

# State Governments' Deferral of Maintenance Expenditures as a Borrowing Tool

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## Abstract

I examine the effect of unexpected revenue shocks on credit constrained governments' deferral of the different expenditures, with a particular focus on maintenance. To study maintenance expenditures, I compile a novel data set from various state highway statistics. Relying on the institutional design of federal highway grants, I construct a measure of future federal highway grant shocks that captures revisions in state governments' expectations. I find that state governments increase maintenance expenditure when they receive a positive grant shock. The maintenance effects are the most responsive component of highway expenditure and are precisely estimated. Consistent with the use of maintenance deferral as a secondary borrowing tool, I further find that maintenance expenditures are even more positively affected by the grant shocks in states with referendum debt approval for capital projects. I theoretically characterize the dynamic choice of highway administrations between borrowing, investment, and maintenance expenditures when they face unexpected shocks. In presence of such uncertainty, I analytically show the extent by which the deferral maintenance expenditures can be optimally used as a secondary source of borrowing to transfer resources over time. Finally, I use the New York state maintenance and road conditions data on all roads to estimate the monetary cost of deferring maintenance and calibrate the model to present the extent by which such behavior is optimal.

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