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Built-in Flexibility of Federal Expenditures

THE PAST DECADE HAS WITNESSED a fairly rapid growth in federal expenditures, in both absolute and relative terms. Numerous new programs have been introduced and existing programs expanded. As can be seen in Table 1, federal expenditures have risen from less than 18 percent of potential gross national product (GNP) in 1961, to about 20 percent in 1970 and are scheduled to rise even further in 1972. They have outpaced total federal revenues, which as a percent of potential GNP also rose between 1961 and 1970, but will decline somewhat when the tax legislation of 1969 and 1971 becomes fully effective. The shift in the percentages reflects the disappearance of the large full employment surplus that prevailed in the early 1960s and the prospective emergence of a full employment deficit.

The composition of expenditures has altered markedly. Transfer payments and grants-in-aid to state and local governments have grown rapidly over the past decade and purchases of goods and services have declined in importance. Transfers and grants together have risen from 5.8 percent of potential GNP in 1961 to 8.4 percent in 1970 and are scheduled to rise to 10.2 percent in 1972. The decline in defense purchases over the decade has been marked, and it has been offset only partially by rising nondefense purchases.

In light of the changes in both composition and size of expenditures it

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Table 1. Expenditures and Revenues of the Federal Sector at Full Employment as a Percentage of Potential Gross National Product, by Category, 1961, 1970, and 1972[a]

Category	*1961*	*1970*	*1972*
Expenditures			
Purchases of goods and services	10.2	9.5	8.7
Defense	8.5	7.3	6.5
Nondefense	1.7	2.1	2.2
Transfer payments	4.5	6.0	6.7
Grants-in-aid	1.3	2.4	3.5
All other	1.8	2.0	1.5
Total expenditures	17.8	19.8	20.5
Revenues			
Personal taxes	8.8	9.3	8.6
Corporate taxes	4.8	4.4	3.6
Indirect business taxes	2.6	2.0	1.8
Social security taxes	3.5	5.0	5.6
Total revenues	19.7	20.7	19.6

Sources: Potential gross national product is based on estimates of the Council of Economic Advisers. Other basic data are from Office of Business Economics, *The National Income and Product Accounts of the United States, 1929–1965: Statistical Tables* (1966); *Economic Indicators* (November 1971); and Arthur M. Okun and Nancy H. Teeters, "The Full Employment Surplus Revisited," *Brookings Papers on Economic Activity* (1: 1970), Table 2, pp. 104–05. Figures are rounded and may not add to totals.

a. National income accounts basis. Data are for calendar years.

becomes appropriate to review and update the evidence on the built-in flexibility of the expenditure side of the budget. That is the purpose of this paper.

Built-in flexibility is defined as the automatic changes in expenditures or tax yields that result when the expenditure and tax laws are held constant:

> Certain public expenditures, such as unemployment benefits or price-support payments, are geared to move in a counter-cyclical fashion. Similarly, tax yields obtained from given statutory rates rise and fall with changes in the level of income and, hence, in the tax base.[1]

As Musgrave's statement implies, the issue of built-in flexibility applies to both sides of the budget. Yet very little research has been devoted to the automatic response of expenditures to cyclical fluctuations, in contrast with the thorough exploration of revenue elasticities. It is important to

1. Richard A. Musgrave, *The Theory of Public Finance: A Study in Public Economy* (McGraw-Hill, 1959), p. 506.

know whether the rapid growth of older programs such as old-age, survivors, and disability insurance has altered the automatic response of the budget to deviations from full employment, and to determine which of the many new programs are automatically responsive to cyclical variations.

Some estimates of the magnitude of the dollar amount of the automatic change in expenditures for deviations upward and downward from 4 percent unemployment will be made. But these estimates are restricted to the impact of changes in real economic activity and do not extend to automatic responses to changes in the price level.

In fact, only a few types of federal outlays respond systematically to inflation. Interest payments have a truly automatic response. In terms of stabilization policy, however, it is a perverse response. As the rate of inflation increases, both private and government interest rates rise, not only in response to the inflation but usually also as a result of tightening monetary policy. Thus, government expenditures for interest rise at a time when expenditure increases are destabilizing. Automatic cost-of-living adjustments in the civilian and military retirement programs also introduce a built-in response to inflation.

The effect of rising prices on other expenditures is not automatic, but price increases add to outlays with a lag. The agencies are instructed to make projected estimates for the coming fiscal year, which begins six months after the budget is submitted, in prices of the current calendar year. Benefits for transfer programs tend to be raised by legislative action when the cost of living is rising rapidly.

The concern for the built-in flexibility of the federal budget arises because the greater it is the more markedly the budget responds to changing economic conditions. Discretionary fiscal policy—deliberate changes in expenditures or tax laws—require legislation. That process tends to be slow: The problem has to be recognized and diagnosed, and a correctional program proposed, worked through the appropriate congressional committees, and, finally, passed by both houses. In 1947 the Committee for Economic Development proposed that built-in stabilizers should do all or most of the budgetary job of stabilizing the economy.[2] In a 1969 policy statement the CED summarized what for many economists were the lessons of the decade of the 1960s:

2. Committee for Economic Development, *Taxes and the Budget: A Program for Prosperity in a Free Economy* (CED, 1947), p. 22.

We reaffirm our support of the automatic stabilizers in the fiscal system.

However, the stabilizing effect of the built-in flexibility of the tax system is not by itself adequate. Taxes and expenditures cannot be left unattended and unadjusted for long periods of time. Annual review of the level of taxes and expenditures and the balance in the budget is necessary to achieve our economic objectives.

When the economy is not experiencing high employment and stable prices (when it is operating below or above its potential), the built-in flexibility of the budget will provide a stabilizing influence. But there will be times when this built-in flexibility should be supplemented by specific actions affecting both federal expenditures and tax rates.[3]

Although built-in flexibility is not the whole answer, the more of it the better. After assessing the degree to which it exists in the various categories of federal expenditures, this study will look at a few proposals for augmenting the built-in flexibility on the expenditure side.

Government Purchases of Goods and Services

Variations in federal purchases do not occur as an automatic response to changes in economic activity.[4] Any program carried out by the federal government itself usually involves purchases.[5] Some are controllable by discrete policy decisions and some are not, at least in the short run. Controllability is greater in theory than practice. Although theoretically and even technically the nation could decide not to have a military establishment, or to conduct atomic research, or to maintain a national parks system, in fact these are ongoing programs. The only aspects of purchases that are semiautomatic (and that only recently and imperfectly) are the annual increases in military and civilian pay, and these respond to economy-wide movements in wage rates, rather than to changes in real activity.[6]

3. Committee for Economic Development, *Fiscal and Monetary Policies for Steady Economic Growth* (CED, 1969), p. 19.

4. For a description of each of the categories of receipts and expenditures in the national income accounts, see "Special Analysis A," in *Special Analyses, Budget of the United States, 1970*, pp. 7–18.

5. The main exceptions are the government-sponsored enterprises—the postal service, the Tennessee Valley Authority, and so forth—that are recorded in both the unified and national income accounts budgets on a net surplus or deficit basis.

6. The amount of the pay increase is determined by an annual comparability survey but the President must sign an executive order to put the increase into effect. A majority vote by Congress can override a presidential decision not to grant the comparability increase.

Even the decision to let last year's price increase be reflected in next year's budget estimates is discretionary in that it requires congressional approval. In practice, inflation creates an opportunity to reduce the real level of program activity by holding the funding constant in dollar terms. In general, however, changes in federal purchases, especially defense purchases, contribute to the cyclical variations in the economy, but are not directly affected by them.

Transfer Payments

The federal transfer payments include old-age and survivors insurance benefits (OASI); disability insurance benefits (DI); medicare, and civil service and military retirement programs; unemployment insurance benefits—state, federal, and railroad (UI); veterans' pensions and disability compensation (VA); and the four welfare programs—old-age assistance (OAA), aid to the blind, aid to the disabled, and aid to families with dependent children (AFDC). The welfare components of grants-in-aid are included in the analysis of transfer payments. Since the federal welfare grants to states pass through to individuals as state or local transfer payments[7] and are open-ended, this treatment seemed appropriate.

In an attempt to isolate the cyclical response of transfer payments, the change in the natural log in the seasonally adjusted number of recipients of benefits under the various programs was correlated with various cyclically sensitive measures of economic activity.

One of the problems in trying to correlate any measure of these programs with cyclical variables lies in the frequent changes in the laws governing eligibility and amount of compensation. By use of the rate of change in the number of people receiving benefits, any change in the rate of compensation (a 10 percent increase in OASI benefits, for example) can be finessed. Expansion in coverage (the "blanketing in" to OASI of the military in 1956,

7. Technically, the federal government is committed to reimbursing state and local governments for a formula-determined percentage of certain types of welfare expenditures. The highly complicated formulas include the number of beneficiaries, a minimum federal payment per beneficiary, and a varying amount above the minimum depending on the per capita income of the state. The reimbursement rates, therefore, vary from state to state but average about 55 percent. A further complication is the fact that a more generous reimbursement formula exists under the medicaid program and can be substituted for the basic welfare formula.

for example) is not eliminated. Dummy variables have been used to take account of shifts created by changes in eligibility rules.

The quarterly data for the number of recipients under each program were seasonally adjusted.[8] As would be expected, strong seasonal patterns appear in the number of people receiving unemployment benefits. There is a mild but noticeable seasonal factor in the AFDC rolls, which tend to rise in the winter months. The federal and military retirement programs are even less affected by the seasons, although the increases in the number of beneficiaries is larger in the first and second quarters than in the latter half of the year, probably because retirement decisions are frequently made on a calendar year basis. The seasonal adjustment factors for 1970 are shown in Table 2.

