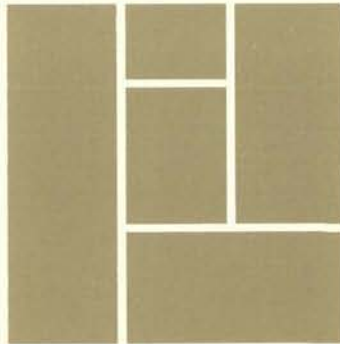


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Project Report

ECONOMIC ANALYSIS OF EFFECTS OF
BUSINESS CYCLES ON THE ECONOMY OF CITIES

BUSINESS CYCLES AND THE FISCAL HEALTH
OF STATE AND LOCAL GOVERNMENTS

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BUSINESS CYCLES AND THE FISCAL HEALTH
OF STATE AND LOCAL GOVERNMENTS

Roy Bahl*

It is clear that the business cycle has a pronounced effect on the financial health of some state and local governments, as well as on the level of savings in the entire state and local government sector. Indeed, it was the severity of the 1975 recession that pushed New York City over the edge and brought many other local governments and at least one state dangerously close to fiscal insolvency. The more recent recession did not produce disasters of this same magnitude, though the fiscal position of some state and local governments deteriorated. In both recoveries, the substantial surpluses accumulated by the state and local government sector as a whole have attracted much attention.

There are important policy reasons to better understand the relationship between state and local government finances and the business cycle. If swings in economic activity do induce substantial changes in relative fiscal health, one might argue for an explicit recognition of business cycle effects in federal intergovernmental policy. In a sense this was done with countercyclical aid and the stepping up of other components of the Economic Stimulus Package in the 1975-1979 recovery, but

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it was done in an ad hoc manner rather than as part of a coordinated federal intergovernmental policy.

The absence of a public policy to address the business cycle issue suggests that little has been learned about the relationship between countercyclical policy, national urban policy, and intergovernmental relations. The fact is that with the United States economy having passed through three recessions in little more than a decade, there is still not a coherent strategy to address the cyclically-related problems of state and local governments.

If business cycles were linked to intergovernmental policy, an essential feature of the system would have to be the targeting of assistance on more distressed jurisdictions. After all, the Administration's choice to combat inflation and allow unemployment to rise is a national urban policy which may hold a decided bias against the older cities. Such arguments lead us to the central purposes of this paper: to investigate the extent to which the fiscal condition of state and local governments in general has been harmed by recession and benefitted by national growth, and to study the commonly offered thesis that the fisc in older central cities has been most compromised by the business cycle.

Measuring the Fiscal Health of the State
and Local Government Sector

Before cyclical effects on city budgets can be studied, one must understand the extent to which the entire state and local government sector has been affected. That is, are cities somehow special victims of

recession or are they simply part of a more widespread problem? To answer this question we must be able to index the overall financial condition of the state and local government sector and to examine the response of this index to the business cycle. This turns out to be a difficult and all too subjective business.

There are a number of tacks we might take in measuring financial condition. One involves determining the overall balance between revenues and expenditures for the state and local government sector in aggregate, and then studying the behavior of this surplus in times of recession and expansion. This type of analysis relies on the National Income Accounts (NIA), and is widely used in macroeconomic policy analysis. A second approach is to look for particular responses to the business cycle in the actual financial performance of state and local governments. For example, how do local government spending, taxing, borrowing, and employment decisions respond to economic downturns and expansions?

Both of these general approaches are subject to conceptual and statistical problems, and they may not give strictly comparable results because they are based on different data series and they are not addressing exactly the same question. Still, making use of both approaches, and looking for consistency in findings, we may learn more than we now know about the response of state and local governments, and central cities, to the business cycle.

The State-Local Sector Surplus

The surplus or deficit position of the state and local government sector is regularly reported in the National Income Accounts (NIA),¹ and is sometimes used as a measure of fiscal health. An NIA surplus, an excess of annual revenues over expenditures, would appear to mean an addition to cash reserves or an amount available to subsidize future tax reduction. As can be seen from column (1) of Table 1, this amount has remained in the \$30 billion range for the past four years, and by the first quarter of 1984 had reached \$54 billion. During this same period, federal aid to state and local governments has consistently exceeded \$80 billion. The sentiment on the part of some federal officials and Congressmen is easily understood. If state and local governments already have more revenue than they can spend, why should federal assistance to states continue at such a high level? Why should the federal government--whose 1984 budget deficit promises to be above \$150 billion--continue to subsidize this accumulation? Indeed, if federal assistance were reduced by the amount of the state and local surplus, the federal budget could take some needed steps toward balance.

More to the point of the present analysis, even in the midst of the most recent recession, state and local governments showed a surplus of more than \$30 billion. Should further countercyclical assistance be provided to local governments that are unable to fully spend the resources they have on hand? The question on the table is whether the NIA data can be properly used to make this point. A review of the trend in the state

TABLE 1
 GROWTH IN THE STATE AND LOCAL GOVERNMENT SURPLUS, FEDERAL AID,
 AND THE FEDERAL BUDGET DEFICIT
 (in billions of current dollars)

Year and Quarter	Total NIA Surplus	General Surplus	General Surplus as a Percent of Total Expenditures ^a	Total Federal Aid	Annual Increase in Federal Aid	Federal Budget Deficit
1974: 1	9.5	-0.3				
2	8.8	-1.5	-1.4	43.3	1.5 ^b	---
3	7.7	-3.0				
4	4.2	-6.8				
1975: 1	3.7	-7.6				
2	4.5	-7.2	-2.7	54.6	11.3	- 70.6
3	6.6	-5.8				
4	8.9	-4.2				
1976: 1	10.1	-4.5				
2	13.8	-1.6	0.4	61.1	6.5	- 53.1
3	17.4	1.4				
4	25.0	8.4				
1977: 1	23.7	6.6				
2	26.1	8.4	3.7	67.5	6.4	- 45.9
3	32.0	13.7				
4	30.4	11.6				
1978: 1	31.6	12.4				
2	34.0	14.3	3.4	77.3	9.8	- 29.5
3	25.7	5.1				
4	29.8	8.2				
1979: 1	32.3	9.9				
2	26.8	3.5	2.0	80.5	3.2	- 16.1
3	30.9	6.7				
4	31.6	6.4				
1980: 1	30.9	5.2				
2	26.2	0.3	1.0	88.7	8.2	- 61.2
3	30.0	2.3				
4	35.1	6.3				
1981: 1	36.8	7.8				
2	39.2	9.9	2.0	87.9	-0.8	- 64.3
3	39.8	9.8				
4	34.6	3.7				

TABLE 1 (CONT.)

<u>Year and Quarter</u>	<u>Total NIA Surplus</u>	<u>General Surplus</u>	<u>General Surplus as a Percent of Total Expenditures^a</u>	<u>Total Federal Aid</u>	<u>Annual Increase in Federal Aid</u>	<u>Federal Budget Deficit</u>
1982: 1	32.5	0.4				
2	34.4	1.0	-0.8	83.9	-4.0	-148.2
3	33.3	-1.0				
4	31.5	-3.7				
1983: 1	34.1	-1.9				
2	43.9	7.0	1.5	86.3	2.8	-178.6
3	47.4	9.5				
4	51.2	12.0				
1984: 1	53.9	13.4				

^aThe numerator is the average general surplus over four quarters; total expenditures are for the state and local government sector.

^b1973-74 increase.

SOURCES: U.S. Department of Commerce, Bureau of Economic Analysis, National Income and Product Accounts, 1976-79, July 1980; Survey of Current Business, July 1984 and various issues.

and local government surplus and a reinterpretation of these data may give a better feel for the issue.

Redefining the NIA Surplus

One is tempted to interpret any surplus as an excess of revenues over expenditures, i.e., as cash that may be saved for some future use. Unfortunately, this would be an incorrect interpretation of the NIA surplus measure. The NIA measure overstates the actual surplus or level of "free reserves" because it includes net additions to the assets of state and local government pension funds. Because pension funds are owned by individuals, the excess of contributions and earnings over beneficiary payments does not represent a surplus for general government operations. If pension fund surpluses are subtracted from the NIA surplus, the remainder can be viewed as the "general" government surplus or deficit. The results of this adjustment still may show a surplus, though of a much smaller magnitude and with a much less steady growth (see column 2 of Table 1). The general government surplus had fallen to 1 percent of total general expenditures by 1980, was in a deficit position in 1982, and had risen to 1.5 percent of state and local government expenditures in 1983.

The general government surplus, though a better measure of fiscal health in the state-local government sector, is still flawed as a measure of available free reserves. It includes both current and capital expenditures but only a portion of capital financing, i.e., capital grants are included but net borrowing is not. The general government surplus, then, may be interpreted as the excess of current revenues and grants over all current and capital expenditures. A positive surplus indicates a net

year-end savings and an amount available for debt retirement or for adding to cash balances. A negative surplus, or deficit, indicates that net borrowing or a drawing from accumulated reserves must be undertaken to cover some portion of current and capital expenditures.

An alternative measure of the unrestricted amount available is the "operating surplus," i.e., the surplus exclusive of capital spending and financing. This measure represents the amount which governments have available to finance capital expenditures, reduce taxes, raise current expenditures, or accumulate reserves to use for any one of these purposes in the future. One would expect the operating surplus to always be positive, i.e., it is not conceivable that the state-local government sector in aggregate would be unable to cover its recurrent expenditures.

Computation of the operating surplus is no straightforward matter, but estimates by Gramlich² and Bahl³ have been extended here through 1981 (see Table 2). As may be seen from these data, the amounts are positive and indicate a small fiscal latitude available to local governments, e.g., the operating surplus was equivalent to 5.4 percent of state and local government own-source revenue in 1981. Because of data problems, it has not been possible to estimate the operating surplus for 1982 and 1983.

The Surplus and the Business Cycle

In order to measure the effects of the business cycle on state and local government fiscal health, we first match the trend in the NIA general surplus with cyclical movements in GNP. As may be seen in Table 1, there is a cyclical pattern to the behavior of the general surplus, i.e., deficits in the 1975 and 1982 recessions, and surpluses in

TABLE 2

COMPONENTS OF GROWTH IN THE STATE AND LOCAL GOVERNMENT SURPLUS
(in billions of current dollars)

Year	NIA Surplus	General Surplus	Operating Surplus	Operating Surplus as a Percent of		
				Federal Budget Deficit	State and Local Government Revenues Raised From Own Sources	State and Local Government Total General Expenditures
1970	1.8	-4.8	8.8	73.9	8.0	6.6
1971	3.4	-3.9	9.8	44.7	8.0	6.6
1972	13.7	5.6	19.1	110.4	13.7	11.7
1973	13.0	4.1	18.4	274.6	12.0	10.2
1974	7.6	-2.9	14.2	132.7	8.5	7.0
1975	6.2	-6.2	9.4	13.3	5.2	4.1
1976	16.6	0.9	12.1	22.8	4.9	4.7
1977	28.0	10.1	18.8	41.0	6.8	6.9
1978	30.3	10.0	22.3	75.7	7.4	7.5
1979	30.4	6.6	11.7	72.7	3.5	3.6
1980	30.6	3.5	20.8	33.8	6.1	6.1
1981	37.6	7.8	27.4	35.8	5.4	5.5

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, Survey of Current Business, various issues; and Bureau of the Census, Governmental Finances in 1980-81, and various other issues (Washington, D.C.: U.S. Government Printing Office, 1982), Table 3.

expansionary periods. To better describe this pattern, four periods of expansion and four of contraction, as defined by the Bureau of Economic Analysis, are shown in Table 3.⁴ Using quarterly, seasonally-adjusted averages as the bench-mark, these results show average deficits during recessions and surpluses during expansions.

We have indexed these changes in fiscal position by calculating a kind of "cyclical swing" in the general surplus. Defining cyclical swing as the absolute difference in the average quarterly general surplus between contractions and the following expansion, we can estimate:

<u>Cycle</u>	<u>Swing</u>	<u>Net Accumulation</u>
1969:III - 1973:IV	\$5.6 billion	\$5.5 billion
1973:IV - 1980:I	8.7 billion	79.3 billion
1980:I - 1981:III	6.9 billion	36.4 billion
1981:III - 1984:I	7.9 billion	40.4 billion

The average quarterly surplus "swung" from a negative \$3.6 billion to a positive \$2.0 billion during the 1969-1973 cycle. That is, state and local governments made up the average quarterly deficit of \$3.6 billion and added another \$2.0 billion for a swing of \$5.6 billion during the cycle. Another way to read these data takes into account the average duration of the cycle and calculates "net accumulation" i.e., by how much did the state and local government sector recover its deficit and accumulate a surplus during the expansion. A larger net accumulation implies that the state and local government sector financial position was helped more by the ensuing recovery than it was hurt by the recession. This would appear to have been the case during the 1973-1980 cycle. That

TABLE 3

THE STATE AND LOCAL GOVERNMENT SECTOR
AND THE BUSINESS CYCLE^a

<u>Contractions</u>	<u>General Surplus (mean quarterly amount in billions)</u>
1969:III - 1970:IV	-3.6
1973:IV - 1975:I	-3.8
1980:I - 1980:II	0.3
1981:III - 1982:IV	-0.08
<u>Expansions</u>	
1970:IV - 1973:IV	2.0
1975:I - 1980:I	4.9
1980:II - 1981:III	7.2
1982:IV - 1984:I	8.0

^aAll data are seasonally adjusted.
Contraction period calculations include trough
quarters; while expansion period calculations
include peak quarters.

SOURCE: U.S. Department of Commerce, Bureau
of Economic Analysis, Survey of
Current Business, July 1984 and
various other issues.

is, state and local governments added \$79.3 billion more to their surplus during nineteen quarters of expansion than they drew down during six quarters of recession.

