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Stagflation, Persistent Unemployment and the Permanence of Economic Shocks*

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Abstract

When changes occur, people do not know how long they will persist. Using a simple stochastic structure that incorporates temporary and permanent changes in an augmented IS-LM model, we show that rising prices and rising unemployment – stagflation – is likely to follow a large permanent reduction to productivity. All markets clear and all expectations are rational. People learn gradually the permanent values which the economy will reach following a permanent shock and gradually adjust anticipations. In our model, optimally perceived permanent values take the form of a Koyck lag of past observations.

I. Introduction

The principal choices that people make in a market economy – choices between present and future consumption, between labor and leisure, between real and monetary assets – depend on beliefs about the future. In forming their beliefs, individuals attempt to separate transitory and ephemeral changes from permanent and persistent changes. Even individuals who are fully informed about past and current values cannot be certain about future values. A basic inference problem that individuals face is to distinguish permanent values of variables like income, wages and prices from current values.[1]

This paper analyzes an economy in which decisions depend not just on the changes that occur but on their persistence. The economy is subject to real shocks to the labor, commodity and money markets and to nominal shocks to the money shock. Each shock has a permanent and transitory component. Indi-

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[1] Permanent income is related to *Friedman's* (1957) permanent income hypothesis. Beliefs about permanent wages play an important role in the determination of current labor supply decisions. See *Lucas/Rapping* (1969) and *Brunner/Meltzer* (1978).

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