Regressions were computed with the quarterly change in the natural logs of the number of persons receiving benefits under the various transfer programs as the dependent variable and various measures of unemployment and employment as the independent variables, also expressed as changes in natural logs.[9] The dummy variables, the unemployment rate in the OASI

Table 2. Seasonal Adjustment Factors for the Number of Persons Receiving Benefits from Various Transfer Programs, Quarterly, 1970

Program	*Calendar quarters*			
	1	*2*	*3*	*4*
State unemployment insurance	137.7	86.5	76.7	98.9
Old-age and survivors insurance	100.0	99.7	100.0	100.1
Disability insurance	100.2	100.0	99.8	99.9
Medicare, civil service, and military retirement programs	100.0	100.2	99.9	99.7
Aid to families with dependent children	101.4	99.2	99.0	100.2
Old-age assistance	99.9	99.5	99.9	100.5
Aid to the blind	99.7	99.5	100.1	100.6
Veterans Administration pensions and compensation	99.8	99.9	100.0	100.2
General welfare	102.8	96.1	99.8	101.1

Source: Computed from data in *Social Security Bulletin*, various issues, using the U.S. Bureau of the Census standard X-11 program.

8. The U.S. Bureau of the Census standard X-11 program was used to make the seasonal adjustment.

9. For small changes, the use of natural logs approximates regressing the percentage change in the dependent variable against percentage changes in the independent variables. Natural logs were used instead of percentage changes to avoid the asymmetries that occur with large negative and positive percentage changes.

regressions, and the average age variable in the equations for veterans are the only variables not in the form of natural logs. The correlations were run for the period 1948:1 through 1970:4. Because some of these programs evolved during the decade of the 1950s, two subsets were also run: 1950:1 through 1960:4 and 1960:1 through 1970:4. Since the regressions were corrected for autoregression, the dynamic $\bar{R}^2$s are better indicators of the amount of variation explained.

UNEMPLOYMENT BENEFITS

As was to be expected, the percentage change in the number of people receiving unemployment benefits is correlated with the change in the number of unemployed males aged 20 or older (as shown in Table 3). The two dependent variables differ to the extent that the second includes beneficiaries under the railroad retirement and federal employee insurance programs as well as under state programs. Yet the $\bar{R}^2$s and the dynamic $\bar{R}^2$s are virtually all less than 0.5, reflecting the gap between global unemployment and covered unemployment. The slope is consistently around 0.85.

The gap between global and covered unemployment occurs for two reasons. First, new entrants and reentrants to the labor force have not worked in covered employment and are not entitled to benefits. Second, the total unemployment rate and the covered unemployment rate vary from state to state in part because state legislatures can, and some do, extend coverage beyond the types of employment that must be covered because of federal laws. Even if all states met only the federal requirements, the coverage would vary because of variation in industry mix among the states. Table 4 shows the 1970 covered unemployment rates, total unemployment rates, and the ratio of the first to the second, state by state.[10]

The Employment Security Amendments of 1970 extended the mandatory coverage of the state programs to 4.8 million people, including agricultural and hospital workers and employees of nonprofit and higher education institutions. Still not covered by federal law are domestic and temporary employees; federal, state, and local government employees; employees of foreign governments or international organizations; and railroad em-

10. The variation in coverage is probably not as large as is indicated in Table 4. Each state estimates total unemployment annually using a procedure established by the U.S. Bureau of Labor Statistics, but there is some question that all states follow the methodology precisely.

Table 3. Relationship of Change in Number of Persons Receiving Unemployment Benefits to Change in Number of Unemployed Males 20 Years Old and Over, Selected Periods, 1948–70[a]

Change in natural logs of seasonally adjusted quarterly data

Period and program	*Constant*	*Quarterly change in natural log of unemployed males*	*Squared correlation coefficient* $\bar{R}^2$	*Squared dynamic correlation coefficient*[b] $D\bar{R}^2$	*Standard error of estimate SEE*	*Durbin-Watson statistic DW*
1948–70						
State unemployment insurance	0.0061 (0.7)	0.8802 (12.2)	0.51	0.48	0.1009	2.064
State, federal, and railroad unemployment insurance	0.0006 (0.1)	0.8566 (11.9)	0.48	0.44	0.1034	2.071
1950–60						
State unemployment insurance	0.0025 (0.2)	0.8287 (8.0)	0.47	0.43	0.1210	1.985
State, federal, and railroad unemployment insurance	0.0013 (0.1)	0.8686 (8.2)	0.46	0.41	0.1256	1.985
1960–70						
State unemployment insurance	0.0072 (0.7)	0.8592 (7.4)	0.46	0.46	0.0810	1.946
State, federal, and railroad unemployment insurance	0.0070 (0.7)	0.8350 (7.4)	0.46	0.45	0.0792	1.963

Sources: Basic data are from *Social Security Bulletin*, various issues, and *Employment and Earnings*, Vol 17 (February 1971), p. 157.

a. The numbers in parentheses here and in subsequent tables are *t*-statistics.

b. The dynamic $\bar{R}^2$ was developed by George Schink for use in the Brookings regression program. It is calculated in the usual manner except that the values are generated by a dynamic simulation, which involves replacement of the observed lagged dependent variable by its predicted value.

ployees, insurance agents, newspaper boys, and professional fishermen. Federal and railroad employees are covered under separate systems. The 1970 act should narrow the variation in the rates between covered and total unemployment among the states shown in Table 4.

In 1969, the latest date for which data on covered employment are available, those in covered employment and unemployment accounted for 76 percent of the labor force.[11] By estimating the ultimate increase in covered

11. Includes military personnel, who have their own readjustment benefits, including unemployment insurance.

Table 4. Covered and Total Unemployment Rates and Ratio of Covered to Total, by State, 1970

State	Unemployment rate		Ratio of covered to total unemployment
	Covered	Total	
Alabama	3.1%	4.8%	0.65
Alaska	9.0	10.2	0.88
Arizona	2.5	4.1	0.61
Arkansas	3.7	5.1	0.73
California	5.1	6.0	0.85
Colorado	1.4	3.3	0.42
Connecticut	4.4	5.5	0.80
Delaware	2.6	4.1	0.63
District of Columbia	1.6	2.6	0.62
Florida	2.1	3.4	0.62
Georgia	1.8	3.7	0.49
Hawaii	2.5	3.6	0.69
Idaho	3.8	5.1	0.75
Illinois	2.4	3.9	0.62
Indiana	2.5	4.7	0.53
Iowa	2.3	3.5	0.66
Kansas	3.6	4.9	0.73
Kentucky	3.2	4.9	0.65
Louisiana	3.8	6.2	0.61
Maine	4.7	5.5	0.85
Maryland	2.4	3.9	0.62
Massachusetts	4.4	5.2	0.85
Michigan	4.9	7.0	0.70
Minnesota	2.7	4.1	0.66
Mississippi	2.6	4.8	0.54
Missouri	3.4%	4.6%	0.74
Montana	4.0	5.4	0.74
Nebraska	1.7	2.8	0.61
Nevada	4.0	5.4	0.74
New Hampshire	2.3	3.3	0.70
New Jersey	4.2	5.5	0.76
New Mexico	4.1	6.3	0.65
New York	3.6	4.4	0.82
North Carolina	2.4	3.8	0.63
North Dakota	3.2	4.2	0.76
Ohio	2.4	3.8	0.63
Oklahoma	3.1	4.3	0.72
Oregon	5.2	5.9	0.88
Pennsylvania	3.1	4.0	0.78
Rhode Island	4.9	5.2	0.94
South Carolina	2.7	5.1	0.53
South Dakota	1.9	3.2	0.59
Tennessee	3.4	4.4	0.77
Texas	1.5	3.5	0.43
Utah	3.4	5.9	0.58
Vermont	3.8	4.3	0.88
Virginia	1.1	3.1	0.35
Washington	8.5	8.3	1.02
West Virginia	3.4	6.4	0.53
Wisconsin	3.2	4.6	0.70
Wyoming	1.6	4.3	0.37

Source: *Manpower Report of the President, April 1971*, pp. 271, 273.

employment and covered unemployment (adjusted to 4 percent), making rough estimates of how many of the 4.8 million newly eligible workers became covered in 1971, and assuming all of the 4.8 million are covered in 1972, rough estimates of the increased coverage can be made. They indicate that coverage rose to 79 percent of the total labor force in 1971 from the 76 percent in 1969 and will increase to approximately 80 percent in 1973.

The big increase in coverage probably occurred in 1971, not only because so many of the states exercised the option of passing the legislation before the mandatory January 1972 date, but also because the big states were in that group. The legislation provides for thirteen additional weeks of benefit payments if the national seasonally adjusted covered unemployment rate is equal to or above 4.5 percent for three consecutive months or if the state seasonally adjusted covered unemployment rate is 4 percent or above for three consecutive months *and* 20 percent or more above the rate in the corresponding three months of the preceding two years. If the national trigger is deactivated, a state's trigger will remain active if its covered unemployment rate equals or exceeds 4 percent *or* is 120 percent or more of that in the preceding two years. Table 5 shows by weeks the number of states triggered *on* starting in February 1971 when the monitoring system began. In the first three or four months of the monitoring, not all of the states meeting the trigger criteria had passed the enabling legislation. But by September, all such states had passed the legislation.

Under the extended unemployment insurance program $250 million was paid out in fiscal 1971, and $225 million during the first four months of fiscal 1972. The number of states triggered on and the number of persons receiving extended benefits have dropped fairly steadily since April, as can be seen in Table 5. However, the global covered unemployment rate (the next to last column) has remained static; it does not include those receiving benefits under the extended coverage program. Thus, unemployment under the regular programs has been rising. Total covered unemployment including that under extended coverage is used in calculating the state triggers but has not been used in calculating the national trigger. If all covered unemployment (regular plus extended) were used to calculate the national trigger, it is quite likely that the national trigger would have been activated in 1971.

