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From Deficit Delusion to the Fiscal Balance Rule: Looking for an Economically Meaningful Way to Assess Fiscal Policy

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Abstract

Although the deficit is a useful construct for Keynesian analyses of fiscal policy, the deficit appears to be a less useful measure of fiscal policy within all but a restricted class of intertemporal neoclassical models. This paper suggests that the nature of deficits in a simple certainty model with nondistortionary policies, and the in settings with uncertain policy, distortionary policy, and liquidity constraints is, to a large extent, arbitrary. It then posits a more appropriate description of fiscal policy for the class of models in question, and proposes the economically meaningful "fiscal balance rule" as an alternative to the economically arbitrary "balanced budget rule" as a means of assessing whether fiscal policy is intergenerationally tight or loose.

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Summary

Although the deficit is useful in Keynesian analyses of fiscal policy, it appears to be a less useful measure of fiscal policy in many neoclassical models. Unlike Keynesian models in which current consumption and aggregate demand depend on current cash flows, consumption and aggregate demand in the neoclassical models examined here depend on the present value of households' future income.

Since households in these models care only about the present value of their resources, they are indifferent between a "tax" now that is "transferred" (i.e., returned with interest) next year, and "lending" to the government now and receiving a return of principal plus interest next year, that is, the households are indifferent as to how the government labels its tax. The government's choice of taxes today or higher taxes tomorrow will, however, alter its reported deficit. It follows that the deficit can change with no real change in policy, and policy can change with no change in the reported deficit.

The paper suggests that the nature of deficits in a simple certainty model or in settings with uncertain policy and liquidity constraints is, to a large extent, arbitrary. It then posits a more useful description of fiscal policy for the class of models in question and proposes a "fiscal balance rule" as an alternative to the "balanced budget rule" as a means of assessing whether fiscal policy is tight or loose.

I. Introduction

Recent years have witnessed a growing unease about using government deficits to measure fiscal policy. Martin Feldstein (1974) pointed out that vast amounts of unfunded Social Security retirement liabilities are not picked up in official debt figures. The 1982 Economic Report of the President and Leonard (1987) stressed the same is true of unfunded civil service and military pensions and a range of other programs such as FSLIC commitments, etc. Eisner and Pieper (1984, 1985), Boskin (1987), and Boskin, Robinson, and Huber (1987) fault the official U.S. deficit for ignoring government assets. These and a host of related complaints about conventional deficit accounting coincided with demonstrations by Kotlikoff (1979), Summers (1981), Chamley (1981), Auerbach and Kotlikoff (1983) and others that (1) major intergenerationally-redistributive fiscal policies can be conducted under the guise of a "balanced budget" and (2) identical fiscal policies can be conducted concomitant with dramatically different time paths of reported deficits.

While some economists, including Eisner and Pieper (1983, 1985) and Leonard (1987) suggest that the deficit can be fixed, the arbitrary nature of such corrections raises the question of whether the deficit is a well-defined economic concept. Unfortunately, it appears that it is not. In a series of articles (Kotlikoff, 1984, 1986, 1988) I have pointed out that from a neoclassical perspective the deficit is an arbitrary accounting construct with no necessary relationship to the fundamental stance of fiscal policy. The equations of neoclassical models do not uniquely define the size or sign of government deficits, and "the deficit" in such models is purely a reflection of how the government chooses to label its receipts and payments.

Since rational households and firms see through accounting labels, the predictions of neoclassical models are free of fiscal illusion. Not only does the choice of accounting labels have no implications for actual fiscal policy in neoclassical models, but the reverse is also true: in neoclassical macro models the government can conduct any sustainable fiscal policy while simultaneously choosing its accounting so as to report any size surplus or deficit it desires. In neoclassical macro models fiscal policies have real effects, not because of their labels, but because they either (1) alter economic incentives, (2) redistribute from different generations to the government, (3) redistribute within generations, or (4) redistribute across generations. It is this fourth policy, intergenerational redistribution and its implications for saving and investment, that appears to underlie recent concern about loose U.S. fiscal policy. Intergenerational redistribution occurs whenever a government policy expands the consumption opportunities of one generation at the expense of another.

This paper describes a new rule for assessing whether the government's intergenerational policy is loose in the sense that future generations are not being made worse off as compared to current generations. The rule is denoted the "Fiscal Balance Rule." In contrast

to the "balance budget rule," the Fiscal Balance Rule is economically well-defined. The Fiscal Balance Rule is based on the economy's intertemporal budget constraint and appears to underlie actual attempts to run tight fiscal policy. It says take in net present value from each new young generation an amount equal to the flow of government consumption less interest on the difference between (a) the value of the economy's capital stock and (b) the present value difference between the future consumption and labor earnings of existing older generations. While the rule is a mouthful, one can use existing data to check whether it is being obeyed and, therefore, whether future generations are likely to be treated better or worse than current generations.

This paper proceeds in the next section, Section II, by demonstrating the arbitrary nature of "deficit" accounting with a simple two-period life cycle model with no uncertainty. Section III shows that the economically arbitrary nature of "deficit" accounting arises equally in models in which government policy is uncertain and distortionary and in which agents face liquidity constraints. Section IV describes the Fiscal Balance Rule and its use as a norm for considering whether fiscal policy is intergenerationally loose or tight. Section V discusses how this rule might be implemented empirically. Section VI summarizes and concludes the paper.

II. A Two-Period Life Cycle Model

A simple two-period, one good Life Cycle model with zero population or productivity growth is convenient to show both the concern with loose fiscal policy that redistributes toward earlier generations and the fact that the government's reported deficit bears no necessary relation to the stance of fiscal policy. At the beginning of each period a new generation of constant size is born, and members of each generation live for two periods, their youth and old age. When individuals are young, they work full time, and when they are old, they are retired. Each individual born at time t chooses how much to consume when young at time t, C_{yt}, and how much to consume when old at time t+1, C_{ot+1}, subject to the budget constraint given in equation (1).

$$C_{yt} + C_{ot+1}/(1+r_{t+1}) = W_t \tag{1}$$

In equation (1) r_{t+1} is the interest rate at time t+1. The equation states that the present value of consumption expenditure (the price of consumption is numeraired to 1) over the life cycle equals the present value of lifetime resources which, in this model, is simply earnings when young, W_t. The maximization of utility given in (2) subject to (1) gives the demands for consumption when young and old written in equation (3).