These data also give some idea of the amount of pressure which the business cycle places on state and local government financial position. During the relatively short 1980-1981 cycle, \$36.4 billion in general surplus was accumulated. Thus far the present cycle has led to an accumulated surplus of \$40.4 billion. The longer the current expansion lasts, the more the state and local government sector will recoup the losses suffered during the last recession, and the more it will save for tax reductions, capital expenditures, and net debt reduction.

The Determinants of Surplus Size

We have attempted to estimate the response of the state and local government sector surplus to movements in the business cycle with quarterly data for the 1969:I-1984:I period. Examination of the NIA data presented in Tables 1 and 2, and a priori reasoning, suggest the following hypotheses:

- (a) the surplus will be higher when the growth in real GNP is higher
- (b) the surplus will increase as federal grants are increased
- (c) the surplus will be dampened by increases in the unemployment rate
- (d) the surplus will be lower, cet. par., during the 1973:IV-1979:IV business cycle

- (e) the response of the surplus to the real GNP growth rate, cet. par., will be lower during the 1973-1979 business cycle.

Using data for these sixty-one quarters (forty-four expansion and seventeen contraction), we have estimated the response of state and local government current revenues, state and local government expenditures, and the state and local government general surplus to the business cycle. Following the hypotheses suggested above, the explanatory variables used are:

U = the unemployment rate lagged by one quarter

Y = the growth rate in real GNP

G = real federal grants (deflated by the implicit GNP deflator for state and local government purchases)

T = a time trend variable

W = a dummy variable = 1 for 1973:IV-1979:IV

The dependent variables are all measured in real terms, deflated by the implicit GNP deflator for state and local government purchases. The relationships are specified as linear, and where appropriate the estimates are corrected with a first order autoregressive transformation.

The results (see Table 4) show that the state and local government sector surplus is responsive to the business cycle, and to the inflow of federal grants. A one percent increase in the unemployment rate, cet. par., lowers the state and local government surplus by \$1.32 billion and a \$1 billion increase in grants raises the surplus by \$500 million. The dummy intercept term for the 1973-1979 period is significant, showing that, cet. par., the surplus was lower during this period than during the

TABLE 4

REGRESSION EQUATIONS^a FOR STATE AND LOCAL GOVERNMENT
CURRENT REVENUES, TOTAL EXPENDITURES,
AND THE GENERAL SURPLUS

	<u>Dependent Variable^b</u>		
	<u>Current Revenues</u>	<u>Expenditures</u>	<u>General Surplus</u>
Intercept	113.60	118.88	-12.56
Y	0.32* (3.439)	-0.01 (0.197)	0.35* (3.435)
G	1.39* (16.576)	0.91* (13.230)	0.50* (5.305)
T	0.70* (17.574)	0.40* (12.431)	0.11* (2.446)
W	0.68 (0.707)	3.15* (4.008)	-2.18* (-2.043)
U	-0.62* (-1.995)	0.88* (3.429)	-1.32* (-3.812)
WY	-0.17 (-1.026)	0.03 (0.192)	-0.28 (-1.516)
R ²	0.98	0.98	0.66

*Significance at .05 level for a one-tailed t-test.

^aT-statistics shown in parentheses.

^bIn billions of real dollars, deflated by the GNP implicit price deflator for state and local government purchases of goods and services.

rest of the time span considered. Finally, the results show that a one percent higher real GNP growth added \$350 million to the state and local government surplus. The interaction variable, to test the hypothesis that there was less surplus response to GNP growth during the 1973-1979 cycle, had the expected negative sign but was not statistically significant.

We have not estimated a simultaneous equation model, so we cannot derive the separate contribution of revenues and expenditures to the surplus. Separate OLS estimation of these explanatory variables against real current revenues and expenditures, however, adds some information about how the business cycle affects state and local government fiscal condition. A one percent increase in the unemployment rate reduces revenues by \$0.62 billion, and increases expenditures by \$0.88 billion, hence reduces the surplus. Our surplus equation estimates that a \$1 billion increase in grants led to a \$500 million increase in surplus which could be used by state and local governments to either finance capital spending or accumulate cash balances. The stimulative effect of federal grants on the surplus would appear to come mostly from the revenue side. To interpret the expenditure and revenue equation coefficients literally, for every \$1 billion in grants received by state and local governments, \$910 million was spent and current revenues were "stimulated" by another \$390 million as a result of the grant. A third observation that one may make from these estimates is that the surplus was significantly lower during the 1973-1979 business cycle, cet. par., because expenditures were markedly higher than in the other periods considered. Finally, we may see

that during expansions, when GNP grows faster, revenues respond more than expenditures and the surplus increases.

The Surplus in 1983

We might use this model to consider whether the surplus during the current recovery is unusually large. To investigate this possibility we have used the surplus equation from column 3 of Table 4 (for the full 1969:I-1984:I period) to analyze the difference between the estimated and actual surplus. Our predicted values underestimate the actual surplus during the current expansion by a mean quarterly amount of \$1.7 billion 1972 dollars. By this same equation, the mean absolute error for the 1975:I-1980:I expansion was an overestimate by a mean quarterly amount of \$0.17 billion 1972 dollars. Clearly, there is something extraordinary about the growth in the surplus during the current recovery.

We can better understand what lies behind this recent performance by examining the revenue and expenditure responses, separately, for the present period of expansion. The revenue equation shows a mean absolute error (underestimate) of \$1.07 billion for the recovery period and the expenditure equation shows a mean absolute error (overestimate) of \$506 million. These data suggest that the unusually large surplus accumulation since 1983 is more due to the widespread tax increases legislated in 1983 than to the unusually conservative expenditure policies of most state and local governments.⁵ By this analysis, then, the 1983 surplus is larger than might be expected and due substantially to the discretionary fiscal actions of state and local governments.

The Surplus and Fiscal Health

While the above makes it quite clear that the state and local government sector surplus has fluctuated in response to business cycles, it is not so clear that these fluctuations represent changes in fiscal health. Deficits or lower surpluses, for example, may only reflect the choice to spend more on capital projects and larger surpluses may reflect the postponement of public employee compensation increases. Such possibilities lead one to examine the other (non-cyclical) reasons for observed fluctuations in the surplus and the extent to which an aggregation problem compromises this interpretation of fiscal health. The former consideration will lead us to a conclusion that the surplus is less an indicator of fiscal health than of financial position and that the surplus position may be largely a matter of state and local government choice. The latter will cause us to suspect that changes in financial position are markedly influenced by a small number of energy-rich state governments, especially during periods of expansion.

Justifications for a Surplus

There is some justification for the sizeable surplus observed in the state and local government sector during the 1975-1980 and 1983 recovery periods. Indeed, a year-end fiscal surplus for a state or local government is neither unusual nor undesirable, and it is not necessarily evidence of "excess" resources. Most state and local governments are prohibited by law from budgeting for an operating fund deficit; therefore, it is not surprising that the national accounts show a year-end cash surplus. More to the point, governments, like people, save for

precautionary reasons by building up cash reserves over a period of years.⁶ These balances are accumulated for contingencies such as recession, a prolonged strike, or a natural catastrophe (snow, flood), or for cash flow problems stemming from the timing of revenue receipts and creditor payments. Practices among governments vary widely in terms of the size of reserves actually held and there are only rules of thumb about the optimal size of general fund cash balances.

Larger cash balances in some states and local areas may be justified as protection against severe business cycle fluctuations. States such as Michigan, with a particular susceptibility to national economic fluctuations, could face severe fiscal fluctuations over the cycle. Theoretically, governments could accumulate reserves during periods of economic expansion and draw them down during contractions. Over the cycle, these reserves should approach the relatively small contingency amount described above. During the sixties and early seventies, there was less interest in establishing such reserves. The pronounced upward trend in state-local government expenditures over the past two decades had dwarfed cyclical fluctuations--if there were excess revenues in an expansionary period, they were quickly spent. If there were deficient revenues during a contraction, tax rates were increased. As long as the national economy was growing rapidly, there was little need for such a fund.

All of that has changed, at least for many state and local governments, as has the growth orientation of state and local government fiscal planners. The newer concerns are that pension systems are

underfunded and in many cases the shortfall will have to be financed from a shrinking tax base and a smaller population; debt burden is too high to be carried by future revenue growth; operation and maintenance of capital facilities imply a substantial future revenue commitment; and there seems no possible way to finance "normal" expenditures in the event of another recession. State and local government financial planners, forecasters, and administrators--a conservative lot in the best of times--have become even more careful. This new wariness, together with uncertainties about the future performance of the national economy, inflation, and the energy crisis may account for some of the building up of reserves by state and local governments observed in the late 1970s.⁷ At least nineteen states have now established "Rainy Day Funds." While these funds were generally too small to deal fully with the revenue shortfalls resulting from the 1980-1982 recession, they did provide some cushion.⁸

In light of these observations about precautionary balances, one might ask whether reserves in recent years have been inordinately high, say greater than the 5 to 7 percent balance in the general operating account suggested by the National Association of State Budget Officers as "normal." Unfortunately, our measure is not of the stock of cash balances available but of the annual year end surplus. Still, we can gain some idea of fiscal position from these data.

The operating surplus, the amount available for capital expenditures, indicates a cushion within the range of 5 to 7 percent of total general expenditures (see Table 2). The trend in the operating surplus as a percent of locally raised revenues--a measure of annual savings--shows a

growth for the post-1975 recovery period, a sharp decline in 1979, and continued growth after 1980. Two features of the trend in the surplus and the very recent performance are noteworthy, and perhaps surprising. First, the pattern of surplus accumulation in this period is no startling departure from that of the recent past. Large operating surpluses are common--the 1970-1978 average was \$14.8 billion--and the pattern of growth follows the business cycle in a predictable way. In fact, the surplus increase in the 1971-1973 recovery period was roughly the same as that during the 1975-1978 recovery period.

Second, the surplus is not large by comparison with past years, when the growth in state-local government budgets is considered. The operating surpluses during recovery from the 1975 recession were equivalent to 5 to 8 percent of revenues raised from own sources, a proportion which was lower than that realized during the previous recovery. The same pattern held for the operating surplus when viewed as a percent of total general expenditures. Hence, at least in terms of practices during the past decade, the size of the operating surplus in the state-local sector after 1975 was not abnormal.

It was not possible to compute the operating surplus for the 1983 recovery, but examination of the trend in the general surplus reveals much the same picture: the surplus has not been growing relative to the size of state and local government budgets. During 1983, the state and local government general surplus as a percentage of total expenditures, remained at about the same levels as in the 1977 and 1978 recovery years. Hence, while the size and growth of the surplus in 1983 is larger than might be

expected given the strength of the recovery, the 'savings' represent about the same share of the state and local government budget as in the previous expansion.

Aggregation Problems

Another concern is that the surplus is so unevenly spread that, at best, it indicates financial health for only a few state and local governments. This is the aggregation problem, i.e., the existence of an operating surplus for the state and local government sector does not imply a healthy fiscal position for every state and local government. And who would argue that a large surplus in the state of Texas makes the fiscal condition of New York State any better? Since the NIA surplus is a measure that offsets surpluses in some states with deficits in others, an aggregate sector surplus would be possible even if most state and local governments were in financial trouble. For example, The Fiscal Survey of the States reported that three states--Alaska, California, and Texas--accounted for more than half of the aggregate balances of reporting state governments in 1978.⁹ This suggests that changes in the surplus may also have been concentrated. A similar picture may be seen as states entered 1984, one full year into the recovery: thirty states anticipated balances of 3 percent of annual appropriations or less, or a deficit.¹⁰ Six states accounted for more than 50 percent of the balances expected in FY 1984.

NIA statistics also aggregate the fiscal conditions of governments within states, e.g., California's large state government surplus during the late 1970s is treated as offsetting the deficits of some California

local governments. It is important to note this aggregation problem in interpreting the surplus as a measure of fiscal health of local governments--financially distressed cities can be located in states where there is an aggregate state and local government surplus. The point which is missed in a reading of the aggregate surplus is that the extent of urban fiscal distress is probably less influenced by the state government surplus than by the fiscal responsibility which the state government assumes toward its local units. That lesson was well-learned during the California and New York experiences of the late 1970s.

The aggregation issue also raises the possibility that the swing to a general deficit during recessions may reflect the especially adverse effects of the business cycle on some state and local governments. The disaggregation we would most like to discuss in this regard are cities vs. states, and regions. Data will not permit a careful comparison of these subcomponents, but some available supplementary information may give a rough idea of the pattern of variation in this surplus.

State vs. Local Government Surpluses. Intuitively, one might expect the surplus/deficit to be concentrated at the state government level because state income and sales tax revenues are more buoyant than local property taxes during an economic expansion or contraction, and because of their greater responsibility for social service expenditures. The Bureau of Economic Analysis has broken out the state vs. local surplus for the 1960-1981 period. The results suggest that intuition would be correct for the 1974-1975 recession and for the 1981 recession year, when state governments ran larger deficits (see Table 5).¹¹

TABLE 5

DISAGGREGATION OF GENERAL GOVERNMENT SURPLUS

Year	General Government Surplus	State Governments	Local Governments	Local Governments	
				Municipalities With Populations Above 25,000	Total Local Governments
1967	-5.9	-2.3	-3.6	-0.3	-1.2
1968	-5.1	-0.9	-4.2	-0.7	-1.2
1969	-4.4	-1.5	-2.9	-0.8	-2.1
1970	-5.1	-4.5	-0.6	-1.5	-2.3
1971	-5.1	-4.4	-0.7	-1.7	-2.8
1972	4.8	3.2	1.6	-1.3	-1.3
1973	3.6	-0.1	3.7	0.8	3.8
1974	-4.2	-4.7	0.5	0.5	5.9
1975	-7.6	-5.4	-2.2	0.1	2.0
1976	0.9	-0.7	1.6	-0.1	1.5
1977	10.0	3.3	6.7	---	---
1978	10.0	5.0	5.0	---	---
1979	6.6	2.6	4.0	---	---
1980	0.9	0.1	0.8	---	---
1981	-0.1	-2.2	2.1	---	---

SOURCE: Columns (1) - (3) from David Levin, "Receipts and Expenditures of State Governments, 1959-1976," Survey of Current Business (May 1978); David Levin, "Receipts and Expenditures of State Governments and Local Governments, 1968-81," Survey of Current Business (May 1983); and Edward Gramlich, "State and Local Government Budget Surpluses and the Effect of Federal Macroeconomic Policy," Joint Economic Committee, January 12, 1979; Survey of Current Business (January 1980).

