

# The Cost of Inflation in a Network Economy<sup>\*</sup>

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## Abstract

Empirical evidence suggests that there is little to no correlation between the rate of inflation and the size of price change. Economists have hitherto taken this to mean that monetary injections do not generate much deviation in relative prices and therefore inflation does not hurt the economy by impeding the workings of the price system. While such an inference is perfectly correct with Calvo and Menu-Cost style price setting, the inference is not true in general. This paper presents a production network model of inflationary dynamics in which it is well possible for inflation to have near-zero (even negative) correlation with the size of price change yet cause significant deviation of relative prices from their steady state values. The wedge between the ‘size of price change’ and the ‘relative price deviations’ caused by inflation critically depends on heavy-tails in the degree distribution of the production network, heterogeneity in the initial impact of monetary shocks, and the subdominant Eigenvalue of the production network which determines the rate of convergence to equilibrium.

**JEL Classification** E52, E31, E51.

**Key Words** Inflation, Prices, Production Network, Disequilibrium.

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