

Why is There Little or No Contingency Planning for the Fiscal Response to an Economic Recession?

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Abstract: The NBER has identified a dozen formal recessions over the past sixty years. Yet the planning for fiscal response remains rudimentary at best. At the federal level, aggressive counter cyclical spending is typically enacted in response to a recession. However, in the absence of a formal contingency plan, Congress is invariably forced to cobble together legislation with little time for meaningful review of a spending program on a scale and for a scope that virtually all would deem irresponsible if not for the pressure to "do something." At the state and local level public spending tends to be pro cyclical rather than counter cyclical. However, governments seem equally ill prepared for the magnitude of budget cuts they are invariably required to make. This paper calls for significant policy reform. Specific suggestions are offered for the structure and objectives of fiscal contingency planning. However, the primary goal of the paper is to simply stimulate meaningful dialogue among economists.

Keywords: Recessions, fiscal policy, contingency planning.

1. INTRODUCTION

The NBER has identified a dozen formal recessions over the past sixty years. Despite this well-documented pattern, planning for a fiscal response to a recession remains rudimentary at best. At the federal level, counter cyclical spending is typically enacted in response to a recession. However, in the absence of a formal contingency plan, Congress is invariably forced to cobble together legislation with little time for a meaningful review of a supplemental spending program on a scale and for a scope that virtually everyone would deem irresponsible if not for the pressure to "do something." At the state and local level public spending tends to be pro cyclical rather than counter cyclical. However, state and local governments appear to be equally ill prepared for budget cuts they are required to make. This paper calls for significant policy reform. Specific suggestions are offered for the structure and objectives for fiscal contingency planning. However, the primary goal of the paper is to simply stimulate meaningful dialogue among economists.

2. THE CASE FOR A STATE-CONTINGENT BUDGET FOR PUBLIC EXPENDITURES

For the federal government, one seemingly straightforward approach would be for Congress to identify priorities for items, or components of items, in the budget it approves for any given fiscal period. Congress could also identify conditions, or contingencies, when formally approved spending

priorities are subject to review. Despite such flexibility, proposals for budget priorities could be vetted as fully as desired prior to formal budget approval.

In support of the general effort to identify and maintain budget priorities that are conditional, or state-contingent, a team of economists could be assigned the task of evaluating specific proposals and contingencies. The team could also be asked to provide estimates for the amount of time required to implement and complete each category of projects. Such procedures are unlikely to result in a perfectly functioning program for state-contingent spending. However, any substantive planning in advance of a recession is presumably better than no planning. As evidence of the current benchmark for such planning, or lack thereof, one need only note that even stimulus projects that are commonly referred to as "shovel ready" typically require multiple years to implement.

Projects considered for a conditional or state-contingent extension of a budget could be limited to routine expenditures that normally would be scheduled for periods beyond the immediate fiscal period. Economic analysis also could be employed to establish guidelines for an effective state-contingent budget. An example for such an approach is presented in the Appendix for this paper. However, as noted in the overview for the paper, the primary objective of the example is to promote a discussion among economists.

The example provided in the Appendix combines two theoretical models. In one model, Samuelson (1954) assumes that significant unemployment does not exist for labor or for other factors of production. Based on this assumption, Samuelson concludes that

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any allocation of factors of production to public goods necessarily comes at the expense of production for private goods. In a competing model, Lewis (1954) assumes that in developing economies governments have unlimited access to free labor. Despite the fact that both of these models were presented in the same year, and despite the fact that more than one half century has passed since that year, it would appear that little if any progress has been made in terms of resolving the fundamental conflict between the implications of these findings for properly functioning fiscal policy. In recognition of the continuing uncertainty, services that are provided by public and private groups, such as the Tax Policy Center can do little more than speculate with respect to potential responses of the federal government and of state and local governments when an economic recession occurs.

The model presented in the Appendix of this paper proposes a blend of the extreme models presented by Samuelson and Lewis. In the blended model, there are times and conditions when some governmental units have at least partial access to factors of production that otherwise would be unemployed. For this intermediate assumption, the extent to which a government has access to unemployed factors of production emerges as an essential scaling variable for the real opportunity cost of public expenditures.