There was not a parallel strengthening of state government financial position during the 1975-1979 expansion. During most of the post-1975 recovery they accumulated a much smaller surplus than did local governments. These results support the strenuous arguments of representatives of state government associations and governors, that the picture was not one of huge state surpluses and local deficits.¹² The National Governors Association estimated the accumulated balance in "free" state accounts to be no more than \$6 billion by the end of fiscal year 1978. Remaining balances held by states were restricted to narrow uses (by Constitutional provision or by statute).

These results are not counterintuitive. Between 1975 and 1979, direct federal aid to cities increased dramatically. Moreover, there was a trend toward a greater share of direct expenditures at the state government level and an increasing state government share in total state and local government financing. The healthier look of local government budgets, then, was in part due to these subsidies. Another explanation is that there was more fiscal retrenchment at the local government level, and these cutbacks show up in the form of a larger local government surplus. In the immediate aftermath of the 1975 recession, expenditures and debt increased faster at the state than at the local government level.

Gramlich has studied the budgetary position of the local government sector with Census of Governments data.¹³ Though not comparable with the NIA amounts or procedures, his estimates suggest that the largest cities and, in general, all municipal governments with populations in excess of 25,000 have fared worst. According to his results, the local

government surplus reported by BEA must lie with smaller local governments, counties, and special districts. Such deduction is dangerous because relatively little work has been done on smaller cities, but Gramlich's inference is consistent with Muller's findings.¹⁴

The BEA conclusion that local governments in aggregate were in a surplus position in the late 1970s raises the interesting question of the relative fiscal health of large cities on the various "distressed" lists. Can a distressed city have a budget surplus? Gramlich's data give an affirmative answer. Of the twenty large cities he studied--including Cleveland--only New York City showed an operating deficit for 1975-1976. Gramlich's answer and analysis are probably correct, but cannot give a detailed picture of the budgetary condition of individual local governments because of the limitations of Census of Governments data.

Some very interesting information on the financial condition of large city governments comes from the work of Philip Dearborn in his studies of audited financial statements.¹⁵ Of the twenty-eight large cities in his sample, he finds twenty-one instances of revenue/expenditure imbalances in at least one year between 1976 and 1979. For the twenty-seven largest cities (excluding New York) his results show an aggregate general fund revenue/expenditure deficit of \$154.2 million in 1976, a surplus of \$230.9 million in 1977, and a surplus of \$73.6 million in 1978. Dearborn's work is not only informative about the financial condition of cities but it is convincing in demonstrating that such conclusions are best drawn from careful case-by-case analyses of local financial statements.

The upshot of this collection of research is that all cities do not suffer major fiscal problems during recessions. Indeed, local governments as a whole seemed to fare better than state governments during the 1974-1975 recession and during the following national expansion. On the other hand, some cities were hurt more than others during the recession and helped less than others during the recovery. The evidence would seem to point to the larger, older cities as having suffered most through the cycle. This is a subject to which we turn later in this paper.

Variations in State Surpluses. The NIA do not provide detail on the financial position of individual states. To develop such estimates, we must resort to evidence such as that provided by the National Governors' Association in their Fiscal Survey of the States.¹⁶ The use of the Fiscal Survey data confirms the suspicion that there is a wide variation among state governments in the reported size of the fiscal surplus and in the response of this surplus to the business cycle. At the height of the recovery during fiscal year 1978, forty-eight states reported ending balances of over \$8.9 billion, or about 8.6 percent of their \$104 billion in aggregate expenditures. Most of this surplus was accumulated by a small number of states. California alone accounted for over 41 percent of the total; three states (California, Alaska and Texas) accounted for over 56 percent of the surplus in fiscal year 1978. The aggregate surplus for the remaining forty-five states was \$3.9 billion, an amount equivalent to only 4.5 percent of current expenditures. Besides Alaska, California and Texas, two other states (Wyoming and Oregon) had surpluses in excess of 20 percent of their total operating expenditures. Surpluses of between 10

and 20 percent of total spending were reported by another eight states and only Pennsylvania reported a deficit. Clearly the real and absolute magnitudes of the state government surplus vary among the states. Yet in fiscal year 1978, twenty-eight of forty-eight states reported surpluses in excess of the benchmark of 5 percent of total operating expenditures.

State finances also have responded in an uneven way to downturns in the economy. In 1979, aggregate balances in state general operating funds were projected to decline to about \$4.3 billion, a drop of \$4.5 billion (or 52 percent) from their 1978 level. This reduction was projected largely because thirty-five of forty-eight reporting states projected that the state government surplus would be smaller in 1979 than 1978. The NGA concluded that this drawdown was a result of changes in state tax policy, a flattening or even downturn in the economy, and a greater impact of inflationary pressures on expenditures. According to the National Conference of State Legislatures (NCSL), the initial outlook for 1982 was for only eleven states to have year-end balances in excess of 5 percent of annual spending, by comparison with eighteen states in fiscal 1981.¹⁷ The energy rich states anticipated sizeable surpluses in 1982; seventeen states expected to conclude fiscal year 1982 with year-end balances equivalent to less than 1 percent of annual spending; and twelve states anticipated deficits. In fact, six states did finish fiscal year 1982 with deficits, and another seventeen ended the fiscal year with virtually no balance. The twelve states which reported balances in excess of 5 percent of annual spending were Florida, Hawaii, Kansas, Oklahoma, Louisiana, Delaware, Montana, Nevada, New Mexico, North Dakota, Texas and

Wyoming.¹⁸ By the end of FY1983, forty states had balances below 3 percent of general fund expenditures,¹⁹ and states had begun to increase taxes again. As states entered 1984, only ten expected balances in excess of 5 percent of appropriations and six states accounted for more than half of the total balances of the fifty states.²⁰

State government fiscal health is probably hurt more by recession than these data on financial condition suggest. The NCSL reports that twenty-six states made cutbacks in fiscal year 1982 budgets after those budgets were proposed or enacted, largely because revenues grew by even less than had been projected.²¹ This result squares with Mikesell's finding that the income elasticity of state taxes is greater during expansions than contractions.²²

Pro or Countercyclical Response

Does this examination add to the debate about whether state and local governments in aggregate behave in a cyclical reinforcing or countercyclical fashion? Our statistical work allows only the conclusion that the aggregate movement in revenues and expenditures is procyclical: revenues grew faster than expenditures during economic expansions and expenditures faster than revenues in recessions. It is important to note the difference between the 'automatic' responses--movements in tax bases, 'required' expenditures, etc.--which have been procyclical, and the discretionary tax and expenditure actions. It is the latter that are most difficult to classify as pro or countercyclical. Our model and statistical testing permits little statement about the discretionary

responses to the cycle, but based on this and other research, we may make some inferences.

During the 1975 recession, there was evidence of state and local government fiscal actions to offset revenue shortfalls with tax increases and to restrain expenditure increases through postponement and/or deferral. The magnitude of these effects, however, was not great. The same behavior was not true of the 1981-1982 recession. Indeed, from 1978 to 1982, few states undertook significant tax increases. The primary response to the revenue shortfalls experienced in FY1982 and FY1983 was to reduce expenditures, often below appropriated levels;²³ expenditures actually declined in real terms during this period. The Federal Reserve Bank of New York has estimated that during the 1981:III-1982:IV recession period, expenditures were reduced by \$6.5 billion because of discretionary actions.²⁴ The sources of expenditure finance shifted to drawings from the accumulated general surpluses, accelerated tax collections and increased borrowings. One can say, from this evidence, that, in aggregate, the discretionary actions of state and local governments during recessions has been procyclical. Among state and local governments, there are very wide differences in this behavior.

The discretionary actions during the 1975-1979 expansion were more clearly countercyclical on the expenditure side. There were important restraints on the growth of current expenditures--a lid on average compensation and employment increases²⁵--a steady decline in capital spending by state and local governments,²⁶ and major increases in federal assistance. Tax rate changes, however, moved in a procyclical

fashion. There was a rather dramatic reduction in the general surplus in 1979, as a result of discretionary tax reductions. Levin has estimated that Proposition 13 resulted in a revenue loss of \$3 billion in 1978 and \$6.5 billion in 1979; the latter equivalent to 15 percent of state and local government own-source revenues or one-half of total property tax revenues. The further reduction in the surplus in 1980 was due to expenditure increases related to rising unemployment.²⁷

This countercyclical pattern of discretionary actions on the expenditure side is again apparent in the 1983 recovery, but there is also some evidence of a countercyclical pattern to discretionary tax actions (see also, Table 4). During FY1983, the nominal increase in taxes by state governments, \$7.5 billion, was the largest ever and was driven primarily by increases in income and general sales taxes.²⁸

We should emphasize that these explanations of the cyclical behavior of state and local governments, and the seemingly inconsistent pattern, may be due to factors other than just national economic performance. For example, the surplus since 1975 may also reflect a response to the tax limitation movement, fiscal conservatism in the aftermath of the New York City scare, and revenue growth due to inflation. In other words, our analysis may impute too much to the business cycle.

The Business Cycle and the Financial Condition of Large Cities

The evidence presented above suggests that state and local government financial position has been compromised by the business cycle and that some state and local governments are harder hit by the recession than

others. The purpose of this section of the paper is to look for evidence that central cities have somehow fared worse than other local governments in terms of their fiscal performance over the business cycle. The evidence is not easily found, in part because so many factors other than the business cycle have impacted cities during the past decade.

One might begin such an analysis by suggesting the types of cities which would seem most susceptible to cycle-related fiscal problems. The candidates for a differentially more severe impact are those which (a) have economic bases which are most sensitive to national economic contraction; (b) are located in cyclically sensitive states and dependent on intergovernmental financing; and (c) have populations who suffer most from recession and therefore require special assistance. On all three counts, the older central cities in the industrialized region would seem most likely to head the "recession-sensitive" list. The financial problems of such cities may be compounded even further because their economies often do not recover as fully as the rest of the country during expansions.²⁹

There are serious data and conceptual problems which cause us to fall well short of a full exploration of this issue. The most important of these shortcomings is that data problems limited this study to a very small sample of cities. In the next section we study the economic base response to expansion and contraction in the ten largest U.S. city/counties.³⁰ We then try to determine whether these economic fluctuations are matched by fiscal adjustments and/or fiscal deterioration. Finally, the fiscal adjustments to the business cycle are

examined for the twenty largest U.S. cities. Throughout this analysis, the concern is with jurisdictional fiscal response in general, and with central cities in particular. For this reason, overlapping government fiscal data are not used and we take care to recognize the assignment differences which may distort these comparisons.

Another important limitation is that we cannot map the business cycle against the financial performance of local governments for exactly the time periods we would like. County-level employment and income data are produced annually rather than quarterly, hence, the economic performance for any given year may cut across a recession and expansion period. To complicate matters further, revenue and expenditure data are reported annually and on a fiscal year basis, which may or may not be a calendar year and which may vary among cities. We attempt to match up fiscal years and business cycle periods as follows: (a) we have specified 1975, 1980 and 1981 as economic recession years and the remainder as expansion years. A reading of the U.S. employment growth at the bottom of Table 6 supports this categorization; (b) we have chosen fiscal years 1974 and 1975 to encompass the impact of the first recession, fiscal years 1980-1982 to include the second, and fiscal years 1976-1979 as the expansion period. As may be seen from Table 3, this does not correspond exactly to the desired time periods, but it would seem close enough to give some insights.

Central City Economic Base Changes

The lack of regularly published data on central city employment and income severely limits the documentation of central city economic

performance. The employment data used here are from the Census Bureau's County Business Patterns--a source which limits our comparative analysis to those ten large cities which are coterminous with counties. County Business Patterns includes only covered employment.

For purposes of this analysis, the ten cities might be roughly grouped as declining or non-declining according to their longer term performance. As an indicator of decline or non-decline, we have taken the rate of population growth between 1972 and 1981. Only Jacksonville and Nashville exhibited any population growth during this period. San Francisco, Indianapolis and Denver declined at less than one-half of one percent per year; hence we have also classified them as "non-declining." The declining cities in this sample--Baltimore, New Orleans, New York, Philadelphia and St. Louis--are primarily industrialized northern cities--and are commonly on the list of cities facing fiscal and economic problems. The idea of this categorization is to see if fiscal responses are dramatically different in the stereotypical 'distressed' cities. Still, the grouping of cities made here is as much impressionistic as objective.

As may be seen from the data in Table 6, New York, Philadelphia, St. Louis and Baltimore experienced employment declines or very little growth during the pre-recession 1965-1972 period, while the non-declining group of counties and the rest of the country were growing at a substantial rate.³¹ At the onset of the recession in 1974, six of the ten central counties were losing employment with three of the four gaining counties--Jacksonville, San Francisco and Nashville--outside the declining region.