$$U_t = \beta \log C_{yt} + (1-\beta)\log C_{ot+1} \tag{2}$$

$$C_{yt} = \beta W_t \tag{3}$$

$$C_{ot+1} = (1-\beta)W_t(1+r_{t+1})$$

At the beginning of any time period the young have no assets. Hence, the capital stock in the economy at time t+1 corresponds to the asset holdings of the elderly at time t+1. The assets of the elderly at time t+1 equal the savings they accumulated when they were young at time t. This savings per elderly equals $W_t - C_{yt}$, which is simply saving out of first period labor earnings. This fact and (3) permit one to write capital per young worker at time t+1, K_{t+1}, as:

$$K_{t+1} = (1-\beta)W_t \tag{4}$$

To close the model assume that the economy's single good is produced according to the production function in (5) that relates output per worker at time t, Y_t, to capital per worker, K_t:

$$Y_t = K_t^{\alpha} \tag{5}$$

Given the production function, profit maximization by representative firms implies the following expressions relating factor demands to factor returns:

$$W_t = (1-\alpha)K_t^{\alpha} \tag{6}$$

$$r_t = \alpha K_t^{\alpha-1}$$

Substitution of the first equation in (6) into (4) yields a nonlinear difference equation determining the time path of the economy's capital stock:

$$K_{t+1} = (1-\beta)(1-\alpha)K_t^{\alpha} \tag{7}$$

If α and β are less than one, this model has a locally stable, nonzero stationary state capital stock denoted by K, where:

$$K = [(1-\beta)(1-\alpha)]^{1/(1-\alpha)} \tag{8}$$

1. Adding loose fiscal policy to the model

Consider now an ongoing government policy commencing at time t that takes an amount H for each young person and gives an amount H to each contemporary old person. For young individuals born at time t, their lifetime budget constraint is now:

$$C_{yt} + C_{ot+1}/(1+r_{t+1}) = W_t - H + H/(1+r_{t+1}) \tag{9}$$

Holding the time path of the wage rate, W_t, and the interest rate, r_t, constant, this fiscal policy leaves generation t as well as all subsequent generations worse off; each generation from t onward gives up H when young and must wait until old age to receive H back. Hence, each generation from t onward looses, in present value, interest on the amount H. The first generation of elderly alive at time t, in contrast, benefits from

this policy since they receive H, but don't have to pay it back. Their second period budget constraint is now:

$$C_{ot} = (1-\beta)W_{t-1}(1+r_t) + H \tag{10}$$

With (9), rather than (1), holding, $C_{yt} = \beta[W_t - Hr_{t+1}/(1+r_{t+1})]$, and the capital stock at time t+1 is given by (11) since the saving of the young at time t now equals $W_t - H - C_{yt}$.

$$K_{t+1} = (1-\beta)W_t - H(1-\beta r_{t+1})/(1+r_{t+1}) \tag{11}$$

The new capital stock transition equation is:

$$K_{t+1} = (1-\beta)(1-\alpha)K_t^{\alpha} - H(1-\beta\alpha K_{t+1}^{\alpha-1})/(1+\alpha K_{t+1}^{\alpha-1})) \tag{12}$$

The new stationary state capital stock, K', is found by setting $K_t = K_{t-1} = K'$ in (12). Denoting by r the initial stationary state value of the interest rate, the derivative of the stationary state capital stock with respect to H evaluated at H equals zero is given by:

$$\delta K'/\delta H = -[1-\beta r/(1+r)]/(1-\alpha) < 0 \tag{13}$$

Equation (13) indicates that this intergenerational transfer policy crowds out the economy's long-run capital stock. Of course, the crowding out process takes some time, and (12) determines the transition path from K to K' associated with an increase in H.

The intuitive explanation for this crowding out of capital formation is that the redistribution to the initial elderly generation of H at time t leads to an increase in their consumption by the amount H (see equation (10)), while the young at time t reduce their consumption by an amount $\beta Hr_{t+1}/(1+r_{t+1})$, which is less than H. Hence, aggregate consumption is larger at time t, and since output at time t is given, aggregate saving and investment at time t declines. This explains why the capital stock is smaller at time t+1 as a consequence of the policy, but why does the economy end up in a stationary state with a permanently reduced capital stock? The answer is that although each successive generation will consume less because of this policy, their reduced consumption will, at any point in time, not yet have fully offset the initial increase in consumption of the time t elderly; i.e., at any point in time there will always be generations yet to come whose consumption has yet to be reduced by the policy. In addition, the reduction in capital at time t+1 means a lower level of wages at time t+1 (see equation (6)), which feeds back into lower savings by the young at time t+1, and an even lower capital stock at time t+2, with the process converging to the permanently lower capital stock of the new stationary state.

2. Deficit delusion and the arbitrary nature of fiscal labels

In presenting this simple example of loose fiscal policy care was taken not to use any fiscal language to label the payment of H by each young generation to the government and the receipt of H from the government by each old generation. It now remains to show that this policy can be conducted with the government reporting a balanced budget, a debt, or a surplus. In each case the real effects of the policy are identical, and the reported size of the debt has no relationship whatsoever to the stance of fiscal policy.

First, take the case that the government labels the receipt of H from the young each period as "taxes" and the payment to the old each period as "spending on transfer payments." In this case the government would report a balanced budget each period, since "taxes" equals "spending" each period, despite the fact that the government is running a loose fiscal policy. Furthermore, the budget would remain in balance the looser the fiscal policy, i.e., the larger is the value of H.

Next let the government (1) label its payment of H to the elderly at time t as "spending on transfer payments," (2) label its receipt of H from each young generation as "borrowing," and (3) label its net payment of H to each elderly generation at time s for all $s > t$ as "repayment of principal plus interest in the amount of $H(1+r_s)$" less a "tax in the amount of Hr_s." While each generation of elderly starting at time t still receives H, and each generation of young starting at t still pays H, with this new labeling the government's deficit at time t is H, and its stock of debt remains at H forever. To see this note that at time t the government "spending" is H, and its reported "taxes" are zero. Hence, the time t deficit ("spending" less "taxes") is H. At time s, for $s > t$, the government's "spending on transfer payments" is zero, but its "spending on interest payments" is Hr_s. Since its "taxes" are also Hr_s, its deficit (change in the debt) after time t is zero, and its debt remains permanently equal to H.

As a third case, let the government (1) label its payment of H to the elderly at time t as "spending on transfer payments," (2) label its net receipt of H from each young person at time t and thereafter as "receipt of taxes in the amount of 2H" less a "loan in the amount of H," and (3) label its net payment of H to each elderly person at time s for $s > t$ as "spending on transfers payments in the amount of $2H + Hr_s$" less "receipt of principal plus interest in the amount of $H(1+r_s)$." At time t the government will now report a negative deficit ("taxes" less "spending") of -H. And at time $s > t$ the government will report a balanced budget, since "taxes" of 2H plus "interest received" of Hr_s will equal "spending on transfer payments of $2H + Hr_s$." Hence, the government will report a positive stock of assets, a surplus, of H at time t and, since its budget will be balance in each period after t, the government's surplus (negative debt) will remain at H.

