

Optimal Time-Consistent Monetary Policy in a Phillips Curve World

Thomas F. Cooley and Vincenzo Quadrini

Economics Department Working Paper

EC-99-15

Abstract

In this paper we study the optimal and time-consistent policy in a model economy that integrates the modern theory of unemployment with a liquidity model of monetary transmission. When the economy is subject to aggregate productivity shocks the optimal monetary policy is pro-cyclical--it increases the growth rate of money after a positive productivity shock and decreases the growth rate of money after a negative technology shock---and the model generates the Phillips Curve feature of a positive correlation between inflation and employment. We also study the long-run properties of the optimal policy under full commitment and compare it to the time-consistent policy. We show that, under some conditions, the optimal policy with commitment induces a long-run inflation rate that is higher than the long-run inflation rate in absence of policy commitment (time-consistent policy). This is in contrast to many studies that have argued that the inability of the monetary authority to commit induces a higher inflation rate.