TABLE 6

EMPLOYMENT GROWTH IN TEN METROPOLITAN CENTRAL COUNTIES
(percent increase)

	<u>1965-1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	Exhibit: 1975-1979 Average Annual Growth Rate
<u>Declining Areas</u>											
Baltimore	4.0	1.7	-9.5	-6.7	-3.8	-1.2	2.2	1.8	0.8	-2.4	-0.3
New Orleans	10.8	2.0	-10.2	-4.0	1.2	1.0	9.1	4.2	-2.0	0.9	3.8
New York	0.2	-3.0	-1.4	-6.2	-1.0	-2.7	3.1	4.3	-0.6	1.0	0.9
Philadelphia	-0.5	0.9	-3.2	-8.0	-1.3	-4.4	3.8	2.5	-2.8	-1.7	0.1
St. Louis	-1.8	1.7	-7.4	-11.5	-0.2	-3.9	4.8	2.5	-4.8	-4.8	0.7
<u>Non-Declining Areas</u>											
Denver	37.4	8.2	-7.4	-4.8	2.3	2.8	12.2	6.4	2.6	1.0	5.9
Indianapolis	15.9	6.4	2.1	-4.8	3.7	2.9	5.6	5.7	-2.2	-4.3	4.5
Jacksonville	37.6	8.0	5.8	-6.4	-0.9	-1.5	9.5	4.0	1.4	2.0	2.7
Nashville	32.3	8.1	4.4	-4.4	4.2	3.8	8.6	6.0	-2.1	1.3	5.6
San Francisco	10.3	2.2	15.2	-2.8	0.4	-5.3	10.9	2.3	1.2	4.9	1.9
United States	21.5	7.0	2.3	-4.7	3.4	3.9	8.1	7.3	-0.8	0.0	5.7

SOURCE: U.S. Department of Commerce, Bureau of the Census, County Business Patterns for 1965-1981 (Washington, D.C.: U.S. Government Printing Office, 1966-1983).

Between 1974 and 1975, all ten counties (and the U.S.) lost employment with the biggest losses coming in Philadelphia and St. Louis. In general, the declining counties fared worse than the non-declining ones and worse than the rest of the country.

The recovery began much later in the industrial cities. Baltimore, New York, Philadelphia and St. Louis all experienced employment declines between 1975 and 1977. Only Jacksonville among the "non-industrialized" cities lost employment in both years. In 1978 and 1979, while the U.S. economy was experiencing employment growth in the 7 to 8 percent range, the industrialized counties under study here were growing in the 2 to 4 percent range. By contrast, the non-declining cities in this comparison were generally growing in the 4 to 6 percent range, or higher. As may be seen in the far right column in Table 6, the average economic performance of the declining cities was substantially poorer than that of the non-declining cities during the expansion period.

Throughout the 1975-1979 recovery period, even the non-declining subgroup fared either worse or little better than the rest of the nation. By 1979, the peak of the expansion, none of these ten cities were growing as fast as the rest of the nation. In 1980, with the beginnings of a new recession, employment growth turned down in the nation as a whole and in six of these ten central counties. Again, however, the central counties in the older industrialized region tended to fare worse. The same was true as the recession continued into 1981.

Have these central areas suffered greater employment losses than their surrounding suburbs, and have central city economies suffered

disproportionately during recession? The central county share of SMSA employment is tracked in Table 7. In no case is the central county employment share greater in 1981 than in 1972. Did some central areas lose more than others relative to their suburbs? Indianapolis and Nashville (governed on an areawide basis) and San Francisco came closest to maintaining their employment share. In all other counties there was a more substantial losses in the central county employment share. These data suggest that the losses in central counties relative to their suburbs were more pronounced for the declining central counties during the 1975 downturn than in 1980 and 1981. More interesting, however, is the indication that most of these central counties seem to have lost more ground to their suburbs during the recovery than during the recession.

The picture is somewhat different when real per capita personal income trends are examined. The rate of growth in real per capita income did fall off faster than in the nation in the older, industrialized cities during 1974--the year prior to the recession (see Table 8).³² However, real per capita income growth did not fall off noticeably faster in these cities than in the rest of the nation in either the 1975 or 1980-1982 downturns. Similarly, these large city-counties did not grow slower than the nation during the 1975-1979 expansion. How does one explain this relatively good per capita real income performance in light of the employment pattern described above? One answer is a loss in population which tends to support the per capita income level, especially if outmigrants are lower income; another is the growing concentration of

TABLE 7

RATIO OF CITY TO SMSA EMPLOYMENT IN TEN
METROPOLITAN CENTRAL COUNTIES
(in percent)

	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
<u>Declining Areas</u>										
Baltimore	59.6	58.3	51.5	50.6	48.7	46.7	44.2	44.6	44.1	43.0
New Orleans	72.3	71.4	62.3	63.2	59.7	58.5	57.4	59.4	58.4	55.1
New York	84.1	88.8	82.3	81.8	81.1	80.5	80.2	80.0	79.7	79.7
Philadelphia	49.6	48.4	44.7	43.3	42.4	40.4	39.8	39.3	38.6	38.1
St. Louis	46.4	45.6	41.3	35.7	36.8	34.8	33.8	33.1	32.0	30.9
<u>Non-Declining Areas</u>										
Denver	63.9	62.7	55.5	54.6	54.0	51.5	50.8	49.8	49.6	48.5
Indianapolis	87.1	88.0	86.9	86.2	85.6	85.4	84.7	84.3	84.4	83.8
Jacksonville	92.1	91.5	91.1	90.3	89.4	88.2	87.9	87.6	87.6	87.6
Nashville	78.7	78.9	76.9	78.0	76.8	76.4	75.7	75.5	74.9	75.1
San Francisco	39.9	38.7	45.6	41.7	40.6	37.3	38.4	37.1	36.9	37.9

SOURCE: U.S. Department of Commerce, Bureau of the Census, County Business Patterns 1972-1981 (Washington, D.C.: U.S. Government Printing Office, 1973-1983).

TABLE 8

GROWTH IN REAL PER CAPITA PERSONAL INCOME IN TEN CENTRAL COUNTIES
(percent increase)

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	Exhibit: 1975-1979 Average Annual Growth Rate
<u>Declining Areas</u>											
Baltimore	2.2	3.1	1.3	3.1	3.7	4.5	-1.9	3.3	1.6	-0.8	2.3
New Orleans	6.0	-4.2	1.9	6.1	4.1	3.8	3.1	5.4	3.4	-0.6	4.3
New York	2.7	-2.1	-1.6	-0.7	1.1	2.9	3.0	2.2	1.3	1.6	1.6
Philadelphia	2.9	-1.3	-0.0	-0.4	0.3	0.9	4.3	2.2	0.9	0.8	1.3
St. Louis	7.5	-7.3	0.5	2.4	1.5	4.0	10.4	3.0	1.9	-0.2	4.5
<u>Non-Declining Areas</u>											
Denver	5.6	-0.4	1.1	-0.3	4.0	5.0	-0.6	3.7	2.4	2.3	2.0
Indianapolis	4.4	1.3	-3.9	3.9	5.1	3.4	1.1	0.5	-0.7	-2.9	3.4
Jacksonville	4.7	1.3	-2.9	5.1	1.1	3.8	2.3	1.4	0.5	1.9	3.1
Nashville	6.4	1.3	-0.7	2.1	7.0	5.3	-2.3	-0.1	2.2	-0.8	3.0
San Francisco	2.3	1.4	0.9	4.5	1.8	4.0	-2.6	3.0	1.1	0.5	1.9
United States	4.8	0.1	-1.5	2.8	3.9	3.8	1.6	0.3	1.6	-1.1	3.0

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, Survey of Current Business, April 1984 and various other issues.

higher paid service sector jobs in the central city; and another is the inflow of transfer payments to compensate the unemployed.

The evidence about city/suburb performance in per capita income growth over the cycle is mixed. Per capita income in the central county is lower than in the rest of the SMSA in Baltimore, New York, Philadelphia, St. Louis and San Francisco, but the disparity did not generally increase during this period (see Table 9). The latter is a finding that will surprise many. Again, there is no clear evidence that central county income growth slowed more than that in their suburbs during either of the downturns.

What one might make of this pattern is the following: large central counties which were in the 'declining' group fared badly during both recessions in terms of employment loss, and large central counties in general had slower employment gains during the recovery period. Most of the central counties studied lost ground to the suburbs during the business cycle. However, the response of real per capita income to recession/expansion was not so different in these cities compared to the rest of the nation, nor was the income growth in central counties relative to their suburbs. What all of this means for revenue growth and response is not totally clear, though one might expect this pattern to lead to a slowing of tax revenues, especially property tax revenues, in these larger cities.

Revenue Performance

It may well be the case that recession dampens the revenue growth of central city governments, particularly those which are 'distressed'; but

TABLE 9

RATIO OF CENTRAL CITY TO SMSA PER CAPITA PERSONAL
INCOME IN TEN CENTRAL COUNTIES

	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
<u>Declining Areas</u>											
Baltimore	0.88	0.88	0.90	0.92	0.92	0.91	0.91	0.89	0.90	0.90	0.90
New Orleans	1.02	1.05	0.99	0.99	1.01	1.01	1.01	1.01	1.02	1.01	1.01
New York	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.93	0.96	0.95	0.95
Philadelphia	0.92	0.92	0.92	0.93	0.90	0.89	0.88	0.88	0.88	0.88	0.88
St. Louis	0.88	0.91	0.86	0.86	0.85	0.83	0.84	0.89	0.88	0.89	0.89
<u>Non-Declining Areas</u>											
Denver	1.10	1.13	1.13	1.14	1.10	1.08	1.09	1.06	1.04	1.04	1.04
Indianapolis	1.04	1.04	1.05	1.04	1.03	1.03	1.04	1.03	1.04	1.04	1.04
Jacksonville	1.03	1.04	1.04	1.04	1.04	1.04	1.05	1.05	1.04	1.04	1.05
Nashville	1.10	1.11	1.10	1.10	1.10	1.11	1.11	1.13	1.13	1.12	1.13
San Francisco	1.12	1.13	1.13	1.13	1.14	1.12	1.12	1.06	0.95	0.95	0.94

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, Survey of Current Business, April 1984 and various other issues.

it is a difficult case to make from available data. The problem is that discretionary as well as automatic revenue increases are included in reported fiscal data, and the pattern of increase tends to be 'lumpy'. The trend in revenue growth in these ten central counties is presented in current dollars in Table 10, and in real terms in Table 11.

The pattern of real revenue decline suggests that those counties whose economies were hardest hit by the recessions also show the greatest real revenue losses: seven of the ten central counties had real declines in own source revenues in either or both 1974 and 1975 (see Table 10).³³ For half of these large cities (four in the declining category), the revenue performance during the recession was worse than that for all cities in the nation (see Table 11).³⁴ The revenue performance of the large cities, however, was not nearly so dismal as their economic performance during the recession; suggesting that significant discretionary actions may have been taken. This conclusion squares with the results of surveys of city fiscal actions taken during the recession.³⁵ During the more recent recession, which would be reflected in the 1980-1982 fiscal performance, the large city/counties in the declining group performed noticeably less well than cities in the non-declining group and than all U.S. cities.

During the 1975-1979 expansion, the revenue performance in the non-declining counties seemed to improve more consistently, though these patterns are somewhat distorted by large discretionary changes.³⁶ The real revenue growth among the city/counties in the declining region was

TABLE 10

REVENUE PERFORMANCE OF TEN CENTRAL COUNTY GOVERNMENTS

	<u>1972-</u> <u>1973</u>	<u>1973-</u> <u>1974</u>	<u>1974-</u> <u>1975</u>	<u>1975-</u> <u>1976</u>	<u>1976-</u> <u>1977</u>	<u>1977-</u> <u>1978</u>	<u>1978-</u> <u>1979</u>	<u>1979-</u> <u>1980</u>	<u>1980-</u> <u>1981</u>	<u>1981-</u> <u>1982</u>
<u>Declining Areas</u>										
Baltimore										
Percent Increase in Own- Source Revenues	19.6	- 2.3	8.3	3.0	3.7	4.4	2.5	9.9	9.3	8.3
Percent Increase in Grants	145.4	-25.5	35.6	30.7	21.3	23.4	- 5.8	4.1	5.4	-42.8
Own-Source Revenue Elasticity	2.9	- 0.2	1.0	0.7	0.5	0.4	0.3	1.0	0.9	---
New Orleans										
Percent Increase in Own- Source Revenues	7.8	17.5	5.2	9.5	2.4	12.2	7.5	29.2	14.8	14.8
Percent Increase in Grants	116.4	30.0	9.9	52.6	- 6.4	36.3	33.8	- 0.0	- 2.7	- 5.9
Own-Source Revenue Elasticity	0.9	5.3	0.5	0.8	0.3	1.1	0.6	1.9	1.1	---
New York										
Percent Increase in Own- Source Revenues	10.3	6.7	11.1	13.7	9.4	2.1	1.9	11.6	11.0	7.2
Percent Increase in Grants	102.9	7.8	33.3	41.8	- 2.4	18.4	- 1.1	15.3	- 8.3	-15.6
Own-Source Revenue Elasticity	1.7	1.2	1.5	5.4	1.7	0.2	0.2	1.0	0.9	---
Philadelphia										
Percent Increase in Own- Source Revenues	4.5	5.0	1.5	2.4	31.7	7.1	8.6	5.6	7.9	9.3
Percent Increase in Grants	78.1	-12.8	1.9	79.0	5.0	5.8	-42.0	14.4	0.8	51.6
Own-Source Revenue Elasticity	0.7	0.8	0.2	0.7	6.2	1.0	0.9	0.6	0.8	---
St. Louis										
Percent Increase in Own- Source Revenues	- 2.4	11.6	3.5	5.6	9.7	6.2	9.1	7.4	2.5	7.5
Percent Increase in Grants	160.5	- 9.3	- 5.8	43.0	27.6	31.9	-11.0	58.4	1.5	-35.3
Own-Source Revenue Elasticity	- 0.3	-15.6	0.5	0.8	2.1	0.7	1.0	0.7	0.3	---

TABLE 10 (CONT.)