Weekly insured unemployment during the first eight months of 1971 averaged 2,730,000, about 45 percent above the 1,875,000 average for the comparable period in 1970. In March, the average weekly benefit was

Table 5. Number of States with Extended Unemployment Trigger On, Number of Persons Receiving Such Benefits, by Weeks, and Monthly Unemployment Rate, February–October 1971

Month and week in 1971		*Number of states with trigger on*	*Number of persons receiving extended unemployment insurance (thousands)*	*Monthly unemployment rate*	
				Covered	*Total*
February	20	30	249	3.8%	5.8%
	27	30	274		
March	6	30	302		
	13	31	318	3.9	6.0
	20	32	325		
	27	32	341		
April	3	32	336		
	10	30	339	4.0	6.1
	17	29	316		
	24	29	301		
May	1	29	291		
	8	29	282		
	15	29	287	4.2	6.2
	22	30	279		
	29	29	277		
June	5	26	280		
	12	23	283	4.4	5.6
	19	23	278		
	26	21	282		
July	3	20	280		
	10	19	274		
	17	19	273	4.0	5.8
	24	18	259		
	31	18	262		
August	7	18	261		
	14	18	255	4.2	6.1
	21	18	252		
	28	18	254		
September	4	16	255		
	11	15	247	4.5	6.0
	18	15	259		
	25	15	250		
October	2	15	255		
	9	15	255		
	16	15	244	4.5	5.8
	23	15	241		
	30	15	240		

Sources: U.S. Department of Labor, "Trigger Notices," UIPL No. 1103 (March 4, 1971 through November 12, 1971), Nos. 1 through 37; Department of Labor, Manpower Administration, Office of Financial and Management Information Systems, "Unemployment Insurance Claims," Vols. 26, 27 (1971), Nos. 37–52 and 1–18, respectively; *Economic Indicators* (November 1971), pp. 11, 12; unpublished data from Manpower Administration, Office of Manpower Management Data Systems.

$52.94. The unemployment benefit programs were putting $650 million a quarter more into the economy than a year earlier, or $2.6 billion at annual rates. During the first eight months of 1970, the average global unemployment rate was 4.6 percent, compared with 6.0 percent for the same period in 1971. The difference between 4.6 and 4 percent unemployment accounts for another $1 billion of benefits, bringing the total stabilizing contribution of the unemployment insurance program (including the extended unemployment benefits) to $3.6 billion for 1971.[12]

OLD-AGE AND SURVIVORS BENEFITS

In investigating the relationship between OASI and cyclical factors, a dummy variable was added in the OASI regression for each major legislative change in eligibility requirements. The legislative changes are obviously very important and showed up as highly significant variables in regressions that covered lengthy periods of time. However, only a twelve-year period was used in the final regression because, after a good deal of experimenting, the most significant independent variable was found to be the unemployment rate for married males and the lagged change in their number. Since the unemployment data on married males dates from 1955, the regression period must be limited to 1958–70 in order to accommodate the three-year lag. As it happened, only one major legislative change in coverage occurred in the period 1958–70. The level of the unemployment rate for married men turned out to be an irrepressibly significant variable, as did the lagged change in the log of the number of unemployed. My interpretation of this is that the rate of unemployment as well as the rate of change has an impact

12. The amount of increased expenditures under the unemployment benefit program was derived by using the equations to project the increase in the number of persons receiving benefits at the rates of unemployment that obtained versus what would have occurred if the global rate had stayed at 4 percent. The increase in the number of people times the average benefits yields the total amount of increased expenditures under the *regular* program. The extended program started after the regression period. Expenditures under the program of extended benefits were derived by taking the number of people receiving extended benefits (as shown in the weekly release of the Manpower Administration, "Unemployment Insurance Claims") times the average weekly benefits. The total derived increase in expenditures (regular plus extended) was compared with the increase in actual expenditures for all unemployment benefits shown in the Monthly Treasury Statement, "Preliminary Statement of Receipts and Expenditures of the United States Government." The two numbers were almost identical.

on the retirement decision. A person eligible for retirement is less likely to seek employment when the rate of unemployment is high than when it is low. Only after three quarters did the rate of change in the number of unemployed begin to exert positive influence on the rate of increase in OASI beneficiaries. The size of the coefficients and of their *t*-statistics increased from the fourth through the seventh quarters. This implies that older workers first use up their unemployment benefits and then turn to retirement. Starting four quarters after the period to which the specified unemployment level applies, the time phasing on the coefficients of the lags are as follows:

Number of quarters after unemployment	*Coefficient*	*t-statistic*
4	0.0126	1.5
5	0.0124	1.9
6	0.0117	2.1
7	0.0107	2.1
8	0.0094	2.0
9	0.0076	1.8
10	0.0054	1.7
11	0.0029	1.6

Among the transfer programs, OASI is one of the major sources of increase in built-in flexibility. Since OASI is the largest of these programs—it had 23.5 million beneficiaries in 1970—an increase in the unemployment rates and in the number of persons unemployed adds considerably to the number of beneficiaries. If the national unemployment rate remains at 6 percent (which implies a 3 percent unemployment rate for married men) through the end of 1973, over 2.7 million people will receive OASI benefits who would not have done so if the national unemployment rate had remained at the 4.2 percent that prevailed in the first quarter of 1970. In terms of equation (1) below, the higher rate of unemployment accounts for 2.2 million of the increase in the number of beneficiaries and the increase in the number of unemployed men for 500,000. The actual increase to 6 percent in unemployment raised OASI expenditures by more than a billion dollars in calendar year 1971. If the rate continues at 6 percent, it will raise expenditures in calendar 1972 by nearly $3 billion. OASI clearly now qualifies, along with unemployment benefits, as a cyclically affected expenditure. The equation that expresses the relationship is

$$(1)\quad OASI = \underset{(0.6)}{-0.0016} + \underset{(8.2)}{0.0451}D + \underset{(6.1)}{0.0051}R_{MM} + \underset{(1.9)}{0.0412}\Sigma UMM,$$

$\bar{R}^2 = 0.70$; $D\bar{R}^2 = 0.70$; standard error = 0.0055; Durbin-Watson = 1.923.
Period of fit = 1958–70.
The numbers in parentheses here and in subsequent equations are *t*-statistics.

where *OASI* is the change in the natural log of the seasonally adjusted number of people receiving old-age and survivors insurance benefits, *D* is the dummy variable for the 1966 expansion in coverage, R_{MM} is the unemployment rate of married males, and ΣUMM is the sum of the weights of the Almon lags of the change in the natural log of the number of unemployed married males.[13]

AID TO FAMILIES WITH DEPENDENT CHILDREN

The rate of growth in the AFDC welfare rolls is highly responsive to the rate of change in the number of unemployed people, especially when the change in unemployment enters the equation with an eight-quarter Almon lag, as is shown in Table 6. The dummy used in the AFDC equation—it

Table 6. Relationship of Change in Number of Persons Receiving AFDC Benefits to Change in Number of Unemployed, Selected Periods, 1950–70

Change in natural log of seasonally adjusted quarterly data

Period	*Constant*	*Dummy*[a]	*Change in natural log of unemployed, summed* $\Sigma\Delta UELF$[b]	*Squared correlation coefficient* $\bar{R}^2$	*Squared dynamic correlation coefficient* $D\bar{R}^2$	*Standard error of estimate SEE*	*Durbin-Watson statistic DW*
1950–70	0.0094	0.0029	0.2489	0.88	0.79	0.0082	2.034
	(3.5)	(6.9)	(5.7)				
1950–60	0.0067	...	0.2513	0.82	0.58	0.0074	1.9555
	(1.7)		(5.2)				
1960–70	0.0156	0.0024	0.2866	0.88	0.87	0.0082	1.873
	(6.9)	(8.2)	(4.0)				

Sources: Basic data are from *Social Security Bulletin*, various issues, and *Employment and Earnings*, Vol. 17 (February 1971), p. 155.
a. Dummy is 1 for 1966:1, rising by 1 in each subsequent quarter.
b. Sum of the weights of the Almon lags of change in the natural log of the number of unemployed persons.

13. Basic data are from *Social Security Bulletin*, various issues; *Employment and Earnings*, Vol. 17 (February 1971), p. 181; unpublished data from U.S. Bureau of Labor Statistics.

is 1 in the first quarter of 1966 and rises by 1 in each subsequent quarter—is a purely pragmatic device. It is an effort to account for the upsurge in the rate of growth of the rolls that is amply evident in the data starting in 1966. At this time, any explanation involves speculation rather than hard evidence. I believe that the shift is directly related to the civil rights movement and the war on poverty, for the pool of people eligible for AFDC has always been large. The increasing attention given to the problems of poverty, by both public and private groups, not only has heightened the awareness of poor people of their rights and benefits but also has made being on welfare more socially acceptable. The developments over the past five years may constitute a transition to a new level of participation in the program, rather than a trend that will continue for another five years. But there is no assurance that the adjustment to a new level has been completed. At the present time, the rate of increase in the rolls is being affected by administrative and legislative tightening of the eligibility rules at the state level. If the family assistance plan is passed, the whole program will be operating at a different level.

Continuation of the trend rate of growth that has developed since 1965, by itself, adds approximately a million people a year to the number of AFDC beneficiaries. The increase in unemployment from the 4.2 percent of the first quarter of 1970 to 6 percent is adding another 350,000 a year. The increase in unemployment that has occurred added $800 million to federal and $700 million to state and local expenditures for AFDC in calendar 1971. A continuation of the unemployment rate at 6 percent would add $1.5 billion to federal and $1.1 billion to state and local expenditures in 1972.

VETERANS' PROGRAMS

The Veterans Administration makes transfer payments for pensions and compensation for service-connected disabilities—wounds, amputations, and the like. Compensation rises with the severity and relative permanence of the injury. Veterans Administration pensions are primarily made on the basis of need and are reduced as income from other sources rises. When a veteran applies for a pension, both his income and the degree of his disability, which need not be service connected, are used to establish eligibility. Although the veteran is supposed to be permanently and totally disabled

to qualify for a pension, the method of calculating disability varies with age. "At 65 a veteran is presumed by law to be 10 percent disabled which, at that age, constitutes total disability."[14]

The number of beneficiaries at any given time depends on the frequency and timing of wars. Table 7 shows the change in caseload by war of participation. There has been a *net* addition of nearly 800,000 to the VA beneficiary rolls in the past ten years. To take account of the variation in the number of people eligible and of the increase in eligibility as they grow older, the number of veterans, by war of origin, was multiplied by their average age for each year. This weighted variable was then divided by the total number of veterans to estimate average age. Both the calculated average age and the total number of veterans were used as independent variables. The results, given in Table 8, reveal sharp differences between the fifties and the sixties. In the 1950s, the rate of increase in the beneficiary rolls was heavily influenced by the growth in the veteran population and by their increasing age. Changing unemployment had little impact. In the decade of the 1960s, the rate of increase was dominated by the rate of change in the number of unemployed men, and the rate of change in the number of potential eligibles was less important; while the average age of veterans is highly significant in the 1960s, its sign is negative. The increase in the calculated average age began in the early part of the decade, and slowed down radically after the Vietnam veterans began to enter the population. By the end of the decade, the average age was actually declining.

