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Public debt, economic growth and nonlinear effects: Myth or reality?

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Abstract

This paper puts a variant of the Reinhart-Rogoff dataset to a formal econometric testing to see whether public debt has a negative nonlinear effect on growth if public debt exceeds 90% of GDP. Using nonlinear threshold models, we show that finding a negative nonlinear relationship between the public debt-to-GDP ratio and economic growth is extremely difficult and sensitive to modelling choices and data coverage. In the very rare cases when nonlinearity à la Reinhart and Rogoff can be detected, the negative nonlinear correlation kicks in at very low levels of public debt (between 20% and 60% of GDP). These results, based on bivariate regressions for central government debt from 1946 to 2009, are confirmed on a shorter dataset including general government debt (1960-2010) using a multivariate growth framework and Bayesian model averaging.

JEL classification codes: E6 ; F3 ; F4 ; N4
Keywords: public debt; economic growth; nonlinearity; threshold effects

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