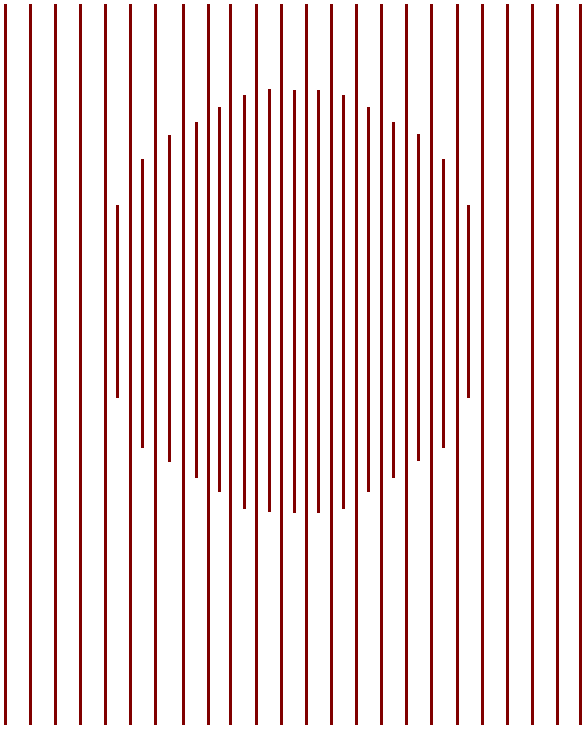
CBO PAPERS

BUDGET ESTIMATES: CURRENT PRACTICES AND ALTERNATIVE APPROACHES

January 1995



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CONGRESSIONAL BUDGET OFFICE
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PREFACE

The Congressional Budget Office (CBO) has prepared this paper as background for a joint hearing on budget estimation procedures to be held by the House and Senate Committees on the Budget. The paper reviews current methods for estimating the budgetary effects of proposed changes in revenues and spending and examines the pros and cons of alternative approaches.

The paper was written by the staffs of CBO's Budget Analysis, Macroeconomic Analysis, and Tax Analysis Divisions, and the General Counsel. Sherry Snyder edited the manuscript, and Kathryn Quattrone prepared the final version of the paper.

Robert D. Reischauer
Director

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SUMMARY AND INTRODUCTION

The Congressional Budget Act of 1974 requires the Congressional Budget Office (CBO) and the Joint Committee on Taxation (JCT) to provide estimates of the budgetary effects of all legislative proposals reported by a Congressional committee. The act assigns JCT the responsibility for preparing the estimates of most revenue legislation, and CBO does the estimates of spending proposals.

Since the inception of the Congressional budget process in 1975, the House and Senate budget committees have used these estimates to assess whether a bill would breach the spending or revenue totals in the budget resolution or would be subject to a point of order on the floor of the Congress.[1] More recently, the budget committees have also used them to monitor Congressional compliance with the requirements of the Budget Enforcement Act of 1990. That act placed dollar limits on discretionary budget authority and outlays and established a pay-as-you-go (PAYGO) requirement; under PAYGO, changes in legislation affecting revenues and mandatory spending, in total, may not increase the deficit in any year. In 1993 and 1994, the Senate used CBO's and JCT's estimates to enforce procedural rules requiring that legislation not increase the deficit in the budget year, the first five years (starting with the budget year), and the second five years. As additional constraints have been added to the Congressional budget process, the estimates have become increasingly important.

The Balanced Budget Act of 1985, as amended by the Budget Enforcement Act, also assigns important estimating responsibilities to the Office of Management and Budget (OMB) in the executive branch. OMB, in turn, depends on the Department of the Treasury for its revenue estimates. At the end of each Congressional session, OMB tabulates the estimated effect of all legislation subject to the pay-as-you-go requirement. If OMB determines that legislation has added to the deficit, it must order an across-the-board reduction (or sequestration) in all nonexempt mandatory spending programs sufficient to eliminate the excess. Similarly, if OMB estimates that the discretionary spending limits have been breached, it must order a sequestration of spending authority for nonexempt discretionary programs.

CBO, JCT, OMB, and the Treasury employ the same basic estimating conventions. Those conventions are simple and practical but not without their limitations. They have served best when changes in policy have been small and when concern has been focused on the budget totals. Their limitations are most apparent when policymakers are considering substantial changes or when they are interested in identifying the full effects of individual proposals.

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1. A point of order is an objection raised on the House or Senate floor to an action that would violate the body's rules. Usually, a point of order may be waived by a majority vote. In the Senate, however, waiving a point of order for a violation of the Budget Act usually requires a three-fifths vote.

Current budget enforcement procedures reflect these basic estimating assumptions. As specified by the budget committees, CBO's estimates of spending proposals and JCT's revenue estimates have been consistent with the economic assumptions used in preparing the annual budget resolution. As required by the Balanced Budget Act, OMB's PAYGO estimates must use the economic assumptions underlying the President's budget submission. The economic assumptions associated with the budget resolution and the President's budget have been reasonably consistent with the respective tax and spending proposals, as well as the resulting fiscal policy. If the proposals are adopted, that approach produces estimates of total revenues and outlays that correctly reflect the new fiscal policies. But the procedure does not attempt to measure the full incremental cost or savings of an individual proposal that would affect the economic aggregates--for example, gross domestic product (GDP) or the price level.