With the population and age variables used to account for variation in eligibility, the rate of growth in the number of VA beneficiaries was correlated with the rate of change in the number of unemployed males, 20 years of age and over. The important thing in the VA equations from the point of view of this study is the positive correlation, shown in Table 8, between the rate of growth in the VA compensation and pension rolls and the percentage change in the number of unemployed males, 20 years of age or older. The relationship is not only positive throughout the entire twenty-year period, but also stronger and statistically significant in the 1960–70 subperiod.

If the number of unemployed males, 20 years of age or older, had grown only at the rate of the growth in the labor force—that is, if the unemployment rate had remained constant at the first quarter 1970 level—29,000

14. Gilbert Y. Steiner, *The State of Welfare* (Brookings Institution, 1971).

Table 7. Change in the Average Number of Cases Receiving Veterans' Compensation and Pensions, by War of Participation, Fiscal Years 1960–70

Thousands

Program	*Wars prior to 1898*[a]	*Spanish-American War*	*First World War*	*Second World War*	*Korean war*	*Vietnam war*	*Peace-time*	*Total*
Compensation								
Veterans	...	−0.2	−92.9	−129.5	+32.5	+131.7	+84.6	+26.2
Survivors	*	−0.5	−8.1	−60.7	+2.6	+32.1	+17.6	−17.1
Total	*	−0.7	−101.0	−190.2	+35.0	+163.7	+102.2	+9.1
Pensions								
Veterans	−0.1	−30.9	−84.8	+270.6	+19.0	+1.1	−0.2	+174.6
Survivors	−3.7	−33.5	+184.7	+396.4	+55.8	+2.5	−0.1	+602.0
Total	−3.8	−64.5	+99.9	+666.9	+74.8	+3.6	−0.2	+776.7
Total	−3.8	−65.1	−1.1	+476.7	+109.8	+167.3	+102.0	+785.8

Sources: *The Budget of the United States Government, 1962*, pp. 232–33, and *The Budget of the United States Government, 1972—Appendix*, pp. 849–50. Figures are rounded and may not add to totals.

a. Includes veterans or their survivors from the Mexican War, the Civil War, the Indian Wars, and the yellow fever experiments. In 1960 recipients included 1 Civil War veteran and 3,122 survivors of Civil War veterans; 2 survivors of the Mexican War; 80 veterans and 529 survivors of the Indian Wars; and 5 veterans of the yellow fever experiments. The data for 1970 do not identify the cases for wars before 1898.

* Less than 50 recipients.

Table 8. Relationship of Change in Number of Persons Receiving Veterans' Compensation and Pensions to Eligibility and Cyclical Factors, Selected Periods, 1949–70

Seasonally adjusted quarterly data

Period	*Constant*	*Change in natural log of total veteran population*	*Average age of veterans*	*Change in natural log of number of unemployed males, summed*[a] *ΣUM/20*	*Squared correlation coefficient* $\bar{R}^2$	*Squared dynamic correlation coefficient* $D\bar{R}^2$	*Standard error of estimate SEE*	*Durbin-Watson statistic DW*
1949–70	0.289	0.0605	−0.0006	0.0092	0.60	0.47	0.0023	2.375
	(5.1)	(0.6)	(4.5)	(1.8)				
1950–60	−0.0328	0.3322	0.0010	0.0021	0.41	0.39	0.0022	1.985
	(3.9)	(5.0)	(4.5)	(0.6)				
1960–70	0.0925	0.1747	−0.0020	0.0152	0.76	0.75	0.0016	2.009
	(8.9)	(1.7)	(8.6)	(3.6)				

Sources: The relationship of veteran population and average age of veterans was derived from unpublished data provided by the Veterans Administration. Other basic data are from *Social Security Bulletin*, various issues; *Employment and Earnings*, Vol. 17 (February 1971), p. 157.

a. The sum of the Almon lags in the change in the natural log of the number of unemployed men 20 years of age or older.

fewer people would have been receiving VA benefits; and with average benefits of $104 per month the result would have been $36 million less federal expenditure.

OTHER FEDERAL TRANSFER PROGRAMS

As might be expected, the number of beneficiaries of disability insurance, and of recipients of categories of welfare for adults (old-age assistance and aid to the blind and disabled), is unresponsive to cyclical factors. The results are shown in Table 9. The dummy used in the DI regression, as before, denotes the one legislative change in eligibility in the regression period. Dummy variables for each expansion in OASDI were tested and only one had any statistical significance for changes in the old-age assistance rolls: the expansion of social security benefits to persons over age 72 regardless of whether they had wage credits. As the eligibility for social security was expanded in 1966, elderly people switched from the welfare to the social security rolls.

Nor do civil service retirement rolls respond significantly to economic conditions, as can be seen in the following equations:

$$(2) \qquad \underset{}{FCSR} = \underset{(11.3)}{0.0183} + \underset{(1.4)}{0.0154}\Delta UMM,$$

$\bar{R}^2 = 0.16$; $D\bar{R}^2 = 0.02$; standard error = 0.0081; Durbin-Watson = 1.956.
Period of fit = 1955–70.

$$(3) \qquad \underset{}{FCSR} = \underset{(10.1)}{0.0158} + \underset{(1.3)}{0.0204}\Delta UMM,$$

$\bar{R}^2 = 0.02$; $D\bar{R}^2 = -0.01$; standard error = 0.0084; Durbin-Watson = 1.860.
Period of fit = 1960–70.

where *FCSR* is the change in the natural log of the seasonally adjusted number of people receiving federal civil service retirement benefits and ΔUMM is the change in the natural log of the number of unemployed married males.[15]

15. In both equations (2) and (3), the basic data are from *Social Security Bulletin*, various issues; *Employment and Earnings*, Vol. 17 (February 1971), p. 181; and unpublished data from the U.S. Bureau of Labor Statistics.

Table 9. Relationship of Change in Number of Beneficiaries of Disability Insurance and Adult Categories of General Welfare to Selected Cyclical Measures, Selected Periods, 1948–70

Change in natural log of seasonally adjusted quarterly data

Program and period	*Constant*	*Dummy*[a]	*Change in natural log of employment* ΔEHH	*Change in natural log of unemployment* $\Delta UELF$	*Squared correlation coefficient* $\overline{R}^2$	*Squared dynamic correlation coefficient* $D\overline{R}^2$	*Standard error of estimate SEE*	*Durbin-Watson statistic DW*
Disability insurance								
1958–70	0.0682	0.0022	...	0.0557	0.64	0.31	0.0345	3.086
	(2.4)	(0.1)		(1.0)				
1960–70	0.0413	−0.0008	...	0.0099	0.48	0.04	0.0380	2.071
	(3.0)	(0.0)		(0.2)				
Old-age assistance								
1948–70	−0.0013	−0.0116	0.1603	...	0.58	0.10	0.0055	2.300
	(0.5)	(2.7)	(1.6)					
1950–60	−0.0040	...	0.1600	...	0.12	0.22	0.0049	1.930
	(3.8)		(1.6)					
1960–70	−0.0037	−0.0106	0.1692	...	0.18	0.02	0.0049	1.950
	(2.4)	(2.4)	(0.9)					

Aid to the blind								
1948–70	0.0003	...	−0.1715	...	0.02	0.01	0.0139	2.116
	(0.2)		(0.7)					
1950–60	0.0030	...	0.1197	...	−0.03	−0.03	0.0064	1.864
	(2.9)		(0.9)					
1960–70	−0.0060	...	−0.1828	...	−0.03	−0.05	0.0166	1.969
	(1.7)		(0.3)					
Aid to the disabled								
1951–70	0.0352		...	−0.0361	0.38	0.35	0.0278	2.216
	(4.1)			(1.2)				
1957–60	0.0457		...	−0.0473	0.36	0.31	0.0372	2.048
	(3.0)			(1.0)				
1960–70	0.0221	...	...	0.0369	0.06	0.03	0.0117	2.051
	(10.6)			(1.5)				

Sources: Basic data are from *Social Security Bulletin*, various issues, and *Employment and Earnings*, Vol. 17 (February 1971).
a. Dummy = 1 in 1966:4, which was the first quarter after significant legislative changes; dummy = 0 in all other quarters.

GENERAL WELFARE

Even though it is a state and not a federal program, general welfare was included in the analysis because a priori it would seem likely to be cyclically responsive. As the equations in Table 10 show, it is responsive to the change in total employment, although that factor does not account alone for its rate of growth. Since general welfare is a state program there are at least fifty sets of rules and regulations. The variation of state systems and the timing of legislative changes probably introduce a great deal of noise into the statistical series.

