Debt, Inflation and Growth

Robust Estimation of Long-Run Effects in Dynamic Panel Data Models*

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Abstract

This paper investigates the long-run effects of public debt and inflation on economic growth. Our contribution is both theoretical and empirical. On the theoretical side, we develop a cross-sectionally augmented distributed lag (CS-DL) approach to the estimation of long-run effects in dynamic heterogeneous panel data models with cross-sectionally dependent errors. The relative merits of the CS-DL approach and other existing approaches in the literature are discussed and illustrated with small sample evidence obtained by means of Monte Carlo simulations. On the empirical side, using data on a sample of 40 countries over the 1965-2010 period, we find significant negative long-run effects of public debt and inflation on growth. Our results indicate that, if the debt to GDP ratio is raised and this increase turns out to be permanent, then it will have negative effects on economic growth in the long run. But if the increase is temporary then there are no long-run growth effects so long as debt to GDP is brought back to its normal level. We do not find a universally applicable threshold effect in the relationship between public debt and growth. We only find statistically significant threshold effects in the case of countries with rising debt to GDP ratios.

Keywords: Long-run relationships, estimation and inference, large dynamic heterogeneous panels, cross-section dependence, debt, inflation and growth, debt overhang.

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