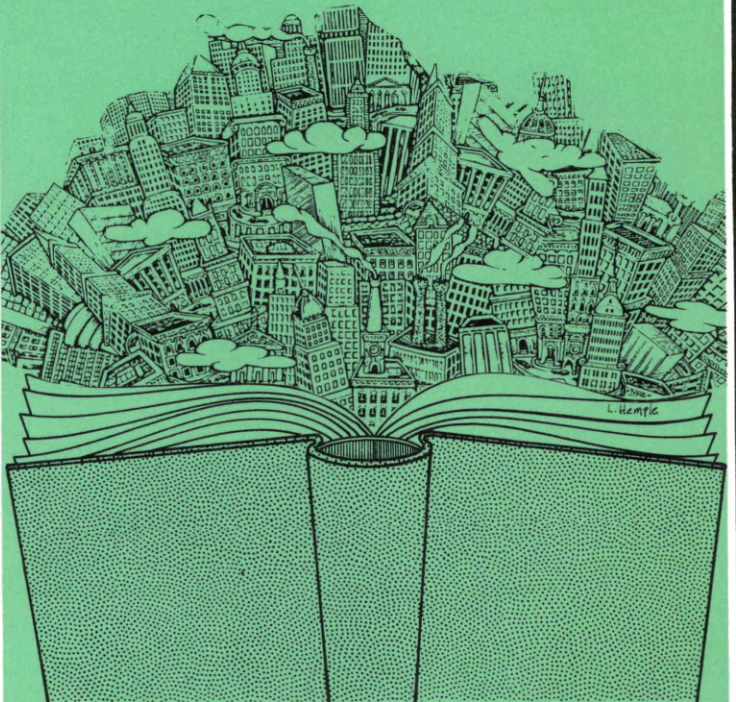


# BUSINESS REVIEW

Federal Reserve Bank of Philadelphia

MARCH · APRIL 1977

## PHILADELPHIA'S FISCAL STORY: THE CITY & THE SCHOOLS





# THE FUTURE OF AMERICAN

THOMAS BRADLEY

ANTHONY DOWNS

MARTIN MEYERSON

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\* \* \* \* \*

# Philadelphia's Fiscal Story: The City and the Schools

By *Nonna A. Noto and  
Donald L. Raiff\**

Over the last several years, the fiscal condition of America's large cities has garnered more and more space in the nation's press. The best known case is New York City's, but many other urban centers, including Philadelphia, have faced or are facing budget difficulties.

While the attention is new, the causes

are of long standing. Like other large cities, Philadelphia has been plagued for years by expenditures that rise faster than locally raised revenues. Grants from Washington and Harrisburg have brought more money to Philadelphia, but much of this money is earmarked for certain programs before it even arrives. Changes in accounting practices have helped reduce reported cumulative budget deficits; but they haven't reduced these deficits to zero, and they have pushed the City and School District toward heavier dependence on short-term borrowing.

Fiscal year 1977<sup>1</sup> was to have been the year when temporary tax hikes would wipe out past deficits and put Philadelphia on a sounder footing. But the City most likely won't be able to pay off all of

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\*The following study is presented in two parts—a main text and four data appendices. Figures in the text are numbered with arabic numerals. Figures in the appendices are numbered with roman and arabic numerals; for example, 'II.3' is the third figure in Appendix II.

The authors are members of the Research Department at the Federal Reserve Bank of Philadelphia. Nonna A. Noto, who joined the bank staff in 1974, holds a Ph.D. from Stanford University. She specializes in urban economics and public finance. Donald L. Raiff was trained in monetary theory and econometric forecasting at Ohio State University and has been with the bank since 1972. Mary M. Hinz, trained at Washington University, collected most of the basic data for this study and prepared it for analysis with the help of A. David Fellner, who was trained at the University of Pennsylvania.

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<sup>1</sup>Philadelphia's fiscal years now run from July 1 to June 30. Fiscal year 1977 began July 1, 1976. Unless noted otherwise, years referred to in the text, figures, and appendices are fiscal years. Figures for 1977 are budget data.



last year's deficit this year, and the School District faces an even larger deficit than in 1976. Unless aid from Washington and Harrisburg takes an unexpectedly sharp turn upward, keeping revenues and expenditures in line over the long haul is going to take some combination of continued higher taxes, spending restraints, and productivity improvements.

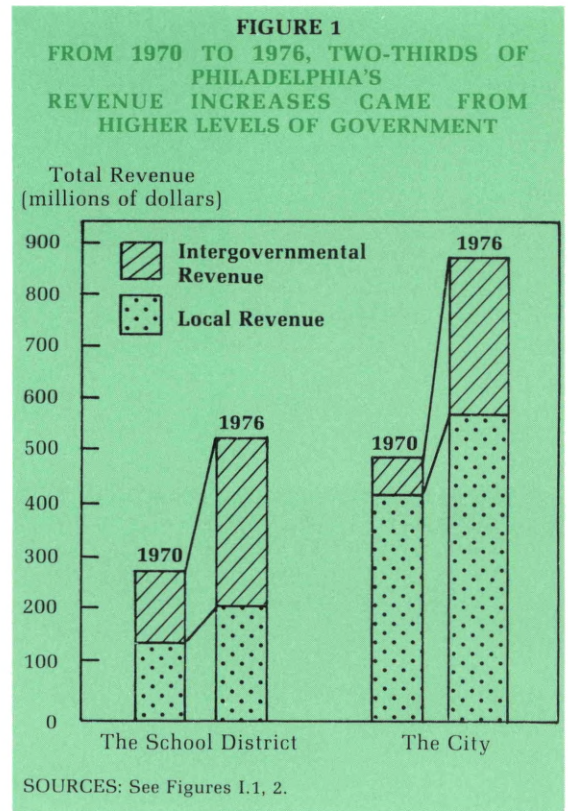
### BUDGET TRENDS

In 1976, the City and School District of Philadelphia combined had a cumulative deficit of nearly \$90 million. In all likelihood, this deficit will not be wiped out in 1977 despite hefty increases in local tax rates. What combination of underlying trends in revenues and expenditures in this typical old Northeastern metropolis has produced the present situation?

### SLUGGISH REVENUES

From 1970 to 1976, total revenues for the City and School District nearly doubled.<sup>2</sup> But little of this growth came from local tax sources: the wage and property tax bases grew, but not very much, and rate hikes were held down to around 10 percent for each tax. Revenues from Fed-

eral and state government financed most of this expansion. Of the \$630 million additional revenues raised over this period, two-thirds can be traced to intergovernmental aid (Figure 1).



<sup>2</sup>The analysis of the School District is based on its General Fund only. The analysis of the City's revenue and expenditure patterns is based on a group of funds whose 1976 condition can be compared with their 1970 condition despite accounting changes in the interim; these funds are enumerated in Figure I.1, note \*. Funds that are self-supporting or lack access to tax revenues are excluded. The analysis of the City's deficit and consolidated cash position discussed later in this report is based on the City's own definition of its Principal Operating Funds (see note 12).

Previous studies by the Philadelphia Fed dealt with 1970, 1973, and 1974, and their results, which are used here, were published in the bank's *Business Review*. See David W. Lyon, "The Financial Future of City and School Government in Philadelphia," March 1971; William A. Cozzens, "Philadelphia's Budgets: Past, Present, Future," April 1974 and "Philadelphia City and School District Budgets: A Year of Austerity," April 1975.

**The Property Tax.** The property tax was the slowest growing of all principal revenue sources, mainly because assessments failed to keep up with rising market values. This failure has been a serious impediment to revenue growth. Estimates by the City Finance Director's office suggest that the market value of Philadelphia's real property grew by at least 48 percent from 1970 to 1976, roughly matching the cost-of-living index, but the dollar value of assessments grew by only 19 per-



cent. As market values diverged from assessed values, the aggregate assessment ratio fell from 50.1 percent in 1970 to 40.1 percent in 1975. Because the assessment ratio fell faster than tax rates rose, the effective tax rate (with respect to market value) remained below its 1970 level (Figure 2). The dramatic 30-percent hike in the property tax rate for 1977 can be viewed as an alternative to restoring the 50-percent assessment ratio for property throughout the City.<sup>3</sup> Either approach returns the effective property tax rate to its 1970 level.

Growth in the market value of real estate—apart from inflation and increased demand—depends heavily on getting new structures built and old ones upgraded. But neither kind of investment has been widespread. Of the \$900-million increase in the value of Philadelphia's taxable properties between 1970 and 1976, 80 percent

can be credited to two areas: Center City, with its high-rise office and commercial construction and its rehabilitation of historic residential neighborhoods, contributed 43 percent; and the large, still-developing area of Northeast Philadelphia contributed another 37 percent, mainly in new construction. As the supply of open land diminishes, continued growth in the property tax base will turn increasingly upon rehabilitating the present stock of buildings and converting it to more productive uses.

In short, property tax revenues have grown slowly during the 1970s. This slow growth has put the School District, which relies heavily on property taxes, in financial difficulty. The City hasn't been hit so hard because it has the more responsive wage tax to fall back on.

**The Wage Tax.** In 1970, property taxes were the single largest source of revenue for the City and School District combined. But by 1972, the wage tax had surpassed the property tax as Philadelphia's largest local revenue source. In contrast to the property tax, the wage tax has been relatively responsive to inflation. Without sizable gains in the number of people employed, however, wage tax revenues are

<sup>3</sup>City of Philadelphia, Office of the Controller, *Real Estate Tax*, August 31, 1976, p. IV-2.

In Philadelphia, the Board of Revision of Taxes (appointed by the Board of Judges of the Court of Common Pleas) is responsible for assessing properties and reviewing assessment appeals. The property tax millage and its distribution to the City and the School District are set by the elected City Council.

**FIGURE 2**  
**AS ASSESSMENTS LAG BEHIND MARKET VALUES,**  
**EFFECTIVE PROPERTY TAX RATES FALL**

Year	Nominal Millage (dollars per thousand)	x	Average Assessment Ratio (percent)*	=	Effective Millage (dollars per thousand)
1970	44.75		50.1		22.42
1971	44.75		46.7		20.90
1972	44.75		42.9		19.20
1973	44.75		42.9		19.20
1974	44.75		41.4		18.53
1975	47.75		40.1		19.15

\*Information provided by Office of the Director of Finance, City of Philadelphia, May 1975.



## THE FISCAL STORY IN BRIEF

From 1970 to 1976, annual expenditures by the City and School District of Philadelphia almost doubled, rising from about \$3/4 billion to about \$1 1/2 billion. Revenues fell short of this expenditure growth. Although Federal and state allocations were up sharply, their impact on Philadelphia's budget position was not as large as their dollar value, since many of them were earmarked for designated programs.