These three labeling cases show that a fundamentally loose fiscal policy can be conducted with the government reporting zero debt, positive debt, or negative debt. Furthermore, there is nothing to preclude the government from changing its labeling through time with the consequence that the same real policy could first be reported as generating a deficit, then be reported as generating a surplus, and finally be reported as being conducted on a balanced budget basis. Finally, there is no requirement that the labeling produce either a zero debt, a debt of H, or a surplus of H. To see this, consider again that the labeling leading to the reporting of a surplus. If the government labels its net receipt of H from the young as "taxes in the amount of 5H" less "a loan of 4H," and labels the net payment of H to the elderly at $s > t$ as "spending on transfer payments of $5H + 4Hr_s$" less "receipt of principal plus interest in the amount of $4H(1+r_s)$," the reported surplus will be 4H rather than simply H. Hence, *the government can report any size surplus or debt while engaging in* exactly the same economic policy. And individuals, since they care only about their budget constraints, not the government's choice of labels, will behave exactly the same regardless of the announced, as opposed to actual, stance of fiscal policy.

III. Demonstrating the Arbitrary Nature of Fiscal Labels When Fiscal Policy is Uncertain, When Fiscal Policy is Distortionary, and When There are Liquidity Constraints

1. Uncertain fiscal policy

One possible objection to the above demonstration that fiscal labels are economically arbitrary is that it assumes that government policy is certain. Surely, the objection goes, "future 'transfer payments' and 'taxes' are less certain than the future payment of interest on government bonds, which, in the absence of inflation, is very safe. Hence, this demonstration that rests on the equivalence of receipts and payments in a world of certainty does not go through in a world of uncertainty." Fortunately or unfortunately, this objection is not valid, and the risk properties of government payments and receipts do not provide a basis for fiscal labeling; i.e., the definition of "the deficit" is just as arbitrary in models with uncertainty as it is in certainty models. The reason is that any uncertain payment (receipt) $\tilde{X}$ (where $\tilde{\ }$ refers to a variable that is uncertain) made by (received by) individuals to (from) the government in the future can be relabeled as the combination of a certain payment (receipt) $\bar{X}$ plus and uncertain payment (receipt) $\tilde{X} - \bar{X}$. Since current payments (receipts) are certain and future payments (receipts) can be described as a combination of certain and uncertain payments (receipts), the labeling of the current and future certain payments and receipts remains economically arbitrary.

To see more precisely why the "deficit" is no less arbitrary in uncertainty models consider again the two-period life cycle model in which the government transfers from the young and to the old. But now denote by $\tilde{H}_t$ the amount taken by the government from the young and given to the old

at time t. The young at time t know the value of $\tilde{H}_t$ (hence the $\tilde{}$ is dropped below for this variable) but are uncertain about the value of $\tilde{H}_{t+1}$. To add to the realism of this example let us assume that output in the future is also uncertain due to a random productivity shock. The young now maximize expected utility given by:

$$E_t U_t = \beta \log C_{yt} + (1-\beta) E_t \log \tilde{C}_{ot+1} \tag{14}$$

subject to:

$$\tilde{C}_{ot+1} = (W_t - H_t - C_{yt})[1+\bar{r}_{t+1}+\theta_t(\tilde{r}_{t+1}-\bar{r}_{t+1})] + \tilde{H}_{t+1} \tag{15}$$

In (15) $\tilde{r}_{t+1}$ and $\bar{r}_{t+1}$ are respectively the risky and safe rates of return at time t+1. At time t $\tilde{r}_{t+1}$ is uncertain. The term θ_t is the proportion of the saving of the young at time t that is invested in the risky asset.

Equations (16) and (17) are the respective first order conditions for the optimal choices of C_{yt} and θ_t:

$$\frac{\beta}{C_{yt}} = (1-\beta) E_t \frac{[1+\bar{r}_{t+1}+\theta_t(\tilde{r}_{t+1}-\bar{r}_{t+1})]}{\tilde{C}_{ot+1}} \tag{16}$$

$$E_t \frac{(\tilde{r}_{t+1}-\bar{r}_{t+1})}{\tilde{C}_{ot+1}} = 0 \tag{17}$$

Insertion of (15) into (16) and (17) yields two equations in the two period t choice variables C_{yt} and θ_t.

To close the model assume that the production function at time t is given by:

$$Y_t = \tilde{A}_t K_t^{\alpha} \tag{18}$$

where $\tilde{A}_t$ is uncertain at time t. The wage at time t and the risky rate of return at time t+1 are determined according to (19):

$$W_t = A_t(1-\alpha)K_t^{\alpha} \tag{19}$$

$$\tilde{r}_{t+1} = \tilde{A}_{t+1}\alpha K_{t+1}^{\alpha-1}$$

Since the net supply of safe assets to the economy is zero, θ_t will equal 1 in equilibrium, and (16) and (17) can be solved, given (19), for C_{yt} and $\bar{r}_t$.

The economy's capital stock evolves according to equation (20):

$$K_{t+1} = A_t(1-\beta)(1-\alpha)K_t^{\alpha} - H_t - \hat{C}_{yt}(K_t), \qquad (20)$$

where $\hat{C}_{yt}$ is chosen to satisfy (16). Note that the optimal choice of C_{yt}, $\hat{C}_{yt}$, can be written as a function of K_t; the function $\hat{C}_{yt}$ incorporates information about the distributions of A_{t+1} and $\tilde{H}_{t+1}$ since these variables are integrated out in equation (16).

2. The arbitrary nature of fiscal labels, once again

As in the case of the certainty model, I have described the uncertainty model without labeling either H_t or $\tilde{H}_{t+1}$. Suppose now that the amount H_t received by the government from the young at time t is labeled "taxes" and the payment of H_t to the elderly at time t is called "spending." In this case the government will report a "balanced budget." If it proceeds in this fashion the government will announce a "balanced budget" and a "zero stock of debt" forever.