The budget estimates are also based on numerous assumptions about the microeconomic effects of the proposed policies--that is, how those policies might change individual behavior in response to new economic incentives. These behavioral and other technical estimating assumptions cover a wide variety of effects and reflect recent research and the best available estimating practices. For example, the estimate of a proposal to subsidize health insurance for early retirees would include the cost associated with the increase in the number of Social Security beneficiaries that would occur. Similarly, the estimate of a proposal to increase the excise tax on tobacco products would take into account the resulting decrease in consumption of cigarettes.

For the vast majority of bills the Congress considers, these estimating conventions are accepted and noncontroversial. Disputes occasionally arise, however, in two sorts of situations. First, estimators sometimes differ in their assumptions about the size of the microeconomic responses. In 1990, for example, the Bush Administration and JCT had different estimates of the Administration's proposal to reduce the tax rate on capital gains. Although the Administration and JCT assumed similar types of behavioral responses, the former estimated an increase in receipts and the latter a reduction. The Administration believed that reducing the tax rate on capital gains would permanently increase realizations of gains by enough to offset the revenue loss from the lower rate. JCT judged that after an initial surge, the increase in realizations would offset much but not all of the rate reduction.[2]

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2. Congressional Budget Office, *How Capital Gains Tax Rates Affect Revenues: The Historical Evidence* (March 1988); Joint Committee on Taxation, *Explanation of Methodology Used to Estimate Proposals Affecting the Taxation of Income from Capital Gains*, JCS-12-90 (March 27, 1990).

Second, although enactment of some proposals might affect the overall economy, the estimates traditionally exclude macroeconomic responses. Some tax or spending bills might affect aggregate demand (that is, total spending in the economy) and, if not offset by changes in monetary policy, restrain or stimulate the economy in the short run. Other proposed legislation could alter the supplies of labor, capital, or technology that determine the potential growth of the economy in the long run. In both cases, use of the economic assumptions underlying the budget resolution or the President's budget could lead to an over- or underestimate of the budgetary effects of the proposal. Whether the full budgetary effects of a proposed policy change are attributed to the bill or included in the economic assumptions can make the difference between whether the bill can pass on a simple majority or whether it needs 60 votes in the Senate. It can also determine whether OMB is required to order a PAYGO sequestration.

In theory, estimators could incorporate macroeconomic effects into budget estimates, thereby providing more information to the Congress and a more comprehensive basis for pay-as-you-go scoring. But in practice, such a change would also raise several difficult issues.

- The results could depend greatly on assumptions about the behavior of the Federal Reserve Board.

- In situations in which little consensus exists on the magnitude of the macroeconomic effects, the estimates would be subject to considerable controversy and uncertainty.

- The macroeconomic effects occurring within the usual five-year estimating period might not accurately represent the proposal's long-term economic gains or losses.

- For many bills, preparing estimates would take substantially more time and require more resources.

- Counting macroeconomic effects for only some bills could reduce delays, but that approach would raise serious problems of consistency and fairness.

- To make the budget process consistent with the new estimating approach, the Congress would have to change the Congressional Budget Act and the Balanced Budget Act to reflect the interrelated effects of tax and spending proposals.

Including a proposal's macroeconomic effects in budget estimates is sometimes described as "dynamic," as opposed to "static," estimating. As has been indicated,

however, the estimates of CBO, JCT, and OMB are not static in that they already incorporate a wide variety of behavioral changes in response to changes in economic incentives. Therefore, the labels "dynamic" and "static" are misleading and are not used in this paper.

CURRENT ESTIMATING PRACTICES

A consistent basic approach for estimating the budgetary effects of legislation has been used since the Congressional budget process began in 1975. The conference report accompanying the annual budget resolution sets forth the economic assumptions on which it is based. Typically, the resolution specifies assumptions for real and nominal GDP, the consumer price index, the unemployment rate, and short- and long-term interest rates. The estimates of proposed legislation prepared by CBO and JCT employ the macroeconomic assumptions specified in the budget resolution as well as a host of behavioral and other technical estimating assumptions.

Macroeconomic Assumptions

The House and Senate budget committees choose the economic assumptions for the budget resolution. In many cases they have chosen the forecast that CBO publishes in January or February with its baseline budget projections. If the committees do not choose the CBO forecast, they generally pick the Administration's forecast, which is a post-policy forecast--that is, it takes into account the macroeconomic effects of the President's budget proposals. Although CBO's forecast is normally based on laws already in place, the budget committees have presented it in the conference report on the budget resolution as if it were a post-policy forecast. In most years, the macroeconomic effects of the policies implicit in the budget resolution would be small over the five-year budget horizon, so the practical difference between a pre-policy and a post-policy forecast would not be significant.[3]

In the few years when the policy changes envisaged in the budget resolution have been large and likely to have significant economic effects, the budget committees have requested that CBO incorporate proposed policy changes in its economic forecast. Such a request was issued in the summer of 1990 in anticipation of the Omnibus Budget Reconciliation Act of 1990. In a few cases, the budget

3. Even though CBO's forecasts have normally excluded the macroeconomic effects of policy changes, they stand up well in comparison both with the Administration's forecasts and with private forecasts. In effect, at least for the first two years, policy changes have not loomed large in comparison with other sources of error in economic forecasts. See Congressional Budget Office, *The Economic and Budget Outlook: An Update* (August 1994), Appendix A.

committees themselves have modified the CBO forecast. In the budget resolution for fiscal year 1983, for example, the committees chose to assume lower interest rates than were in the CBO forecast, in order to reflect the anticipated effect of the Tax Equity and Fiscal Responsibility Act of 1982.