	<u>1972-</u> <u>1973</u>	<u>1973-</u> <u>1974</u>	<u>1974-</u> <u>1975</u>	<u>1975-</u> <u>1976</u>	<u>1976-</u> <u>1977</u>	<u>1977-</u> <u>1978</u>	<u>1978-</u> <u>1979</u>	<u>1979-</u> <u>1980</u>	<u>1980-</u> <u>1981</u>	<u>1981-</u> <u>1982</u>
<u>Non-Declining Areas</u>										
Denver										
Percent Increase in Own- Source Revenues	9.1	16.7	14.6	5.3	6.6	7.7	18.9	11.6	11.3	12.7
Percent Increase in Grants	22.1	69.2	-12.1	- 3.6	6.1	33.0	15.0	-21.4	5.1	-10.2
Own-Source Revenue Elasticity	0.8	2.8	2.0	1.3	0.8	0.6	1.5	1.0	0.9	---
Indianapolis										
Percent Increase in Own- Source Revenues	7.7	6.8	- 1.1	3.1	13.5	14.2	5.0	10.4	2.9	19.0
Percent Increase in Grants	48.3	57.4	0.5	49.0	19.3	26.5	5.5	25.4	16.0	-28.0
Own-Source Revenue Elasticity	0.8	0.7	- 0.2	0.4	1.2	1.3	0.5	1.2	0.3	---
Jacksonville										
Percent Increase in Own- Source Revenues	16.2	22.7	9.9	10.3	9.3	4.9	15.7	13.1	12.5	10.7
Percent Increase in Grants	117.1	90.9	18.3	18.3	15.6	- 7.2	- 9.7	20.1	-22.6	- 5.4
Own-Source Revenue Elasticity	1.2	1.8	1.2	1.3	1.4	0.4	1.3	1.0	1.1	---
Nashville										
Percent Increase in Own- Source Revenues	7.4	9.6	13.6	7.2	9.9	11.8	9.3	13.1	18.0	9.7
Percent Increase in Grants	41.7	21.9	0.5	19.6	- 8.0	101.5	- 9.2	21.5	- 3.0	-27.2
Own-Source Revenue Elasticity	0.7	1.0	1.5	1.0	0.8	0.9	0.8	1.3	1.5	---
San Francisco										
Percent Increase in Own- Source Revenues	4.8	6.0	10.4	1.1	12.7	11.9	-10.7	26.6	16.3	20.2
Percent Increase in Grants	- 0.9	- 9.2	0.2	97.3	- 4.1	21.9	31.4	13.5	-24.8	1.5
Own-Source Revenue Elasticity	0.6	0.7	1.3	0.1	2.0	1.1	- 1.1	2.1	1.3	---

TABLE 10 (CONT.)

	<u>1972-</u> <u>1973</u>	<u>1973-</u> <u>1974</u>	<u>1974-</u> <u>1975</u>	<u>1975-</u> <u>1976</u>	<u>1976-</u> <u>1977</u>	<u>1977-</u> <u>1978</u>	<u>1978-</u> <u>1979</u>	<u>1979-</u> <u>1980</u>	<u>1980-</u> <u>1981</u>	<u>1981-</u> <u>1982</u>
United States										
Percent Increase in Own- Source Revenues	9.3	7.2	9.7	9.6	11.0	7.9	7.8	11.8	11.8	12.0
Percent Increase in Grants	74.6	24.9	7.1	27.3	19.8	14.8	5.9	0.3	3.8	- 2.5
Own-Source Revenue Elasticity	0.8	0.7	1.1	1.0	1.0	0.6	0.6	1.1	1.0	---
Percent Increase in Implicit Price Deflator for GNP	5.7	8.7	9.3	5.4	5.8	7.4	8.6	9.2	9.4	6.0
Percent Increase in Implicit Price Deflator for State and Local Government Purchases	6.9	9.8	9.3	7.8	7.3	7.6	8.8	10.2	8.7	7.1

SOURCE: U.S. Department of Commerce, Bureau of the Census, City Government Finances in 1982, and various other issues (Washington, D.C.: U.S. Government Printing Office, 1983); and Bureau of Economic Analysis, Survey of Current Business, April 1983 and various other issues.

TABLE 11

AVERAGE ANNUAL GROWTH IN REAL^a OWN-SOURCE REVENUE:
RESPONSE TO RECESSION AND EXPANSION
(in percent)

	<u>Recession</u> <u>(1974-1975)</u>	<u>Expansion</u> <u>(1975-1979)</u>	<u>Recession</u> <u>(1980-1982)</u>
<u>Declining Areas</u>			
Baltimore	-0.9	-3.2	0.7
New Orleans	-3.7	1.0	4.4
New York	1.7	-0.2	0.9
Philadelphia	-7.1	4.8	0.6
St. Louis	-5.2	0.8	-1.7
<u>Non-Declining Areas</u>			
Denver	4.9	2.5	2.6
Indianapolis	-9.5	1.9	1.8
Jacksonville	0.6	3.0	2.4
Nashville	4.0	2.6	3.7
San Francisco	1.1	-3.3	6.4
United States	0.4	2.1	2.6

^aDeflated by the GNP implicit price deflator for state and local government purchases of goods and services.

SOURCE: U.S. Department of Commerce, Bureau of the Census, City Government Finances in 1981-82, and various other issues (Washington, D.C.: U.S. Government Printing Office, 1983).

relatively slow during the recovery--four of the five grew more slowly than the rest of the nation.

We have further adjusted these recession responses for changes in local area personal income, by computing an own source revenue-income elasticity for each year (see Table 10). For all cities in the U.S., for the two years 1973-1975, this elasticity--which includes discretionary rate and base changes--was 0.7 and 1.1, respectively. For example, between 1974 and 1975 revenue grew by 11 percent for every 10 percent increase in personal income, i.e., local tax burdens rose. Conversely, between 1973 and 1974, average tax burdens actually fell. In 1980 and 1981, this elasticity was 1.1 and 1.0 respectively. The pattern among these ten cities varied dramatically. About half undertook major discretionary actions and the revenue elasticity was quite high in those years, e.g., there were significant tax burden increases in Denver and New Orleans in 1974. If we look only at fiscal year 1975, only one city in the declining group (New York) has an elasticity as high as the all-city average, and only one city in the non-declining group had a lower elasticity. A similar pattern is observable for 1981.

The year-to-year changes in this elasticity give some idea of the revenue response of city governments to the business cycle. Interestingly, we can find only two years between 1972 and 1981 (1974-1975 and 1979-1980) when revenues of all U.S. cities increased faster than personal income, i.e., when average tax burdens increased. This pattern suggests a policy of allowing own source revenues to grow as fast as personal income during national contractions--perhaps relying on discretionary increases--

but to allow tax burden reductions during expansion. This would suggest that to a significant extent, city revenue response to the business cycle is a matter of choice.

To attempt to determine whether this national pattern is a systematic one and whether the income elasticity of own-source revenues varies over the business cycle in these ten cities, we have performed the following regression experiment. A linear relationship between own-source revenue and income has been estimated for each of the ten city/counties for the 1972-1981 period. The revenue elasticity coefficient for the entire period is shown under the column labeled "Entire Period" in Table 12. All of the elasticities were significant, and varied from highs of 1.21 in Philadelphia and 1.15 in Denver and Jacksonville to 0.63 in Baltimore. A dummy variable was then inserted for the recession years (1974, 1975, 1980 and 1981) and the coefficient was re-estimated for expansion and contraction periods. As may be seen from the results presented in Table 12, there is no systematic evidence that the income elasticity of own-source revenues is substantially different during recessions than during expansions--the recession elasticity is significantly lower only in New Orleans. Interestingly, the national pattern also does not show a significantly different revenue response in periods of expansion and contraction.

Federal Grants

What role has the growth in federal assistance played in compromising or accentuating the fiscal responses of central cities to the business cycle? The aggregate state and local government analysis presented above

TABLE 12

OWN-SOURCE REVENUE ELASTICITIES^a FOR THE
PERIOD 1972-1982

	<u>Recession Years^b</u>	<u>Entire Period</u>
<u>Declining Areas</u>		
Baltimore	0.62	0.63*
New Orleans	0.94*	1.01*
New York	1.12	1.06*
Philadelphia	1.28	1.21*
St. Louis	0.93	0.93*
<u>Non-Declining Areas</u>		
Denver	1.15	1.15*
Indianapolis	0.81	0.81*
Jacksonville	1.16	1.15*
Nashville	0.98	0.99*
San Francisco	0.79	0.82*
United States	0.88	0.87*

*Significant at the .05 level for a one-tailed t-test.

^aEstimated from:

- (i) $LOSR = a + bLY$ -- for the entire period
(ii) $LOSR = a + bLY + c(DLY)$ -- for the recession years

where:

$LOSR = \ln(\text{own-source revenue})$

$LY = \ln(\text{personal income})$

D = a dummy variable = 1 for recession years

^bRecession years are 1974-1975 and 1980-1982.

SOURCE: Computed by author.

suggests that grants stimulate budgets by leading to expenditure increases and induced revenue increases. The data in Table 13 suggests that for these ten cities, there were markedly different rates of growth in real federal grant receipts. During the 1974-1975 recession period, six cities faced real declines in federal grant receipts and two of these were in the declining city category. In fiscal years 1980-1982, which include the impact of the more recent recession, nine of these ten cities experienced real declines in federal grants--more severe than the national average decline in every case. During the 1975-1979 expansion years, most of these cities received federal grants at a rate above the national average.

Again, we have used linear regression to estimate the differential growth rate of federal grants during recession and expansion. First, the estimated average annual percent increase in real federal grants is shown for each city under the column "Entire Period" in Table 14. The equation was then re-estimated, with a dummy variable for the recession years. These results show that in every case, the average annual growth rate in real federal grants was lower in recession than in expansion years. Only for the U.S. as a whole and for Philadelphia, however, were the recession growth rates significantly lower. These results suggest that the flow of grants to large cities is itself procyclical--it slows down during recessions and speeds up during expansions.

Expenditure Performance

Three indexes of expenditure performance have been computed for each city: the percent increase in current expenditures, the number of city government employees per 1000 population and the percent increase in

TABLE 13

AVERAGE ANNUAL GROWTH IN REAL^a FEDERAL GRANTS:
 RESPONSE TO RECESSION AND EXPANSION
 (in percent)

	<u>Recession</u> <u>(1974-1975)</u>	<u>Expansion</u> <u>(1975-1979)</u>	<u>Recession</u> <u>(1980-1982)</u>
<u>Declining Areas</u>			
Baltimore	24.1	-9.5	-19.6
New Orleans	0.6	10.1	-7.6
New York	22.0	-7.5	-12.6
Philádelphia	- 6.8	3.6	9.6
St. Louis	-13.8	3.8	-17.2
<u>Non-Declining Areas</u>			
Denver	-19.6	3.0	- 6.6
Indianapolis	- 8.0	6.5	-10.4
Jacksonville	8.3	2.3	-14.2
Nashville	- 8.0	5.1	-15.2
San Francisco	- 8.3	15.1	-13.0
United States	- 2.0	1.9	- 4.4

^aDeflated by the GNP implicit price deflator for state and local government purchases of goods and services.

SOURCE: U.S. Department of Commerce, Bureau of the Census, City Government Finances in 1981-82, and various other issues (Washington, D.C.: U.S. Government Printing Office, 1983).

TABLE 14

AVERAGE ANNUAL PERCENT GROWTH IN REAL FEDERAL
GRANTS^a FOR THE PERIOD 1972-1982
(in percent)

	<u>Recession Years^b</u>	<u>Entire Period</u>
<u>Declining Areas</u>		
Baltimore	7.4	8.4*
New Orleans	13.1	13.9*
New York	8.0	8.9*
Philadelphia	-2.1*	-0.8
St. Louis	12.0	12.2*
<u>Non-Declining Areas</u>		
Denver	0.9	1.5
Indianapolis	14.5	14.9*
Jacksonville	7.0	7.9
Nashville	8.4	8.6*
San Francisco	6.2	7.0*
United States	7.2*	8.0*

*Significant at the .05 level for a one-tailed
t-test.

^aEstimated from:

- (i) $LGR = a + bT$ -- for the entire period
(ii) $LGR = a + bT + cDT$ -- for the recession years

where:

$LGR = \ln(\text{real federal grants})$
 $T = \text{a time trend variable}$
 $D = \text{a dummy variable} = 1 \text{ for recession years}$

^bRecession years are 1974-1975 and 1980-1982.

SOURCE: Computed by author.

average October earnings of city government employees (see Table 15). The average growth rates in current and capital expenditures have been computed in real terms for the recession and expansion years, as shown in Table 16. If we take the 1974 and 1975 fiscal years to roughly include the impact of the 1975 recession, we can see that expenditures of all U.S. cities rose faster than the increase in prices, i.e., there was an average increase in real current expenditures of 3.1 percent per year. Six of the ten cities under study here experienced real expenditure increases, as shown below:

Real Increases³⁷

Baltimore
 Denver
 Jacksonville
 Nashville
 New Orleans
 New York

Real Declines

Indianapolis
 Philadelphia
 St. Louis
 San Francisco

In the case of capital expenditures in FY1975, three of the five declining cities had real reductions and a fourth showed an increase well below the national average.

During the 1980-1982 recession period, real current expenditures declined in all five of the declining cities, and declined or grew at less than the national average in three of the five non-declining cities (see Table 16). Particularly the declining cities again showed real capital expenditure declines, at a rate well below that of other U.S. cities.³⁸ It would seem, then, that an effort was made to maintain expenditures during the 1975 recession, with discretionary tax increases where

TABLE 15

EXPENDITURE PERFORMANCE OF TEN CENTRAL COUNTY GOVERNMENTS

	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
<u>Declining Areas</u>											
Baltimore											
Percent Increase in Current Expenditures		4.2	4.0	13.6	7.4	8.7	-9.0	8.2	0.4	5.2	2.7
Employment per 1000 Population	42.2	42.8	43.7	47.6	48.0	45.4	52.1	51.9	51.6	42.7	---
Percent Increase in Average Employee Earnings		10.2	6.3	8.5	8.1	1.4	-0.2	3.4	12.8	24.0	6.5
New Orleans											
Percent Increase in Current Expenditures		15.1	14.9	18.5	19.1	3.5	15.2	12.3	24.6	2.4	8.1
Employment per 1000 Population	18.5	18.1	17.9	18.7	18.7	22.4	22.5	22.5	22.5	16.9	---
Percent Increase in Average Employee Earnings		-0.2	12.1	5.8	0.0	34.2	1.4	0.0	0.0	33.8	21.0
New York											
Percent Increase in Current Expenditures		5.8	6.8	12.1	19.5	-3.1	2.2	-5.5	9.0	7.1	8.6
Employment per 1000 Population	47.7	51.7	52.2	45.9	40.5	42.5	44.4	45.8	45.1	46.1	---
Percent Increase in Average Employee Earnings		5.6	8.0	9.0	7.1	3.1	3.0	2.2	9.1	16.8	3.3
Philadelphia											
Percent Increase in Current Expenditures		15.5	4.7	9.0	11.6	9.3	18.2	3.9	8.1	3.8	9.7
Employment per 1000 Population	19.3	19.6	20.1	20.8	20.7	21.2	20.6	20.4	18.9	19.9	---
Percent Increase in Average Employee Earnings		5.1	6.8	10.4	0.3	10.5	3.9	16.5	2.2	5.6	15.9

TABLE 15 (CONT.)