Two potentially important findings emerge from the blended model. First, a new method is identified for evaluating a potential fiscal project in terms of the availability of the factors required for a particular government service at a particular point in time. Second, the nature and extent of the variation in access to factors that are required for government services can be monitored over time in order to appropriately customize a general contingency plan for the public response to a given recession.

For example, to prepare for growing concern of a potential melt down in new home construction during the Great Recession of 2008, Congress could have included a provision in a supplemental budget that would have allowed for conditional authorization for the re-deployment of resources formerly used by home builders to new programs, such as the repair of public schools or other types of public buildings. As previously noted, Congress could have retained general authority with respect to whether or not spending from the supplemental budget would actually occur. However, planning for such state-contingent expenditures could be done in advance of such approval.

The need for a state-contingent budget is not limited to the federal government. On the contrary, the logic is equally compelling for a state or local governments that is required to maintain a balanced budget, as well as a state or local governments that is permitted to engage in pro cyclical public expenditures. Given the frequency of economic recessions, one might reasonable wonder why there is so little advanced contingency planning for the efficient scaling back of budgets for a state or local government that is required to maintain a balanced budget. At the very least, one might reasonably presume that a state or local government would be willing and able to assign priorities to various classes of expenditures within its budget.

As in the case for a contingency plan at the federal level, a relatively simple priority system can be employed for the potential scaling back of expenditures by a state or local government during a recession. Two specific examples are considered in the Appendix. First, in the case of a typical recession, there could be a significant increase in the value of the marginal product of private goods. Advocates of the Schumpeter view might regard this effect as a natural consequence of "creative destruction" in the sense that surviving private production is likely to focus on products with relatively high value of marginal productivity. Other economists might think of this effect as simply a natural consequence of declining marginal productivity, but in reverse. I.e. for a decrease in the amount of production, marginal productivity should increase. Hence, by simply analyzing the current magnitude of a potential increase in opportunity cost, and the trend in that value over time, it might be possible to improve on a simple mandate to maintain a balance budget under all conditions.

Second, as previously noted in the case of the federal government, access to unemployed factors of production can serve as a scaling effect for the opportunity cost of public expenditures. Accordingly, an appropriate analysis of the markets for factors of production could serve as an additional conditioning effect for appropriate priorities for budget cuts.

For example, if resources are highly specialized for a particular government service, such as fire and police, then the potential private sector demand for those factors might be relatively modest. In such cases, the potential gain within the private sector from a potential reduction in specialized government services could be substantially less than the potential gain for the private sector from a potential scaling back of

government services that rely on more generic factors of production. In principle, if a team of economists could provide such evaluations in advance of a recession, the adverse impact of a scaling back could be managed more effectively.

Extending this logic, it is conceivable that economic analysis could ultimately identify an optimal pattern for the fiscal response to a recession. In the Appendix it is demonstrated that when the effects of the marginal value of public goods and private goods are considered together, the combined effects can produce a pattern of optimal public expenditure that is pro cyclical, as adopted by most state and local governments, rather than counter cyclical, as typically employed by the federal government and as uniformly advocated by neo Keynesians. Moreover, seemingly contradictory patterns can be simultaneously optimal for different government entities. This finding offers hope for a logical resolution of a paradox Hansen and Petroff (1944) refer to as "fiscal perversity".

The coordination of contingency planning at various levels of government represents an additional area for potential benefit. For example, if a particular state or local government is required to scale back on the extent of its own public expenditure, such reductions would presumably release labor and other factors of production, such as office space. These factors of production might be ideally suited for new programs the federal government would simultaneously seek to implement. Proper coordination could thus serve to minimize adverse effects on private sector access to factors of production during a period of both a pro cyclical pattern for state and local government expenditure and a counter cyclical pattern for federal government expenditure.

3. THE CASE FOR A PRE-PLANNED FISCAL EXIT STRATEGY

At the risk of stating the obvious, it is essential to note that any justification for a state-contingent change in optimal public expenditure will be temporary. In particular, when enhanced access to idle resources comes to an end, there is a corresponding end to the rationale for enhanced public expenditure. Moreover, to the extent that counter cyclical fiscal policy succeeds in terms of reversing an economic downturn sooner rather than later, such success can only accelerate the need for a practical and effective exit strategy. Accordingly, an optimal strategy for state-contingent public

expenditure must clearly identify an appropriate end, as well as an appropriate beginning.