In response to Philadelphia's fiscal difficulties, local officials have tried to close the gap between revenues and expenditures by raising taxes and holding the line on spending. They also have tried to manage their accounts more advantageously and to meet financing requirements out of internal cash flow. Some of these efforts have helped, but Philadelphia still ended 1976 with a cumulative budget deficit of nearly \$90 million.

Increased revenue from local or outside sources, and expenditure restraint through service cuts and productivity gains, could improve Philadelphia's current budget position and its long-term fiscal health. But each alternative has pros and cons. Philadelphia's task is to find a workable combination of these alternatives.

unlikely to expand much in excess of the cost of living.

Philadelphia lost about 121,000 jobs (13 percent) from 1970 to 1976. If average wages or tax rates had not increased, the trend in employment would have caused an actual decline in wage revenues. But the tax base per worker has risen, and this rise has contributed in an important way to actual wage tax revenues. General productivity and cost-of-living increases in all industries have brought this increase in the wage base about (Figure 3). Shifts between manufacturing and non-manufacturing sectors have had little measurable impact on the wage base per worker.<sup>4</sup>

<sup>4</sup>For a detailed description of the change in the composition of the City's economy, see "Jobs in Philadelphia: Experience and Prospects," *Business Review*, Federal Reserve Bank of Philadelphia, December 1975.

To test the impact of the change in the composition of employment on average earnings from 1970 to 1975, weighted average earnings figures were calculated for both years by multiplying the 1969 median industry earnings in the Philadelphia SMSA times the percentage of Philadelphia (city) employment for that industry and summing across all industries. The resulting estimates—\$7,534 using 1970 employment weights and \$7,467 using 1975 employment weights—show a decline of less than 1 percent and suggest that the changing composition of employment caused almost no change in the average wage tax contribution per

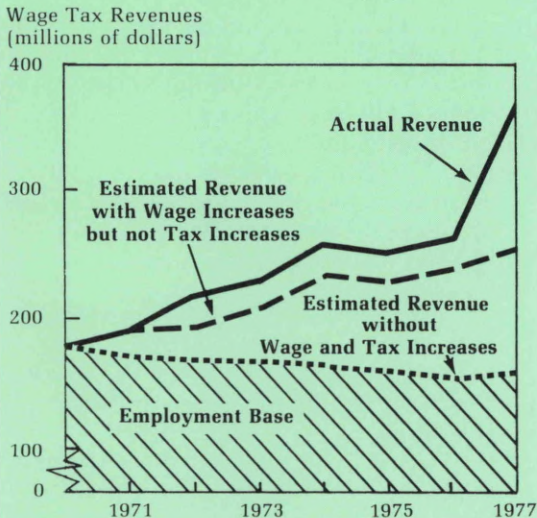
worker, even though workers in the declining manufacturing sector generally are paid better than workers in the growing service sector. Philadelphia experienced relatively large employment declines in the low-paying manufacturing industries—apparel (1969 median earnings \$5,444), textiles (\$6,083), and retailing (\$6,083)—where median earnings were below those in the growing services industry (\$6,574). In calculating average earnings, these low-pay figures cushioned the impact of losses in such high-paying manufacturing industries as nonelectrical machinery (\$8,851), electrical machinery (\$8,539), and fabricated metals (\$8,350), as well as construction (\$9,240).

**Other Local Revenues.** Philadelphia raises revenue locally from business taxes, parking fines, airport service



FIGURE 3

DESPITE EMPLOYMENT LOSSES,  
HIGHER WAGES AND TAX RATES BOOST  
CITY WAGE TAX REVENUES



SOURCES: Actual wage tax revenue data taken from the *Annual Report of the Director of Finance of the City of Philadelphia, 1969-70 through 1975-76*, and from *The Mayor's Operating Budget and Programs, Fiscal 1977*. The Federal Reserve Bank of Philadelphia estimated the wage tax revenues that could have been expected if the 1970 tax rate of 3 percent and the 1970 average wage tax base per worker of \$6,378 had held constant, as well as the revenues that would have been produced by actual wage increases without any tax increase.

Employment data for 1969-73 come from the U.S. Department of Labor, Bureau of Labor Statistics, *Mideast Region, Employment Structure and Trends: Philadelphia*, Report No. 14, Supplement No. 3, May 1975. Employment data for 1974-76 come from the Commonwealth of Pennsylvania, Bureau of Employment Security, "Labor Market Letter, Philadelphia Area," April 1976. For 1977, the Federal Reserve Bank assumed a 1.5-percent employment growth rate based on the forecasts of the Economics Research Unit of the University of Pennsylvania, Philadelphia Econometric Model Project, March 15, 1976.

charges, and a host of other sources, as well as from wage and property taxes. For the City and School District combined, these other local revenues have just about

kept pace with inflation. The sources available to the City, however, have proven much more responsive than those available to the School District in the 1970-76 period. Other local revenues for the School District grew by only \$12 million or 38 percent, contributing less than 5 percent of the total increase in its revenues, while other local revenues for the City have grown by \$56 million or 48 percent, contributing almost 15 percent of the incremental City revenue generated during this 6-year period.

While the business tax component of this revenue catch-all is likely to grow along with inflation, any real expansion in other local revenue sources will depend upon a restructuring of Philadelphia's system of levying charges and selling its services.

**Intergovernmental Revenues.** Nonlocal sources of funding have altered the shape of Philadelphia's budgets over the last six years. Sixty percent of the growth in City revenues and 73 percent of the School District's revenue growth were allocated from Commonwealth or Federal coffers. But the impact of this revenue growth on the City has been quite different from its impact on the School District. The share of intergovernmental funds rose from 14 percent to 34 percent of City revenues, a much more dramatic increase than for the School District. Education has a long tradition of being heavily supported by the state of Pennsylvania. In 1970, Commonwealth contributions already amounted to half of the District's revenues. The state's share rose to 60 percent by 1976 (Figure 4).

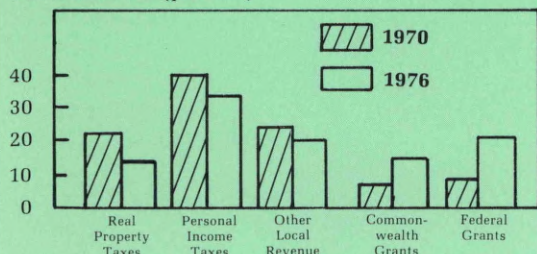
Many of the intergovernmental transfers received by Philadelphia have been categorical grants—grants earmarked for designated programs. Categorical grants to the City from the Federal government (which increased from \$35 million in 1970 to \$130 million in 1976) are designated primarily for health and welfare programs, manpower training, and community devel-



FIGURE 4

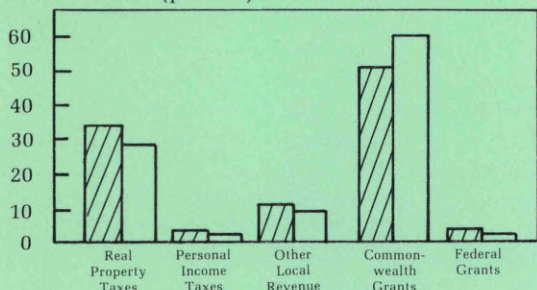
THOUGH FEDERAL GRANTS HAVE GROWN MOST RAPIDLY, LOCAL INCOME TAXES STILL DOMINATE THE CITY'S REVENUE PICTURE . . .

Total Revenue (percent)



. . . BUT THE STATE PROVIDES THE LARGEST AND THE FASTEST GROWING SHARE OF THE SCHOOL DISTRICT'S FUNDS

Total Revenue (percent)



SOURCES: See Figures I.1, 2.

opment.<sup>5</sup> In 1976, Federal Revenue Sharing funds—which, in contrast to categorical grants, are relatively unrestricted with respect to use—accounted for only 17

<sup>5</sup>Federal subsidies to the School District's General Fund have grown only from \$6 million in 1970 to \$9.6 million in 1976. Not treated in this analysis, which is restricted to the School District's General Fund, are the largely Federal categorical funds which grew from \$33.5 million in 1970 to \$74.9 million in 1976. These funds support programs such as Early Childhood education, preschool day care, and special elementary education programs.

percent of the City's total intergovernmental revenues of \$302 million.

In 1976, state grants ranked as the single largest source of revenue for the City and School District budgets combined. Commonwealth allocations to the City (which rose from \$33 million in 1970 to \$119 million in 1976) are designated primarily for health and welfare programs and courts. But the state's larger funding endeavor is the School District, to which it allocated \$315 million in 1976, up from \$140 million in 1970. For the most part, these monies were unrestricted instructional subsidies to the General Fund, the level of which is established by a statewide formula.<sup>6</sup>

Intergovernmental funding has influenced both the revenue side and the expenditure side of Philadelphia's ledgers. It has supported two-thirds of the expansion in the combined City and School District budgets. And its earmarking provisions have helped to shape the pattern of expenditures.

### RISING CITY AND SCHOOL DISTRICT EXPENDITURES

Philadelphia has been no exception to the general pattern of rising state and local expenditures throughout the United States. Over the period 1970-76, the City's current-dollar (nominal) operating expenditures rose by 91 percent, from \$502 million to \$959 million. School District expenditures grew slightly less rapidly, by 86 percent, from \$282 million to \$526 million.

Both higher prices and a larger volume of purchases contributed to spending increases. About two-thirds of the increase in the School District's and three-quarters

<sup>6</sup>The amount of the instructional subsidy varies directly with the number of students and the percentage of children from poverty families in the district, and it rises when the population density of the district exceeds 10,000 per square mile or the real estate market value per student falls below the state average. The state also subsidizes Vocational and Special Education programs directly.



of the increase in the City's spending over this period are accounted for by higher prices. The School District's real expenditures grew by 29 percent. (Real expenditures are current-dollar expenditures adjusted for price increases. See Box.)

Because the things the City buys had risen in price even faster than the School District's purchases, the City had a lower rate of real expenditure increase—23 percent—despite its higher rate of increase in nominal spending. Adding people to the payroll

**BOX**

**ADJUSTING FOR RISING PRICES**

The impact of rising prices for labor and materials can be approximated through a price deflator. A deflator compares one year's price for certain goods and services with their price in another year—the base year. For the City, price deflator calculations suggest that what could be bought for \$100 in base year 1970 cost \$156 in 1976. What cost the School District \$100 in 1970 cost \$145 in 1976. A deflator can capture price increases caused by inflationary forces beyond local control as well as increases caused by, for example, local wage adjustments.

Dividing current or nominal dollar figures by a price deflator gives real or constant-dollar estimates with reference to the base year. In this study, separate deflators were calculated for each of the City and School District expenditure elements. See Appendix II for details on the construction and application of deflators.

Overall deflators can be calculated by weighting price indexes for the several appropriation groups according to their share of total City or School District expenditures.