Grants-in-aid

Federal grants-in-aid to state and local governments have risen from $7.3 billion in 1961 to $24 billion in fiscal year 1970 and are scheduled to

Table 10. Relationship of Change in Number of Beneficiaries of State General Welfare Programs to Selected Cyclical Measures, Selected Periods, 1949–70

Change in natural log of seasonally adjusted quarterly data

		Change in natural log					
Period	*Constant*	*Total number employed, summed*[a] $\Sigma\Delta EHH$	*Unemployed married males, summed*[b] $\Sigma\Delta UMM$	*Squared correlation coefficient* $\bar{R}^2$	*Squared dynamic correlation coefficient* $D\bar{R}^2$	*Standard error of estimate* *SEE*	*Durbin-Watson statistic* *DW*
1949–70	0.0256	−6.5334	...	0.38	0.25	0.0439	2.067
	(2.5)	(3.5)					
1950–60	0.0188	−8.1189	...	0.42	0.35	0.0489	2.012
	(1.5)	(3.7)					
1960–70	−0.0022	1.9152	...	0.19	0.15	0.0368	1.789
	(0.1)	(0.5)					
1955–70	0.0075	...	0.2935	0.37	0.37	0.0366	1.944
	(1.6)		(5.7)				
1955–65	0.0006	...	0.306	0.38	0.38	0.0385	2.013
	(0.1)		(5.2)				
1960–70	0.0081	...	0.3412	0.38	0.37	0.0321	1.897
	(1.4)		(4.7)				

Sources: Basic data are from *Social Security Bulletin*, various issues; *Employment and Earnings*, Vol. 17 (February 1971); unpublished data from U.S. Bureau of Labor Statistics.

a. Sum of the Almon lags of the change in the natural log of total number employed.

b. Sum of the Almon lags of the change in the natural log of the number of unemployed married men.

rise in fiscal 1972 to more than $37 billion, including revenue sharing.[16] Has this large increase in grants enhanced the built-in flexibility of federal expenditures?

As can be seen from Table 11, which presents total federal grants and shows the development of major new programs along with the old, the income maintenance programs grew enormously during the decade, mainly owing to AFDC. Grants for highways grew by only $2 billion, much less than the growth in the earmarked highway trust fund revenues; the restriction was mainly the result of discretionary action to restrain expenditures after the escalation of the Vietnam war. As of February 1971, $5.9 billion of highway funds had been impounded.

As can also be seen, federal grants for other programs, chiefly education and manpower training, housing and community development, and health, started to expand about 1965. Between 1961 and 1965 grants for programs other than welfare and highways grew about $1.7 billion, rising to $3.7 billion in 1965. From that year to 1971, they rose to $16.2 billion, and they are expected to rise to $21.6 billion in 1972. Over 80 percent of the 1965–72 growth occurs in nineteen programs, of which thirteen either were not in existence or were funded at very low levels in 1965.

The largest expansion occurred in the grants for education and manpower, reflecting the provision of aid to elementary and secondary education in 1965 and the manpower programs of the present administration. The second largest increase has occurred in expenditures for health. In 1965 grants to states for medical assistance were confined primarily to the indigent elderly. The large increase is the result of the introduction of medicaid, which in essence extended medical assistance to those on the AFDC welfare rolls. The final area of major growth was community development and housing.

Apart from the income maintenance grants programs, which pass through to individuals as transfers and have been discussed above, remarkably few of these programs are likely to be cyclically responsive. Medicaid expenditures rise automatically in a slack economy because AFDC rolls expand, and acceptance on the welfare rolls almost guarantees acceptance to the medicaid program. In fact, medicaid goes beyond the welfare rolls: In 1970, an average of 10.3 million people were on welfare, but

16. The original $4 billion requested for revenue sharing had already been reduced to $2.4 billion at the time this article was written. The reduction had been partially offset by the addition of the public service employment grants.

Table 11. Federal Grants-in-aid to State and Local Governments, by Functional Category, Fiscal Years 1961–72[a]

Billions of dollars

Functional category	*1961*	*1962*	*1963*	*1964*	*1965*	*1966*	*1967*	*1968*	*1969*	*1970*	*1971 estimate*	*1972 requested*
Total	7.3	8.2	8.8	10.3	10.9	13.0	15.2	18.6	20.3	24.0	30.3	37.4
Income maintenance	2.5	2.8	3.1	3.4	3.2	3.4	3.7	4.4	4.9	6.5	9.6	11.2
Highways	2.6	2.8	3.0	3.6	4.0	4.0	4.0	4.1	4.1	4.3	4.6	4.6
Total less income maintenance and highways	2.0	2.6	2.7	3.3	3.7	5.6	7.6	10.1	11.2	13.2	16.2	21.6
Environmental protection, rural water and sewer facilities, outdoor recreation	...	...	...	...	...	*	*	0.1	0.1	0.3	0.6	1.3
Mass transit, aid to airports	...	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.4	0.4
Model cities, urban renewal, low-rent housing	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.8	0.9	1.6	1.9	2.5
Education and manpower training[b]	*	*	*	0.1	0.4	1.7	2.9	3.6	3.5	4.1	5.1	5.5
Hospital construction and medicaid	0.2	0.2	0.2	0.2	0.5	1.0	1.4	2.1	2.5	3.0	3.5	3.6
Law enforcement and revenue sharing	...	...	...	...	...	...	*	*	*	*	0.3	2.9
All other	1.5	2.1	2.0	2.6	2.3	2.3	2.7	3.5	4.0	4.0	4.3	5.3

Sources: *Special Analyses, Budget of the United States Government, 1972*, pp. 244–47, and preceding issues for 1967–71; *The Budget of the United States Government, 1966*, pp. 467–71, and preceding issues for 1963–65; "Preliminary Statement of Receipts and Expenditures of the United States Government for the Period from July 1, 1970 through June 30, 1971," Table III; Emergency Employment Act of 1971 (Public Law 92-54), 85 Stat. 146. Figures are rounded and may not add to totals.

a. Unified budget definitions.

b. Includes the following programs: Community Action (Office of Economic Opportunity); elementary, secondary, vocational, and higher education (Department of Health, Education, and Welfare); manpower development and training (Department of Labor); and public service employment.

* Less than $50 million.

an average of 15 million received medicaid benefits. The larger number of medicaid recipients undoubtedly reflects, in part, the turnover in the AFDC rolls, but some states provide medicaid benefits for low-income persons not on welfare. Assuming that only those added to the AFDC rolls received medicaid benefits, the recession has raised both federal expenditures for medicaid by $500 million in 1971 and state and local outlays by $500 million.

The second grant program that is cyclically responsive is the new system of grants to state and local governments to subsidize public service employment. Appropriations are $750 million for fiscal year 1972 and $1 billion for fiscal year 1973 to benefit areas of substantial unemployment (defined as unemployment equal to or in excess of 6 percent for three consecutive months).[17] The secretary of labor can make grants to units of federal, state, or local governments or to institutions that are their subdivisions (for example, hospitals), and to Indian tribes to provide transitional jobs in needed public services for unemployed or underemployed persons during periods of relatively high unemployment. When the national unemployment rate (seasonally adjusted) drops below 4.5 percent for three consecutive months, no more funds are to be obligated; but a subsequent increase in unemployment above that level for three months would reactivate the program. The program is funded for only two years; if it is successful, however, additional appropriations can be made in future years.

The two manpower training programs, one in OEO and one under the Labor Department, could respond automatically to business cycle developments if their funding were on a per capita basis, available to everyone who signed up. But, under the present law, annual appropriations for the total program are made. The only possibility of built-in flexibility arises if the programs have not used all of their annual appropriation, as apparently has been true recently,[18] and if the shortfall reflects a scarcity of eligible applicants, which seems unlikely.

The list of new grant programs provides no good candidate for rapid expansion or contraction even as a discretionary action. Outdoor recreation is a possible candidate. Recreation areas fit into the category of small public works; they usually can be completed in a summer and tend to be

17. Emergency Employment Act of 1971 (Public Law 92-54), 85 Stat. 146.

18. Robert Hall, "Prospects for Shifting the Phillips Curve through Manpower Policy," this volume, pp. 691–92.

self-contained projects. OEO's community action programs could probably be expanded fairly rapidly but it is doubtful that they could be contracted as readily. Once a community action program has been started, its funding is very difficult to reduce. Much the same applies to education programs: An expanded level of funding that has become embedded in the planning and budgeting of local school boards is difficult, if not impossible, to curtail. Congress is more likely to maintain the real level of program activity by expanding the funding in line with increases in the cost of living or other appropriate price indicators. In a few cases—grants for construction of national guard centers, some flood control projects, and highway beautification grants—the real level of the program has been reduced by the failure to expand the dollar funding.

Many of the other new programs are construction subsidies—for urban renewal, model cities, water and sewer facilities, mass transit, airports, environmental protection, and hospitals—that are not suitable for discretionary stabilization policy because the lead times are so long that the economic impact is likely to be felt too late at best and, possibly, at precisely the wrong time.

Proposals To Increase the Built-in Flexibility of Expenditures

Various proposals have been advanced that would increase the built-in flexibility on the expenditure side of the federal budget. The automatic extension of unemployment benefits from twenty-six to thirty-nine weeks under conditions described above is already in force in thirty-two states. Three things could be done to augment the built-in flexibility of this program. First, those receiving extended benefits could be included in calculating the national trigger. Second, the trigger point could be lowered. Although the expansion of coverage should reduce the gap between the covered and global rates, a reduction in the trigger to 3.5 or 4.0 percent would activate the program sooner. Given the average gap between the covered and the global unemployment rates of 1.6 percentage points in the 1970–71 recession, the 4.5 percent trigger for covered unemployment requires a global rate of 6.1 percent. Third, the unemployment insurance program could be made more responsive by policies that would encourage states to expand its coverage. Although the range in coverage may not be

as wide as Table 4 suggests, some states undoubtedly could expand coverage substantially.

The built-in flexibility of the federal grants could be increased by developing more programs like those embodied in the public service employment act. These would be programs that automatically turn on and off with variations in the unemployment rate. The recent experience has emphasized the financial problems that state and local governments face in a recession. Their revenues either do not increase or actually decline, while their expenditures continue to rise; indeed, some—welfare payments for a prime example—are aggravated by the recession. Since state and local governments are constrained, often legally, to operate with balanced budgets, countercyclical revenue grants are needed to bolster their expenditures and to prevent perverse increases in their taxes.

Several proposals along these lines have been put forth. Joseph Pechman has suggested a cyclical grant program that would replace state and local revenues lost because of a recession. It would be activated whenever the national unemployment rate exceeds 4 percent for three consecutive months. Charles L. Schultze has proposed a similar revenue-sharing program that would take into account the level of unemployment in each state. Alternatively, such a program could be triggered on a state-by-state basis as well as by the national unemployment rate.[19] Operating the trigger presents no problem because that mechanism is already in place and functioning in conjunction with the programs for extended unemployment benefits and public service employment.

