Exact microeconomic foundation for the Phillips curve under complete markets: A Keynesian view

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Abstract

Assuming that the labor productivity varies with the previous employment level, we derive the Phillips curve based on the *standard* dynamic microeconomic foundation. The usage of the term *standard* implies that our theory entirely excludes the assumptions unfamiliar with microeconomics such as price or information stickiness, and money in the utility function.

We find that when labor productivity decreases, disinflation advances. This is because disinflation, ceteris paribus, limits the current goods supply and increases the rate of return on money (the inverse of the inflation rate) in an overlapping generations (OLG) model. In addition, mass unemployment becomes a hazard for the intergenerational skill transformation, and thus, the higher the unemployment is, the lower the labor productivity becomes in the stationary state. Consequently, the negative correlation between inflation and unemployment emerges even in the dynamic general equilibrium in complete markets.

It is also noteworthy that we depend neither on linear approximations nor on numerical methods: the method used to derive the Phillips curve is purely analytical.