**CITY PRICE INCREASES**

Source	Appropriation Group	1976 Price Index (1970 = 100)	1976 Weight (percentage of total expenditures)
Actual Wage Settlements	Wages and Employee Benefits		
	Policemen and Firemen	163.4	23.5
	Nonuniformed Employees	157.6	37.8
National Income Accounts deflators for state and local government purchases of services, non- durable goods, and durable goods	Purchase of Services	149.2	24.5
	Materials and Supplies	163.6	3.7
	Equipment	142.7	0.4
Philadelphia Con- sumer Price Index	Debt Service	148.0	10.1
Overall City Deflator		155.9	100.0

**BOX (Continued)**

**SCHOOL DISTRICT PRICE INCREASES**

Source	Appropriation Group	1976 Price Index (1970 = 100)	1976 Weight (percentage of total expenditures)
Actual Wage Settlements	} Wages and Employee Benefits	141.7	73.4
National Income Accounts deflators for state and local government purchases of services and non-durable goods			
}	Purchases of Services	149.2	8.2
	Materials and Supplies	163.6	6.3
Philadelphia Consumer Price Index	} Debt Service Advance Funding Payback	148.0	<u>12.1</u>
Overall School District Deflator		144.8	

SOURCE: See Appendix II.

accounted for about one-third of the increase in the City's price-adjusted expenditures and almost half of the increase in the School District's real outlays.<sup>7</sup>

The growth pattern of expenditures in the 1970s has been influenced by both rising prices and intergovernmental funding. The rising price of labor and material puts upward pressure on spending but restricts the increase in what higher spending buys. Revenues from the Federal and state governments add to local income without increasing local taxes, but much of this income is absorbed by spending increases for designated programs. Thus programs develop where the money is. They can make

more services available, but they may not improve a locality's net fiscal condition.

**The City.** Although each fiscal year has its own unique story, a 6-year review can highlight some longer term patterns. From 1970 to 1976, the smallest percentage increase in nominal outlays was for Debt Service. The current level of Debt Service payments is determined by past decisions about construction and borrowing, the price of construction, and patterns of market interest rates. But higher levels of interest rates are pushing up the cost of new borrowing, as the 1977 jump in Debt Service payments shows.

The Police and Fire departments registered two of the smallest increases in real expenditures over this period. It appears that appropriations to these departments were raised primarily to cover the higher cost of buying the established level of services, not to underwrite increases. Police and Fire faced rapidly rising costs,

<sup>7</sup>The impact of an expanded staff on each element of real expenditures was estimated by multiplying the change in employment from 1970 to 1976 by the average 1970 wage expenditure per worker.



but they had smaller shares of intergovernmental funding than any other departments (Figure 5) and registered among the lowest percentage increases in real expenditures.<sup>8</sup>

<sup>8</sup>These high deflators can be traced to a large labor bill and a high wage index. The Police Department and Fire Department are heavily labor-intensive: about 95 percent of their appropriations are budgeted for wages and salaries (see Figure II.1 for their personal services weights). Because of the critical nature of their services and the monopoly power of public employees in providing them, the Police and Fire unions have strong

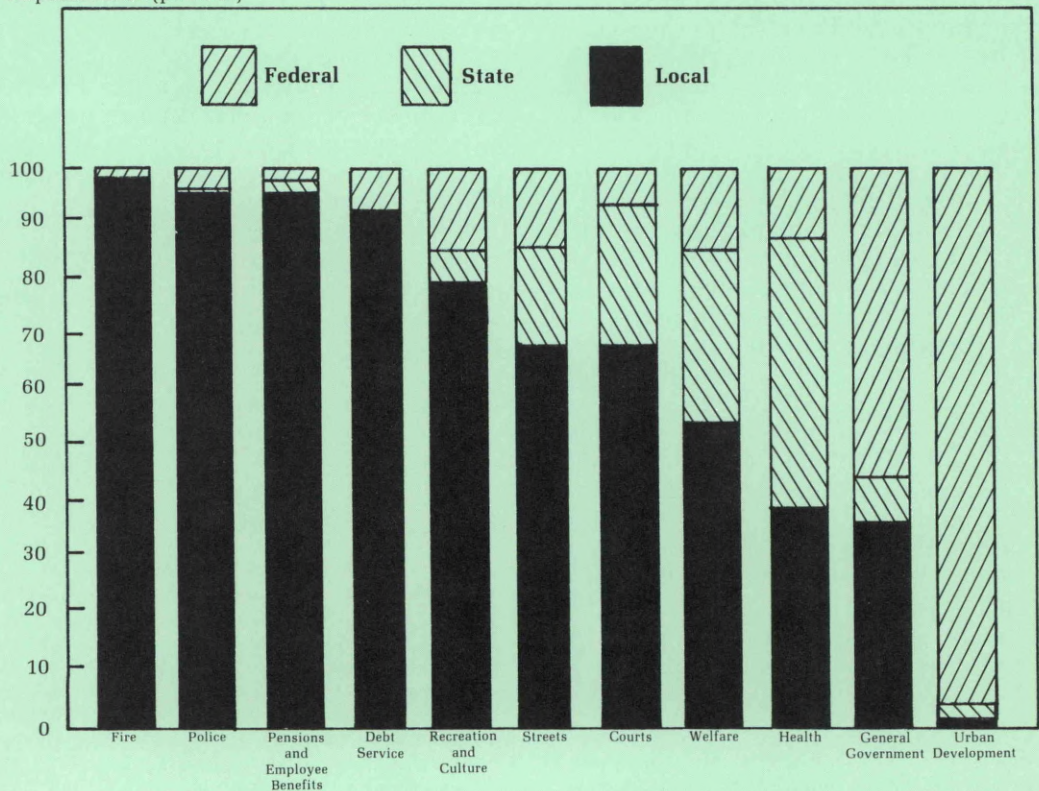
bargaining power. Average uniformed employee wages rose 63 percent from 1970 to 1976 compared with 58 percent for nonuniformed City workers and 48 percent for the local cost-of-living index.

A small percentage increase in real expenditures can cost a lot in local taxes. The Police Department alone accounted for \$64 million (14 percent) of the increase in nominal City expenditures from 1970 to 1976. Further, in 1976, over 96 cents of every dollar spent by the Police Department came from local revenue sources—in contrast to, say, only 36 cents for General Government. Thus, although the absolute increase in General Government expenditures was over twice as high, increases in Police budgets cost more in local taxes than increases in any other expenditure element over the period 1970-76.

FIGURE 5

INTERGOVERNMENTAL REVENUES SUPPORT SOME EXPENDITURE ELEMENTS MORE HEAVILY THAN OTHERS

Expenditures (percent)



SOURCES: City of Philadelphia, 1975-76 Annual Report of the Director of Finance, Schedule I-A-2c-1, pp. 23-25 and Schedule I-A-22b, pp. 121-123. See also Figure I.1, note \*, and Appendix II.

The Streets function was able to support a higher percentage growth rate in real expenditures (including higher employment) than either the Police Department or the Fire Department. Despite a slightly lower percentage growth in current-dollar expenditures, Streets was able to expand its services because its costs rose less rapidly than those of Fire and Police.

Comparing 1976 to 1970, the Pensions and Employee Benefits element appears to have grown at the average rate for the City budget as a whole. But this simple comparison masks the unusually high payments that were required in 1973 and will be required in 1977 in response to regular actuarial reviews of the City pension program. The level of contributions required for adequate financing of the Pension Fund and other Employee Benefits is influenced in part by currently controllable factors—the level of current wages and promised benefits, and the number of employees. But it is influenced also by some factors outside the City's immediate control. For example, growth in the City's Social Security contribution, beyond what would have been expected from a general rise in wages and employment, was an outcome of increases in the contribution rate and in the maximum taxable earnings ceiling. And as a result of the *Dombrowski* and *Bogen* court decisions,<sup>9</sup> the City is required to make higher payments to the Pension Fund to compensate for inadequate past contributions, thereby limiting this component of the unfunded liability. Now the City must pay interest on the unfunded portion of the liabilities incurred prior to 1972 as well as the estimated normal costs associated with adequately financing current liabilities.

<sup>9</sup>For details of these two court decisions see *Dombrowski v. City of Philadelphia*, 431 Pa. 199, 245 A.2d 238 (1968) and 57 Pa. D. & C.2d (1971), as well as the opinion rendered in *Bogen v. City of Philadelphia*, 63 Pa. D. & C.2d 306 (1973).

Since 1970, heavy intergovernmental funding has helped four City expenditure elements—General Government, Courts, Health, and Welfare—to sustain real expenditure increases above the City-wide average of 23 percent. And intergovernmental support has made a difference even in those elements whose growth has been below the City's average—such as Recreation and Culture, which was up about 20 percent.<sup>10</sup> But departments that depend largely on local financing, such as Fire and Police, have had much lower growth rates—of about 5 percent and 7 percent, respectively, in real terms (Figure 6).

Thus while the City nearly doubled its nominal spending from 1970 to 1976, much of this increase can be traced to rising prices. Only expenditure elements supported by higher intergovernmental grants have registered above-average growth.

**The School District.** Despite a more modest percentage increase in current-dollar outlays than the City's, the School District has been able to buy more with its money because of smaller price increases. Since 1970, the number of students has declined in every program except Senior High and Technical Education, because of demographic trends. A tradition of spending more money per pupil in the higher grades, which now have larger percentages of students, have helped real per-pupil expenditures to rise by a greater extent (39 percent) than School District spending overall (29 percent). But real expenditures and the number of staff per pupil have risen across

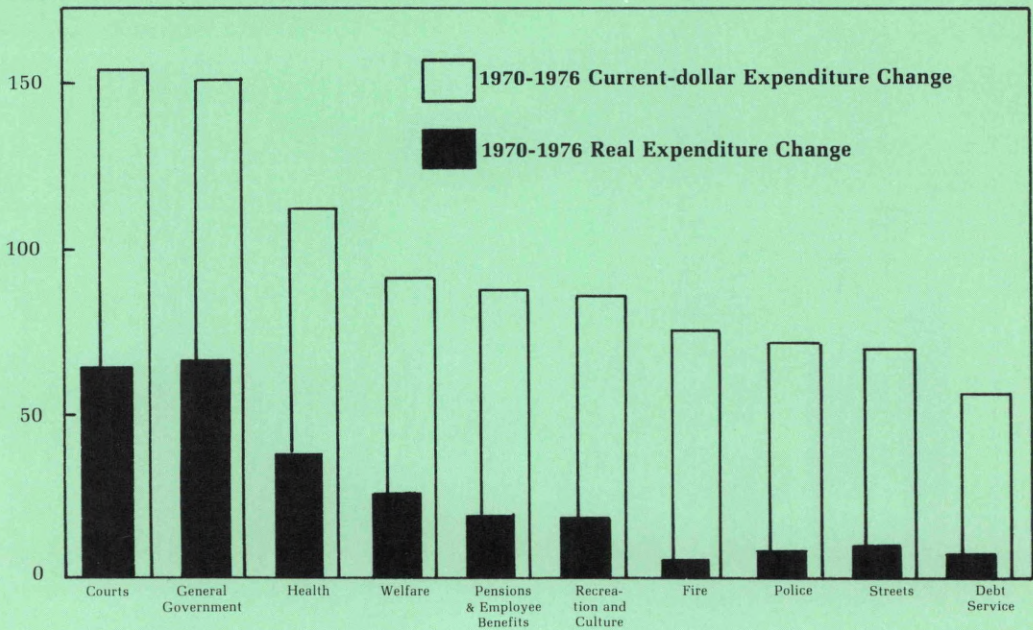
<sup>10</sup>The Federally financed Urban Development program, which continued to spend at 1970 levels, is an exception. From 1970 to 1974, Federal funds for Urban Development came through the Model Cities and Economic Opportunity programs and the Redevelopment Authority (Figure I.1., notes \*, \*\*). Since 1975 they have come from a series of three Community Development Block Grants, affecting five fiscal years through 1979, when the current programs end. Urban Development expenditures are expected to peak at \$57 million in 1977 and fall to about \$20 million in 1978 and 1979.