The loss of state and local revenues because of recessionary economic conditions is concentrated in income and sales taxes, revenues that are income elastic. Some criterion other than the amount of excess unemployment is necessary to channel the grants to states hard hit because of their (and their local jurisdictions') heavy reliance on income-elastic taxes.

19. Joseph A. Pechman, "Fiscal Federalism for the 1970s," in National Tax Association, *Proceedings of National Tax Association Seminar on Balancing our Federal-State-Local Fiscal System* (*National Tax Journal*, Vol. 24, September 1971, pp. 281–90), Brookings Reprint 215; Charles L. Schultze, "Statement" (testimony before the Joint Economic Committee on President Nixon's Economic Proposals, August 20, 1971; processed), p. 8. See also Frank W. Schiff, "Control of Inflation and Recession," *Annals of the American Academy of Political and Social Science*, Vol. 396 (July 1971), p. 98; and *The 1971 Midyear Review of the Economy*, Report of the Joint Economic Committee, 92 Cong. 1 sess. (1971), pp. 2, 8, 9.

In addition some account should be taken of the variation in the amount of revenue lost because of the difference in elasticities of sales and income taxes. Sales taxes are less elastic than income taxes; therefore, less revenue would be lost by states that rely heavily on sales taxes than by those that rely primarily on income taxes. The formula developed to take all of these factors into account is as follows:[20]

$$(4) \quad S_iR = x[(S_iST)\,(S_iU_i - S_i\bar{U}_{itx})] + y[(S_iIT)\,(S_iU_i - S_i\bar{U}_{itx})],$$

where

S_iR = each state's countercyclical revenue grant
S_iST = each state's total (including local) sales and gross receipt taxes in the preceding year
S_iU_i = each state's covered unemployment rate in the preceding quarter
$S_i\bar{U}_{itx}$ = each state's average covered unemployment rate in the preceding year when the national global unemployment rate was below 4.5 percent
S_iIT = each state's total (including local) personal and corporate income taxes
x = the estimated elasticity of sales taxes with respect to unemployment
y = the estimated elasticity of income taxes with respect to unemployment,

and the bracketed expressions are equal to or greater than zero.

The formula assumes the use of seasonally adjusted unemployment rates, so that a normal seasonal rise in unemployment would not entitle a state to countercyclical revenue grants. A variable for population size could have been included, but it seemed unnecessary since the dollar amount of taxes already reflects much of the variation in population size among the states.

With Robert Reischauer's model of state and local receipts and expenditures and the covered unemployment rates by states that prevailed in March 1971, it was possible to determine how much each state would have received had countercyclical grants-in-aid been available. The results, given a trigger of 4.5 percent, are shown in Table 12. The total amount that

20. This formula was developed jointly by Robert D. Reischauer, Henry Aaron, and myself after experiments with alternatives. Peter Henle was helpful in evaluating for us the quality of the alternate state unemployment rates available.

Table 12. Annual Countercyclical Grants-in-aid to State and Local Governments Assuming Persistence of 1971:1 Unemployment Rate for One Year[a]

Thousands of dollars

State	*Grants to state governments*	*Grants to local governments*	*Total grants*	State	*Grants to state governments*	*Grants to local governments*	*Total grants*
Alabama	30,785	4,138	34,923	Missouri	73,150	6,347	79,497
Alaska	17,084	1,753	18,837	Montana	15,370	0	15,370
Arizona	20,645	2,259	22,904	Nebraska	17,116	161	17,277
Arkansas	29,192	276	29,467	Nevada	7,970	136	8,105
California	566,959	51,050	618,010	New Hampshire	7,060	4	7,065
Colorado	17,694	1,538	19,232	New Jersey	112,191	1,673	113,864
Connecticut	118,039	0	118,039	New Mexico	19,917	1,734	21,652
Delaware	11,120	206	11,326	New York	601,560	136,466	738,025
District of Columbia	...	9,482	9,482	North Carolina	65,617	210	65,827
Florida	36,761	3,874	40,634	North Dakota	14,852	63	14,915
Georgia	31,805	782	32,587	Ohio	108,190	32,731	140,920
Hawaii	24,380	601	24,981	Oklahoma	27,287	2,524	29,810
Idaho	15,556	41	15,596	Oregon	66,002	790	66,792
Illinois	222,025	16,539	238,564	Pennsylvania	214,373	55,488	269,861
Indiana	82,609	4	82,613	Rhode Island	29,277	2	29,278
Iowa	49,242	81	49,322	South Carolina	32,197	*	32,197
Kansas	51,369	679	52,049	South Dakota	7,125	7	7,133
Kentucky	55,121	6,864	61,985	Tennessee	45,690	6,724	52,415
Louisiana	32,314	8,048	40,361	Texas	49,894	5,561	55,456
Maine	29,692	3	29,694	Utah	18,251	848	19,100
Maryland	86,976	21,435	108,411	Vermont	22,406	0	22,406
Massachusetts	208,518	0	208,518	Virginia	37,656	4,604	42,260
Michigan	298,588	27,981	326,569	Washington	174,218	9,280	183,499
Minnesota	131,296	496	131,793	West Virginia	26,510	227	26,737
Mississippi	24,304	223	24,528	Wisconsin	166,921	48	166,969
				Wyoming	2,122	44	2,165

Source: Brookings model on state and local government expenditures and receipts. Figures are rounded and may not add to totals.

a. Based on a 4.5 percent trigger rate, x of 0.3 and y of 0.5.

* Less than $500.

would have been distributed to the states and localities would have been $4.6 billion if the state covered unemployment rates of the first quarter of 1971 had prevailed all year. During the first quarter of 1971, the revenue loss to state and local governments was approximately $7 billion at annual rates. Such a formula would distribute slightly more than $1.5 billion (at annual rates) in 1971 for each 0.5 percentage point of national unemployment above 4.5 percent.

Under this formula, thirteen states would have received more than $100 million and two states, New York and California, would have received considerably more than $500 million. The $738 million going to New York would have redressed the nearly $1 billion revenue shortfall estimated by the state as a result of the recession. Considerable amounts would have gone also to Michigan ($327 million), Pennsylvania ($270 million), Illinois ($239 million), Massachusetts ($209 million), Washington ($183 million), Wisconsin ($167 million), Ohio ($141 million), Minnesota ($132 million), Connecticut ($118 million), New Jersey ($114 million), and Maryland ($108 million). The rest of the states would have received varying amounts of less than $100 million; five of them (including the District of Columbia) would have received less than $10 million. But all the states would have received some money, the smallest amount going to Wyoming ($2 million).

If the national trigger deactivated the program, states that were still triggered on could continue to receive grants-in-aid, in a manner analogous to the operation of extended unemployment benefits. Table 5 shows the number of states that would have participated in the revenue grants based on the weekly reports of the states with their triggers on this year. The number declined as the year progressed.

Experiments were conducted with a variety of alternate formulations. The formula presented above has the major advantage of making the grant program truly countercyclical and not a permanent subsidy to states with chronically high unemployment, such as Alaska. The variable that reflects the average state covered unemployment rate during preceding periods when the national global rate was less than 4.5 percent ($S_i\bar{U}_{itx}$) ties the revenue-sharing trigger to the experience of each state during periods of national full employment. It also solves the problem of the variation among states in the amount of total unemployment that is covered by the insurance program. In one of the formulas, the covered rate for each state was adjusted by the ratio of the past year's covered employment to total unemployment on a state-by-state basis, and a national trigger used in place of

$S_i\bar{U}_{itx}$. Each state calculates its own annual total unemployment rate from the covered unemployment rate and there is some doubt that the calculation is carried out in a comparable manner in every state. The formula here uses the more reliable covered unemployment rate and has the great advantage of automatically closing out the program. Finally, the localities that do use sales and income taxes would automatically receive revenue grants.[21]

Conclusions

The amount of built-in flexibility in federal expenditures is greater than has been generally recognized. That unemployment insurance, AFDC, and state general welfare are responsive to changing economic conditions comes as no surprise. But there are new elements in the sensitivity of expenditures to economic conditions. One is the medicaid program, with its close connection to the welfare rolls. Another is the rate of growth in the number of people receiving benefits under the retirement programs. For older people retirement frequently is more socially acceptable than unemployment. Moreover, since the test of how much one can earn without losing social security benefits is applied monthly, a beneficiary finds it easy to go on and off the rolls depending on the employment opportunities available.

Table 13 summarizes the estimated impact on federal and state and local expenditures of an increase in the global unemployment rate from 4.2 percent in 1970–71 to the average of 6.0 percent that has prevailed in 1971. The state and local governments, with the revenue shortfall of $7 billion and the increased expenditures of more than $1½ billion, would need cyclical revenue sharing totaling nearly $9 billion, or twice the amount that would have been distributed under the formula presented in this paper, to compensate them for the effects on their budgets of the recession.

Because of the recession, federal expenditures in 1971 were an estimated $6.4 billion higher than they would have been without the increased unemployment. Fifty-six percent of the increase stems from the unemployment benefit programs in 1971. Including induced state and local expenditures, outlays rose an estimated $7.8 billion. If the 6 percent rate of unemployment persists, recession-induced federal expenditures could rise to $10 bil-

21. In further work, an adjustment should probably be made to the formula to eliminate a peculiarity it now embodies: More money is distributed if the global rate rises from 3.5 percent to 6 percent than if it rises from 4.4 percent to 6 percent.