Because the budget committees include the effects of their proposed policy changes in the economic assumptions of the budget resolution, CBO and JCT do not consider the macroeconomic effects of individual bills when they estimate their budgetary impact. As long as the macroeconomic effects are considered in one place or the other, however, the policies envisaged in the budget resolution will have the same bottom-line effect on the deficit. The current practices are consistent with the whole set of policies in the budget resolution and give a clear picture of their budgetary effects, but they cannot give as complete a picture of the effects of individual policies. Those practices do not give appropriate credit to policies that could strengthen the economy and increase the tax base, nor do they charge policies that could weaken the economy and erode the tax base.

The economic impact of policies can be shown by means other than cost estimating--for instance, committee hearings and reports, and analyses by Congressional staff and others. CBO has often been asked to analyze the economic effects of proposals. Recently, for example, CBO did a comprehensive analysis of the effects of the North American Free Trade Agreement (NAFTA) and examined the economic effects of the Administration's health care proposal. Such reports, however, sometimes have less weight in the political debate than CBO's or JCT's estimates of a proposal. The introduction of the PAYGO rules in 1990 and the additional points of order in the Senate have also raised the stakes for estimating bills and made it more critical that all of a policy's effects be included in the cost estimate. The following two sections provide further details on how estimates of spending and tax proposals are currently prepared.

Estimates of Spending Proposals

Estimates of proposals to change mandatory spending programs take into account a wide variety of programmatic interactions and behavioral responses. In general, CBO's aim is to include all of the effects of a proposal that can be estimated with sufficient confidence and precision, as long as the effects do not involve changing the macroeconomic aggregates specified in the budget resolution. An estimate might assume, for example, that incentives for early retirement cause some federal employees to start drawing retirement benefits, that reductions in reimbursement rates for physicians are partially offset by an increase in the volume of services provided, that training and work programs for recipients of Aid to Families with Dependent Children help some people leave welfare faster, or that farmers increase

plantings in response to higher support prices. The following descriptions illustrate the kinds of changes that are included in cost estimates in four different areas of the budget--health care, debt management, farm price supports, and the Social Security earnings test.

Health Care. During the past year, CBO and JCT have analyzed a variety of health reform proposals--the Administration's plan, single payer, managed competition, the House bipartisan proposal, and several others.[4] All of the proposals would have increased the demand for health care services. Several of the proposals would have encouraged a reallocation of workers among firms, as workers sought jobs that would provide them with a larger combined amount of cash wages, fringe benefits, and federal subsidies. Both of those microeconomic responses would increase the cost of health reform, and CBO took both into account when preparing its estimates. For consistency with the assumptions of the budget resolution, however, the estimates assumed that total employment in the economy would not change. For example, by requiring employers to contribute to the cost of their employees' health insurance, the Administration's health proposal would have discouraged some workers from working and would have promoted early retirement. CBO estimated that the President's proposal would have reduced the supply of labor by between 0.25 percent and 1 percent. Had CBO included that macroeconomic effect in the estimate, tax revenues would have been between $6 billion and $20 billion lower in 2000.

Debt Management. To estimate federal debt and interest costs, CBO uses a versatile model that integrates assumptions about future deficits, interest rates, and the mix and seasonality of borrowing.[5] The model projects changes in the debt for up to six years by rolling over the current debt as it matures and adding new debt as determined by assumptions about the deficit and borrowing. Most legislation affects interest costs only indirectly--through its effect on the deficit. Furthermore, the Treasury has fairly wide latitude to manage the debt as it sees fit, so the debt is rarely the target of legislation. But a few bills would directly affect the cost of financing the debt. For example, if altering the return on savings bonds made those instruments significantly more or less attractive to investors, it would reduce or increase the Treasury's need to borrow elsewhere in the market. That shift would in turn raise or lower the Treasury's borrowing costs, depending on the relative yields of savings bonds and marketable securities. The effect of such a change in the Treasury's borrowing mix would be included in CBO's cost estimate.

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4. See, for example, Congressional Budget Office, *An Analysis of the Administration's Health Proposal* (February 1994).

5. Congressional Budget Office, *Federal Debt and Interest Costs* (May 1993).

In contrast, other debt management proposals have been advanced with the intention of altering the relation between short- and long-term interest rates or changing the overall level of interest rates in the economy. Although the effects of any changes in interest rates would not be included in a cost estimate because doing so would be inconsistent with the interest rates assumed in the budget resolution, economic research suggests that such effects would be negligible in any event.

Farm Price Supports. CBO's estimates of proposals to change the price support programs of the Department of Agriculture's Commodity Credit Corporation (CCC) are based on detailed models and analysis of the supply and demand for the subsidized commodities.[6] CCC outlays are directly affected by the laws governing U.S. farm programs, the choices the Secretary of Agriculture makes in carrying out the programs, farmers' decisions to participate, and U.S. and world market conditions. Estimates of the cost of proposals to change support levels take into account the extent to which the Secretary will change the amount of required acreage reduction, farmers will change their plantings of supported crops, and market prices will rise or fall. Estimates of changes in other federal programs such as the Conservation Reserve Program, or proposed trade agreements such as NAFTA, include their estimated effect on farm prices and federal commodity spending. Consistent with the economic assumptions of the budget resolution, however, the estimates for even major changes in farm subsidies do not include the effects of those changes on total GDP or tax collections.