The case for a pre-planned exit strategy also applies to government entities that adopt pro cyclical expenditure patterns. An economic recession is as unlikely to end on the eve of a routine budget review, as it is to begin at such a convenient time. Accordingly, whenever a state or local government enacts a cut in public expenditure in response to an economic downturn, it should also specify the conditions and schedule for the resumption of spending programs. As previously noted, the respective governmental bodies could retain control over the general form and timing of an exit strategy. Yet the desire for such control need not translate into a complete absence of any pre-planning for such regularly occurring events.

Exit strategies for state-contingent changes in public expenditure programs can also benefit from improved coordination across governmental entities. For example, during a period of recession, an agreement might be reached to simply lend workers and other factors of production, such as office space from state and local government to the federal government. The implicit or explicit assumption could be that such workers and other factors of production would be returned following the end of formally designated recession.

4. THE CASE FOR INDEPENDENT STATE-CONTINGENT FISCAL AUTHORITY

Recognition of the temporary nature of an appropriately managed program for state-contingent fiscal policy is reminiscent of an earlier debate with respect to opportunities for state contingent optimal monetary policy. Following the creation of the Federal Reserve System in 1913, there were extensive and prolonged discussions regarding the "outside lag" for monetary policy. As commonly defined, part of the outside lag is due to practical limits for timely measures of economic activity. Additional time is required to enact a policy a change. I trust most economists will acknowledge the technology for measuring economic activity has greatly improved during the century following the creation of the Federal Reserve System. I also presume most economists will concede that the additional time lag for taking monetary action was greatly reduced with the establishment of an independent body of economists at the Federal Reserve Board who do not have to wait for the formal approval of a legislative body.

In contrast to the apparent progress that has been made in terms of reducing the lag time for effective monetary policy, and despite best efforts from whatever political party happens to be in power during a particular recession, fiscal policy in the US is essentially stuck at the pre-Fed level of development for monetary policy. For many if not most counter cyclical fiscal stimulus programs, the effective response time is measured in years rather than months.

In an effort to reduce and potentially minimize the outside lag for fiscal policy, Congress could pre approve a body for fiscal policy that would be analogous to the Federal Reserve Board of Governors. Congress could assign authority, conditional on receiving the green light from Congress, to manage the program for state-contingent expenditure by appropriately picking and choosing from items in the supplemental budget so as to tailor both the level for supplemental spending and the mix of new projects, so as to best reflect the essential comparison expressed as equation 2 in the Appendix. Such an independent body might even be assigned the task of developing input for conditional budgets and contingency planning in advance of economic recessions.

5. A CLOSING OBSERVATION

As previously noted, the formal model presented in the Appendix is modified version of Samuelson's (1954) pure theory for public expenditure. As such, the model does not consider financial aspects of optimal fiscal policy. Nevertheless, it would not appear to be much of a stretch to extend observations regarding the need for contingency planning to include state-contingent tax policies. Over the years, creative and potentially constructive programs have been crafted in the midst of economic crises. Nevertheless, the costs in terms of time delays and efficiency in terms of actual delivery have reportedly been substantial.

For example example, during the US recession of 2001, the US Congress enacted sweeping tax cuts that were innovative but complex. One part of the program offered tax rebates that were initially based on income earned during the year 2000. However, many taxpayers were initially uncertain about how to claim the rebate. As a result, there was a reoffering of the tax rebates based on income earned in 2001 for tax payers that did not receive the rebates on income earned in 2000. Thus, despite the fact the NBER would eventually determine the recession of 2001 ended in November of 2001, many of the tax rebates were not

received until the spring of 2002. It has also been reported the tax rebates were so difficult to evaluate and process that the IRS ultimately incurred roughly one dollar of additional cost for each dollar eventually rebated to taxpayers. More extensive pre planning between Congress and the IRS might have resulted in a state-contingent program for tax rebates that was both more efficient in terms of processing costs, and faster in terms of getting stimulus funds to taxpayers. Accordingly, it is hopefully understood that despite a deliberately narrow focus of the formal model, the general recommendation in support of greater pre planning for economic contingencies applies to fiscal policy, broadly defined as well as pure public expenditure.