FIGURE 6

Percentage Increase  
1970-1976

HIGHER PRICES EAT AWAY THE PURCHASING POWER  
OF LARGER DOLLAR OUTLAYS BY THE CITY



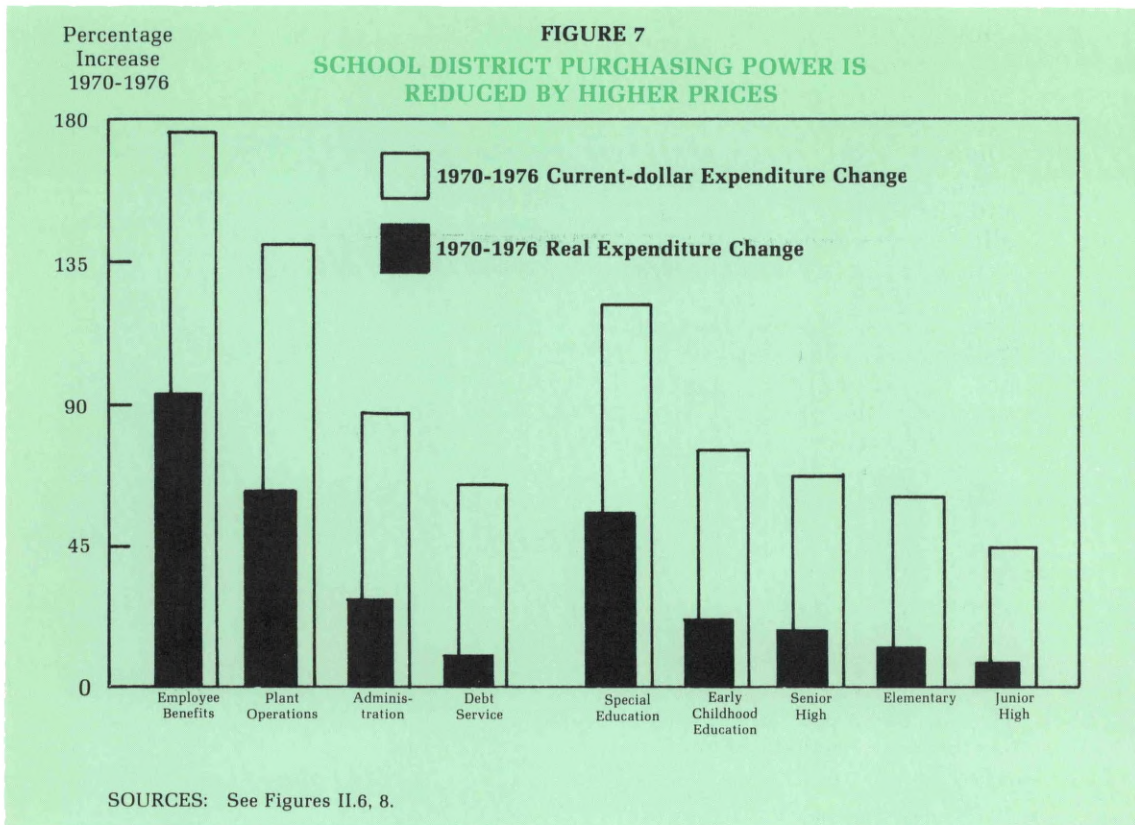
SOURCES: See Figures II.3, 5.

the board.

Three expenditure elements had above-average increases in spending—Special Education, Plant Operations and Maintenance, and Employee Benefits. The doubling of Special Education expenditures since 1970 was funded entirely through state revenue. Of the \$16-million increase, about half can be accounted for by price increases and half by an expanded staff. While the level of enrollment in Special Education remained quite constant, real expenditures per pupil and the number of staff per pupil climbed impressively. Early Childhood, one of two other programs in the education element to register

an above-average rate of increase in total expenditures, is unusual in being financed by Federal as well as by state and local taxes. The Federal portion is received as a categorical grant which is kept separate from the General Fund. But Early Childhood still has an impact on the General Fund, because the General Fund supplies the required local matching dollars.

Rising fuel bills and an enlarged staff have driven up the costs of Plant Operation and Maintenance, which had the largest increase in nominal expenditures of any expenditure element (\$39 million). Even with higher costs consuming over half of the additional spending, real ex-



penditures still grew by 62 percent from 1970 to 1976.<sup>11</sup>

School District employees settled for lower wage adjustments than their counterparts in the City. The 6-year wage increase for School District employees overall was 42 percent compared with 58 percent for nonuniformed City workers and 63 percent for uniformed City workers. Thus the School District was able to

increase employment by 18 percent over the six years, compared with under 12 percent for the City, and still register a lower rate of nominal expenditure growth. Of the total increase in School District employment (3,953 over the six years), 31 percent went to overhead services, 43 percent to the four basic education functions, and 26 percent to Special Education (Appendix III).

The lower rate of wage growth was offset in part by the School District's Employee Benefits bill. Its growth rate was twice that of the City's. Of the \$33-million additional Employee Benefits contributions, about half reflects the impact of higher wages. Nonetheless, there was a doubling of real Employee Benefits expenditures, reflecting an increase in payments to

<sup>11</sup>Part of this apparent large increase in real expenditures can be traced to the use of a deflator that understates the rate of increase in wages for maintenance employees. Custodial and secretarial employees, heavily represented in the overhead departments, received higher average wage increases than classroom workers. The wage deflator used represents an average across these groups (see Appendix II, note 3).



the state retirement system and Social Security, an extension of the benefits package, and a rise in the number of employees (Figure 7).

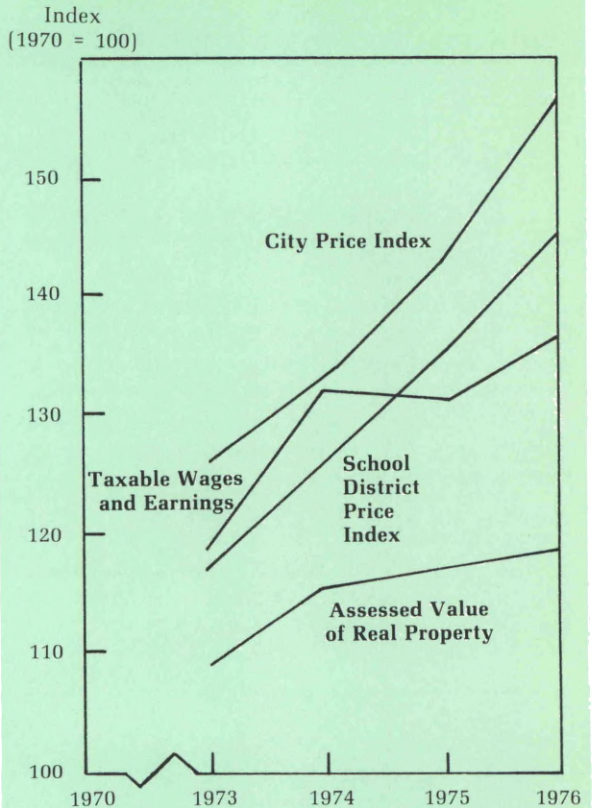
School District workers have traded off higher wage increases for increased benefits and improved working conditions—smaller class sizes and more class preparation time—in recent contract settlements. The outcome is reflected in a decrease in the number of pupils per staff member. With almost two-thirds of every dollar spent subsidized by Federal or state allocations, the School District has continued to increase its staff and its real expenditures despite declining enrollment.

**Summary.** Philadelphia, just as many other large cities in the United States, watched its expenditures grow more rapidly than its local revenues over the period 1970-76. Comparing City and School District price indexes with trends in the local tax bases shows that the cost of buying a constant volume of materials and labor outpaced the growth of Philadelphia's two main local tax bases—the property tax assessment rolls and taxable wages and earnings (Figure 8). In other words, by 1976, Philadelphia couldn't even support its 1970 level of purchases without more general revenue from either local tax increases or intergovernmental transfers. Moreover, the City and School District continued to buy a higher volume of goods and services and to make larger real expenditures in every expenditure element. But through mid-1976, tax rate hikes were held to about 10 percent. And categorical grants from Washington and Harrisburg, though they financed the expansion of selected program expenditures, didn't eliminate the overall budget deficits.

In short, sluggish revenues and rising expenditures have left Philadelphia with a large cumulative deficit and the fiscal pressures that go with it.

FIGURE 8

PRICE INCREASES OUTPACE THE GROWTH OF PHILADELPHIA'S MAIN TAX BASES\*



\*All 1970 values are 100. Values not computed for 1971 and 1972.

SOURCES: Price indexes from Figures II.4, 7. Taxable wages and earnings equal actual revenues divided by tax rate. Assessed value of real property supplied by the City of Philadelphia, Board of Revision of Taxes.

HOW PHILADELPHIA COPEd WITH ITS BUDGET CRUNCH

In response to these fiscal pressures, local officials periodically used the traditional policy levers, cutting expenditures and changing tax rates. To keep the cumulative budget position from deteriorating,

they also made some changes in accounting practices. These changes have forestalled the counting of some expenditures and moved up the counting of some revenue, thus alleviating the constraints of a cash budget. At the same time, the City and School District have become more dependent on credit sources. And to relieve the pressure of borrowing in short-term money markets, City officials have made use of long-term fund sources—namely, the Capital Improvement Accounts—to supply operating credits.

In another vein, up until the 1970s, the City put off paying part of its annual labor costs: it deferred paying the full cost of annual pension liabilities. And recent calculations of unfunded pension liabilities—which are equivalent to long-term borrowings against the future—suggest that these liabilities are heavier than previously thought.