Social Security Earnings Test. Proposals to liberalize the Social Security earnings test provide the final illustration of traditional practices for estimating the effects of spending proposals. Increasing the amount of money that a Social Security beneficiary may earn without having his or her benefit reduced would increase benefits for some elderly people who are currently working and have their benefits partly or entirely withheld. The proposal could encourage additional paid work by some elderly people, although others might reduce their work effort. Such an increase in work would have a negligible effect on the amount of Social Security benefit payments. Because the cost estimate incorporates the economic assumptions in the budget resolution, the estimate would not reflect any change in economywide employment, compensation, or income and payroll tax collections. Even if those additional revenues were included in the cost estimate, however, they would offset less than 20 percent of the additional benefit payments, according to the Social Security Administration.

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6. Congressional Budget Office, *The Outlook for Farm Commodity Program Spending, Fiscal Years 1992-1997* (June 1992).

Estimates of Tax Proposals

Like CBO's estimates of proposals to change mandatory spending programs, JCT's estimates of proposals to change tax law reflect a wide variety of behavioral responses. Behavioral responses that are found to be large enough to affect revenues are included in the estimate unless they would be inconsistent with the levels of the macroeconomic variables assumed in the budget resolution. For example, the estimates of the proposal to increase income tax rates for high-income individuals in the Omnibus Budget Reconciliation Act of 1993 (OBRA-93) considered the following behavioral responses by those taxpayers: switching from assets that yield taxable income to assets that generate capital gains or to tax-exempt bonds, increasing the amount of itemized deductions, and shifting compensation from taxable to tax-exempt or tax-deferred forms. Possible changes in work effort and saving that could affect GDP, however, were not reflected in the revenue estimates. Five recent cases--legislation affecting the earned income tax credit, individual retirement accounts, the tax rate on capital gains, the excise tax on gasoline, and the General Agreement on Tariffs and Trade--illustrate the kinds of behavioral and other effects that are included in estimates of tax proposals.

Earned Income Tax Credit. OBRA-93 increased the subsidy rate of the earned income tax credit (EITC) and the rate for phasing out the credit and eliminated two special credits. JCT calculated the effects of those changes by applying the proposed change in rules to data from the Internal Revenue Service on a sample of families who currently receive the credit. Because OBRA-93 also added a new population of eligible recipients--lower-income people without children--the estimate drew on nontax data on newly eligible recipients as well. Assumptions about the participation rate of new recipients and changes in participation and compliance by those whose benefits were changed also were included in the estimate.[7]

By changing the subsidy and phaseout rates of the EITC, OBRA-93 changed implicit marginal income tax rates for families receiving the credit. Although the change in rates could affect labor supply and GDP, this effect was not reflected in the estimate because it would not be consistent with assumptions of the budget resolution. If the effects on labor supply had been incorporated into the revenue estimate, the estimated cost of the changes in the EITC would have been somewhat larger, because most of the affected workers experienced an increase in marginal tax rates.

Individual Retirement Accounts. Estimates of proposals to expand the availability of individual retirement accounts (IRAs) include the effects on revenues of taxpayers'

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7. Congressional Budget Office, "An Economic Analysis of the Revenue Provisions of OBRA-93," CBO Paper (January 1994).

decisions to take advantage of the tax preference by increasing IRA contributions and, subsequently, the share of their investment income that is tax-exempt. To evaluate a proposal, JCT must estimate, for each year, the amount of new IRA contributions made by taxpayers facing each marginal income tax rate, the source of funds for those contributions, and the amount of eventual withdrawals of the new funds from the IRAs. Funds that would otherwise have been deposited in taxable savings accounts reduce future income tax revenues by reducing taxable investment income, but funds that would have been deposited in other tax-preferred accounts (in particular, 401(k) accounts) and funds that come from additional saving do not.

If expanding the availability of IRAs increased personal saving by more than it increased the federal deficit, it would increase national saving, and the resulting higher level of investment would increase future output and income. Much of the new income would be received as tax-free interest in IRAs and therefore would not affect revenues, but some of the new income would be received in the form of corporate profits and wage and salary income and would boost income tax revenue. Current revenue estimates do not account for this further feedback from eventual changes in aggregate output. Excluding this type of feedback reflects both the adherence to the macroeconomic assumptions of the budget resolution and the substantial disagreement that persists among researchers on the amount that national saving increases when the after-tax rate of return on capital goes up.

Tax on Capital Gains. JCT estimates the revenue effect of a change in the capital gains tax rate by building from CBO's projection of total realization of gains under current law. JCT then estimates how much taxpayers would change those realizations because of the proposal and calculates the change in revenues caused by that induced change in behavior. A rate decrease, for example, would lower the barrier to selling assets, which would induce people to realize more gains. Those induced revenue effects, which are based on econometric estimates of taxpayers' responses to past changes, typically offset a large portion of the revenue loss from the lower rate. For President Bush's 1990 proposal for a 30 percent exclusion, for example, JCT estimated that induced realizations would offset fully 78 percent of the loss. If the increase in realizations is achieved at the cost of a switch away from other taxable forms of income such as dividends, the estimate is adjusted for the revenue lost as a result of the shift.

JCT's estimates, however, do not include how a rate change would indirectly affect revenues by changing the size of the economy. For example, a reduction in the capital gains tax might encourage saving, innovation, and the formation of new businesses. If those effects were large enough, they could boost other taxable incomes sufficiently to generate enough additional income tax revenue to offset the estimated revenue loss from the reduction in tax rates. Again, excluding this potential feedback from revenue estimates reflects both adherence to the economic

assumptions adopted for legislative estimates and the substantial uncertainty about whether such a feedback would be large enough during the five-year budget window to have a significant effect.