APPENDIX

A general model would allow for multiple categories of goods and services. A general model would also incorporate multiple factors of production. However, for the narrow objective of this paper, it is sufficient to consider an economy in which there is a single private good and a single public good. It is also sufficient to assume the production of each good depends on a single factor of production namely labor.

Let x denote quantity of labor allocated to the production of the public good, and let y denote the quantity of labor allocated to the production of the private good. In addition, let $f(x)$ and $g(y)$ denote the respective levels for the public good and the private good that are produced for corresponding allocations of labor. Based on these definitions, the goal for a well-intentioned policy maker is to maximize a social utility function that is defined over levels of public and private goods that are produced.

$$1) \quad U[f(x), g(y)]$$

By taking the derivative of the social utility function (1) with respect to x , we find that the marginal allocation of labor to the production of the public good is beneficial up to the point where:

$$2) \quad U_1 f' + U_2 g' dy / dx = 0.$$

In classical economics, the wage rate adjusts as needed to assure that significant unemployment does not exist. In such a case, any allocation of labor to the public good necessarily reduces the allocation of labor to the private good at a rate of one for one. The corresponding value for the term dy/dx in condition 2 is

-1. Therefore, in the classical model presented by Samuelson, the opportunity cost of public expenditure is simply the rate at which private goods are crowded out g' , times the marginal value of private goods U_2 . The optimal level for public expenditure is then determined by comparing the opportunity cost of public expenditure to its benefit, which is measured by the marginal rate of productivity for public goods f' , times the marginal value of the public goods produced U_1 .

In an extension of the classical model, non-trivial unemployment is possible, at least under certain conditions. For this assumption, it is conceivable that a portion of the allocation of labor to the public good might come from labor that otherwise would be idle rather than from labor that otherwise would be allocated to the private good.

In his work on the economics of developing nations, Lewis (1954) adopts an extreme form of this assumption that is the logical opposite of the assumption considered by Samuelson (1954). Specifically, Lewis assumes the entire allocation of labor to the production of public goods would be idle if not for action by the government. Additional proposals for public expenditure that appear to be at least suggestive of the extreme assumption of Lewis include calls for the government to serve as "employer of last resort", and proposals for the conversion from a system of public welfare to a system of public "work fare".

For the extreme case of unlimited government access to free labor, the corresponding value of dy/dx is zero in condition 2. By implication, the marginal opportunity cost for the production of the public good is zero. The corresponding special case of condition 2, i.e. for $dy/dx = 0$, establishes that marginal public expenditure is beneficial as long as there is at least some degree of productive efficiency in the public sector $f' > 0$ and at least some marginal social value of the public good $U_1 > 0$.

For an intermediate case, part of the incremental allocation of labor to the public good comes from labor that otherwise would be idle and part comes from labor that otherwise would be allocated to the private good. For any such mix of allocations dy/dx is less than unity but greater than zero. Accordingly, and as indicated by the general form of condition 2, the effect of the term dy/dx , serves as a scaling factor for the classical Samuelsonian measure of the opportunity cost of public expenditure.

The extent of public sector access to idle resources need not be constant. In particular, during a period of normal economic activity with normal levels of employment for factors of production the rate of substitution between public expenditure and private expenditure might approach unity. In such a case, the classical Samuelsonian test would apply for public expenditure. However, during a period of economic contraction and significant under employment of labor and other factors of production a level of public expenditure that might not pass the test presented by the classical Samuelsonian version of condition 2 might nevertheless pass an appropriately modified version of that test in which the extent of access to idle resources is viewed as a state-contingent reduction in the opportunity cost of public expenditure.

When considering such potential support for a Keynesian type pattern of counter cyclical public expenditure, it is important to note that the optimal pattern for state-contingent public expenditure can be pro cyclical rather than counter cyclical. To establish this possibility, one need only recall that it is typically assumed that marginal productivity declines with the level of production. Accordingly, during a recession in which the level of production declines for the private sector, the rate of marginal productivity is likely to increase for the private good.

