Shocks in public investments and the asymmetric effects on the private sector

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The empirical literature has extensively analysed the macroeconomic effects of public investments. However, there are still open questions worth to be addressed. From the econometric perspective, the biggest concern is represented by the endogeneity of public investments, as they are jointly determined with the macroeconomic environment. In this study, we depart from the existing literature by exploiting new panel econometric techniques that allow us to address two main characteristics of the phenomenon under analysis, namely endogeneity and asymmetric effects. The endogeneity of public investment is addressed by using its forecast errors. The asymmetric effects are tested and estimated through a non-linear autoregressive distributed lag model (NARLD) proposed by Shin et al. (2014). Using quarterly data over 1970-2021 for 17 OECD countries, we establish an asymmetric cointegrating relationship between public and private investments. The results suggest that the long-term coefficients associated with negative shocks in public investments are significantly higher (in absolute value) than those associated with positive shocks. Conversely, the short-run effects appear to be symmetric. Dynamic multipliers show that the asymmetries become significant after six to seven quarters following the shock.