Gasoline Excise Tax. Recent increases in the gasoline excise tax illustrate some other factors included in revenue estimates. JCT takes into account the fact that people will drive less if the gasoline tax is raised, thus reducing the estimated revenue gain. JCT also recognizes that a higher excise tax would increase nominal GDP by raising the prices of the taxed good. Therefore, JCT's estimates assume that income falls in order to maintain GDP at the level assumed in the budget resolution, and that income and payroll tax receipts would shrink accordingly. As with other estimates, revenue losses stemming from temporary disruptions in the economy are not included.

General Agreement on Tariffs and Trade. CBO incorporated several behavioral reactions in the estimates of the revenue losses resulting from the legislation implementing the agreement of the Uruguay Round of negotiations of the General Agreement on Tariffs and Trade (GATT). (Estimates of customs duties, unlike most revenue estimates, are prepared by CBO.) The agreement reduced tariff rates across the board by approximately one-third over 10 years, reducing receipts from customs duties. The estimate assumed that some of the revenue lost through the reduction in tariff rates would be offset by the increase in tariff revenue stemming from the expansion of trade brought about by the agreement. The estimate also incorporated the effect of the tariff change on income and payroll taxes, as described above. Although CBO has not examined the economic effects of GATT, most economists expect that cuts in tariffs will benefit the economy in the long run but will cause disruptions in some industries in the short run. The much smaller reduction in tariffs occasioned by NAFTA, which CBO did analyze, was estimated to increase potential GDP by about 0.25 percent after 15 years.

BROADENING THE SCOPE OF BUDGET ESTIMATING: PRACTICAL ISSUES

Despite the wide range of economic effects now included in estimates of the budgetary impact of legislative proposals, some acknowledged macroeconomic effects are still excluded. Given the pay-as-you-go requirement of the Budget Enforcement Act, lack of explicit recognition--either qualitative or quantitative--of such effects has put some legislation believed to be beneficial to the economy at a procedural disadvantage and has advantaged some legislation that could hurt the economy. This limitation of current estimating practices could be overcome if the macroeconomic consequences of legislative proposals were reflected in the estimate of each bill rather than in the budget resolution's economic assumptions. Before

changing current estimating practices, however, the Congress needs to consider a number of important practical questions.

- What types of macroeconomic consequences might be included in bill cost estimates?
- What degree of consensus exists within the economics profession concerning the macroeconomic effects of various proposals?
- How large are the macroeconomic effects of a proposal likely to be in the five- or ten-year window for which budget estimates are made?
- How many resources and how much time would it take to incorporate macroeconomic effects into bill cost estimates?
- How would the budget process have to be changed to accommodate the changes in estimating practices?

Types of Macroeconomic Effects

Macroeconomic effects fall into two categories that might be termed "structural" and "cyclical." The recent discussion of macroeconomic effects has focused on structural changes--those that would affect the economy's potential output in current dollars. For example, changes in incentives to work, save, or invest may alter the amounts of labor or capital offered in the marketplace. Other changes, such as reductions in barriers to trade or imposition of new regulations, may affect the efficiency with which resources are used. Some legislation might have a relatively direct impact on the level of prices--for example, if it changes excise taxes, user fees, or subsidies.

Most of the legislation considered by the Congress would not have significant structural economic effects. In the few cases in which structural economic changes might be expected, the changes are likely to take some time to produce noticeable impacts, but in some cases the effects might begin quickly.

Cyclical changes are those that affect how close to its potential output the economy is operating. For example, during recessions, the Congress has often considered proposals to increase demand by increasing federal spending or by cutting taxes and allowing the deficit to grow. Conversely, when inflation has threatened, the Congress has contemplated raising taxes.

Including cyclical feedbacks in budget estimates is more problematic than including structural feedbacks because cyclical feedbacks depend crucially on the

behavior of the Federal Reserve. Calculating those feedbacks would thus require an assessment of how the Federal Reserve would be likely to react, an assessment that must take into account the state of the economy as well as the makeup of the Federal Reserve Board. Attributing a cyclical feedback to every bill would also be extremely cumbersome, because many bills--including those that otherwise affect only federal spending--would alter the government's fiscal stance and would in turn affect revenues.

Degree of Consensus

Macroeconomists often seem to disagree about nearly everything, but that appearance is misleading. In fact, there are fairly broad areas of agreement on how fiscal policies affect the economy. Even where consensus exists, however, economists often have widely divergent views about the magnitude and timing of the macroeconomic effects of policy changes. Thus, expanding the scope of macroeconomic effects to be included in budget estimates could add to the uncertainty and controversy surrounding some estimates and might risk undermining the credibility of all the estimates.

Advocates of including more macroeconomic effects point out, correctly, that the assumptions about those effects are not necessarily any less certain or more controversial among economists than some of the behavioral assumptions that are currently included in cost estimates. The macroeconomic effects of some tax and spending policies have been extensively examined in the professional literature, which serves to delineate areas of agreement.

The economic assumptions still seem likely to attract more political controversy than CBO's and JCT's other assumptions. Even in the absence of a strong consensus among economists on macroeconomic effects, estimators would have to make some kind of judgment about them. In such a situation, the estimators could be under considerable pressure for a favorable estimate and would have little professional backing for the particular choice they made. Even if the estimators did not succumb to such pressure, the credibility of budget estimates could be undermined if people who were not pleased with the estimate regarded the choice as arbitrary or politically motivated.

