Designing Federal Aid to State and Local Governments during the Pandemic Recession: How to Make Aid Adaptable to National Economic Conditions and to State and Local Needs

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Appendices

Appendix A: Unemployment and Local Budgets

How badly are local government budgets affected by higher unemployment? We can make some reasonable estimates. Based on the 2017 Census of Governments, local government own-source tax revenue is 75 percent of state government own-source tax revenue—this ratio excludes intergovernmental transfers.

A large share of local government revenue derives from property taxes. Ordinarily we might assume that property tax revenue is less volatile with respect to economic conditions, at least in the short run. But in the current crisis, there may be significant property tax delinquencies, which could make this source of revenue less stable. Excluding property taxes, local own-source tax revenue is 21 percent of state government own-source tax revenue.

If we assume that property tax revenue is half as volatile as overall state revenue, and that other local tax revenue is as volatile as state revenue, then local-government budget problems caused by an increase in the unemployment rate, measured in dollars, will be 48 percent as large as the state budget response. This is derived by taking the average of 75 percent and 21 percent.

This calculation is based only on the revenue sensitivity of local budgets versus state budgets. But, as mentioned, the research on state budget problems resulting from higher unemployment suggests that over 90 percent of these problems are caused by lower tax revenue. A much more minor role is raised by spending pressures created by higher unemployment. The calculation made here assumes that the relative spending effects of higher unemployment on local budgets versus state budgets will follow a similar pattern as the relative revenue effects. Because spending pressures play only a minor role, this assumption likewise plays only a minor role in the overall dollar figure that is calculated.

Appendix B: Allocating Funds between State and Local Governments, and Then among Local Governments

To make this funding sensitive to differences between the states in the relative roles of state and local governments, the allocation between a state government and all its local governments could be based on a simple average of two factors:

1) total tax revenue of each type of government, and
2) total nonproperty tax revenue of each type of government.

This formula allocation is consistent with the overall determination of total federal fiscal aid. In states where local governments play a larger role in raising revenue vis-à-vis the state government, the local government share would be larger, and vice versa.

Among local governments in a state, the funding share of each could be allocated based on the local increase in the unemployment rate and the local government's tax revenue. Specifically, an index of "need" for each local government could be calculated as the product of the following two things:

1) the increase in the unemployment rate from 2019 in the local government's county, and
2) the average of the local government's total tax revenue and its total nonproperty tax revenue.

Sum this index over all local governments in the state. Then divide the aggregate local government share of federal aid in the state, calculated above, by each local government's share of this index sum. This formula apportionment responds to the severity of local need and also adjusts for the locality's size based on its revenue share.