	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
St. Louis											
Percent Increase in Current Expenditures		9.5	8.7	3.8	12.7	5.3	15.4	7.5	14.4	3.8	-2.2
Employment per 1000 Population	23.9	25.2	24.6	25.3	25.1	28.0	28.4	30.4	28.2	25.7	---
Percent Increase in Average Employee Earnings		9.4	4.8	1.5	5.3	5.9	4.8	8.8	14.1	10.0	3.6
<u>Non-Declining Areas</u>											
Denver											
Percent Increase in Current Expenditures		10.9	6.2	11.5	14.2	6.0	3.2	10.6	4.8	12.7	8.9
Employment per 1000 Population	18.2	22.4	24.2	25.1	25.1	25.6	26.9	25.2	24.5	23.2	---
Percent Increase in Average Employee Earnings		18.6	7.3	16.4	5.4	6.4	6.0	7.0	12.7	11.4	10.8
Indianapolis											
Percent Increase in Current Expenditures		17.2	9.8	7.0	14.1	9.6	12.8	11.1	4.7	7.2	9.8
Employment per 1000 Population	8.8	12.1	12.6	14.5	14.6	14.8	14.6	14.6	16.0	15.7	---
Percent Increase in Average Employee Earnings		10.8	9.3	-6.1	9.4	3.6	22.5	0.0	12.1	2.0	25.9
Jacksonville											
Percent Increase in Current Expenditures		20.5	15.9	22.3	18.8	0.1	17.4	9.2	11.5	13.6	0.5
Employment per 1000 Population	16.5	17.0	17.1	18.2	20.2	19.7	19.6	19.5	19.1	16.8	---
Percent Increase in Average Employee Earnings		0.7	18.5	-0.6	6.9	12.2	2.6	0.1	0.0	47.2	3.8
Nashville											
Percent Increase in Current Expenditures		6.1	9.0	15.1	7.2	10.4	16.9	5.1	7.2	9.7	8.0
Employment per 1000 Population	33.2	35.1	36.1	40.0	39.4	39.7	39.0	36.6	35.6	35.5	---
Percent Increase in Average Employee Earnings		6.5	10.8	3.7	1.4	16.7	17.2	10.6	4.5	9.2	14.4

TABLE 15 (CONT.)

	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
San Francisco											
Percent Increase in Current Expenditures		8.5	-2.2	8.6	9.5	4.0	9.3	-2.3	6.6	11.8	14.0
Employment per 1000 Population	30.3	30.6	31.5	32.2	32.5	33.2	33.6	31.4	31.1	30.6	---
Percent Increase in Average Employee Earnings		2.4	4.6	10.0	0.5	5.3	1.1	12.7	16.0	14.5	0.0
United States											
Percent Increase in Current Expenditures		9.1	9.8	12.7	14.6	5.5	8.6	6.8	9.2	8.9	9.0
Employment per 1000 Population	9.7	10.1	10.1	10.1	9.8	10.0	9.9	9.7	9.5	9.2	---
Percent Increase in Average Employee Earnings		7.6	6.1	6.5	6.6	5.2	5.5	7.0	8.1	12.1	7.8
Percent Increase in Implicit Price Deflator for GNP		5.7	8.7	9.3	5.4	5.8	7.4	8.6	9.2	9.4	6.0
Percent Increase in Implicit Price Deflator for State and Local Governments		6.9	9.8	9.3	7.8	7.3	7.6	8.8	10.2	8.7	7.1

SOURCE: U.S. Department of Commerce, Bureau of the Census, City Government Finances in 1982, and various other issues (Washington, D.C.: U.S. Government Printing Office, 1983); and City Employment in 1982, and various other issues (Washington, D.C.: U.S. Government Printing Office, 1983).

TABLE 16

AVERAGE ANNUAL GROWTH IN REAL^a CURRENT AND CAPITAL EXPENDITURES:
 RESPONSE TO RECESSION AND EXPANSION
 (in percent)

	<u>Recession (1974-1975)</u>		<u>Expansion (1975-1979)</u>		<u>Recession (1980-1982)</u>	
	<u>Current Expenditures</u>	<u>Capital Expenditures</u>	<u>Current Expenditures</u>	<u>Capital Expenditures</u>	<u>Current Expenditures</u>	<u>Capital Expenditures</u>
<u>Declining Areas</u>						
Baltimore	4.0	17.2	-4.0	-19.7	-2.5	10.3
New Orleans	8.4	- 1.9	4.2	1.0	-1.6	- 0.7
New York	2.6	-10.1	-4.7	-26.3	-0.0	12.8
Philadelphia	-0.2	4.7	2.6	4.4	-0.7	-19.8
St. Louis	-5.0	-15.2	2.1	11.3	-4.4	-11.8
<u>Non-Declining Areas</u>						
Denver	2.0	18.6	0.5	0.4	1.8	- 3.0
Indianapolis	-2.1	-14.9	3.7	- 3.8	0.4	-16.6
Jacksonville	11.9	71.2	3.0	-19.7	-0.6	3.4
Nashville	5.3	23.6	1.8	- 7.5	0.6	0.6
San Francisco	-0.6	30.4	-2.6	16.7	3.1	- 0.2
United States	3.1	11.5	0.9	- 5.3	0.7	- 0.3

^aDeflated by the GNP implicit price deflator for state and local government purchases of goods and services.

SOURCE: U.S. Department of Commerce, Bureau of the Census, City Government Finances in 1981-82, and various other issues (Washington, D.C.: U.S. Government Printing Office, 1983).

necessary, but that expenditure retrenchment to accommodate recession and tax cuts was more the order in the 1981-1982 recession. In the recovery, these central counties did not perform as well as cities in the rest of the nation. Only two of the ten large cities had a current expenditure growth rate above the national average, and six had real declines in capital spending.

Employment and compensation increases tell a similar story (see Tables 15 and 17). All U.S. cities held employment per 1000 population about constant during 1973-75 while eight of the ten cities in this sample were increasing their employment-population ratio. Only New York City in this sample actually reduced its employment level. Public employee compensation rates were checked by all U.S. cities during 1974-1975, indeed there was a real decline of 2.5 percent. Seven of these ten cities also showed a reduction in real average earnings, and two others grew at one percent or less (see Table 17).

The reaction in the 1980-1982 recession years was somewhat different--much more austere relative to the rest of the country. Employment was reduced in eight of the ten cities, more severely than the nationwide cut in seven instances. Real earnings rates, however, were on the rebound in 1980-1982 and increased above the national rate in seven of the ten cities. Public employees appeared to be using the 1980-1982 recession as a period of 'catch-up' in compensation rates. This lag in reaction builds a countercyclical feature into the state and local government fiscal system.

TABLE 17

AVERAGE ANNUAL GROWTH IN CITY GOVERNMENT EMPLOYMENT AND REAL^a
 AVERAGE EARNINGS: RESPONSE TO RECESSION AND EXPANSION
 (in percent)

	<u>Recession (1974-1975)</u>		<u>Expansion (1975-1979)</u>		<u>Recession (1980-1982)</u>	
	<u>Employment</u>	<u>Real Average Earnings</u>	<u>Employment</u>	<u>Real Average Earnings</u>	<u>Employment</u>	<u>Real Average Earnings</u>
<u>Declining Areas</u>						
Baltimore	6.3	- 0.7	0.8	-3.8	-7.0	3.9
New Orleans	3.7	- 3.2	4.4	0.8	-6.9	11.2
New York	-12.1	- 0.3	-1.6	-3.1	1.7	0.8
Philadelphia	2.3	1.1	-2.1	0.4	0.4	1.3
St. Louis	0.2	- 7.1	0.7	-0.9	-4.5	-1.1
<u>Non-Declining Areas</u>						
Denver	0.3	6.5	0.4	-0.9	-1.6	1.6
Indianapolis	14.9	-14.1	-0.5	1.3	-3.5	2.9
Jacksonville	8.6	- 9.0	1.3	-1.7	-3.3	9.1
Nashville	11.4	- 5.1	-1.0	3.8	-2.7	2.0
San Francisco	0.3	0.7	-0.4	-2.3	-0.5	-0.9
United States	0.7	- 2.5	0.5	-1.0	-1.4	0.9

^aDeflated by the GNP implicit price deflator for state and local government purchases of goods and services.

SOURCE: U.S. Department of Commerce, Bureau of the Census, City Employment in 1982, and various issues (Washington, D.C.: U.S. Government Printing Office, 1983).

The surprise in these trends comes in the 1975-1979 recovery when there appears to have been substantial fiscal restraint among these ten cities. Employment in six cities increased more slowly than in cities in the rest of the nation, and slowed down even from the 1974-1975 rates of increase in six of ten cases. The average compensation of city employees was held below the general increase in prices in six of these central counties.

Large City Fiscal Responses

One might question whether the results presented above are based on a result of our choosing a very small sample that is more abnormal than illustrative. To deal with this possibility, we have collected fiscal data for the twenty largest cities during the 1972-1982 period. While it is possible to study the city government employment and wage rate responses to national expansions and contractions, there are not data to tell us how well or badly the economic base of these cities has performed. As above, however, we can roughly separate these places according to population increase or decline between 1970 and 1975, as follows:³⁹

Declining

Baltimore
Boston
Cleveland
Chicago
Detroit
Milwaukee
New Orleans
New York
Philadelphia
Washington

Not Declining

Dallas
Honolulu
Houston
Indianapolis
Los Angeles
Memphis
Phoenix
San Antonio
San Diego
San Francisco

City Government Employment. How did these cities adjust their budgets during recession and expansion? Consider first the level of city government employment during the 1974, 1975 recession years. Twelve of these cities cut employment in one of these two years, only one (New York City) cut employment in both years, and five (Cleveland, Dallas, New York City, Detroit, and Washington, D.C.) had fewer employees in 1975 than in 1973 (Table 18 and Appendix Table 4). On average, the ten declining cities increased employment by 1.2 percent in 1974 and cut back by 2.1 percent in 1975 while the respective increases in the non-declining cities were 1.8 percent and 7.3 percent (Table 18).

Employment reductions were much more the rule in the recovery period. Every one of the twenty cities cut employment in at least one year between 1975 and 1979 and eleven cities had fewer employees in 1979 than in 1975. With the downturn in economic activity in fiscal year 1980, eleven of these cities reduced their public employment levels. As the recession continued, more cities reduced employment: fourteen of the twenty cities cut the size of their employment rolls between 1980 and 1982. The five cities which registered any significant amount of employment growth were the odd combination of Dallas, Houston, San Antonio, Philadelphia and New York City.

To the extent one can look past this variation, we might make a very general statement about the relationship between city government employment and national business cycles. During the 1973-1975 period of national contraction, the average annual change in city government employment in this twenty city sample was 2.1 percent as compared to -1.2

TABLE 18

PERCENT GROWTH IN CITY GOVERNMENT EMPLOYMENT

	<u>1972-</u> <u>1973</u>	<u>1973-</u> <u>1974</u>	<u>1974-</u> <u>1975</u>	<u>1975-</u> <u>1976</u>	<u>1976-</u> <u>1977</u>	<u>1977-</u> <u>1978</u>	<u>1978-</u> <u>1979</u>	<u>1979-</u> <u>1980</u>	<u>1980-</u> <u>1981</u>	<u>1981-</u> <u>1982</u>
Baltimore	0.2	1.5	6.3	- 3.1	- 6.7	12.5	1.6	- 3.5	-17.2	- 2.8
Boston	- 4.4	- 1.3	6.5	0.1	0.1	- 0.1	- 1.3	1.7	0.0	-25.3
Chicago	1.3	- 3.0	9.9	0.0	- 6.9	4.6	0.0	- 4.9	- 6.0	3.2
Cleveland	3.9	1.3	- 4.7	-20.0	7.4	5.5	- 0.7	-19.0	0.0	0.4
Dallas	3.6	- 2.1	1.9	- 2.2	2.8	0.5	2.4	0.6	- 3.7	4.6
Detroit	- 4.6	6.5	-24.0	- 2.2	19.4	0.1	- 0.1	-10.0	- 5.1	- 1.6
Honolulu	- 2.4	- 0.4	18.4	0.3	14.7	-30.0	26.1	- 1.4	- 5.6	- 0.3
Houston	2.8	0.8	19.4	5.8	4.5	-13.0	14.2	12.4	3.5	7.0
Indianapolis	36.7	4.2	14.9	- 1.6	1.6	- 1.8	0.0	8.5	- 2.0	- 8.2
Los Angeles	3.2	1.2	5.3	- 5.2	2.2	- 3.2	- 8.4	1.2	- 0.5	- 1.6
Memphis	- 4.9	4.2	- 1.8	0.8	12.7	- 5.2	2.7	- 8.0	- 4.2	1.9
Milwaukee	- 2.6	6.1	- 0.1	- 3.7	- 0.1	- 0.8	- 3.1	3.2	- 3.8	- 1.0
New Orleans	- 5.1	- 2.2	3.7	0.0	18.8	- 0.1	0.1	0.0	-23.8	5.9
New York	6.0	- 0.1	-12.0	-14.0	3.3	2.5	2.2	- 2.0	2.3	2.7
Philadelphia	- 1.0	1.7	2.3	- 1.9	1.3	- 3.5	- 4.3	- 8.8	5.3	- 3.8
Phoenix	12.7	- 0.1	6.2	5.8	11.0	- 3.9	1.4	7.2	- 4.8	- 3.0
San Antonio	6.3	4.1	6.9	- 2.6	6.3	8.5	- 4.9	-15.0	0.0	7.1
San Diego	- 5.0	4.5	1.8	2.4	0.4	- 2.5	- 1.2	2.7	- 6.3	4.9
San Francisco	0.5	2.1	0.3	0.2	0.5	0.6	- 2.8	- 0.7	- 1.4	0.0
Washington, D.C.	- 0.1	1.6	- 8.5	- 1.2	- 0.3	- 1.4	- 0.8	- 5.9	- 7.1	1.9

SOURCE: U.S. Department of Commerce, Bureau of the Census, City Employment in 1982, and various other issues (Washington, D.C.: U.S. Government Printing Office, 1983).

percent for all U.S. cities. In the 1975-1979 expansion, the comparable average annual percent increases were 0.6 and 5.7; and between 1981 and 1982, -0.4 and -2.0. Cities become much more conservative about their public employment spending programs after 1975, reacted in more of a countercyclical fashion to the 1980-1982 recession, and significantly slowed their employment growth after the 1975 recession.