Next let the government (a) label its payment of H_t to the elderly at time t as "spending," (b) label its receipt of H_t from the young as "borrowing," and (c) label its payment of $\tilde{H}_{t+1}$ as "a certain repayment of principal plus interest in the amount of $H_t(1+\bar{r}_t)$" less an uncertain "tax" on the elderly at time t+1 equal to $H_t(1+\bar{r}_t)-\tilde{H}_{t+1}$. In words, the random second period payment is described as a combination of a certain payment equal to "principal plus interest on H_t" plus an uncertain "tax" equal to the difference between the certain amount $H_t(1+\bar{r}_t)$ and the random amount $\tilde{H}_{t+1}$. In this case the government will report a "deficit" of H_t at time t. At time t+1 the "deficit" (the change in the debt) will equal zero assuming the government labels the $\tilde{H}_{t+1}$ that it gets from the young at time t+1 as "borrowing" in the amount of H_t plus "transfers" to the young at time equal to $H_t-\tilde{H}_{t+1}$. The sum of time t+1 "transfers" to the young, $H_t-\tilde{H}_{t+1}$, plus the government's time t+1 "interest payments," $H_t\bar{r}_t$, equals the time t+1 "taxes" on the old, $H_t(1+\bar{r}_t)-\tilde{H}_{t+1}$, and the time t+1 deficit is zero. If the government proceeds in this manner through time, it will report a stock of debt equal to H_t forever.

If the government prefers to announce a debt of say $20H_t$ forever rather than a debt of only H_t, it need only label its period t receipt from the young of H_t as "borrowing of $20H_t$" less a "transfer payment" to the young at time t of $19H_t$. If the government continues to label the payment of H_t to the old at time t as a "transfer payment" its deficit at time t and debt at the beginning of time t+1 will equal $20H_t$. At time t+1 the government now labels its payment of $\tilde{H}_{t+1}$ to the old at time t as a certain "repayment of principal plus interest" of $20H_t(1+\bar{r}_t)$ plus a "tax" equal to $20H_t(1+\bar{r}_t)-\tilde{H}_{t+1}$. If the government labels the $\tilde{H}t+1$ it takes from the young at time t+1 as "borrowing" of $20H_t$ less a "transfer" of $20H_t-\tilde{H}t+1$, its reported deficit at time t+1 will equal zero; time t+1 "transfers" of $20H_t-\tilde{H}t+1$ plus "interest payments" of $20H_t\bar{r}_t$ will equal time t+1 "taxes" of $20H_t(1+\bar{r}_t)-\tilde{H}t+1$. If the government proceeds in this fashion through time it will report a stock of debt equal to $20H_t$ forever.

I leave it ot the reader to convince himself that despite the uncertainty of government policy, the government can equally well label its receipts and payments so as to report forever any size surplus it desires.

3. Distortionary fiscal policy

So far the discussion has ignored distortionary fiscal policies. The presence of distortionary policies does not alter the conclusion that the "deficit" is not well defined. I demonstrate this point again using the simple life cycle model. In the context of the simple life cycle model with no uncertainty distortionary policy can be exhibited through the introduction of a wedge between the marginal rate of substitution between consumption when young at time t, C_{yt}, and consumption when old at time t+1, C_{ot+1}, and the marginal rate of transformation between consumption at time t and consumption at time t+1. Suppose this distortion is effected through a proportional "capital income tax." In this case the lifetime budget constraint of generation t is given by:

$$C_{yt} + C_{ot+1}/(1+r_{t+1}(1-\tau_k)) = W_t \qquad (21)$$

In (21) τ_k stands for the rate of "capital income taxation" and represents a distortionary policy since the marginal rate of substitution now equals $1/(1+r_{t+1}(1-\tau_k))$ while the marginal rate of transformation equals $1/(1+r_{t+1})$, where r_{t+1} equals the marginal product of capital at time t+1 (see equation (6)).

If the receipts from "capital income taxation" are used each period to pay for government consumption, and there are no other sources of government receipts and no other government payments, the government will be reporting a "balanced budget." Now suppose the government wishes to run the same real policy, but report a "surplus." One method it can use is to levy a nondistortionary "tax" on the young at time $s \geq t$ of say H_s, lend this to the young at time s, and at time s + 1 use the return of "principal plus interest" on this "loan" to finance a transfer payment to the old. This policy will leave each generation facing exactly the same lifetime budget constraint including the same distortion with respect to current and future consumption, but permit the government to report a surplus of H_s at $s \geq t$. The new policy also leaves unchanged the net flow of payments from each generation to the government in each period; the only thing that has changed is the words used to describe the policy.

The reader may prefer an example in which the government maintains its identical policy but uses distortionary "taxes" in "running its surplus." Here's one such example. Let the government announce at time t that it is eliminating the "capital income tax" from time t+1 onward, but is imposing a "tax" at rate m_s on the purchase of assets at time $s \geq t$. To illustrate this policy let us write the lifetime budget constraint of individuals born at time $s \geq t$ in two parts:

$$C_{ys} + (1+m_s)A_{s+1} = W_s \qquad (22)$$

$$C_{os+1} = A_{s+1}(1+r_{s+1})$$

In (22) A_{s+1} stands for the assets the young at time t accumulate and bring into period s+1. If m_s is set equal to $r_{s+1}\tau_k/[1+r_{s+1}-\tau_k)]$ for $s \geq t$ the lifetime budget constraints of each generation born at time t and thereafter will be unaffected by the "new" policy and the distortion between consumption when young and consumption when old will remain unchanged. The only thing that will change is the government's reported "debt." Rather than report a "debt" of zero, the government will now report a "surplus" of mAt+1 at time t since "taxes" will exceed "spending" by this amount. At time t+1 the government's "spending" will be covered precisely by this time t "surplus" including interest earned by the government on this surplus; i.e., the value at time t+1 of the time t surplus is $m_tA_{t+1}(1+r_{t+1})$ which, given the definition of m_t, equals $r_{t+1}\tau_k(W_t-C_{yt})$, the "tax revenue" under the "capital income tax." However, since the government will collect another m_{t+1} in "taxes" at time t+1, its reported "surplus" (stock of government assets) at time t+1 will equal $m_{t+1}A_{t+2}$. At time $s \geq t$ the government's reported "surplus" will equal m_sA_{s+1}.

Note that in this example if the government lends its surplus each period to that period's young, the net payments from each generation to the government will again remain unchanged. Hence, to a Martian observer the only thing that will make this policy different from the previous policy is the government's choice of words.

If the government prefers to report a "debt" from time t onward, it can do so with no change in policy by "borrowing" say D_s for $s \geq t$ and making transfer payments to the young at time $s \geq t$ equal to D_s. At time $s \geq t + 1$ it "taxes" the old an amount equal to D_s plus interest and uses these receipts to finance its payment of "principal plus interest" on its borrowing of D_s at time s. This policy will leave the government reporting a "debt" of D_s for $s \geq t$.