Magnitude of Macroeconomic Effects

Some analysts argue that including macroeconomic effects in budget estimates is not worth the trouble because the most interesting and important effects--those on

efficiency and on incentives to work and to save and invest--would generally not reach a significant size within the first five years (the budget window).

Certainly, this assessment is correct for proposals that would alter incentives to save and invest. For example, reductions in taxes on capital increase the supply of capital only slowly, through a myriad of interrelated decisions by firms, entrepreneurs, and savers. Strong practical considerations, ranging from capacity constraints at equipment suppliers to managerial constraints at rapidly growing firms, limit the speed with which investment can be expanded, buildings can be built, and machinery can be installed. As a result, the capital stock usually takes many years to adjust to its new level after a change in the tax on capital income. In many estimates, half or less of the adjustment implied by the tax change would be completed in the five-year budget window--and even that only at the end of the fifth year.

The narrow budget window, moreover, would often focus attention on the transitional problems attending policy changes rather than on their long-run effects. Those transitional problems can be particularly important in the case of trade legislation such as NAFTA or GATT. Economists widely believe that liberal trade policies strengthen the economy in the long run by focusing resources on producing the goods and services in which the United States holds a comparative advantage. But the transfer of resources involves job losses in industries that lose a measure of protection, as well as job gains in some exporting industries. The job losers cannot be easily matched up with the new jobs, so structural unemployment is likely to increase for a while. In the budget window, transitional costs are likely to play a large role.

Although changes in capital taxation and trade policies would show only limited macroeconomic effects during the first five years, other policies would realize the full measure of their effects in a relatively short time. Changes in marginal tax rates on labor income, for example, would immediately affect the incentive to work. Work habits may take some time to adjust, and jobs may not appear immediately, but there is some evidence that most of the adjustment would take place within two years. Both the potential output of the economy and the federal tax base would adjust over a similar period.

Resources and Timeliness

Including macroeconomic effects in bill cost estimates would increase the amount of time and resources needed to prepare many of the estimates. Although some estimates would be straightforward and could be done quickly, others would be extremely complex and could not be done with the rapid turnaround that the

Congress has come to expect. For example, CBO's economic analyses of the North American Free Trade Agreement in 1992 and of the Administration's health proposal in 1993-1994 each took several months. More than 40 staff members in all of CBO's divisions contributed to the latter analysis.

Both NAFTA and the health plan were certainly more complex than most bills, and few would be likely to take so long to analyze. In many cases, moreover, CBO and JCT could anticipate legislation, so the final analysis would be unlikely to delay cost estimates by months. Still, some delays would be inevitable and might require stretching out the schedule for considering legislation--especially for lengthy, complicated legislation such as reconciliation bills and major tax proposals. The final versions of many of those bills are drafted in last-minute, late-night sessions just before a scheduled Congressional recess or the end of a session. Even appropriation bills, for which outlay estimates are frequently prepared overnight, would have to be carefully scrutinized for their potential macroeconomic effects.

Unanticipated floor amendments could well affect the economic impact of legislation, and if they raised new issues, evaluating them might require days or weeks of research, analysis, and model simulation. A change in estimating practices might thus require changes in the rules or schedules for introducing bills and amendments that would allow time for examining their economic impact.

Changing the Budget Process

In addition to raising questions of accuracy and timeliness, changing the estimating process to include macroeconomic effects in estimates for individual bills would require amending the Congressional Budget Act and the Balanced Budget Act. At present, the procedures for controlling spending and revenues are quite distinct. As required by titles III and VI of the Congressional Budget Act, the budget resolution allocates to each Congressional committee a total amount of new budget authority and outlays. The resolution also establishes a floor on total revenues. If a spending committee reports legislation that would exceed its allocation of budget authority or outlays, a point of order may be raised, and the legislation may not be considered without a waiver of the point of order. A similar provision prevents legislation from breaching the revenue floor. As noted earlier, the Balanced Budget Act controls mandatory spending and revenues by the pay-as-you-go process. Discretionary spending programs, however, are limited by separate caps on budget authority and outlays.

If macroeconomic effects were included in cost estimates, bills that altered spending programs could also change revenues, and *vice versa*, and the budget process would have to recognize that fact. For example, a reduction in appropri-

ations for grants to state and local governments could reduce federal revenues. A large body of literature suggests that federal grants do not add dollar for dollar to state and local spending but substitute in part for other sources of funds. Thus, if federal grants were cut back, state and local governments would probably seek to replace at least some of the funds through increases in their own taxes. State and local taxes would have effects on the economy that would be similar to those of federal taxes and thus would reduce federal tax bases and revenues. Moreover, because some state and local taxes can be deducted from federal taxable income, the federal tax base could fall for that reason also.

Including macroeconomic effects in cost estimates would require changes in how Congressional committees are held responsible for the budgetary effects of the legislation they report. The Congressional Budget Act generally assumes that only the House Committee on Ways and Means and the Senate Committee on Finance will report legislation that affects revenues. If macroeconomic effects were taken into account, however, that assumption would no longer be valid. The Congress would have to develop procedures for assigning both spending and revenue targets to committees or for allowing committees to substitute increases in revenues for reductions in discretionary or mandatory spending. The current system does not allow committees to offset revenues against spending.

As part of these changes, the Congressional budget resolution would have to specify in more detail the assumed policy changes that would affect the economic outlook. Currently, many policies are consistent with the spending totals allocated to individual committees. But if committees were assigned targets for revenues as well as spending, they would find it harder to deviate from the particular policies assumed in the resolution.