But these efforts haven't gotten Philadelphia out of its deficits. While budgets for the current year do show an improved pic-

ture for the City itself and for the City and School District combined, the School District sinks deeper into deficit.<sup>12</sup> And even such promising signs as there are must be taken with caution, since they are based on estimates, and only actual results count.

### TRADITIONAL POLICY LEVERS

Philadelphia officials are constrained by law to approve balanced operating budgets—budgets that match planned current expenditures and retirement of past operating deficits to projected revenue. But even if they succeed in this venture, they still have to live within their budget. And both tasks have proved difficult (Figure 9). Philadelphia's cumulative fund position

<sup>12</sup>This analysis of the City's budget position is focused on the Principal Operating Funds, which include the Aviation Fund, Bicentennial Fund, County Liquid Fuels Tax Fund, General Fund, Parking Fund, Pier Maintenance Fund, Sewer Fund, Special Gasoline Tax Fund, and Water Fund. The analysis of the School District's position is based on the General Fund.

**FIGURE 9**  
**PHILADELPHIA HAS SEEN CUMULATIVE DEFICITS BEFORE**  
**(Millions of Dollars)**

Year	City Principal Operating Fund Condition*	School District General Fund Condition	Combined City and School District Fund Condition
1969	\$25.6	\$(28.3)	\$(2.7)
1970	27.1	(2.9)	24.2
1971	(28.7)	(5.9)	(34.6)
1972	12.4	(36.2)	(23.8)
1973	17.9	1.5	19.4
1974	19.4	0.7	20.1
1975	11.4	(7.5)	3.9
1976	(73.3)	(15.3)	(88.6)

\*City data reflect accrual of some intergovernmental revenues starting in 1975. For further detail on the effects of this change on 1972-74 data, see *1974-1975 Annual Report of the Director of Finance of the City of Philadelphia*, pp. 1-35.

SOURCES: Prospectus for City of Philadelphia Water and Sewer Revenue Bonds, September 2, 1976, and annual financial reports and proposed 1977 budget of the School District of Philadelphia.



has been in deficit several times over the past decade. (The cumulative fund position is the current operating position plus the carryover from the previous year). Deficits have recurred despite initiatives that cut real expenditures, raised taxes, and redistributed revenue.

**Holding the Line on Expenditures.** Local expenditures have been cut twice since 1970. In 1973, with help from a strike-shortened school year, the School District shaved 10 percent off its budgeted expenditure figures.<sup>13</sup> In 1974, the City cut 6 percent from its real spending. But on average, expenditures adjusted for price increases were rising at an annual rate of 4.8 percent for the School District and 3.8 percent for the City from 1970 to 1976.

Given the size of the 1976 deficit, one might have expected large expenditure cuts in 1977, and there has been some tightening-up here and there. But overall, real expenditures are budgeted to rise at higher rates than last year.<sup>14</sup> The City's planned reductions in Health, Welfare, Streets, and Recreation are more than offset by increased payments for Pension and Debt Service and by higher spending on Urban Development and General Government—

two elements heavily supported by Federal funding. And School District plans show rises in Employee Benefits payments that more than offset reductions in other overhead departments and lower growth in some education units (Figure 10).

**Adjusting Local Tax Rates.** Besides cutting expenditures, officials sometimes have found it necessary to raise taxes. Except for a one-percentage-point rise in the wage tax in 1969, Philadelphia's taxes remained stable throughout the later 1960s. The tax rate on wages, earnings, and net profits was adjusted upward again in 1972 to 3.3125 percent, where it remained until 1977. The combined property tax rate remained at its 1966 level of 44.75 mills until the 3-mill boost of 1975.

But in 1977, after these years of restraint,

<sup>13</sup>For an estimate of these expenditure savings see William A. Cozzens, "Philadelphia's Budgets: Past, Present, Future," *Business Review*, Federal Reserve Bank of Philadelphia, April 1974, p. 11, Chart 14.

<sup>14</sup>Figure 10 compares budgeted with estimated or actual outcome data from a year earlier on the assumption that inflation will raise 1977 prices by 2.3 percent for the City and School District. The budgeted funds have not gone through their final allocation and there still is uncertainty about whether some of them will be received. For example, three large grants (LEAA, Provision for Other Grants, and Community Development Block Grant) totalling \$88 million were assumed to be allocated among departments for purposes of this study, but the amounts received as well as their allocation surely will differ from our estimates. See Appendix II (City Budget Data) for further discussion of this problem. Recent information for the City is contained in Finance Release 77-6, February 18, 1977 and other Finance Releases.

FIGURE 10

SOME RESTRAINT HERE AND THERE;  
BUT OVERALL, REAL EXPENDITURES  
KEEP RISING

City

Expenditure Element	Percentage Change	
	1975-1976	1976-1977
General Government	11.7	38.7
Police	-3.7	7.7
Health	3.6	-0.8
Welfare	17.1	-9.0
Streets	2.1	-13.9
Courts	4.0	2.3
Fire	0	1.9
Recreation and Culture	5.8	-2.0
Urban Development	-24.2	82.8
Debt Service	3.9	26.5
Pensions and Employee Benefits	-19.6	39.9
Total*	1.1	16.0

\*Includes Special Payments in 1977 not shown above.

SOURCE: See Figure II.4.



FIGURE 10 (Cont'd)

## School District

Expenditure Element	Percentage Change	
	1975-1976	1976-1977
Education Elements		
Early Childhood	18.0	-2.8
Elementary	6.6	9.9
Junior High & Middle	-3.8	0.5
Senior High & Technical	11.0	5.0
Special Education	10.2	-1.4
Total Education	6.3	2.0
Overhead Elements		
Plant Operations & Maintenance	9.1	-4.2
Administration & Support	6.2	0.5
Debt Service & Insurance	-18.4	-1.5
Employee Benefits	15.4	14.7
Total Overhead*	2.7	19.4
Total	4.3	10.4

\*Includes two items not shown above—Advance Funding Payback and Undistributed Items & Refunds.

SOURCE: See Figure II.7.

local tax rates rose sharply: the wage tax rate went up 30 percent; the property tax rate increased 14 mills or 29 percent; the mercantile license tax rose 33 percent; and a new tax was added on petroleum processed within the City limits. The combination of rate increases, a new tax, and a slowly growing tax base adds up to a projected 39-percent increase in local tax revenues for the City. And its intergovernmental revenue is projected to increase 38 percent. For the School District, the revenue changes are less dramatic. Local sources are expected to produce 6 percent more revenue, while intergovernmental revenue is budgeted to increase only 4 percent. Given intended spending increases, this comparatively slow growth

in revenue leaves the School District with a rising operating deficit that has to be dealt with—somehow.

**Allocating Local Revenues.** Even if the combined revenues are sufficient to cover the expenditures for schools and other municipal services, the School District still may come up short since it has to rely mainly on the sluggish property tax. In response to this difficulty, City officials have made several attempts to allocate a larger share of revenue to the School District since 1970. The first was a \$12-million direct payment in 1973. Second, in 1974, the City reduced its own property tax millage and increased the School District's (Figure 11). Since the assessment rolls did not grow sufficiently to offset the loss that this transfer caused, City revenues from the property tax actually fell. Even so, when City Council raised the property tax rate in 1975, by 3 mills, the entire proceeds went to the School District. This was the third attempt. But of 1977's 14-mill increase in the property tax rate, only 1 mill is destined for the School District. And deciding how to allocate resources to the City and School District may become even more difficult as more claims are made on available resources.

Thus local officials have another arena for policymaking—allocating revenue—along with setting appropriate levels for expenditures and local taxes.

## ACCOUNTING INNOVATIONS

Lowering spending levels and raising more tax money are the standard methods for coping with budget pressures, but they are not the only ones local officials have used in recent years. Chief among these others have been changes in accounting practices that allowed the City and School District to spend more money on services than would have been allowed under the old methods of counting revenues and expenditures. These changes have pushed Philadelphia to rely more



FIGURE 11

**THE SCHOOL SHARE OF PROPERTY TAX REVENUE  
WAS ON THE RISE—UNTIL 1977**

Year	Nominal Millage (Dollars per thousand)		Total (3)	School District Share (percent)
	City (1)	School District (2)		(2) ÷ (3)
1970	23.75	21.00	44.75	47.5
1971	23.75	21.00	44.75	47.5
1972	23.75	21.00	44.75	47.5
1973	19.75	25.00	44.75	55.9
1974	19.75	25.00	44.75	55.9
1975	19.75	28.00	47.75	58.6
1976	19.75	28.00	47.75	58.6
1977	32.75	29.00	61.75	47.0

SOURCE: Prospectus for City of Philadelphia Water and Sewer Revenue Bonds, September 2, 1976.

heavily on credit markets to pay bills, though of course, when the City works with a balanced cash budget, these debts are repaid by the end of the fiscal year.

A change in the beginning and ending dates of the fiscal year moved up the counting of revenue but increased the requirement for short-term credit within the year; deferring a semiannual debt installment in 1972 put off accounting for an expenditure but didn't reduce the ultimate cash outflow; and accruing revenue transfers from other governmental units put more income on the books at an earlier date but only at the price of increased credit costs. As a result of these changes, Philadelphia's budget numbers may have improved in the short run, but it is not clear that any longer term problems have been solved. In fact, these innovations make it more difficult even to diagnose changes in Philadelphia's fiscal health much less to correct them, since a budget surplus today does not mean precisely what it did ten years ago. Expected future income has been used to balance each year's books.

**Switching Fiscal Year Dates.** Changing the dates of the fiscal year—in this case from January-December to July-June—can alter the credit requirements within fiscal years unless the flow of expenditures and revenues is distributed evenly throughout the year. In Philadelphia, revenue comes in unevenly to both the City and the School District, most of it arriving between January and June. For example, most of the calendar-year property tax payments are received between April and June.

The City used an 18-month interim budget when it moved to a new fiscal year in 1968-69; the School District had opted for a 6-month interim budget when it changed its accounting year in 1966. The immediate effect of these switches was to put temporary surpluses on the books, since big calendar-year revenue flows (such as property tax payments) occur mainly in the January-June period, while expenditures are spread fairly evenly throughout the year. Establishing an interim budget including first halves of two successive calendar years (City) or only the first six



months of a calendar year (School District) boosts revenues way above expenditures, provided expenditures aren't pushed beyond customary levels. Thus the fund balances over an interim budget show one-time improvements.

During the interim budget periods, the General Funds moved from roughly balanced positions to surpluses—\$15 million for the City and \$10 million for the School District. The price of the initial improvement was that succeeding years faced a negative cash-flow configuration. Before the switch, revenue received in the first half of the year could be used to cover spending in the second half. Now the position is reversed. Even with a balanced budget, expenditures exceed revenue in the first six months (July-December) and are overtaken only in the last six. So budget officials have to borrow funds to cover the cash-poor months and pay interest on the funds needed to tide them over.