Another way the government can do nothing real while reporting a "debt" is to announce a subsidy on the acquisition of assets for $s \geq t$. In terms of equation (22) m_s is set equal to a negative number. If the government also announces an increase in the rate of capital income taxation for $s \geq t + 1$ equal to τ'_{ks} such that $(1+m_s)/[1+r_{s+1}(1-\tau'_{ks+1})] = 1/[1+r_{s+1}(1-\tau_k0]$, the intertemporal distortion will remain unchanged, but the government will announce a "debt" of m_sA_{s+1} for $s \geq t$.

While hardly exhaustive, these examples illustrate that the distortionary nature of the government's policy does not restrict its ability to announce any size deficit or surplus while running the same underlying fiscal policy.

4. Liquidity constraints

Another response to the above demonstrations that "deficit" policies are not well-defined is that the demonstrations ignore the possibility that at least some agents are liquidity constrained. If some young agents can't borrow against future income will they be indifferent between policy (a) in which the government takes H from each young person and returns H to them when old and policy (b) in which the government "borrows" H per young person from those young who volunteer to make loans, repays these "loans" with interest when the lenders are old, and "taxes" each old person Hr_s at time s?

An affirmative answer is given in a very insightful article by Hayashi (1987) (see Yotsuzuka (1986) for an expanded treatment of Hayashi's argument). Hayashi points out that the riskiness of future government payments is different from the riskiness of an individual's earnings. Hence, even though an individual may not be able to borrow more than a specific sum against future earnings, he may still be able to borrow against future government payments. As an illustration of this point, I present one of Hayashi's examples although with different notation. The example relies again on the two-period life cycle model, but incorporates the assumption that there are two types of young agents each period, denoted type A and type B. Both the A and B agents earn W_s when young (assuming they are born at time s). The A type agents earn $\lambda_A W_{s+1}$ when old, while the B types earn $\lambda_B W_{s+1}$ when old, where $\lambda_B > \lambda_A$. The problem for banks in lending money to the A and B types is that the banks don't know who is who. If they lend more than $\lambda_A W_{s+1}/(1+r_{s+1})$, where r_s is the safe rate, to the A types, the A types will default on a part of the loan since their second period earnings is only $\lambda_A W_{s+1}$.

While Hayashi's argument also goes through in the case of a pooling equilibrium, I focus here on the separating equilibrium. I first examine the equilibrium with no government policy and then introduce the government policy. If one assumes a configuration of preferences such that a separating rather a pooling equilibrium arises, the banks will separate the two types by offering a maximum loan, M, (which exceeds $\lambda_A W_{s+1}/(1+r_{s+1})$) such that (a) the A types are indifferent between borrowing this maximum and defaulting and borrowing and repaying a smaller amount, and (b) the B types borrow the maximum amount and repay. The indifference relationship for the A types is given by:

$$\beta\log[\beta R_{As}] + (1-\beta)\log[(1-\beta)R_{As}(1+r_s)] = \beta\log(W_s+M) + (1-\beta)\log C \quad (23)$$

In (23) the left-hand side gives the indirect utility of the A types is they borrow less than M and repay their loan. The term R_s equals $W_s + \lambda_A W_{s+1}/(1+r_{s+1})$, the present value of the lifetime resources of the A types valued at the safe interest rate. The right-hand side gives the utility of the A types if they borrow the maximum M and then default when old. The term C stands for the subsistence level of consumption provided by society to people who have defaulted. Equation (23) is used to solve for M. Given M the consumption of the B types when young will equal

W_s + M, i.e., their first period wages plus the maximum they can borrow. Their second period consumption will equal $\lambda_B W_{s+1}$ - $M(1+r_{s+1})$. The B types are, therefore, liquidity constrained in this separating equilibrium; they would like to borrow more than M but cannot.

The question posed above amounts to asking whether type A or type B agents will change their consumption when young if the government takes away H from each of them when young and returns $H(1+r_{s+1})$ to each of them when old. This policy leaves the left-hand side of (23) unchanged since the present value of resources valued at the riskless rate r_{s+1} is unchanged. The right-hand side of (23) will also remain unchanged if the maximum loan amount increases to M + H. In this case the consumption when young of those borrowing from the bank equals W_s - H plus the maximum loan M + H, i.e., it equals W_s + M, the same amount that is consumed prior to this present value neutral government policy. The banks are willing to increase their loan amount to the type B agents because they understand that the A types will, on net, be no better off if they select into the group borrowing the now larger maximum because they will need the larger maximum just to remain indifferent between borrowing the maximum and borrowing less than the maximum. Hence, at the margin the type B agents are not liquidity constrained with respect to government-determined changes in the timing of their income flows, and the "liquidity constrained" B type agents will consume the same when young despite the government's taking H from them when young.

For the United States there is conflicting evidence on whether even a minority of households are liquidity constrained (e.g., Hayashi (1987) and Altonji and Siow (1986)). While as many as 20 percent of households may be liquidity constrained, such households probably account for less than 10 percent of total U.S. consumption. Hence, even if Hayashi's logic (which appears to hold for a wide class of credit market models) is ignored and one argues that the relabeling of government receipts and payments cannot be accomplished without some change in U.S. policy, the change in policy would at most be quite minor. In other words, even admitting the possibility of liquidity constraints that bind with respect to government policy, it appears that, at least for the United States, one can run essentially equivalent policies while reporting any size surplus or deficit.

IV. Can We Discuss Fiscal Policy Without Using the Words "Taxes," "Spending," and Deficits"?

After some reflection on the labeling illustrations of the previous sections, one might offer the following defense of the use of the terms "taxes," "spending," and "deficits:" "Well, I agree that the quantities we measure as "taxes," "spending," and "deficits" are not meaningful measures of fiscal policy in and of themselves, but the important thing is not what the government labels its receipts and payments, rather the important thing is thinking comprehensively about the government's receipts and payments. As long as I keep track of all of the government's

lump sum and distortionary receipts and payments extracted from and made to particular individuals, I can use any words I want to describe particular receipts and payments." True! But thinking comprehensively about the distortionary and nondistortionary net payments extracted from particular individuals is equivalent to specifying their lifetime budget constraints. Once one realizes this point, there is no reason to use potentially misleading language when one can describe precisely how government policy affects individuals' lifetime budget constraints. Indeed, the policy description in Section II is an example of how one can discuss fiscal policy without ever using the words "taxes," "spending," and "deficits" and without classifying assets as "private" assets or "government" assets.

