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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The coronavirus pandemic has a significant likelihood of leading to a long and severe recession. In this unprecedented public health and economic challenge, any forecast is highly uncertain. But it is plausible that this pandemic will cause lasting damage to many small businesses, and that it will lower business and consumer confidence.

The "Pandemic Recession" could be made worse by state and local spending cuts. The recession will significantly reduce state and local tax revenue. State and local governments are required to balance their budgets, so reduced tax revenue will lead either to tax rate increases or to spending cuts—more likely the latter.

State and local spending cuts will harm the economy and increase overall unemployment. Budget cuts will lead to layoffs not only of state and local workers but also of workers who work on state and local contracts and grants. As all these workers are laid off, they will reduce their spending on various consumer goods and services, which will reduce employment further in the already hard-hit retail sector.

These budget cuts are likely to begin soon. For example, even if K–12 schools can restart in the fall, many parents will discover that spending cuts have led to fewer special education specialists and larger class sizes.

What can be done to reduce the harm resulting to the economy from state and local budget cuts? The best solution is large and flexible federal aid to offset budget losses inflicted by the pandemic.

So far, such large and flexible federal aid has not been forthcoming. The $2.2 trillion CARES Act, passed in March 2020, included a widely publicized program of state and local fiscal aid of $150 billion. But this $150 billion can be used by state and local governments only to pay for extra spending that is directly related to the coronavirus and that was not previously budgeted. The $150 billion *cannot* be used to backfill the revenue hole caused by the Pandemic Recession. Thus, while this money can be used to hire additional public health workers, it cannot be used to pay regular public expenses for police, firefighters, or teachers.

New congressional action to deal with the pandemic should include more federal aid to state and local governments. The National Governors Association has called for $500 billion in federal assistance to states. The U.S. Conference of Mayors, the National League of Cities, and the National Association of Counties have jointly called for $250 billion in federal assistance to local governments.

As of this writing, the political outlook for added federal aid to state and local governments is highly uncertain. But if federal aid to state and local governments is not adopted soon, the consequence will be a worse national economy not only in the fall but in coming years.

Any new federal fiscal aid to state and local governments should have the following four characteristics:

1) The federal aid to state and local governments should be responsive to national economic conditions: it should expand if the economy performs worse than expected, and it should contract if the economy does better. We don't know right now how severe the recession will be; thus, making the aid adaptable is a wise precaution.

2) The federal aid should be timely, responding as quickly as possible to changing economic conditions. Delay harms the prospects for a speedy economic recovery.

3) The federal aid should be targeted on the state and local areas facing the most severe unemployment conditions; these areas will be suffering the biggest revenue declines. We don't want aid flowing to geographic areas that don't need it while other areas that continue to suffer economically are left out in the cold.

4) The federal aid should be designed around the varying importance of local governments in different states. For example, county governments are quite powerful in some states, while nearly nonexistent in others. In some states, local governments have substantial revenue-raising powers, while in others they are largely dependent on transfers from the state. Although the decisions about local government allocations could be left to state governments, the federal government may wish to make allocations directly to local governments to ensure equity among communities with different needs.

This proposal presents some specific ideas on how these goals can be achieved in a new federal fiscal-aid package for state and local governments.

The best recent research on the impacts of recessions on state tax revenues and fiscal health is contained in the papers by Fiedler, Furman and Powell (2019) and Fiedler and Powell (2020). This research finds that for each 1 percentage point increase in the national unemployment rate, state governments collectively face an annual budget shortfall of $45 billion. Although some of this budget shortfall is due to increased social spending necessitated by higher unemployment, over 90 percent is due to higher unemployment leading to lower state tax revenue.

Their research, although sound, may understate just how much increased unemployment rates in today's economy may affect state budgets. During the current crisis, we are adopting measures like work sharing, in which workers have their hours reduced and collect partial unemployment benefits. Measures like these imply that unemployment rates will not fully capture labor market distress. Also, because of nonessential business closures, the current crisis may reduce sales, and thus sales tax revenue, even more than what might ordinarily be expected based on the unemployment rate. By not accounting for these possibilities, this proposal provides a *lower-bound* estimate of the state-government budget problems that will be caused by current increases in the unemployment rate.

Under reasonable assumptions, the local-government budget problems due to increased unemployment, measured in dollars, will be about 48 percent as large, proportionally, as the state budget problems. This lower effect occurs in part because local governments on average raise 25 percent less revenue than state governments. In addition, local governments rely more on property tax revenue, which is less sensitive to economic conditions than income or sales tax revenue. Based on the research cited above on state-government budget problems, this 48 percent figure would imply at least $22 billion in budget problems for local governments collectively, given a 1 percentage point rise in the unemployment rate. (Appendix A describes how this calculation was made.) Combining the estimates for state and local budget impacts, each 1 percentage point increase in unemployment will lead to annual state and local budget shortfalls of at least $67 billion, with about two-thirds of that amount due to state budget problems and one-third to local budget problems.