**1972 Budget Covered Only One Debt Payment.** Before 1972, the City counted two Debt Service payments in its obligations each year—the payment due in January and the one due in July of the next fiscal year. The second accounting change—budgeting for only one payment in fiscal year 1972—makes it hard to compare year-end budget positions now with year-end budget positions before the change. It used to be that the fund balance included the accounting for a soon-to-follow debt payment, but this \$37-million obligation was left out for fiscal 1972. Because this change lowered obligations on the books in one fiscal year and did not raise a succeeding year's obligations proportionately, the General Fund's cumulative balance got a shot in the arm. On the surface, improvements in the fund balance looked like progress in the battle for financial stability. This deferral really did not improve the City's financial health, however, as it neither decreased cash outflow nor increased inflow. The improved fund balance was offset by the City's new requirements for short-term credit. Before

the deferral, the City's revenue flow indicated borrowing for only one of the two payments. Since then, it has been necessary to borrow to cover both payments, because the payments come due before most of the revenue comes in.<sup>15</sup>

**Accruing Intergovernmental Revenues.** Philadelphia, like other large cities, has been reimbursed for certain programs by the state and the Federal government. But because it may not be reimbursed for as long as a year or two after it makes program expenditures, these expenditures have been able to pull part of its budget temporarily into deficit. Or they could until the City made the change to accrual of appropriated program revenue.

In 1975, City officials decided to count transfers from other governmental units as soon as they had been appropriated and qualified for—to put dollars on the books before they were received. This accrual decision gave the City a one-time advantage in calculating its cumulative fund position, because it gave 1975 an extra dose of revenue from other governmental units. The budget entry for intergovernmental revenue was swelled not only by cash receipts from other governments but also by \$44.2 million in receivables—dollars counted but not yet received in 1975 (Figure 12). As it accrues revenue, however, the City must borrow from the time expenditures are incurred until cash arrives.

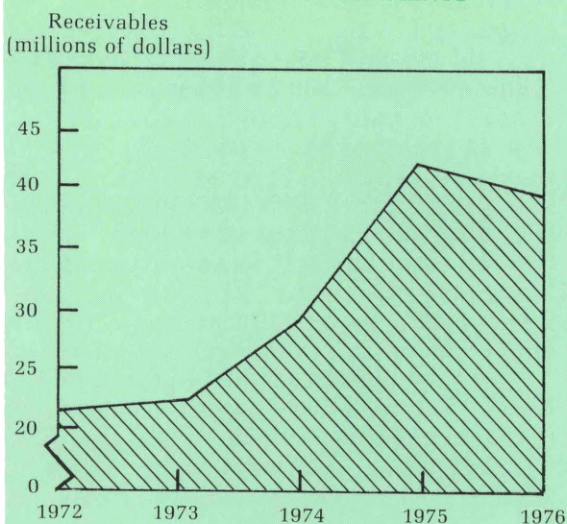
**What Does All This Mean?** The changes in accounting practice make it more difficult to judge changes in fiscal health. But it's clear at least that now, when the City balances its budget, it borrows more than it used to within the fiscal year and defers one debt payment into the next fiscal year—two things it didn't do 10 years ago. In short, when it made these changes, Phila-

<sup>15</sup>With recent debt issues, attempts are being made to ameliorate this problem by spacing the debt payments to be more consistent with timing of cash flows.



FIGURE 12

THE CITY WAITS FOR MONEY FROM OTHER GOVERNMENTS



SOURCE: Prospectus for City of Philadelphia Water and Sewer Revenue Bonds, September 2, 1976.

difficulty with this internal procedure so long as the Consolidated Cash Account has enough money, owned by member operating funds, to cover the General Fund's short-term borrowing requirements. But recently, for example, for three of five consecutive quarters, the sum total of liquid assets owned by the General Fund and the other main operating funds was in deficit (Figure 13). That is to say, pay-

FIGURE 13  
LIQUID ASSETS DRY UP IN SOME CITY OPERATING ACCOUNTS

(Thousands of Dollars)

Calendar Quarter	Liquid Asset Holdings Consolidated Over All Member Funds Except Capital Improvement Accounts	Liquid Asset Holdings Consolidated Over All Member Funds Including Capital Improvement Accounts
Second Quarter 1975	\$37,689	\$49,491
Third Quarter 1975	(20,196)	29,835
Fourth Quarter 1975	(44,365)	94,686
First Quarter 1976	(79,177)	20,595
Second Quarter 1976	1,166	97,339

SOURCE: Prospectus for City of Philadelphia Water and Sewer Revenue Bonds, September 2, 1976.

delphia was coping with its annual budget crunches by spending part of its future income.

LONG-TERM FUND SOURCES

To keep its operations going the City tapped both ordinary short-term credit sources and some unusual longer term sources—mainly its Capital Improvement Accounts. Until the beginning of this decade, it also drew some short-term benefits by deferring a portion of its annual payments to pension funds.

**Excess Balances in Capital Improvement Accounts.** The Capital Improvement Accounts are drawn on indirectly. To meet its in-year cash requirements, the City's General Fund borrows from the Consolidated Cash Account—a common cash drawer that includes excess balances from several operating funds, including the General Fund itself, and from the Capital Improvement Accounts. There's no

ments made from the common cash drawer for General Fund purposes were greater than the liquid assets owned by the General Fund and other principal operating funds. So when checks were presented for collection, the excess cash owned by Capital Improvements was used to cover them.

Borrowing from Capital Improvements may go back as far as the 1920s, though the Consolidated Cash Account wasn't established until 1960. What is new, however, is borrowing from Capital Improvements to cover General Fund cash deficits that run over from one fiscal year to the next, as shown on the City's books for 1975 and 1976.



These Capital Improvement monies themselves have been derived via long-term borrowing to fund planned capital improvements. The City's officials built up the Capital Improvement Accounts by raising cash (selling bonds) well before the cash was needed to pay construction bills.<sup>16</sup> This allowed the City, through its Capital Improvement Accounts, to be its own supplier of short-term credit to its operating funds—in a word, to be its own banker. Excess balances by themselves do not show that the City has mismanaged its capital funding requirements. Perhaps the City acted early to secure money at a favorable rate. But if bonds were issued earlier than required solely to build cash for lending to operating funds (either within or across fiscal years), what showed up on the books as increased interest on long-term debt might not indicate increased capital improvements. It would just be a substitution of long-term debt for short-term instruments.

Since City officials plan to have the operating accounts pay back their loans from the Capital Improvement Accounts within the year, there is no clear justification for arguing that the City is spending capital monies to cover operating expenses. Rather, for the time being, it is covering some of its short-term financing requirements within the family. Whether this is cost-effective, and whether long-term lenders know that the City is using the money it borrows to act as its own banker, are issues requiring clarification.<sup>17</sup>

<sup>16</sup>This policy was outlined in comments by Lennox L. Moak, the City's Director of Finance, in *The Future of American Cities* (Philadelphia: Federal Reserve Bank of Philadelphia, 1976), p. 50.

<sup>17</sup>In Finance Release 77-5, October 29, 1976, the City announced a revised policy for its new issue of Gas Revenue Bonds. Neither the "proceeds of the bond issues nor the moneys destined for payment of debt service on such bonds will be deposited or passed through the Consolidated Cash Account. . . . The Office of the Director of Finance is presently studying the

### Higher Unfunded Pension Liabilities.

Workers are paid for their services by wages and fringe benefits. If wages are paid by current taxpayers, but increased fringe benefits such as pensions are charged to future taxpayers, then the full cost of current services is not being paid by the receivers of those services; part is being shifted forward to future taxpayers. Deferring increased pension fund liabilities not only burdens future citizens who may have their own uses for resources when they take over. In addition, it may make current citizens less sensitive to inefficiency in government, and it could incline them to accept some services that they wouldn't be willing to pay for just because these services appear to be free.

The full cost of yet-to-be-fulfilled pension promises is represented by the pension fund liability figures, and the pension liabilities already paid for by past and current citizens are represented by the figures for accumulated assets in the pension fund.<sup>18</sup> The remainder is the unfunded pension liability.

Preliminary actuarial data were used to compute the normal cost (the estimate of annual accrued cost) of pensions in the City's 1977 budget.<sup>19</sup> It is estimated that the City's unfunded pension liabilities have increased by 28 percent from \$566

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possibility of extending this type of segregation to other types of revenue bonds already issued or under consideration for issue by the City."

<sup>18</sup>The calculation of pension fund liabilities is an attempt to state the amount which would have to be put aside today to cover the payments that will be made in the future for all past and current workers. Assumptions about future wage rates and future interest rates are elements of this complex calculation. For an easy-to-read presentation of pension issues, see *Pension Primer for Philadelphians*, Pennsylvania Economy League Report No. 362, 1972.

<sup>19</sup>These calculations were contained in preliminary worksheets for an actuarial report prepared by Peat, Marwick, Mitchell & Co., with data as of July 1, 1975. According to the *Annual Report of the Director of Finance of the City of Philadelphia, 1975-76*, p. 269, this report was to be completed in December 1976.



million to \$722 million since 1973. The School District belongs to the Pennsylvania Public School Employees' Retirement System, which itself has experienced increased unfunded liabilities. Philadelphia's portion of the System's unfunded liabilities is estimated to have increased by about \$60 million since 1973 (Figure 14).

On the surface, it appears that the City and the School District are asking future citizens to pay an increasing amount for the pensions of current workers. But that isn't quite right. Both the City and the School District have attempted to pay the full cost of currently accruing pension liabilities. For the City, the probable increase in unfunded liabilities comes about mainly because of a change in assumptions about future wage increases and therefore about the size of future pension checks. For the School District, the latest appraisal includes an enlarged benefit package granted by the state legislature in 1975, and this probably explains most of the increase in unfunded liabilities. Whatever the reason—more realistic assumptions or higher

benefits—the unfunded amount is now a debt for future citizens. But if officials paid off all or part of it now or paid interest to keep its value from rising, current taxpayers would feel the pinch immediately, and the relation of current costs to current services would be distorted in another direction. So the unfunded pension problem is a difficult one to solve.

Pension funding in Philadelphia has come a long way since 1950. The City is using more realistic assumptions now to calculate pension liabilities; and it is paying in enough to cover each year's normal cost of pensions. Further, where pension fund assets fall short of liabilities, it is setting enough money aside to pay interest on that difference.<sup>20</sup> Thus the

<sup>20</sup>To settle a payment promise of \$1,050 next year, the City would have to set aside a thousand dollars today if it got interest at 5 percent. (This figuring doesn't count the cost of administration.) If only \$200 were set aside—that is, funded—the City would be left with \$800 of unfunded pension liability. If it got 5 percent interest on the funded portion, it would have

FIGURE 14

UNFUNDED PENSION LIABILITIES FLUCTUATE AS ACTUARIAL ASSUMPTIONS CHANGE  
(Millions of Dollars)

Dates*	City	Pennsylvania Public School Employees' Retirement System	School District†
January 1, 1967	\$496.6	\$720.7	\$54.0
July 1, 1971	918.5	—	—
July 1, 1972	541.6	1,720.3	140.5
July 1, 1973	566.1	1,656.6	118.8
July 1, 1974	—	2,331.7	178.8
July 1, 1975	722.2	—	—

\*Dates of unfunded liabilities are valuation dates in periodic actuarial studies of City and Pennsylvania Public School Employees' Retirement System. City figures not available for 1974, state and School District figures not available for 1971 and 1975.

