

# Identifying the Effects of Grants on Local Expenditures and Policies in the Presence of Grant Endogeneity and Grant Effect Heterogeneity

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## PRELIMINARY AND INCOMPLETE

### Abstract

Although recent empirical studies on the effects of intergovernmental grants on local spending and other outcomes have increasingly taken into account grant endogeneity, most of them rely on a linear estimation framework with a constant treatment effect or do not explicitly consider treatment heterogeneity in their theoretical and empirical models. In this paper, assuming a two-stage grant allocation process and relying on the potential outcome framework, I explicitly consider the case where heterogeneous characteristics of local governments induce endogenous grant allocation and heterogeneous grant effects on local spending. Then I discuss how an exogenous, discontinuous or kinked grant allocation rule can be utilized to solve the problem of grant endogeneity under the assumption of grant effect heterogeneity. Finally, using Japanese municipality panel data, I examine the causal effects of fiscal equalization grants on local expenditures and policies with a Regression Kink design. Results imply that, for a specific subgroup of relatively affluent municipalities, the grants have an almost one-to-one effect on total expenditure and expenditures for non-personnel education costs are arguably most significantly affected by the grants. Effects on other various expenditure categories and policy indicators are also estimated and interpreted.

**JEL classification:** C13, C21, H71, H72, H77

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