The proposal here is to use this information to make federal fiscal aid available on a monthly basis. Each month, total federal fiscal aid to state and local governments would be determined by a formula based on the most recent unemployment numbers, which are available from the U.S. Bureau of Labor Statistics (BLS) with about a one-month lag.

Specifically, each month, the national unemployment rate would be compared with the average national unemployment rate for 2019, which was 3.7 percent. Each month's gap in this measure would be multiplied by a monthly aid rate, derived from the calculation above, meant to capture state and local budget problems resulting from elevated unemployment. Assuming the $67 billion annual shortfall from above, the monthly payment would be $5.6 billion ($67 billion divided by 12) for each 1 percentage point by which the national unemployment rate exceeds 3.7 percent.

For example, the BLS in early May will report the national unemployment rate for April. Suppose that the April unemployment rate ends up being 10.0 percent. This unemployment rate would be 6.3 percentage points higher than the 2019 average. If the proposed program were in effect, the federal government would make a first-month's payment to state and local governments, in the aggregate, of $35.3 billion. This $35.3 billion payment would be made in May of 2020. In turn, payments would be made in June of 2020 based on May unemployment data, and so on.

Under this program, payments would automatically rise or fall each month, depending upon the economy. If the economy were to have a quick, "V-shaped" recovery, dipping and then

bouncing back, then monthly payments would quickly diminish to zero. If the economy were to deteriorate, monthly payments would increase. In this way, the program is immediately responsive to national economic conditions and their implications for state and local budget problems.

How much in aggregate would be paid out? That depends upon how well the economy recovers. For some illustrative calculations, I use the latest forecast (April 9, 2020) from the University of Michigan's Research Seminar in Quantitative Economics (RSQE), a well-known forecaster. This forecast includes quarterly projections, from the second quarter of 2020 through the first quarter of 2022, for the national unemployment rate.

Suppose we assume that the proposed federal fiscal-aid program, of a $5.6 billion payment per 1 percentage point increase in the unemployment rate, were in effect and were made retroactive from the beginning of the second quarter of 2020 through the first quarter of 2022. Then the unemployment rates and quarterly payments would look as follows:

Payments in Billions, Federal Fiscal Aid, under Proposed Formula and Unemployment Forecast

	2020			2021				2022	
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	2-year total
RSQE-forecast unemployment	13.6	7.5	6.9	6.7	6.3	5.9	5.7	5.4	
Quarterly federal aid to state/local, billions of $	166	64	54	51	44	37	33	29	478

The two-year total of federal aid is $478 billion. This is less than the $750 billion requested by governors and local officials. But this amount would rise significantly if the recession is worse than forecast. And if the recovery is stronger, the payment would shrink.

How would this federal aid be allocated among the states? My suggestion is that the allocation be based on each state's "extra number of unemployed."

Specifically, roughly two weeks after reporting the national unemployment rate for a particular month, BLS reports estimates of each state's unemployment rate. For each state, take this monthly unemployment rate. Subtract the state's unemployment rate averaged over 2019. Multiply this difference in the unemployment rate by the state's most recent labor force estimate (provided by the same source) to get the state's "extra number of unemployed." This number is an indicator of the state and local budget needs caused by the recent increase in the state's unemployment rate. Federal fiscal aid could be allocated based on each state's share of the national total of extra unemployed.

Under this formula, if two states had the same increase in their unemployment rates but one of the states was twice as large in its population and labor force, the larger state would receive twice as much in federal funds. If two states were of the same population and labor force but one had twice the increase in its unemployment rate as the other, the harder-hit state would receive twice as much in federal funds. Thus, the formula is properly responsive to both the size of the state and to how much its economy and budget have deteriorated.

How should this federal aid be divided between a state government and its respective local governments? This could be left to the discretion of state governments, but the federal government could also consider using a formula for this allocation as well. Appendix B proposes a specific formula that responds to differences across states in the relative fiscal roles of local governments and the state government, as well as to variations in local economic need.

Prompt federal action is needed if we want to avoid the economic problems caused by large state and local budget cuts. Without federal action, those problems will greatly intensify during the summer and fall. But given the uncertainty about the severity of the economic crisis, federal aid should not be excessive if some of our economic fears prove unwarranted, nor should it be lacking if the economy worsens. In addition, we want our federal assistance to be targeted on the state and local governments that most need the aid. This proposed federal fiscal-aid package meets these goals of being timely, automatically adjustable to economic conditions, and targeted on need.

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.