†The School District's unfunded liability is calculated by multiplying the state system's unfunded liability by Philadelphia's percentage of the total of wages and salaries in the plan, and dividing the product in half. The other half is the state's currently intended matching payment.

SOURCES: City of Philadelphia, Board of Pensions and Retirement; Commonwealth of Pennsylvania, Public School Employees' Retirement Board.



interest on funded and unfunded portions of pension assets combined should be keeping pace with growing pension liabilities.

The School District is paying its normal cost of pensions and is amortizing unfunded liabilities over the next 20-25 years. And the City could start amortizing its unfunded pension liabilities—or at least any further increases in unfunded pension liabilities. Adjustments of this kind would bring on higher annual payments but they would bring pension promises and pension funding closer together in time.

**MORE DEFICITS AHEAD?**

Over the last ten years, budget pressures have caused local officials to cut expenditures, increase tax rates, and change accounting and financial practices. As a result of the latest initiatives, fiscal 1977 was budgeted to be a year in which sizable adjustments on the revenue side would restore a cumulative surplus to the City's Principal Operating Funds—a surplus large enough to cover last year's deficit with \$10.2 million left over. In fact, at budget submission time, many people believed that the surplus would bring a tax cut in 1978.<sup>21</sup> And although the School District's full-year budget was in deficit, the combined cumulative deficit was expected to decrease. These were encouraging signs, even though the outlook remained mixed (Figure 15).

\$210 at year's end and be \$840 short of the \$1,050 promised to the pensioner. Thus, in effect, the unfunded portion of the liability would have increased by the amount of interest lost during the year (\$40). The City could keep the gap between funded and unfunded liabilities from widening by putting assets equal in amount to the lost interest into the pension fund every year, and it has begun to do this. But drawing on revenue to prevent growth in the unfunded pension liability may put a strain on other parts of the budget and *will not reduce* the size of the unfunded liability.

<sup>21</sup>On May 27, 1976, City Council passed a resolution of intent (Resolution No. 68) to cut taxes at the start of fiscal 1978.

Estimated improvements, however, are elusive, and budget dollars sometimes are different from actual dollars. City officials, for example, overestimated revenues by \$94 million and underestimated expenditures by \$4 million in the 1976 budget.<sup>22</sup>

**FIGURE 15**  
**PHILADELPHIA BUDGET POSITION**  
**EXPECTED TO IMPROVE**

Budget Caption	Estimated Obligation Basis 1976 (millions of dollars)	Budget Basis 1977 (millions of dollars)
City: Principal Operating Funds		
Revenues	\$821.1	\$1,103.4
Previous year surplus (deficit)	17.1	(73.3)
Expenditures	911.5	1,019.9
Surplus (deficit)	(73.3)	10.2
School District:		
General Fund		
Revenues	525.8	548.7
Previous year surplus (deficit)	(7.9)	(15.3)
Expenditures	533.2	600.0
Surplus (deficit)	(15.3)	(66.6)
Combined City and School District		
Revenues	1,346.9	1,652.1
Previous year surplus (deficit)	9.2	(88.6)
Expenditures	1,444.7	1,619.9
Surplus (deficit)	(88.6)	(56.4)

SOURCES: Prospectus for City of Philadelphia Water and Sewer Revenue Bonds, September 2, 1976, p. IV-13; adopted full-year budget for the School District of Philadelphia 1977, dated May 27, 1976.



These estimating errors, instead of offsetting one another as they frequently have in the past, added up to the biggest combined miscalculation in recent times (Figure 16).

Right now, the best guess is that Philadelphia will not make as much headway against its cumulative deficits as it expected to this year. The City's projected 1977 operating surplus appears to be shrinking enough to keep it from covering last year's deficit. Arbitrated wage increases for Police and Fire employees, along with only partially realized savings from overtime cuts, employee layoffs, and other developments, have taken a big bite out of the budgeted surplus. And a cumulative deficit of at least \$12 million appears more likely than the budgeted \$10-million surplus for the City's Principal Operating Funds. Down the street, the School Board's alternative budget—the full-year budget—generates an operating deficit of some \$51 million, which, when combined with the previous year's deficit, sums to a cumulative shortfall of \$67 million. Thus projected budget surpluses can turn into real-life

deficits, and small deficits can turn into big ones.

In short, the budgeted gains in the position of the City and the School District combined appear to be shrinking. The final result depends on whether the schools remain open for the full year, whether higher levels of government expand their allocations, and whether the City is able to hold the line at its budgeted expenditure levels. And only the final result counts! What can be done from this point forward?

### ALTERNATIVES FOR PHILADELPHIA

Philadelphia won't be able to maintain balanced budgets over the long run unless it raises more revenues or holds down expenditures or does a little of each. In order to raise more revenue, Philadelphia would have to collect more taxes locally itself or else depend on Federal and state tax allocations. And citizens are showing increased resistance to taxes, no matter who collects them.

But cutting expenditures may reduce the level of vital municipal services unless productivity is increased. No doubt there are places where increased City and School District expenditures have not been matched by improved services, where

<sup>22</sup>These misestimates apparently have both technical and political causes. See Moak, *The Future of American Cities*, pp. 49-50.

**FIGURE 16**  
**ESTIMATING ERRORS COMPOUND 1976 BUDGET WOES**  
 (Millions of Dollars)

Budget Caption	Estimate	Actual*	Effect on Surplus
Revenues	\$800.2	\$706.0	\$-94.2
Obligations	780.8	785.1	-4.3
Prior year surplus (deficit)	(19.4)	(7.5)	+11.9
Closing surplus (deficit)	0	(86.6)	-86.6

\*Preliminary figures.

SOURCE: Prospectus for City of Philadelphia Water and Sewer Revenue Bonds, September 2, 1976.

some fat could be trimmed. Yet there may be other departments where spending cuts would jeopardize services. Each of the alternatives outlined below has costs as well as benefits. The challenge for Philadelphia is to come up with a workable combination of these policy options to restore long-run fiscal health.

## RAISING REVENUES

If costs continue to rise, more revenues will be needed just to pay for the same level of service inputs. And if public demand for local government services increases, even more money will have to flow into public treasuries.

The City and School District can look for more revenue at home as well as in Harrisburg and Washington. On the local level they can try to increase the tax base, modify the tax structure, raise tax rates, levy new taxes, and charge users for services. On the state and Federal levels they can try to influence the way funds are distributed to municipalities.

**Growth in the Tax Base.** An expanding tax base would generate more revenue even if tax rates were left where they are.<sup>23</sup> Can Philadelphia anticipate such an expansion?

Prudent urban renewal investments by the City might encourage private rehabilitation of residential neighborhoods, as in Society Hill, and investing in transportation and utility facilities might attract businesses into town, as in the Center City redevelopment plan. In a built-up city like Philadelphia, there's little room for new development of open land, and so growth must come mainly from redevelopment and rehabilitation—neither of which is proceeding at a rapid pace.

Nor does the wage tax base seem likely

<sup>23</sup>But it also might encourage demand for public services.

to show much real growth.<sup>24</sup> Although employment, the cornerstone of wage taxes, is expected to rebound from its recessionary setback, it is unlikely to surpass its 1970 level in the foreseeable future. Wages per worker in the Philadelphia area are expected to continue the pattern of not growing much in excess of cost-of-living increases. A major breakthrough in labor productivity in the nonmanufacturing sector would be required to produce real wage increases exceeding price changes, but this sector just hasn't seen large productivity changes in the past. Nor is the inflation-adjusted level of other local revenues expected to increase much if population, employment, and the level of business transactions remain relatively constant.

So while Philadelphia's local revenue base may be expected to grow apace with the cost of living (as reflected by the market value of property, wages per worker, and business sales), there probably won't be enough growth beyond that to generate markedly higher revenues if current trends continue.

## Modifying the Tax Structure (and Improving Its Administration). A more

<sup>24</sup>Through its broad-based income tax, the City of Philadelphia has been able to tap some of the economic development in neighboring counties. Over the period 1970-76, revenues from the earnings tax paid by reverse commuters—individuals living in Philadelphia but working outside City boundaries—have contributed on average 10 percent of total wage and earnings tax revenues. In 1970, 29 percent of the people working in Philadelphia lived in the surrounding suburban counties. And these commuters generally earn more than their coworkers who live in the city. A weighted average of commuter and resident earnings suggests that commuters in 1970 took home 39 percent of wages earned in the city and contributed 35 percent of wage and earnings tax revenues. This left the people who both live and work in Philadelphia to shoulder about 55 percent of the City income tax levy.

For the income and commuter data see U.S. Department of Commerce, Bureau of the Census, *Census of Population: 1970, Subject Reports, Final Report PC(2)-6D, Journey to Work* (Washington: Government Printing Office, 1973).



efficient property assessment system—one which has assessments keeping up with market values—would help capture the nominal growth of the City's taxable base. Thirty-eight counties throughout the U.S., including Montgomery County outside Philadelphia, have instituted computer-aided appraisal procedures to facilitate annual reassessment.<sup>25</sup> Such an automated assessment system, by making it easier to keep assessment ratios equal, also might help ensure that the burden of property taxes would be distributed equitably.

Another way to enlarge the tax base is to revoke tax exemptions or mitigate their effects. In this time of fiscal pressure, it may be appropriate for cities that are impacted with nonprofit institutions and Federal and state offices to press more strongly for *in lieu* payments from at least some of these organizations.<sup>26</sup> Further, the City's personal property tax exempts stock in corporations that have facilities in the state of Pennsylvania, and the School District's tax on unearned income exempts interest on savings deposits and long-term capital gains. These exemptions could be dropped.

Different kinds of income and wealth are taxed at different rates. For example, the rate of the School District's tax on unearned personal income remained steady at

2 percent from 1968 to 1976, while the City's wage rate rose to 3 5/16 percent. These two income tax rates have been equalized at 4 5/16 percent in 1977. A disparity remains, however, in the wealth taxes levied by the City. Housing—which represents the principal kind of wealth for low-income and moderate-income families—already was taxed at an effective rate of almost 18 mills in 1975, before the 1977 rate increase.<sup>27</sup> Financial investments, which more frequently are held by high-income families, are taxed by the City at only 4 mills. Taxing both forms of wealth at the same or more nearly similar rates might generate more revenue in the short run, but it also might accelerate the exodus of higher income people to surrounding communities with more favorable tax structures.