Average Earnings. The other major adjustment open to city governments is to slow the rate of increase in public employee salaries. Though data problems make it very difficult to reach firm conclusions on this issue, the percent increase in annual earnings is arrayed for these twenty cities in Table 19. To get some idea of the response to recession, we have calculated the average percent increase across the twenty cities during the 1974-1975 recession, the 1975-1979 expansion, and the 1980-1982 downturn.

The interpretation of these results is not so straightforward. For example, the average percent increase in annual earnings in 1974 was 8.4 percent and the implicit deflator rose by 9.6 percent. This means that governments held the earnings increment below the "real level." We may take this difference of -1.2 percent ($8.4 - 9.6$) as an "index of restraint" if negative and an "index of expansion" if positive. For 1974-1975, the index averages -4.5 and for 1975-1979 it is 0.9. This suggests that cities kept the rate of increase in earnings 4.5 percent below the constant real increase level during the recession, and 0.9 percent above during the expansion. Between 1980 and 1982, the index of

TABLE 19

PERCENT GROWTH IN ANNUAL EARNINGS OF CITY GOVERNMENT EMPLOYEES

	<u>1972-</u> <u>1973</u>	<u>1973-</u> <u>1974</u>	<u>1974-</u> <u>1975</u>	<u>1975-</u> <u>1976</u>	<u>1976-</u> <u>1977</u>	<u>1977-</u> <u>1978</u>	<u>1978-</u> <u>1979</u>	<u>1979-</u> <u>1980</u>	<u>1980-</u> <u>1981</u>	<u>1981-</u> <u>1982</u>
Baltimore	- 3.9	6.3	- 0.9	18.4	1.4	- 0.2	3.4	12.8	24.0	6.5
Boston	25.0	10.0	-12.0	37.1	- 0.1	0.1	4.3	- 0.6	0.0	24.5
Chicago	4.2	9.6	3.9	0.0	20.9	1.2	0.1	11.4	14.5	13.5
Cleveland	8.9	5.0	4.8	12.1	0.7	- 5.1	14.9	12.6	0.0	19.7
Dallas	12.1	18.3	3.7	8.9	4.7	7.0	14.0	10.4	11.7	9.5
Detroit	11.8	2.9	9.7	14.3	- 4.9	20.1	50.0	-27.0	29.2	-15.5
Honolulu	12.1	7.2	- 0.9	11.3	8.1	3.5	0.0	14.1	12.8	9.6
Houston	8.1	4.7	13.1	11.1	2.9	15.7	8.9	12.5	8.1	10.1
Indianapolis	4.1	9.3	- 6.1	9.4	3.6	22.5	0.0	12.2	2.0	25.9
Los Angeles	3.0	6.8	7.5	9.2	- 1.1	4.1	19.0	- 0.4	22.7	5.2
Memphis	24.8	13.1	4.4	12.7	3.5	14.6	3.4	13.2	10.8	22.5
Milwaukee	1.7	4.0	6.3	10.3	4.1	7.8	4.1	12.2	1.0	19.3
New Orleans	- 0.4	12.1	5.8	0.0	34.2	1.4	0.0	0.0	33.8	21.0
New York	10.5	8.0	1.3	15.2	3.1	3.0	2.2	9.1	16.8	3.3
Philadelphia	5.1	6.8	10.4	0.3	10.5	3.9	16.5	2.2	5.6	15.9
Phoenix	13.5	13.4	3.4	15.5	- 1.9	10.8	9.3	6.5	14.0	12.5
San Antonio	- 0.9	17.2	4.9	12.8	1.4	6.0	12.3	7.6	0.0	19.4
San Diego	8.5	9.2	10.2	5.4	5.8	4.4	4.8	16.9	8.1	3.0
San Francisco	2.5	4.6	10.0	0.5	5.3	1.1	12.7	16.0	14.5	0.0
Washington, D.C.	33.2	0.2	17.1	11.0	6.2	7.5	9.3	4.1	12.3	2.1

SOURCE: U.S. Department of Commerce, Bureau of the Census, City Employment in 1982 and various other issues (Washington, D.C.: U.S. Government Printing Office, 1983).

expansion is 3.7, i.e., the signs of a catch-up effect in employee compensation is apparent.

Conclusions

The purpose of this paper is to study the impact of the business cycle on state and local government finances. In particular, our interest is whether and how the business cycle compromises the fiscal condition of central cities, and whether some types of cities suffer more than others. The answers we get here are very tentative, but do suggest a cyclical impact on state and local governments in general and on central cities in particular.

State and Local Governments

With respect to the broader and prior question of the effects of national contractions and expansions on state and local government fiscal position, we have studied the growth path of the general surplus of state and local governments. This surplus, as reported in the National Income Accounts, is not a perfect measure: it aggregates the surpluses in the Texas and the deficits in the New Yorks, as well as those of the state governments and the local governments, and one cannot tell the difference between a surplus that is large because tax revenues have grown and one that is large because necessary capital expenditures have been put off. Nevertheless, the surplus does reflect the excess of own-source revenues over current plus capital expenditures in the sector as a whole and thus gives some indication of the cushion that has been built up to drawdown in the next recession, or to use for tax reduction, increased capital

spending and/or debt retirement. In its deficit form it describes the gap between current revenues available and planned current and capital expenditures, i.e., the amount to be borrowed, drawn from reserves, or financed from next year's tax increases.

The analysis here suggests that this surplus responds in a systematic and predictable way to the business cycle. On average, the state and local government sector has shown a surplus during expansionary periods and a deficit during national contractions. A statistical analysis of sixty quarters between 1969 and 1983 shows the following:

- a one percent increase in the unemployment rate lowers the general surplus by \$1.32 billion (in 1972 dollars)
- a one percent higher real GNP growth rate added \$350 million to the state and local government surplus
- all other things being equal, the surplus position was weaker during the 1973-1979 business cycle than in the rest of this period
- the surplus responded more strongly to an increase in federal grants than to a like increase in GNP.
- in aggregate, the state and local government sector has accumulated more surplus during recoveries than deficits during recession, because the recoveries have been much longer than the contraction periods (there were forty-four quarters of expansion and seventeen quarters of contraction in the time period studied here).

One might use the results from this analysis to roughly estimate the amount of countercyclical assistance required to compensate state and local governments for recession. For example, all else being equal, this model suggests that if the unemployment rate had been 6 percent rather

than 8.2 percent in 1984:I, the surplus would have been \$2.9 billion real dollars larger. If we take 6 percent as a "normal" unemployment rate, we might say that, cet. par., the 1981:II-1982:III recession cost state and local governments \$3.0 billion in real terms, and \$6.7 in current dollars.

Has the state and local government sector behaved in a procyclical or countercyclical way? The answer is that it has done both in the period under study. Fiscal actions in the 1975 recession were procyclical, expenditure growth was slowed and tax rates were increased, but by most accounts the magnitude of the adjustments were not great. The 1975-1979 expansion brought countercyclical actions on the expenditure side (real cuts and/or very slow growth) and procyclical tax rate reductions. The 1980-1982 recession brought on a procyclical expenditure response--expenditure cuts--and countercyclical tax response--tax reductions. The 1983 recovery, which has led to an unusually large surplus, has also seen countercyclical action on the tax side and continued countercyclical expenditure control if not retrenchment.

There seems to have been a fundamental change in the fiscal behavior of state and local governments, toward a more conservative expenditure growth policy and a hesitation to increase taxes. Is it too much to assign responsibility for this new fiscal conservatism to the business cycle? In one sense it is not, because the New York City fiscal crisis and the tax limitation movement which led to the new conservatism were both results of the poor performance of the U.S. economy. Moreover, the expectation that recessions will occur and some knowledge of their consequences are something new to U.S. fiscal planners and politicians and has helped shape this new conservative behavior. On the other hand, there

were other reasons for the new resistance to government growth: the sizeable cutbacks in federal grants beginning in the late 1970s played some role in shaping the fiscal actions of state and local governments.

Central Cities

These results are somewhat consistent with those reached in our study of central cities, but there are important differences. Our sample is quite small--we matched fiscal and economic base behavior for ten city/counties and studied fiscal trends for twenty central cities--hence one cannot stretch the interpretation of these statistical results too far. The following, however, would appear to be the case for these cities.

- The "declining cities" fared badly during the two recessions in terms of employment loss, and large central counties in general had slower employment gains during the recovery period. Most of the ten large counties studied here lost ground to their suburbs during the business cycle.
- There is no evidence that revenue growth was markedly dampened during the 1973-1975 recession period, probably because discretionary revenue changes are included in these data. In most of these central cities, and in all U.S. cities in aggregate, revenue growth appeared to keep pace with personal income growth.
- The expenditure budgets of these ten cities were not restrained as much during the 1973-1975 period as in other U.S. cities. City government employment and employee compensation increases tell a similar story. All U.S. cities held employment per 1000 population about constant during 1973-1975 while most cities in this sample were increasing their employment-population ratio. Similarly, the public employee compensation rate was not checked as much during 1973-1975 in most of these ten large cities as in other cities in the nation.

- The 1980-1982 recession was different in that large cities cut their expenditures and did not increase tax rates to make up for resources lost to the recession and to the reductions in federal grants.
- The surprise in these trends, however, comes in the recovery when there appears to have been substantial restraint among these ten cities. Employment in six of these cities increased more slowly than in cities in the rest of the nation, and slowed down even from the 1973-1975 rates of increase in seven of ten cases. The average compensation of city employees was held below the increase in prices in six of these central counties.
- An analysis of the fiscal behavior of the twenty largest U.S. cities confirms this finding. These cities did not reduce employment or cut wages as much as other U.S. cities during the 1973-1975 recession, but their budgets were much more austere during the 1975-1979 recovery, and the 1980-1982 recession.
- The fiscal position of central cities of the declining type--perhaps those in the industrialized region--seem most responsive to cyclical changes, but this sample and analysis is far too limited to place much stock in this result.

The fiscal performance of large central cities over the business cycle, then, roughly parallels that of the state and local government sector in aggregate, with a few exceptions. During the 1974-1975 recession, large central counties did not retrench so much on the expenditure side--they were less procyclical in their actions. From the beginning of the 1975-1979 expansion and through the following recessions, large cities followed a pattern of lowering effective tax rates and controlling or retrenching on the expenditure side--a mixture of strategies which was, on balance, probably procyclical during the 1975-1979 expansion (tax effects dominate) and countercyclical during the

1980-1982 recession (tax effects dominate). The 1983 expansion appears to be bringing a change in this reaction, and may lead to a countercyclical pattern of tax increases which dominate the expenditure increases due to pent-up wage demands.

The interesting conclusion, then, is that central cities are hurt as much by their failure to recover as by the impact of recession. A combination of this expectation, the new conservatism of urban fiscal managers, and federal aid reduction dampened fiscal growth during the recovery. Compounding this problem, higher level and more prosperous state and local governments seem to be taking the fiscal dividends earned during the recovery in the form of tax burden reductions.

FOOTNOTES

1. The NIA are reported monthly in Survey of Current Business.
2. These measurement problems are covered in some detail in Edward Gramlich's very useful paper, "State and Local Government Budget Surpluses and the Effect of Federal Macroeconomic Policy," Joint Economic Committee, January 12, 1979; see also Edward Gramlich, "State and Local Budgets the Day After it Rained: Why is the Surplus so High?" Brookings Papers on Economic Activity: 1 (1978) pp. 191-216.
3. Roy Bahl State and Local Government Finances in a Changing National Economy (New York: Oxford University Press, 1984).
4. Robert Bretzfelder and Howard Friedenberg, "Sensitivity of Regional and State Nonfarm Wages and Salaries to the National Business Cycle, 1980:I - 1981:II," Survey of Current Business (January 1982): 26-28; and Howard Friedenberg and Robert Bretzfelder, "Sensitivity of Regional and State Nonfarm Wages and Salaries to National Business Cycles, 1948-1979" Survey of Current Business (May 1980): 15-27.
5. See also David J. Levin, "The State and Local Government Fiscal Position: An Alternative Measure," Survey of Current Business (March 1983): 23-25.
6. Indeed, it may be necessary practice. One financial analyst for a major bond rating agency has noted that the percentage of general fund unobligated balances to expenditures is a key financial indicator, and thinks that 5 percent is ". . . a good solid number for a state surplus unless you have a cyclical economy." See Understanding the Fiscal Condition of the States (Lexington, KY: National Association of State Budget Officers, 1978), p. 12; Philip Dearborn also argues that liquidity in the general fund is a key indicator of fiscal strength in Elements of Municipal Financial Analysis, Part I: Measuring Liquidity (New York: First Boston Corporation, 1979). The National Association of State Budget Officers mentions year-end balances of 5 to 7 percent of general fund expenditures as common for states. See Understanding the Fiscal Condition, p. 12.
7. Dearborn's analysis of the financial condition of 28 large cities in 1977 supported the fiscal restraint thesis--he found a general fund operating surplus (excluding New York City, Chicago, and Cleveland) of \$212.8 million or 3.2 percent of general fund expenditures. Philip Dearborn, The Financial Health of Major U.S. Cities in Fiscal 1977 (New York: First Boston Corporation, 1978).