This section offers some new terminology, centered around lifetime budget constraints, to describe fiscal policies. The section first discusses nondistortionary policies and then considers distortionary policies. The new fiscal vocabulary succinctly summarizes the government's fundamental policy instruments. One can think about policy in terms of changes in these instruments. In addition to describing these instruments, this section discusses the choice of these instruments through time. In this regard this section examines a rule to which the government must ultimately adhere (if the economy reaches a steady state) in setting policy through time so as to obey the economy's intertemporal budget constraint. This rule, which I denote the Fiscal Balance Rule, has no relationship to conventional "budget balance," i.e., the government can obey "budget balance" while violating the fiscal balance rule.

1. Describing nondistortionary policy

If policy is not distortionary and there is no uncertainty, the government's treatment of each individual over his lifetime can be fully summarized by the present value of the individual's lifetime net payment (LNP) to the government. The LNP is a sufficient statistic for the government's treatment of individuals; any intertemporal equilibrium will be unaffected by changes in the timing of lifetime net payments to the government that leave individual LNPs unchanged. Equation (24) shows how the LNP (denoted N_t) enters the lifetime budget constraint of individuals born at time t in the simple two-period OLG model. 1/

$$C_{yt} + C_{ot+1}/(1+r_{t+1}) = W_t - N_t \tag{24}$$

Let us now consider a stationary state of a two-period Cobb-Douglas economy in which government consumption equals G and $N_t = N$. In the stationary state income equals consumption; hence, the capital stock is defined by:

$$k^{\alpha} = [\beta+(1-\beta)(1+r)](W-N) + G \tag{25}$$

1/ Note that in the policy of Section II $N_t = -H + H/(1+r_{t+1})$.

where $r = \alpha k^{\alpha-1}$ and $W = (1-\alpha)k^{\alpha}$. In (25) $\beta(W-N)$ is the consumption of the young and $(1-\beta)(1+r)(W-N)$ is the consumption of the old. There is no need for N to equal G. Different combinations of N and G are consistent with different stationary states. In the stationary state N may be negative, and G may be zero or positive. Larger values of G and smaller values of N will be associated with larger values of stationary state capital. This may seem surprising. How can larger values of government consumption and a smaller LPN be consistent with more long-run capital accumulation? The answer is that equation (25) only tells us about the stationary state; it says nothing about the transition leading up to the stationary state. To see how the transition matters, start in a stationary state with a given N and G and consider a policy in which the government permanently raises G. According to (25) there is a new stationary state with the original N, but larger values of G and k that is feasible. But will the economy ever get there, but only if the government raises the LNPs on some generations during the transition. In other words, a new stationary state with a higher G, a higher k, and the same N is only feasible if the government makes generations alive in the transition to the new stationary state pay the bill.

Starting at time t from an initial stationary state what is the transition equation determining the evolution of the economy's capital stock? Equations (26) and (27) answer this question.

$$k_{t+1} = k_t + k_t^{\alpha} - \beta(W_t - N_t) - C_{ot} - G_t \qquad (26)$$

$$k_{s+1} = k_s + k_s^{\alpha} - \beta(W_s - N_s) - (1-\beta)(1+r_s)(W_{s-1} - N_{s-1}) - G_s \quad s \geq t \qquad (27)$$

Equation (26) states that capital at time t+1 equals income at time t less total private plus government consumption at time t. The consumption of the young at time t, $\beta(W_t - N_t)$ incorporates the new if $(N_t \neq N)$ choice of an LNP for the generation born at time t. The term C_{ot} is the consumption of the old at time t. If the policy does not involve any change in consumption of the initial elderly C_{ot} will equal $(1-\beta)(1+r)(W-N)$, otherwise it will equal this amount less an additional net payment extracted from the elderly. Equation (26) holds for periods after time t. At time $s \geq t$ consumption of the elderly can be written as $(1-\beta)(1+r_s)(W_{s-1} - N_{s-1})$.

To summarize, the government's choice of policy can be fully described as (a) a decision whether to extract an additional net payment from the initial elderly, (b) the choice of a time path of LNPs (the time path of N_s for $s \geq t$), and (c) the choice of a time path of government consumption (G_s for $s \geq t$). The government need only announce these three elements of its policy and need never use the three ill-defined words "taxes," "spending," and "deficits."

2. The fiscal balance rule

The next question that this new vocabulary raises is if the government abandons the rule of "balancing the budget," what rule should it use to guide it in choosing the time paths of the N_s and the G_s, i.e., what

rule can the government use to make sure it is obeying the economy's intertemporal budget constraint? To consider this question let us first look at the economy's intertemporal budget. Since $k^{\beta} = rk + W$, equation (25) can be rewritten in the standard form for the intertemporal budget constraint, viz.:

$$k(1+r) + \frac{W(1+r)}{r} = \frac{(W-N)(1+r)}{r} + (1-\beta)(1+r)(W-N) + \frac{G(1+r)}{r} \qquad (25')$$

or, after subtracting $W(1+r)/r$ from both sides:

$$k(1+r) - (1-\beta)(1+r)(W-N) + \frac{N(1+r)}{r} = \frac{G(1+r)}{r} \qquad (25")$$

Equation (25') states that the present value of the economy's resources (the sum of its nonhuman and human wealth) equals the present value of the consumption of young and future generations (the first term on the right-hand side of the equation) plus the consumption of the current old plus the present value of government consumption. Equation (25") states that the present value of what the government consumes must be financed by the difference between the economy's nonhuman wealth and the consumption of the current old plus the present value of LNPs from future generations. Intuitively, equation (25") says that the government's resources for financing the present value of its consumption are the economy's capital left over after the elderly have consumed plus the amount that will be taken from young and future generations.

Equation (25") also represents the stationary state rule for setting fiscal policy. Let the stationary state level of government consumption be $\bar{G}$. Then in the stationary state N_s must be set each period to satisfy:

$$N_s = \bar{G} - \frac{r_s}{(1+r_s)}[k_s(1+r_s) - C_{os}] \qquad (25''')$$

The rule says: set the net lifetime payment of each successive generation equal to the flow of government consumption less the interest on the economy's capital stock left over after the current elderly consume. A more intuitive statement of the fiscal balance rule is: "extract enough from each successive generation such that if you were in the stationary state you would stay there and not impose a larger or smaller burden (NLP) on subsequent generations."

