Do Advances in Robots Change the Inflation Dynamics?*

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Very Preliminary

Abstract

We provide novel evidence that inflation more weakly responds to changes in output gap (demand and supply conditions) as the economy employs more robots in the production of goods, which implies the Phillips curve becomes flatter. We rationalize this finding in an otherwise standard New-Keynesian model: incorporating robot capital. The robot capital has a distinguishing feature from the traditional capital: the higher elasticity of substitution to labor. We show the resulting model is consistent with the observed fact, presenting a simple intuitive mechanism. We also discuss the possibility that advances in robots could be one of possible explanations for the recent missing inflation puzzle in which inflation has been unexpectedly low in many countries.

JEL classification: E12, E22, E31

Keywords: Robot; Automation; Phillips Curve; Missing Inflation.

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