8. Steven Gold, Preparing for the Next Recession: Rainy Day Funds and Other Tools for States, Legislative Finance Paper 41 (Denver, CO: National Conference of State Legislatures, December 1983).
9. National Governors' Association and National Association of State Budget Officers, Fiscal Survey of the States (Washington, D.C.: Government Printing Office, 1978-79.)
10. Steven Gold and Corina Eckl, State Fiscal Conditions Entering 1984 (Denver, Colorado: National Conference of State Legislatures, February 1984) p. 5.
11. David Levin, "Receipts and Expenditures of State Governments and of Local Governments, 1959-1976," Survey of Current Business, Vol. 58, No. 5 (May 1978): pp. 15-21; and Levin, "Receipts and Expenditures of State Governments and of Local Governments, 1968-81," Survey of Current Business, Vol. 63, No. 5 (May 1983): pp. 25-38.
12. See, for example, Stephen Farber, Director, National Governors' Association, in Local Distress, State Surpluses, Proposition 13: Prelude to Fiscal Crisis or New Opportunities? Hearings before the Committee on Banking, Finance, and Urban Affairs, July 25 and 26, 1978, pp. 779-787.
13. Edward Gramlich, "State and Local Government Budget Surpluses and the Effect of Federal Macroeconomic Policy," Joint Economic Committee, January 12, 1979.
14. Thomas Muller, Growing and Declining Urban Areas: A Fiscal Comparison (Washington, D.C.: The Urban Institute, 1976).
15. Philip Dearborn, Elements of Municipal Financial Analysis: Part IV: Condition of Major City Finances (New York: First Boston Corporation, 1977); and The Financial Health of Major U.S. Cities in 1978, Working Paper (Washington, D.C.: Urban Institute, 1979).
16. National Governors' Association and National Association of State Budget Officers, Fiscal Survey of the States (Fall 1977); Fiscal Survey of the States, 1978-79; Fiscal Survey of the States, 1983.
17. Steven Gold and Karen Benker, State Fiscal Conditions as States Entered 1982, Legislative Finance Paper 13 (Denver, Colorado: National Conference of State Legislatures, January 1982).
18. Steven Gold, Karen Benker, and George Peterson, State Budget Actions in 1982, National Conference of State Legislatures, July 1982.
19. Steven Gold and Corina Eckl, State Budget Actions in 1983, Legislative Finance Paper 42 (Denver, CO: National Conference of State Legislators, September 1983).

20. Gold and Eckl, State Fiscal Conditions...
21. Gold, Benker, and Peterson, State Budget...
22. John Mikesell, "The Cyclical Sensitivity of State Tax Revenues," School of Public and Environmental Affairs, Indiana University, November 1982.
23. Steven Gold, State Tax Increases of 1983: Prelude to Another Tax Revolt? Legislative Finance Paper 40 (Denver, CO: National Conference of State Legislators, March 1984).
24. Peter Skaperdas, "State and Local Governments: An Assessment of Their Financial Position and Fiscal Policies," Quarterly Review, Federal Reserve Bank of New York (Winter 1983-1984): 1-13.
25. This is outlined in Roy Bahl, Bernard Jump, Jr., and Larry Schroeder, "The Outlook for City Fiscal Performance in Declining Regions" in The Fiscal Outlook for Cities, edited by Roy Bahl (Syracuse, NY: Syracuse University Press, 1978), pp. 1-48.
26. George Peterson, "Capital Spending and Capital Obsolescence: The Outlook for Cities," in The Fiscal Outlook for Cities, edited by Roy Bahl (Syracuse, NY: Syracuse University Press, 1978), pp. 49-74.
27. This historical pattern is discussed and described in a series of very useful Survey of Current Business articles by David Levin. See "Sources of Growth in Selected State and Local Government Tax Receipts" (February 1982): 15-18; "State and Local Government Fiscal Position in 1979" (January 1980): 23-26; "State and Local Government Fiscal Position in 1980" (February 1981): 19-21; and "State and Local Government Fiscal Position, 1981" (January 1982): 23-25.
28. David Levin, "State and Local Government Fiscal Position in 1983," Survey of Current Business (January 1984): 30-34.
29. For a discussion of these characteristics, see Chapter Five of State and Local Government Finances in a Changing National Economy.
30. City/Counties are chosen because employment data are not available on an annual basis for the sub-county area.
31. Employment levels in each county are presented in Appendix Table 1. Some of the year-to-year increases shown in these tables are due to special events, reclassifications, etc. We do not adjust for such changes.
32. Real per capita personal income data for each county are presented in Appendix Table 2.

33. The price level changes are reported at the bottom of Table 10.
34. As reported in Roy Bahl and Larry DeBoer, "Inflation, The Business Cycle and State and Local Government Finances," Metropolitan Studies Program, The Maxwell School (Syracuse, NY: Syracuse University, unpublished manuscript).
35. The year-by-year revenue growth for these cities is shown in Appendix Table 3.
36. Some of the large negative increases shown in Table 11 reflect discretionary tax reductions such as Proposition 13, or changes in the timing of receipts (e.g., San Francisco).
37. These real changes are calculated by comparing the price level increases and current dollar expenditure increases for the respective years in Table 15.
38. The pattern of growth in capital spending is quite erratic. On average, there was much less real growth during the 1980-1982 recession than during 1974-1975, and there were real declines during the 1975-1979 expansion.
39. Los Angeles, San Francisco and Dallas all registered population loss during this period, but we have classified them as "not declining" because of their general economic performance and/or subsequent growth.

APPENDIX TABLE 1

EMPLOYMENT IN TEN METROPOLITAN CENTRAL COUNTIES

	1965	1972	1973	1974	1975	1976
Baltimore	345,896	359,852	366,113	331,392	309,251	297,482
Denver	199,919	274,680	297,158	275,145	262,024	268,109
Indianapolis	267,702	310,187	330,114	337,123	320,816	332,705
Jacksonville	127,140	174,886	188,952	199,844	187,122	185,387
Nashville	139,391	184,346	199,313	208,114	198,945	207,363
New Orleans	213,737	236,785	241,604	216,985	208,320	210,762
New York ^a	3,136,117	3,141,624	3,048,158	3,005,742	2,820,437	2,791,885
Philadelphia	724,161	720,054	703,747	703,747	647,298	639,183
St. Louis	358,013	351,394	330,790	330,790	292,711	292,008
San Francisco	351,635	387,967	456,991	456,991	444,328	445,999
U.S. Total	47,743,277	58,015,904	63,487,630	63,487,630	60,518,871	62,564,364
	1977	1978	1979	1980	1981	
Baltimore	293,894	300,480	305,836	308,422	300,964	
Denver	275,649	309,150	329,055	337,631	340,965	
Indianapolis	342,508	361,791	382,516	374,207	358,268	
Jacksonville	182,675	200,059	208,032	210,870	215,052	
Nashville	215,146	233,705	247,666	242,449	245,579	
New Orleans	212,902	232,192	241,860	237,005	239,181	
New York ^a	2,715,544	2,799,816	2,919,807	2,903,339	2,931,325	
Philadelphia	611,099	634,072	650,224	632,080	621,144	
St. Louis	280,639	294,153	301,514	286,896	273,135	
San Francisco	422,319	468,380	479,325	484,979	508,861	
U.S. Total	65,004,205	70,289,236	75,410,944	74,844,180	74,850,402	

^aNew York is defined as the sum of the following five counties: Bronx, Kings, New York, Queens and Richmond.

SOURCE: U.S. Bureau of the Census, County Business Patterns for 1965-1981 (Washington, D.C.: U.S. Government Printing Office, 1966-1983).

APPENDIX TABLE 2

REAL PER CAPITA PERSONAL INCOME IN TEN CENTRAL COUNTIES^a
1972-1982

	1972	1973	1974	1975	1976	1977	1978	1979	Revised		
									1980	1981	1982
<u>Declining Areas</u>											
Baltimore	4160	4252	4383	4439	4577	4744	4957	4862	4982	5064	5026
New Orleans	4334	4595	4400	4485	4760	4954	5141	5298	5554	5744	5708
New York	5391	5535	5419	5332	5293	5350	5506	5673	5734	5807	5902
Philadelphia	4609	4741	4680	4678	4661	4674	4717	4920	4994	5039	5080
St. Louis	4244	4562	4230	4253	4354	4418	4596	5075	5187	5288	5279
<u>Non-Declining Areas</u>											
Denver	5676	5994	5968	6035	6017	6261	6576	6535	6697	6860	7019
Indianapolis	5042	5264	5334	5128	5326	5599	5787	5852	5859	5819	5650
Jacksonville	4367	4571	4631	4497	4728	4780	4960	5074	5161	5187	5284
Nashville	4598	4894	4955	4920	5024	5375	5658	5531	5491	5610	5566
San Francisco	6665	6816	6912	6972	7287	7417	7717	7516	7653	7740	7776
United States	4549	4770	4774	4701	4833	5023	5216	5297	5326	5410	5352

^aDeflated by GNP implicit price deflator.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, Survey of Current Business, April 1984, and various other issues.

APPENDIX TABLE 3

PERCENT INCREASE IN REAL OWN-SOURCE REVENUES^a

	1972- 1973	1973- 1974	1974- 1975	1975- 1976	1976- 1977	1977- 1978	1978- 1979	1979- 1980	1980- 1981	1981- 1982
<u>Declining Areas</u>										
Baltimore	13.1	-10.1	- 0.9	- 2.3	- 2.0	- 2.8	- 5.7	0.6	- 0.1	2.1
New Orleans	2.0	8.0	- 3.7	3.9	- 3.2	4.4	- 1.0	18.3	5.0	8.3
New York	4.4	- 1.9	1.7	7.9	3.4	- 5.0	- 6.2	2.3	1.5	1.1
Philadelphia	- 1.1	- 3.4	- 7.1	- 2.8	24.4	- 0.2	0.0	- 3.2	- 1.3	3.1
St. Louis	- 7.7	2.6	- 5.2	0.2	3.7	- 1.2	0.4	- 1.6	- 6.3	1.4
<u>Non-Declining Areas</u>										
Denver	3.3	7.3	4.9	- 0.1	0.8	0.3	9.5	2.2	1.7	6.3
Indianapolis	1.9	- 1.8	- 9.5	- 2.2	7.3	6.3	- 3.3	1.1	- 5.9	12.3
Jacksonville	10.0	12.8	0.6	4.7	3.3	- 2.4	6.5	3.6	2.8	4.5
Nashville	1.7	0.8	4.0	1.7	3.9	4.1	0.6	3.5	7.9	3.5
San Francisco	- 0.8	- 2.5	1.1	- 4.1	6.5	4.2	-17.8	15.9	6.3	13.4
United States	3.4	- 1.4	0.4	4.0	4.9	0.5	- 0.8	2.4	2.2	5.7

^aDeflated by GNP implicit price deflator for state and local government purchases of goods and services.

SOURCE: U.S. Department of Commerce, Bureau of the Census, City Government Finances in 1982, and various other issues (Washington, D.C.: U.S. Government Printing Office, 1983).

APPENDIX TABLE 4

CITY GOVERNMENT EMPLOYMENT

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Baltimore	37481	37538	38103	40522	39278	36630	41224	41900	40442	33489	32560
Boston	24765	23673	23373	24895	24909	24937	24909	24583	24995 ^a	24995 ^a	18677
Chicago	45236	45811	44416	48799	48799	45441	47535	47535	45201	42495 ^b	43848
Cleveland	12596	13084	13260	12637	10049	10795	11393	11314	9161	9161 ^b	9165
Dallas	12894	13356	13078	13320	13026	13391	13455	13777	13866	13350	13959
Detroit	26583	25371	27017	20511	20059	23942	23955	23934	21483	20397	20063
Honolulu	7733	7551	7520	8905	8932	10249	7144	9010	8886	8391	8364
Houston	11520	11839	11937	14258	15082	15762	13726	15676	17618	18226	19495
Indianapolis	7014	9589	9988	11474	11287	11464	11255	11255	12210	11972	10988
Los Angeles	42689	44038	44560	46929	44503	45460	44027	40338	40813	40602	39939
Memphis	22318	21227	22114	21708	21883	24657	23376	23999	22073	21145	21549
Milwaukee	9388	9140	9699	9687	9324	9319	9246	8963	9252	8902	8817
New Orleans	10958	10398	10168	10544	10544	12527	12511	12526	12526	9549	10116
New York	373292	395640	395430	347686	300591	310606	318376	325391	318925	326381	335252
Philadelphia	36890	36509	37124	37981	37274	37768	36428	34879	31825	33508	32228
Phoenix	6159	6940	6932	7363	7792	8650	8313	8427	9036	8605 ^b	8343
San Antonio	9359	9948	10356	11068	10784	11459	12430	11825	10043	10043 ^b	10753
San Diego	6856	6511	6801	6923	7091	7118	6943	6859	7047	6602	6925 ^c
San Francisco	20943	21046	21482	21555	21599	21702	21830	21219	21077	20786	20786 ^c
Washington, D.C.	49324	49273	50082	45801	45249	45105	44452	44104	41499	38551	39270

^aData are for October 1979.

^bData are for October 1980.

^cData are for October 1981.

SOURCE: U.S. Department of Commerce, Bureau of the Census, City Employment in 1982 and various other issues (Washington, D.C.: U.S. Government Printing Office, 1983).

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