In a more realistic model where each period refers to a single year and in which adulthood begins at say age 20, the fiscal balance rule would be to set the net lifetime payment of each new cohort of 20 year olds equal to annual government consumption less the product of the interest rate times the sum of the economy's current (in the year the cohort hits age 20) capital stock and human wealth (the present value of labor earnings of existing adults) less the present value of consumption of existing adults. If there is population and or productivity growth the rule needs to be adjusted slightly; in the case of the two-period model the rule with

growth is given by $N_s = \bar{G} - [r_s-n)/(1+r_s)][K(1+r_s)-C_{os}]$, where 1+n stands for the product of one plus the rate of population growth and one plus the rate of productivity growth.

Now consider a policy transition starting at time t from a stationary state that involves keeping G constant at $\bar{G}$, but altering the time path of Ns $s \geq t$. While the time path of the N_ss can be chosen arbitrarily for a period of time, if the economy is to converge to a stationary state the government must ultimately choose a rule for setting N_s that leads to stationary state convergence. Any policy rule can be described as a function $N_s = R(\bar{G},k_s,C_{os-1})$, since the three arguments of this function fully circumscribe the government's choice of N_s; i.e., the government needs to finance a constant time path of $\bar{G}$, it needs to honor (if it is time consistent) the consumption of the elderly, C_{os-1}, and it needs to think about the resource base of the current and future economy which is fully described by k_s. Since the rule $N_s = N(\bar{G},k_s,C_{os-1})$, where the function N(, ,) is given by the right-hand side of (25'''), must be satisfied in the stationary state, any policy rule $R(\bar{G},k_s,C_{os-1})$ which leads the economy to converge to a stationary state must, itself, converge to $N(\bar{G},k_s,C_{os-1})$. I denote the rule $N_s = N(\bar{G},k_s,C_{os-1})$ the underlying "fiscal balance rule."

While there is no guarantee that any particular rule $R(\bar{G},k_s,C_{os-1})$ will lead the economy to converge to a stationary state, the simulations of Auerbach and Kotlikoff (1987) in their 55-period life cycle model use the "fiscal policy rule" itself (i.e., they set $R(\bar{G},k_s,C_{os-1}) = N(\bar{G},k_s,C_{os-1})$) and found no problems with convergence to a unique stationary state for a range of reasonable parameter values (see Laitner (1988) for an analysis of uniqueness in the Auerbach-Kotlikoff model).

Table 1 gives an example of a loose fiscal policy using the simple two-period model and the fiscal balance rule. The economy, whose parameters are given in the table, is initially at a stationary state with a value of k = .138, G = .1104, and N = .1104. The new policy involves reducing by 10 percent the NLP of the generation born at time t. At time $s \geq t$ the value of N_s (the NLP of generation s) is set by the fiscal balance rule. Note that this policy raises the consumption of generation s, but lowers that of subsequent generations. Associated with this intergenerational redistribution is a 30 percent crowding out of capital.

Before turning to the issue of distortionary policy, it is useful to consider the nonrelationship between the fiscal balance rule and conventional "budget balance." An easy illustration of the point that "budget balance" does not necessarily imply fiscal balance is given by the case of a "pay as you go" social security system. Suppose the economy is initially (at time t) in a stationary state with no government policy whatsoever (N=0 and G=0). At time t the government announces that starting at time t it will "tax" each young generation s for $s \geq t$ an amount X_s and "transfer" the proceeds to the contemporaneous old. Since at each point in time "taxes" equals "spending," this policy satisfies "budget balance" forever. For the old at time t the new policy means an increase

Table 1. A One Time 10 Percent Reduction in N for the Young

alpha = 0.5
beta = 0.3
lambda = 0.2

t	K	W	r	N	G	Cy	Co	S
1	0.1380	0.3864	1.2000	0.1104	0.1104	0.1380	0.3036	0.1380
2	0.1380	0.3864	1.2000	0.0994	0.1104	0.1435	0.3036	0.1325
3	0.1325	0.3817	1.2348	0.1240	0.1104	0.1288	0.3208	0.1178
4	0.1178	0.3685	1.3406	0.1252	0.1104	0.1216	0.3016	0.1106
5	0.1106	0.3616	1.4011	0.1259	0.1104	0.1179	0.2921	0.1068
6	0.1068	0.3578	1.4357	0.1263	0.1104	0.1158	0.2871	0.1048
7	0.1048	0.3558	1.4555	0.1265	0.1104	0.1146	0.2843	0.1036
8	0.1036	0.3546	1.4668	0.1266	0.1104	0.1140	0.2828	0.1029
9	0.1029	0.3539	1.4734	0.1267	0.1104	0.1136	0.2819	0.1026
10	0.1026	0.3535	1.4771	0.1267	0.1104	0.1134	0.2814	0.1024
11	0.1024	0.3533	1.4793	0.1267	0.1104	0.1133	0.2811	0.1022
12	0.1022	0.3532	1.4805	0.1268	0.1104	0.1132	0.2810	0.1022
13	0.1022	0.3531	1.4812	0.1268	0.1104	0.1132	0.2809	0.1021
14	0.1021	0.3530	1.4816	0.1268	0.1104	0.1131	0.2808	0.1021
15	0.1021	0.3530	1.4818	0.1268	0.1104	0.1131	0.2808	0.1021
16	0.1021	0.3530	1.4820	0.1268	0.1104	0.1131	0.2808	0.1021
17	0.1021	0.3530	1.4821	0.1268	0.1104	0.1131	0.2808	0.1021
18	0.1021	0.3530	1.4821	0.1268	0.1104	0.1131	0.2808	0.1021
19	0.1021	0.3530	1.4821	0.1268	0.1104	0.1131	0.2808	0.1021
20	0.1021	0.3530	1.4821	0.1268	0.1104	0.1131	0.2808	0.1021

of X_t in their consumption. For generation s, where $s > t$, the policy involves setting $N_s = - X_s + X_{s+1}/(1+r_{s+1})$. Suppose the government chooses its initial X_t and then sets $X_{s+1} = (1+r_{s+1})X_s$ thereafter for $s > t$. In this case $N_s = 0$ for all $s \geq t$, and this "balanced budget" policy never obeys the fiscal balance rule and, since it violates the economy's intertemporal budget constraint, leads the capital stock to implode.

If the fiscal balance rule rather than the "balanced budget" rule were obeyed starting at t+1, the government would set $N_s = -[r_s/(1+r_s)]X_t$ for $s \geq t$, leading the economy to converge to a stationary state with a lower, but positive capital stock. Depending on the policy's labeling, obeying the fiscal policy rule in this case might be described as "keeping the level of old age benefits (transfers) constant and adjusting taxes to meet the fixed level of benefits plus pay for government consumption" or it might be described as "keeping debt per young worker constant." 1/ Again, announcement of "social security trust fund balance" or "federal budget balance" may be associated with policies obeying fiscal balance, but they also may not.