Changes would also be required in the procedures for handling appropriation bills. At present, Congressional controls on revenues and mandatory spending involve a five- or ten-year horizon, but the controls on discretionary spending apply only to the budget year. Also, the costs of bills affecting revenues or mandatory spending are measured as deviations from a baseline, whereas appropriation bills are assigned their full costs. Including macroeconomic feedbacks in estimates might therefore require that appropriation bills be estimated as changes from a multiyear baseline as well. The distinction between the budgetary effects of discretionary spending, on the one hand, and of mandatory spending and revenues, on the other, would also cease to apply, necessitating a corresponding revision in the enforcement procedures of the Balanced Budget Act.

To change the estimating rules governing the Office of Management and Budget, the Congress would have to amend the provision of the Balanced Budget Act that requires OMB's estimates to use the economic assumptions underlying the

President's most recent budget submission. Unless the Congressional Budget Act and the Balanced Budget Act were both changed, estimators in the legislative and executive branches would employ inconsistent rules, which could create confusion and frustration. Even if both laws were amended, the estimating differences between the Congress and the Administration would still be likely to grow, and any differences that did arise could be particularly contentious.

BROADENING THE SCOPE OF BUDGET ESTIMATING: ALTERNATIVE APPROACHES

If policymakers want to accord greater attention to the macroeconomic effects of legislation, several different approaches are available. The following three alternatives cover the major possibilities.

- Improve and expand information about current cost estimates of bills, and provide qualitative information about macroeconomic effects and budgetary feedbacks of proposed legislation.

- Change the estimating process to reflect feedbacks from structural macroeconomic effects that would show up within the budget window.

- Include for all proposals both cyclical and structural economic feedback effects within the budget window.

Provide Additional Information

Even though the economic assumptions of the budget resolution are intended to incorporate the effects of the resolution's policies, the budget committees' reports do not describe the macroeconomic effects of the proposed policy changes. A modest reform in estimating practices would be to make that information more readily available and to identify explicitly the policies assumed in the budget resolution that could affect macroeconomic conditions. Three changes seem important: making more information available about cost estimates, explicitly estimating and describing the effects of policy changes that are built into the economic forecast, and doing more extensive analyses of the macroeconomic effects and budgetary feedbacks of proposed legislation.

JCT and CBO could provide more information about the assumptions currently used in preparing cost estimates. Estimates of spending bills reported by authorizing committees have routinely been accompanied by extensive descriptions of the assumptions underlying the estimate. But sometimes, especially for reconciliation

bills, CBO and JCT do not have enough time to prepare such a narrative. Lack of that information makes the cost estimates harder to understand and may lessen their credibility.

CBO or the budget committees might also prepare separate pre-policy and post-policy forecasts to be included in the committee reports on the budget resolutions. The budget committees would have to make explicit their assumptions about policy changes and how those changes would affect the economic outlook--something that the commitees now need not do. The effects of those policy changes on taxable income and other economic variables could be clearly seen in the difference between the pre-policy and the post-policy forecasts. The committee report could go farther by explaining how the differences would affect the budget. Although this approach would not attribute macroeconomic effects to the specific legislative initiatives that produce them--only to the entire package--knowing the effects of adopting the budget resolution instead of continuing current policies would still be useful.

Finally, CBO, JCT, and the budget committees could publish comprehensive analyses of the likely economic effects of proposed legislation, including how the proposal might affect the structure of the economy in the long run and what transitional problems it might produce. The analyses might also divide the economic and budgetary effects of the policy initiatives into those that are captured in the cost estimate and those that are not. The analyses could be included with the bill cost estimates or, for major proposals, published as separate studies.

Increased information about the cost estimates and about the short- and long-run economic effects of legislation would help to explain the benefits of growth-oriented policy proposals and the costs of policies that would depress growth. But any information that was presented in a separate report rather than as part of the cost estimate would have less impact than the estimate itself. Furthermore, providing more information is not costless. Information about JCT's and CBO's current estimates could be made available easily, but additional economic forecasts would require more resources. And writing comprehensive economic reports to accompany significant bills takes a substantial effort--nearly as much as if the estimates themselves reflected macroeconomic feedbacks. The legislative schedule would have to allow sufficient time for such analyses.

Include Only Structural Effects

A second approach would be to include in the cost estimates the budgetary feedbacks from structural economic effects--such as changes in incentives to work or to save and invest--but to exclude cyclical effects. The exclusion of cyclical effects would be consistent with the assumption that the Federal Reserve follows a policy of

controlling the level of aggregate demand relative to potential GDP and would, on average, offset changes in demand. Excluding cyclical effects would also reduce the role of temporary factors in cost estimates.

The macroeconomic effects that could be included in such estimates are, of course, limited to those that would occur within the budget window. Five years is long enough to encompass most direct effects on incentives in the labor market and short-run disruptions such as those caused by trade legislation, but it is not long enough to show the full supply-side benefits from, for example, more liberal trade policies, a lower deficit, or a lower tax rate on income from capital. Extending the budget window would capture more of the macroeconomic effects, but it would increase the uncertainty surrounding other aspects of the estimate. It would also represent a significant increase in responsibility for CBO and JCT, which currently prepare detailed baseline projections for only five years.