Figures 1, 2 and 3 collectively illustrate the effects of such changes on the optimal level of public expenditure. Figure 1 corresponds to a base case of normal economic activity. The declining curve represents the value of marginal product for the public good, expressed as a function of the allocation of labor to the public good. The value of marginal product for the private good is represented as a rising curve based on the classical assumption that the entire allocation of labor to the public good comes at the expense of the

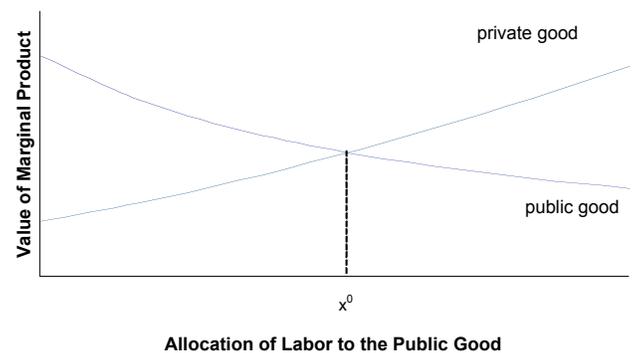


Figure 1: Optimal Allocation of Labor to Public Goods Under Normal Conditions.

allocation of labor to the private good. The intersection of the two curves identifies optimal public expenditure for the classical version of condition 2 ($dy/dx = -1$).

Figure 2 illustrates the ceteris paribus effect of an increase in the value of marginal product for the private good. This is reflected by an upward shift for the curve representing the value of marginal product for the private good. Note that the corresponding leftward shift for the intersection (from x^0 to x^1) indicates a decline rather than an increase in optimal public expenditure in response to the recession.



Figure 2: Optimal Response to an Increase in the Marginal Product of Private Goods During a Recession.

When there are multiple producers and multiple classes of private goods, the effect of a recession on marginal productivity in the private sector is likely to increase in so far as sectors and firms with below average value of marginal productivity are likely to be hardest hit by a recession. This observation suggests that a counter cyclical pattern for optimal public expenditure could require a strong offsetting effect *Via* a reduction in the rate at which private expenditure is reduced by public expenditure.

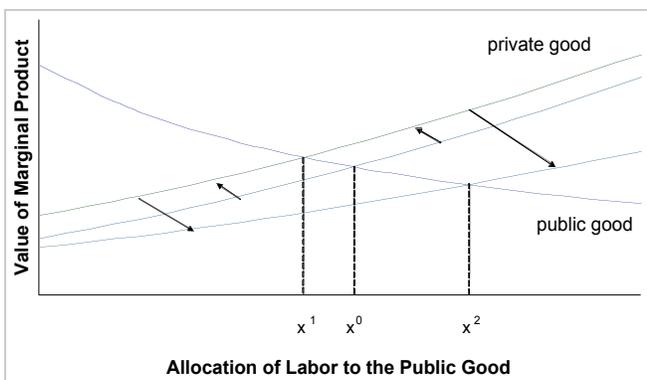


Figure 3: Optimal Response to an Offsetting Reduction in the Competition for Labor During a Recession.

In Figure 3, the upward shift in the curve representing the value of the marginal product for the

private good is the same as in Figure 2. However, the initial shift is accompanied by a secondary downward shift that reflects the scaling effect due to an assumed decrease in the extent of interference between public access to labor and private access to labor, as would be represented by a decrease in the magnitude of the term dy/dx in condition 2. For the particular case depicted in Figure 3, the scaling effect is sufficiently strong to produce a net positive response in public expenditure (from x^0 to x^2) following the initial contraction in the private sector.

In the general case, the net effect is ambiguous for the two countervailing forces depicted in Figure 3. Under certain conditions and/or for certain types of governmental entities, the incremental effect on the marginal value of private sector productivity could dominate the scaling effect. Viewed in this context a local government that attempts to attract or retain businesses might view a constitutional provision for a balanced budget as the equivalent of a social contract to assure businesses that the local government will not become more intrusive in factor markets during periods of difficult economic times.