3. Describing distortionary policy

As in the case of nondistortionary policy, fiscal policy can be characterized with reference to individual lifetime budget constraints. Take, as an example, the case of a distortionary capital income tax. In

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1/ If the amount X_t taken from the young at time t is labeled "borrowing," the amount given to the old at time t is labeled a "transfer payment," and subsequent receipts from each new young generation are taken when young and labeled "taxes," then for $s > t$ the quantity $-[K_s(1+r_s)-C_{os}]$ in the fiscal balance rule will correspond to "debt per young person," and the fiscal balance rule would be read "tax each new generation an amount N_s equal to government consumption plus interest on government debt; i.e., keep debt per young person constant." If the amount X_t taken from the young at time t is labeled "taxes," rather than borrowing, the amount given to the old at time t is labeled a "transfer payment," and receipts taken from generation $s > t$ when young are labeled "taxes" and payments made to generation $s > t$ when old are labeled "transfers" and there is no "debt," then the amount $-[K_s(1+r_s)-C_{os}]$ in the fiscal balance rule will correspond to "transfers to the elderly" and the fiscal balance would be read "set taxes high enough to cover government consumption and keep transfers to the elderly at the current level of $-[K_s(1+r_s)-C_{os}]$; i.e., keep transfers to the elderly constant through time." In addition to paying "taxes" to cover $\bar{G}$ at time s, the young at time s pay "taxes" sufficient to cover "transfers" to the elderly at time s, $-[K_s(1+r_s)-C_{os}]$; but when they are old the generation born at time s will receive "transfers" of $-[K_s(1+r_s)-C_{os}]$, hence the present value of their lifetime payment, N_s, is $G + [K_s(1+r_s)-C_{os}]-[K_s(1+r_s)-C_{os}]/(1+r_{s+1})$, which is the fiscal balance rule except for the difference between r_s and r_{s+1}.

this case the lifetime budget constraint equation (24) still holds, but the lifetime net payment, N_t, now includes the net present value of distortionary payments to the government plus the present value of nondistortionary payments. 1/ With this budget constraint the share of net lifetime resources (valued at the pretax interest rate) spent on consumption when young, α, depends, on the interest rate and the rate of capital income taxation. Hence, equation (28), defining stationary state capital, expresses α as a function of r and τ_k. In (28) N should be understood to include the net present value of lifetime distortionary payments to the government.

$$k^{\alpha} = [\beta(r,\tau_k)+(1-\beta(r,\tau_k))(1+r)](W-N) + G \tag{28}$$

The transition equations are:

$$k_{t+1} = K_t - \alpha(r_{t+1},\tau_{kt+1})(W_t-N_t) - C_{ot} - G_t \tag{29}$$

$$k_{s+1} = k_s^{\beta} - \alpha(r_{t+1},\tau_{kt+1}))(W_s-N_s)-(1-\alpha(r_{t+1},\tau_{kt+1}))$$
$$(1+r_s)(W_{s-1}-N_{s-1}) - G_s \tag{30}$$

The form of the fiscal balance rule is not changed. However, in determining N_s in (25''') the government needs to consider the net present value of its receipts from each new generation arising from its distortionary as well as nondistortionary policies; i.e., in setting its capital income tax rates the government must consider how this policy will influence its time path of N_ss.

V. Can We Implement the Fiscal Balance Rule Empirically?

The fiscal balance rule represents a means (but not a unique means) for judging the stance of current policy. The use of this rule does not require describing how policy changes will affect the economy. Hence, the use of this rule does not require a fully articulated model that would determine, for example, how factor prices respond to changes in policy. Use of the fiscal balance rule does, however, require one to specify what one believes current policy to be. This, in turn, requires specifying current future policy, i.e., the time path of policy in the future currently expected to prevail. For example, in forming the value for N_s in (25''') based on an economy with a social security system one would need to consider what generation s will pay to the government when young and what it will receive when old. It is this receipt when old that constitutes an aspect of current future policy.

1/ One can always express a budget constraint with distorted prices as a budget constraint with nondistorted prices, but with the present value of lifetime resources now reduced by an amount equal to the present value of distortionary payments to the government. Thus equation (21) can be written as: $C_{yt} + C_{ot+1}/(1+r_{t+1}) = W - N$, where $N = r_{t+1}\tau_k C_{ot+1}/(1+r_{t+1})$.

In addition to specifying current future policy, determining whether the government is obeying the fiscal balance rule requires projecting future factor prices. The prevailing term structure of interest rates can be used to value future earnings and consumption streams, but the levels of future earnings will have to be projected. Projecting future earnings of those currently alive requires specifying the growth rates of population and productivity. It remains to be seen how sensitive will be the evaluation of the fiscal balance rule to these assumptions.

Another issue that needs to be examined is how to deal with lifespan uncertainty in forming the present value of the future earnings and consumption of existing adult generations. Treatment of this kind of uncertainty as well as the uncertainty of future earnings and government policy need to be considered prior to actually implementing the fiscal balance rule. Still, even at this stage the empirical implementation of the fiscal balance rule seems eminently feasible.

An advantage of the fiscal balance rule is that its implementation would take into account nongovernmental intergenerational redistribution. For example, a reduction in the stock market, like the crash of October 1987, will redistribute from older to younger generations. In terms of the fiscal balance rule, the change in stock values spells a lower present value of consumption of older generations and makes it easier to satisfy the fiscal balance rule.

VI. Conclusion

The concern with missing the true economic policy because one is focusing on the "deficit" is far from a hypothetical possibility. As Feldstein (1974) has argued the United States engaged in an enormous program of intergenerational redistribution through Social Security in the 1960s and 1970s. In 1983 the government reduced the future generosity of Social Security without the new legislation having any impact on the 1983 deficit as conventionally measured. Other programs such as the Accelerated Cost Recovery System and the 1986 Tax Reform Act may have had important generational implications.

The concern with evaluating fiscal policy is heightened by the social security surpluses projected for the 1990s and beyond. These impending surpluses are already leading many commentators to suggest that fiscal policy will be tight in the 1990s. In contrast, the fiscal balance rule perspective suggests that there will be no particular tightening of policy in the 1990s.

The use of the fiscal balance rule or closely related rules will not be easy. Given the kinds of projections and assumptions required for its implementation, we may well end up with a quite rough measure of fiscal policy. Still, even a rough measure of actual fiscal policy would be preferable (at least to a non-Keynesian) to the precise measure of accounting whims that constitutes current description of fiscal policy.

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