-in-the-utility-function model with sluggish nominal wage adjustment, this paper examines conditions for liquidity traps in which the nominal interest rate hits a zero lower bound and unemployment arises due to demand shortages. It is shown that if the liquidity trap exists, there is a continuum of perfect-foresight equilibrium paths: a path to full employment and multiple paths to the liquidity trap. Against a typical Keynesian view, in the liquidity trap government purchases crowd out private demand and a future monetary expansion has no effect on real economic activity.

Keywords: Demand for money, Demand shortage, Liquidity trap, Zero bound on nominal interest rates.

JEL Classification Numbers: E24, E32, E41.

* The authors would like to thank Yoshiyasu Ono and seminar participants at Okinawa International University, Osaka University, and Osaka University of Economics for their helpful comments and suggestions.

† Faculty of Economics, Osaka University of Economics, 2-2-8 Osumi, Higashiyodogawa-ku, Osaka 533-8533, Japan. Tel: +81-6-6328-2431; Fax: +81-6-6327-2390; E-mail: tkogawa@osaka-ue.ac.jp.