Producing budget estimates along these lines would require that JCT or CBO estimate how the supplies of labor and capital would change in the budget window, how those changes would affect potential GDP, and how incomes and tax bases would change as a result. In practice, the estimators would have to simplify their task by creating rules of thumb that would encompass some of the most important effects, rather than trying to run exhaustive simulations of the structural effects of each proposal. The rules of thumb would be based on results from empirical studies and would be regularly checked against model simulations. Because of the wide variety of legislative proposals that might be considered, however, developing rules of thumb to cover many situations might not be possible.

Even by excluding cyclical effects and using rules of thumb, substantial additional work would be needed, and the schedule for considering legislation would somehow have to accommodate that requirement. If macroeconomic effects had to be included in the budget estimates for purposes of points of order, delays could arise in considering reported bills and floor amendments. Such delays could be minimized by including the macroeconomic effects in budget estimates only for certain bills--for example, only those that would change spending or taxes by more than a specified annual amount, or only revenue bills, or only revenue and direct spending legislation. Counting macroeconomic effects for only some bills would simplify the estimating process, and examining only revenue bills would simplify the budget process as well.

But such approaches would raise serious problems of consistency. As long as estimators used two different methods, budget estimation would not be evenhanded, and comparisons among proposals would be difficult. Similar proposals could receive different estimates if one was freestanding and the other part of a larger package, or if one was included in the tax code and the other involved a cash outlay. For example, investment policies in revenue or direct spending legislation would

receive more favorable treatment than investment policies contained in appropriation bills. Perverse incentives would also be created. Proposals that were expected to have favorable effects on the economy might be formulated as changes in revenues or mandatory spending, and those expected to have negative effects might be proposed as changes in discretionary appropriations. Considerable confusion could arise, and the estimating process could easily be accused of being unfair.

Including macroeconomic effects for estimates of revenue legislation but not spending bills could worsen rather than improve the accuracy of the budget estimates in some cases. For example, consider a bill to provide a tax credit for children that would be financed by reductions in transfers or subsidies to low-income people. As a whole, the bill would have little effect on labor supply or might actually increase it. Taken by itself, however, the tax credit would reduce labor supply and GDP. Furthermore, even a bill that directly affected only revenues might indirectly affect outlays through changes in prices or interest rates.

Include Both Cyclical and Structural Effects

The previous alternative left out the cyclical economic effects of budget policies on the assumption that the Federal Reserve Board would tend to offset cyclical but not structural effects. But although the current Federal Reserve might behave that way under current economic conditions, other central bank officials might act differently under other circumstances. Moreover, even in the present environment, the Federal Reserve might not fully offset the cyclical effects of changes in fiscal policy if the changes were large or unanticipated, if they were compatible with the Federal Reserve's goals, or if the Federal Reserve acted too cautiously.

First, very large or unexpected changes in fiscal policy would require an extended period of time for a full response by the Federal Reserve. Monetary policy operates on the economy's aggregate demand with a much longer lag than fiscal policy. If the Federal Reserve has little advance notice of the fiscal change, or if the change is large enough, fully offsetting it might require unacceptably large changes in the money supply or in interest rates. Macroeconomists differ over precisely how big and sudden a change in fiscal policy is too much to offset, but most agree that the difficulty is far greater if the change would alter the standardized-employment budget balance by much more than half a percent of GDP in one year.

Second, if the change in fiscal policy is compatible with the Federal Reserve's goals, the board would have no reason to offset it. If the economy is well below potential, for example, the Federal Reserve might accept fiscal stimulus that would temporarily boost the economy's growth rate above what the board would be willing

to produce with monetary policy alone. In a boom, the Federal Reserve might gratefully accept fiscal restraint if it did not want to raise interest rates.

Third, the Federal Reserve could simply make a mistake and not move monetary policy enough to obtain the degree of offset that it desires. Monetary policy, like fiscal policy, is an imprecise instrument, and the Federal Reserve Board cannot control the economy with a great deal of accuracy. A cautious board might err on the side of providing an insufficient offset to fiscal policy.

For these reasons, some analysts argue that cost estimates should include cyclical effects, such as the temporary economic stimulus from a spending increase or a tax cut that increased the deficit and left more money in the pockets of consumers or businesses. Others oppose including cyclical effects precisely because doing so would attribute short-term beneficial effects to increases in the deficit even though the long-run effects of the policy would be harmful.

CONCLUSION

The current estimating approach, which aims to reflect a proposal's economic effects in the economic forecast underlying the budget resolution rather than in the estimate of an individual bill, sometimes obscures important macroeconomic or budgetary consequences of fiscal policy decisions. The rules do not allow any credit to legislation that would strengthen the economy, nor do they penalize legislation that would work in the other direction. In the context of the pay-as-you-go procedures, the rules have a more practical impact: they affect the likelihood that certain policies will raise a point of order or trigger a sequestration.

Estimates that attributed a broader range of macroeconomic effects to a bill could provide more accurate information to the Congress in certain situations but would raise some serious practical difficulties. The budgetary effects of spending and tax proposals would become interdependent, requiring fundamental changes in budget enforcement procedures. The Congress would have to change the schedule for considering bills and amendments in order to allow time for economic analysis that for some legislation would be complex. Including macroeconomic effects in only some estimates would alleviate a number of these difficulties but would introduce potentially serious inconsistencies into the budget process. The current estimating approach, in contrast, has the advantages of relative simplicity, timeliness, and consistency. It has also worked well during the past few years in limiting discretionary spending and controlling the growth of new entitlements.

The Congress, not the estimators, should decide how to balance these competing considerations.