Table 13. Expenditures of Federal, State, and Local Governments on Cyclically Sensitive Transfer Payments and Grants-in-aid, at Selected Levels of Unemployment Rate, by Program, 1971–73

Billions of dollars

Program	Expenditures						Increase in expenditures from built-in stabilizers		
	4.2 percent unemployment			6 percent unemployment					
	1971	1972	1973	1971	1972	1973	1971	1972	1973
Total unemployment insurance[a]	3.8	4.3	4.8	7.4	8.6	9.5	3.6	4.3	4.7
Old-age and survivors insurance	31.8	36.2	38.7	32.9	38.5	42.2	1.1	2.3	4.5
Aid to families with dependent children (federal share)	3.7	5.3	8.0	4.5	6.8	10.2	0.8	1.5	2.2
Medicaid (federal share)	2.5	2.8	3.2	3.0	3.6	4.1	0.5	0.8	0.9
Veterans Administration	3.6	3.7	3.8	3.6	3.7	3.8	b	b	b
Public service employment	...	...	...	0.4	0.7	1.0	0.4	0.7	1.0
Total federal expenditures	45.4	52.3	58.5	51.8	61.9	70.8	6.4	9.6	13.3
Aid to families with dependent children (state share)	3.0	4.4	6.6	3.7	5.5	8.3	0.7	1.1	1.7
Medicaid (state share)	2.1	2.4	2.8	2.6	3.1	3.5	0.5	0.7	0.7
General welfare	0.6	0.7	0.7	0.8	0.8	0.9	0.2	0.1	0.2
Total state and local expenditures	5.7	7.5	10.1	7.1	9.4	12.7	1.4	1.9	2.6
Total government expenditures	51.1	59.8	68.6	58.9	71.3	83.5	7.8	11.5	15.9

Source: Calculated from equation (1) and the regressions shown in Tables 3, 6, 8, 10, except for public service employment figures, which are author's estimates.
a. Includes extended unemployment insurance.
b. Less than $50 million.

lion in 1972 and to $13 billion in 1973. Of the increased expenditures in 1973, only 36 percent would arise out of the unemployment benefit programs, reflecting the long lags between increases in unemployment and increases in welfare and retirement rolls. This estimate reinforces the observation that people take unemployment benefits before applying for other income maintenance programs. Even if the unemployment rate declines, most of the induced increase in the retirement rolls would remain in force in 1973. By that year, state and local expenditures would be $2.6 billion higher as the result of the hypothesized prolonged slack.

In the 1972 budget the full employment concept of revenues was used officially for the first time. In January the unified budget was presented as one balanced at full employment. However, no adjustment was made in expenditures for the recession-induced increases, not even for increased unemployment benefits.

Expenditures have increased somewhat since January, and full employment revenues will decline because of the new tax reductions. The unified budget is estimated roughly to have an actual deficit of $28 billion; based on full employment revenues, the deficit is $8 billion. If the appropriate adjustments were also made on the expenditure side, the federal budget calculated at full employment would be essentially in balance, as would the total receipts and expenditures for state and local governments (Table 14).

Table 1 reported federal expenditures that had been adapted to a full employment basis by removing only expenditures for unemployment benefits

Table 14. Estimated Federal and State and Local Government Budgets, Fiscal Year 1972

Billions of dollars

Description	*Federal*	*State and local*
Actual revenues	204	179
Revenue shortfall	20	7
Full employment revenues	224	186
Expenditures	232	188
Official full employment deficit	−8	−2
Induced expenditures	8½	1½
Corrected full employment surplus or deficit	+½	−½

Source: Author's estimates.

that were the result of an unemployment rate in excess of 4 percent. If the other slack-induced increases are also removed, full employment expenditures would total only 19.8 percent of potential GNP, not 20.5 percent, as shown in the table.[22]

22. Table 1 presents federal receipts and expenditures on the basis of calendar rather than fiscal years. Calendar year 1972 is likely to have a small full employment deficit because several large expansions in expenditures are scheduled to take effect July 1, 1972, thus falling into fiscal 1973.

Comments and Discussion

Joseph Pechman: When I first saw Nancy Teeters' paper, I wondered why this article had not been written by Cary Brown or David Lusher—or by me—fifteen years ago when research on tax flexibility became popular. I rationalize my lack of initiative on the grounds that built-in expenditure flexibility has become a relatively more important characteristic of the fiscal system in the recent past.

As Table 1 shows, transfer payments, which are the main part of the expenditure program that has built-in flexibility, amounted to 4.5 percent of GNP in 1961 and when we were talking about built-in flexibility in the mid-1950s, they were even smaller. So with the level of transfer programs then in existence, little automatic stabilization could be expected from the expenditure side of the budget. We all assumed what Nancy Teeters found—that there is virtually no built-in flexibility in purchases. In fact, many of us detected a reverse flexibility there. Some of the postwar recessions and booms were triggered by discretionary actions regarding purchases, mainly military expenditures.

The built-in flexibility that the paper detects is really on the "negative tax" side rather than on the expenditure side. We have always known that, in theory, flexibility could operate both on the negative and the positive sides of taxes, and transfers are the negative side of taxes. The amount of built-in flexibility that one observes is now significant, and it may become even more significant as society moves further to improve the lot of the poor.

Nevertheless, the amount of built-in flexibility on the negative tax side is still relatively modest when compared with that in the positive tax system. That is the case for obvious reasons: The positive tax system is much larger than the negative tax system. I have made some very rough calculations that give a flavor of the differences. Assuming that unemployment remains at 6 percent in 1972 and 1973, the GNP gap, according to my calculations, rises from $70 billion in 1971 to $75 billion in 1972 and to $80 billion in 1973. On the assumption, which Nancy Teeters confirmed for me with her full employment table for 1971, that the decrease in federal revenue associated with the GNP gap is roughly 30 percent (at least, somewhere between 25 and 35 percent), the loss in revenue due to the gap is thus about $21 billion in 1971—approximately three-tenths of the $70 billion GNP gap—and $24 billion in 1973. These numbers compare with the $6½ billion, nearly $10 billion, and more than $13 billion that have been estimated for the expenditure effects for these three years. In 1971, the contribution from expenditures is only about three-tenths of that from taxes; it works its way up but is still only about one-half in 1973. In other words, the tax kicker not only is much larger but also starts more rapidly, according to these results.

I agree with Nancy Teeters on the importance of exploring ways to increase the amount of built-in flexibility in expenditures. Improving and increasing transfer payments will do this and will also help the poor. Needless to say, as an advocate of revenue sharing of all sorts, I heartily endorse the suggestion that the federal government add cyclical revenue sharing to its gamut of grants. It is justifiable on substantive grounds to ensure that state and local governments need not stop their spending merely because the federal government does not do its job of stabilizing the economy. Moreover, the program would contribute extra built-in flexibility.

I also agree that it would be highly desirable to improve the trigger on extended unemployment compensation, which is, I think, wholly inadequate. The trigger now goes on if the national covered unemployment rate is 4½ percent, which is a total unemployment rate of about 6 percent. The states trigger at 4 percent covered unemployment, if their rate is 20 percent above the comparable three-month period in the two preceding years.

Unemployment compensation and public service employment are two expenditure programs that contain formula flexibility. This is an important —even a rather amazing—innovation in the fiscal system. We have not been able to get any formula flexibility on the tax side and I doubt whether even now the time is ripe for introducing it. But we should keep trying.

Warren Smith: This paper discusses possible changes in the degree of built-in stability that may have resulted from the substantial changes that have occurred in recent years in the composition of the expenditure side of the federal budget. The subject is obviously important. Given the notable lack of success in implementing a flexible discretionary fiscal policy in recent years, the more built-in stability injected into the fiscal system the better. Having said that, however, one should point out that built-in stability cuts two ways. As long as the economy stays near the full employment path, built-in stability helps to keep it on track. But if it is permitted to drift substantially away from the path, the existence of built-in stability increases the magnitude of the discretionary action—whether it be through fiscal or monetary policy—needed to get back on target.

It seems reasonable that the shift in the composition of federal expenditures away from purchases of goods and services and toward transfer payments and grants-in-aid has acted to increase built-in stability. Purchases make little contribution—indeed, in some cases they may in a sense be destabilizing—because as a practical matter expenditures may have to increase to keep pace with rising prices during inflation. Many types of transfer payments and some types of grants tend to be stabilizing in their effects either because of their inherent behavior or because the programs have been designed for that purpose.

The Teeters paper tries to measure the contributions, especially of the various transfer programs, to built-in stability primarily by trying to relate changes in the numbers of transfer recipients to cyclical variables. While the results are interesting and to some extent useful, the formulations used in some of the equations as well as some of the results seem rather strange and not very plausible to me.

It seems to me that it would be desirable to develop some kinds of relatively simple models to explain the behavior of some of the categories of transfer expenditures and then consider carefully how cyclical variables might be introduced. In the case of OASI recipients, for example, demographic considerations—the numbers of persons in the eligible age categories—would seem to be the most important factor and should therefore be incorporated into the equation. Cyclical variables might then be introduced to explain changes in retirement behavior among the eligible group. As it stands, much of the statistical work seems to have a decidedly ad hoc quality, which raises doubts in my mind about the results.

In some of the equations, the logic underlying the selection of particular explanatory variables is not very clear. For example, I have some difficulty

in understanding the logic of the equations concerning veterans, which relate the changes in the natural logs of the number of recipients of veterans' benefits to the changes in the natural logs of the numbers of veterans and their average ages.

In view of the rapid escalation of the AFDC program since 1965, which is handled by introducing a time trend (described as a dummy variable) starting at that point, the cyclical behavior of the program may well have changed in recent years. It would seem desirable, therefore, to examine the recent behavior of that program separately and quite carefully.

The objective of the paper, of course, is not to explain as fully as possible the determinants of the various categories of expenditures but rather to determine merely the extent of their cyclical sensitivity. The trouble with this approach is that unless an effort is made to develop a full explanation of the behavior of the expenditures, one cannot feel very confident that the cyclical responses have been accurately captured. For this reason, I do not believe that the summary results for built-in stability resulting from transfer programs presented in Table 13 can be regarded as anything more than very rough approximations. While the subject is important, I believe more work is needed before dependable estimates can be made.