In an era of increasing globalization, a concern about business relocation could be present even at the federal level. However, traditionally at least, one might reasonably presume that the risk of business relocation has not been of as great for the nation as a whole as for an individual state or local government. As a result, all save die-hard neoclassical economists might be willing to concede that during periods of significant economic distress and in particular during periods of distress in factor markets an appropriately enlightened government might in principle at least be able to tailor its access to factors of production in ways that limit the extent of competition with the private sector. An additional leap of faith might be required to presume that an actual government can find its way to such an enlightened path. Nevertheless condition 2 establishes that there would be a positive benefit if such a solution could be found and implemented.

The potential for logically consistent simultaneous support for both counter cyclical public expenditure by the federal government and pro cyclical public expenditure by state and local governments thus offers hope for a favorable resolution of an apparent paradox the Hansen and Per off identified as "fiscal perversity" more than a half century ago.

A specific example is presented in the following section to further illustrate and clarify the combined effects of state-contingent variation in the value of the marginal productivity of private labor and state-contingent variation in the extent of governmental access to idle resources.

AN EXAMPLE OF STATE-CONTINGENT OPTIMAL PUBLIC EXPENDITURE

To illustrate the general case of state-contingent public expenditure, consider a special case in which both the value of the marginal product of the public good and the value of the marginal product of the private good are each inversely related to the corresponding quantity of labor that is allocated to that good.

$$3) \quad U_1 f' = a / x, \quad \text{where } a \text{ is a constant, and}$$

$$4) \quad U_2 g' = b / y \quad \text{where } b \text{ is a constant.}$$

To highlight the interaction of labor allocations between the public sector and the private sector we express y , the value of labor allocated to the private good as:

$$5) \quad y = L - \theta - \lambda x \quad \text{where } L \text{ is the total supply of labor, } \theta \text{ is a potential, or state-contingent, reduction in private sector expenditure that is unrelated to competition between the public and private sectors and } \lambda \text{ is the average rate at which the allocation of labor to the public good reduces the allocation of labor to the private good.}$$

Applying specifications 3, 4 and 5 to condition 2 and assuming that the marginal rate of competition between the public and private sectors is the same as the average rate,

$dy/dx = -\lambda$, we can identify the corresponding special case of condition 2:

$$6) \quad a/x - \lambda b/(L - \theta - \lambda x) = 0.$$

Solving equation 6 for x , we can represent the optimal level for public expenditure as:

$$7) \quad x = [a/(a + b)] [(L - \theta)/\lambda].$$

For a base case in which: (a) there is no adverse shock to private expenditure $\theta = 0$; and (b) there is no

special access of the public sector to labor $\lambda = -dy/dx = 1$, the corresponding version of equation 7 is:

$$8) \quad x^0 = [a/(a + b)] L,$$

Condition 8 establishes that for the base case of no recession, the optimal fraction of total labor to be allocated to the public good is simply the ratio of the parameter a to the sum of parameters a and b . This ratio is a measure of the relative value of marginal productivity for the public good versus the private good.

Comparing the base case for no recession, condition 8, to the solution for a state in which there is a measurable negative shock to private production $\theta > 0$ condition 7, we find that optimal public expenditure in a recession state is less than equal to or greater than the corresponding level for the non recession state, depending on whether the rate at which public expenditure crowds out private expenditure is greater than equal to or less than the percentage of total labor net of the shock:

$$9) \quad \lambda^* = (L - \theta) / L,$$

An equivalent restatement of condition 9 is that optimal public expenditure is counter cyclical, neutral, or pro cyclical depending on whether the extent of government access to idle labor, $1 - \lambda$, is greater than, equal to, or less than the magnitude of the unemployment shock expressed as a fraction of total labor supply;

$$10) \quad 1 - \lambda^* = \theta / L,$$

In so far as public access to unemployed resources might reasonably differ across various levels of government, there is no a priori reason to believe that appropriate state-contingent programs for public expenditure will necessarily agree in terms of structure, be they counter cyclical, pro cyclical, or neutral. Instead, each case would require careful analysis of the appropriate critical values.

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The National Bureau of Economic Analysis, or NBER, is a private non-partisan organization that was founded in 1920.

Standards applied by the NBER for the formal definition of an economic recession are widely applied to the U.S. economy 1920.

The Tax Policy Center routinely publishes papers that attempt to provide estimates of the budgetary patterns. On August 7, 2017.