The most interesting recent development has been the introduction of programs, such as the extended unemployment benefit program and the grants under the public service employment act, that are "triggered" by rises in the unemployment rate. The Pechman-Schultze proposals for grants to replace state and local revenues lost due to recession are of a similar type. These programs are really examples of what economists used to call "formula flexibility," under which elements of the federal budget are tied to certain indexes of the performance of the economy. I am pleased to observe some acceptance of the principle of formula flexibility, and I see the possibility of some further extension of this principle. In the discussions of possible ways of increasing the cyclical flexibility of the personal income tax some years ago, it seemed to me that there were two ways in which this might be accomplished. One would be to give the President some limited discretion to change tax rates, and the other would be to tie tax rates to some indicator of the performance of the economy, such as the unemployment rate. I would prefer the discretionary approach, but the possibility of achieving it seems increasingly remote. In view of the fact that the formula-flexibility approach has already achieved some acceptance, it may be useful to revive the idea in the personal income tax.

It is perhaps worth noting that the formula-flexibility schemes that have been introduced into the system thus far (extended unemployment benefits and the public service employment program) are asymmetrical in their operation; that is, they operate to counteract the effects of a recession and an increase in unemployment, but they die out when full employment is restored and do not operate to check an inflationary boom. The Pechman-Schultze proposals for countercyclical grants to state and local governments would have the same characteristics. This complicates policy making, because it introduces an additional element of asymmetry into the response of the economy to discretionary policy measures. This characteristic is not, however, inherent in formula-flexibility schemes; it would be possible, in principle at least, to make a formula-flexibility scheme—involving, for example, the personal income tax—symmetrical in its operation.

To summarize my reaction to the paper, I believe it serves a useful purpose in pulling together a description of recent developments on the expenditure side of the federal budget from the standpoint of their possible contribution to automatic stabilization. But I think more work is needed on a number of analytical and statistical issues to make the quantitative estimates of built-in flexibility more dependable.

General Discussion

Many members of the panel commented on the sharp uptrend in the number of AFDC beneficiaries since 1965. Joseph Pechman shared Warren Smith's uneasiness about the time trend variable used in the equation. Lawrence Klein pointed out that the variable implied a quadratic time trend in the level of beneficiaries. He felt this was an acceptable econometric procedure, but that it was dangerous to extrapolate the results over any substantial period of time.

Nancy Teeters said she had no intention of extrapolating the trend into the future. She had been obliged to use the variable in the equation because the data made it obvious that something happened after 1965. The 1969–70 recession provided the first and only test of the cyclical responsiveness of AFDC under post-1965 circumstances. The number of recipients leveled off in the first six months of 1971, but it is not clear whether in response to recovery or to a tightening up of state rules. The development needs more

time to reveal whether a new long-range trend has begun due to changing attitudes toward welfare.

R. J. Gordon reported that, in an exploratory study of the increase of the AFDC rolls in New York, David Gordon got results suggesting that the number of people receiving benefits is related to the level of the benefits as a fraction of mean income. The faster benefits go up, the more incentive low-income individuals are given to quit working and to accept welfare benefits.

Robert Hall said that Daniel Patrick Moynihan hypothesized a few years ago that the connection between AFDC and unemployment had been broken sometime during the sixties. That implied that increases in unemployment would no longer enlarge AFDC caseloads. The evidence then, of course, was that AFDC started to shoot up after 1965 when the unemployment rate was going down. But these equations show the opposite—a considerable sensitivity of AFDC to unemployment. Surely that finding depends on the unexplained dummy time trend variable. The behavior of AFDC in 1970 does seem to suggest that Moynihan was wrong, and in fact large increases in the number of cases for other reasons drowned out the sensitivity of the program to the unemployment rate when unemployment was going down in the mid-sixties.

Demographic considerations may help to explain the uptrend, Hall suggested. AFDC recipients are primarily women aged 18 to 30, and the 18-year-olds of 1965 were born in 1947, the first year of the baby boom. The particular age group of 18–30-year-olds grew rapidly in the late sixties. When these women began bearing children, AFDC cases shot up. The propensity to be a recipient of AFDC is very sensitive to the presence of very young children in the family. A common pattern among single mothers is to go back into the labor force once the children reach school age, which suggests a good reason to be optimistic about the future behavior of the AFDC rolls. R. A. Gordon added that demographic trends in the size of the large metropolitan areas and in shifts within them—between the central cities and the suburbs—may help to explain the acceleration in welfare payments. These demographic elements certainly changed between the first part of the sixties and the end of the decade.

Albert Rees agreed with Nancy Teeters' judgment that the war on poverty and the activity of the welfare rights organization explained a good part of the trend since 1965. But he felt that legislative changes and changes in the judicial interpretation of the law also contributed. The introduction

of the AFDC-UP program, the program for families that include a father in the household, accounts in part for the rise in the number of cases. Rees pointed out that state welfare agencies administer this program with a set of eligibility criteria. Presumably everyone who meets these criteria gets benefits. But, in practice, the budget is quite frequently not large enough to cover all the people who are eligible, and the administrators choose recipients from among them by interpreting these criteria more or less tightly. Some of the devices traditionally used for that purpose, like residency requirements, were struck down by the courts during this period, increasing the post-1965 caseloads. Because of the recession, the state and local budget constraints have tightened up recently, and devices to hold down the welfare rolls that are still legal or at least not clearly illegal are probably being invoked by state administrators to an increasing extent. That is probably holding down the rolls currently, Rees suspected.

Thomas Juster noted that two essentially different kinds of considerations had been stressed: One kind can be extrapolated and measured; the other is subject only to "feel," or statistically to treatment as a dummy. The issue of demographic composition that Hall mentioned is of the former type: We know how many people are eligible for support, given the law. But the issue Rees raised—the difference between who is eligible and who gets benefits—is of the latter type. That difference is a consequence of social institutions and attitudes—how people feel about welfare, how much information they have, and whether they consider it socially acceptable. All of this defies quantification.

Paul Samuelson commented that, if Rees was correct that states adjust eligibility in practice in light of their budget constraints, the amount of built-in countercyclical flexibility in the welfare system would be reduced.

Nancy Teeters reported on some studies of welfare that she and William Branson made a few years ago. They calculated hypothetical eligibility by taking the number of poor people and guessing how many had young children. They were struck that the number of eligible people had always been huge. The number eligible was larger relative to the rolls in the decade of the fifties and the early part of the sixties than it has been since 1965. In making projections, they found that if the rolls continued to increase at the rate of the 1965–70 period, and if the number of poor people continued to decline at the same rate as in 1965–70, there would be 13 million people on the rolls by 1975 and everybody eligible would be receiving AFDC by that time.

The panel was interested in the proposal for revenue-sharing grants keyed to a cyclical formula. R. J. Gordon commented that one of the most important impacts of the recession had been the fiscal squeeze on state and local governments. In addition to countering that squeeze, the proposal for cyclical revenue sharing, he believed, would have the further beneficial effect of increasing the incentive for states to shift from sales taxes to income taxes and thus of making the whole tax system gradually more progressive.

Arthur Okun said that the proposal for cyclical revenue sharing assumed that state and local governments would in fact spend the grants or avoid tax increases, rather than shift into surplus. That assumption is consistent with the fact that budgets of the state and local government sector in the national accounts stay close to balance, which must mean that these governments do offset their cyclical revenue loss in one way or another, either by raising taxes or by holding down the growth of expenditures. In light of that, presumably they could be relied upon to respond to cyclical revenue grants in ways that contribute to aggregate demand. But it would be desirable to have more solid evidence to support that assumption.

Okun also stressed the significance of the estimated built-in stabilization on the expenditure side. While it was small relative to that on the revenue side, as Pechman had noted, it is really large enough to affect the picture of how fiscal policy moved in 1969, 1970, and 1971. The official estimate of the full employment unified budget made no allowance for any induced expenditures due to the slump, not even unemployment compensation. An allowance of $6½ billion for automatically induced outlays reveals that the fiscal posture is much less expansionary than it looks superficially. On the other hand, in 1968 and early 1969, expenditures were less than their full employment level, and the full employment budget would, when thoroughly adjusted, show up as more expansionary.

George Perry felt that the effect on aggregate demand per dollar of induced expenditures was likely to exceed that of induced revenues. About half of the total cyclical swing in revenues stems from corporate profits taxes, where the short-run effect per dollar on demand is probably quite small.

William Branson underlined a point Warren Smith had mentioned—that one man's built-in flexibility is another man's fiscal drag. The paper assumes that an increased amount of built-in flexibility is desirable, and this is valid if the authorities manage discretionary fiscal and monetary policy

properly. But if, for example, they tended to tighten up prematurely in a recovery, increased built-in flexibility could worsen overall performance.

R. J. Gordon expressed his interest in a topic explicitly omitted from the paper—how government expenditures respond to changes in the rate of inflation. Klein noted some asymmetries. While gains in real income actually tend to reduce transfer payments, inflationary increases in income do not. On the revenue side, inflation is a tax collector because it pushes people into higher income tax brackets, and that tends to stabilize, but no counterpart to the process exists on the expenditure side.

Nancy Teeters expressed some confidence that government expenditures move up in line with inflation but with a lag. The budget estimates for each fiscal year assume the price level of the preceding calendar year, because agencies are specifically instructed by the Office of Management and Budget to make their estimates that way. She and Charles Schultze, in *Setting National Priorities*, made five-year projections of the budget. There were price variables on both the revenue and expenditure sides that they could and did alter. The lagged response of the expenditure side to inflation, in combination with the immediate impact on the revenue side, can have a marked effect on the surplus or deficit when the inflation rate changes sharply. She noted that the price impact on expenditures will be increased and sped up if a cost-of-living escalator is introduced into social security benefits, as provided by H.R. 1. Of course, benefits have been adjusted by legislative action every two years, at least in part to compensate for inflation, and hence it is not clear just how much difference a provision for automatic increases would make.

R. J. Gordon wondered whether the increased built-in fiscal flexibility on the expenditure side may have been offset by reduced revenue elasticity as a result of the net shift from personal and corporate income taxes to social security taxes. Nancy Teeters agreed that the increasing importance of payroll taxes has reduced built-in flexibility on the revenue side. She stated her conviction that reform of the payroll tax deserves high priority for this and other reasons, and her intention to deal with this issue and other revenue matters in future research.