**Higher Tax Rates.** A far less popular method for increasing locally raised revenue is raising the average individual's tax bill. Yet raising a tax rate is an attractive move for administrators because it's a simple and often broad-based way of generating a sizable sum of additional revenue. Philadelphia's recent decision to increase property and income tax rates by one-third, for example, is expected to generate \$162 million in additional revenue in 1977.

Many economists believe that businesses and residents are sensitive to changes in the tax rates of neighboring jurisdictions, especially if these differences are not associated with corresponding variations in public service quality. If the rate of tax on property, income, wealth, and business rises more rapidly in Philadelphia than in surrounding areas, City property values are likely to drop and wealthy individuals and businesses will tend to locate elsewhere. Thus intended

<sup>25</sup>For a description of the use of computerized multiple regression analysis in property appraisal, see George W. Gipe, "Understanding Multiple Regression Analysis," *Assessors Journal* 10, 4 (December 1975), pp. 1-13. It is reasonable to expect that the cost of setting up such a system for Philadelphia would be more than paid for in its first year of operation, especially if the first year saw high inflation. An increase in assessments reflecting a rise in market value of 6 percent would yield additional property tax revenues to the City and School District of over \$15 million in one year. This is well above the estimated cost of installing a computerized mass appraisal program.

<sup>26</sup>In 1976, the assessed value of tax-exempt property was reported by the Board of Revision of Taxes at \$2.3 billion or 41 percent of the value of taxable property.

<sup>27</sup>This equals the nominal tax rate of 47.75 mills times the 1975 average assessment ratio (36.9 percent) for a sample of residential properties (Figure 2). See *Real Estate Tax*, August 31, 1976, Exhibit IV.

gains in revenue from rate increases have to be balanced against obstacles to growth in the tax base over the long run.

**New Taxes.** Besides modifying its present tax structure, Philadelphia probably could raise money from new taxes on enterprises that can't pull out. In the past, the City has done this with parking lots and amusements, and the City's 1977 budget imposes a 1-year tax on petroleum processing.

Each of these nuisance taxes generates only a small amount of revenue and may be expensive to administer; but all together, business activity taxes contributed \$87 million (or 6 percent) of the 1976 combined City and School District revenues.

Some cities other than Philadelphia have taxes on general sales and tobacco products as well as on motor vehicle fuel, registration, and licenses. Any or all of these might be considered for Philadelphia, too—though some of them would require state legislative approval.

**User Charges.** Another way to generate revenue locally is to charge users of services. The idea here is to charge people who use a service for at least part of the cost of providing that service and not to charge those who do not use it. Charging for services tends to discourage people from accepting a service if they don't value the service at least as much as the charge for it. The City of Philadelphia already raises considerable revenues through such charges. There are charges for stadium, dock, and airport rentals, licenses, admission to some cultural and recreational facilities, court costs, traffic violations, and health care.

More charges could be instituted, and current fees could be raised. Higher tuition at the Community College, higher bus fares, higher parking charges, more charges for recreation facilities, income-graduated health care fees, and charges for special fire,

police, or emergency squad protection would help cover the costs of providing these services. Higher charges might tend, however, to discourage use of these services, even where, as in mass transportation, increased use might be more appropriate. Low user charges may be intended to subsidize low-income users; but there may be more efficient ways to provide subsidies. Thus, like the other alternatives, increasing user charges has its pros and cons.

**Intergovernmental Funding.** To the extent that some services were provided previously and funded by the locality, intergovernmental financing of these activities can mean considerable relief from local taxes—though maybe not for the state and Federal taxes of City taxpayers.

Economists agree that it's appropriate for a level of government higher than the municipality to finance some services—for example, where the benefits accruing from a service spill over to people who live outside the taxing jurisdiction. On these grounds the Federal government has stepped into urban renewal, law enforcement, and pollution control, and state allocations are used to finance public health care programs, court costs, and education.

Another case for financial assistance by a higher level of government has to do with services that are redistributive in nature, transferring income from some individuals to others to ensure equity in the delivery of services. If these expenditures were financed at a local level, higher income individuals would have a strong incentive to move to avoid the related tax and would be able to do so. The Federal government finances health care for the poor, and the state of Pennsylvania allocates direct welfare payments to the poor. There may be a case for more state and Federal financing of education, social services (including health and welfare), environmental programs and facilities, and law enforcement (including courts and prisons).



More responsiveness to rising costs on the part of Federal and state governments would help alleviate the fiscal pressure on local governments in an inflationary period. While the state's instructional subsidy program has grown somewhat to cover the increasing cost faced by the School District, the Federal Revenue Sharing program for the City has not risen with inflation.<sup>28</sup> Amending the unrestricted revenue sharing program to include an inflationary component would help maintain the real contribution of Federal relief. Further adjusting the program to include a countercyclical component would help local governments weather periods when local revenues lag because of economic recession.<sup>29</sup> And prompter payments of grants by higher levels of government would mitigate the need for short-term borrowing by local governments which now operate their budgets on an accrual basis.

When the spillover effects of certain services are limited geographically, regional financing may be the most suitable kind of intergovernmental funding. Regional financing has been used for public trans-

portation systems, pollution control projects and water systems, solid waste disposal and sewage treatment, recreation facilities, land use planning, and law enforcement. But organizing and enforcing financial contributions by benefiting neighbor jurisdictions may be the most difficult of all the revenue-raising alternatives suggested, since legal barriers are hard to overcome.

**Summary.** Without large real growth in the wage and property tax base or without an expanded flow of aid from the Federal and state levels, Philadelphia will have to reform and extend its local tax system to generate more revenue. Reforms and rate increases on the broad-based property and wage taxes are likely to yield the greatest increases in revenues. New taxes and user charges designed to have businesses and individuals pay more directly for some of the services they receive are likely to contribute only a small fraction of total revenue but may provide a pricing incentive for the more efficient production of public services and allocation of public resources.

Higher rates and new taxes would produce larger tax bills. The results of a study of 30 cities show that Philadelphians paid lower state and local taxes in 1974 than their counterparts in up to 10 other big cities of the U.S. But its state and local tax structure puts Philadelphia at a competitive disadvantage with at least 19 of the 29 other cities, many of which are small, still-developing cities in the South and West. Subsequent tax increases in Philadelphia may have worsened its position further. More taxes would aggravate this disadvantage (see Appendix IV).

## CONTROLLING EXPENDITURES

When taxpayer resistance grows and additional financial assistance is not forthcoming from higher levels of government, the alternative for achieving a balanced budget in the face of rising cost

<sup>28</sup>The state instructional subsidy does not have an explicit inflationary or countercyclical component. But the density component is related directly to the actual instruction expense per pupil and this rises with expenditures. The poverty component is based on the number of children whose families are on welfare. To the extent that this number reflects unemployment, the poverty component is sensitive to the business cycle.

<sup>29</sup>On September 30, 1977, the total national Federal Revenue Sharing program is expected to increase from its annual level of \$6.65 billion to \$6.85 billion—or about 3 percent. A 3-percent increase in Philadelphia's revenue sharing receipts would mean only an additional \$1.5 million.

Recent antirecessionary relief has come in the form of a public works job bill (S3201 signed by President Ford on October 12, 1976) which authorizes a total of \$3.95 billion through September 30, 1977. This is a one-time program with no provisions for future economic downturns.

pressures is to restrain the growth of total expenditures. Two main paths are available. One is cutting back certain functions. The other is reducing the cost of providing the same level of service through improved productivity.

**Fewer People, Fewer Expenses.** Philadelphia, like many other large cities in the Northeast, has fewer residents, fewer workers, and fewer school students than it did in 1970. While total expenditures have grown by 91 percent for the City and 86 percent for the School District since 1970, expenditures per resident and per pupil have grown even faster. Some would argue that a decline in population calls for a reduction in service volume and that expenditures should be cut accordingly across the board. This approach would pass the savings back to the taxpayers rather than spending the freed resources on extra services for those who remain.

In practice, however, the link of production costs to the level of population may not be proportional. How much should air and water port services and museum operations be cut back to reflect a declining City population? The solution may be more straightforward for schools, transit, and garbage collection. While trimming services in line with a declining population may not be appropriate for every department, there is room for some cost saving through flexible service delivery systems and responsive budgeting.

**Eliminate Functions.** Some would argue that the public sector has overextended itself in trying to provide services. This reasoning suggests that the private sector could accommodate the demand for many of the services now performed by government. Garbage collection, security patrol, and recreational facilities are services for which private purchase has been proposed. The New York crisis has made many people believe that a financially strapped city cannot afford to provide

services that some regard as luxuries. From this point of view, the beautification of parks, shopping areas, and public buildings, the provision of extracurricular programs for public school students, and tax support for community colleges are on the list to be reviewed for the appropriateness or urgency of public support. Choices become harder to make as revenue limitations become more acute. In selecting which services to maintain and which to cut, people have to weigh the tax savings that would come from dropping a service as well as the relative importance of different services.

**Increased Productivity.** When increasing costs threaten to drive the price of a product out of the market, private producers have a strong incentive to examine their method of production to cut costs. Taxpayer resistance and the movement of households and firms out of a jurisdiction which has high taxes and poor services offer analogous pressures for public-sector managers and officials.

Government activity and the private service sector of the economy have not received the same intensive analysis of production methods and efficiency as the manufacturing sector.<sup>30</sup> But rising public expenditures without any perceptible improvement in services, along with a fiscal pinch intensified by sluggish revenue growth, have focused attention on improved productivity as the most promising long-term solution for public budget woes. Productivity studies could be undertaken at the local level either directly by the City itself or by hired consultants. Government budgetmakers could assist productivity analysis by tying input costs to output measures. Management could

<sup>30</sup>An exception is *Personnel Administration in the City of Philadelphia: A 'Performance Report' on Selected Aspects of the Work of the Civil Service Commission and Personnel Department*, Pennsylvania Economy League Report No. 386, 1976.



contribute by rewarding changes in personnel and procedures that lead to greater efficiency.

Restraining the growth of the labor bill may be the most cost-effective policy to turn to, since producing local government services is a labor-intensive activity. Over 63 percent of the City of Philadelphia's 1976 General Fund expenditures and 73 percent of the School District's went to wages and employee benefits.

What can be done in this area? The City and School District might be able to hold the line with unions—insisting on productivity increases in exchange for increases in compensation.<sup>31</sup> They might institute incentives for improved management and worker efficiency or use high-priced labor more effectively by allocating some tasks to less trained, lower paid workers (police trained for patrol are not necessary to do office work, give parking tickets, or direct traffic). More paraprofessionals could be used in the health, legal, and educational functions.

Improved technology can assist workers and perhaps reduce personnel numbers. Some municipalities collect garbage by means of trucks which lift a standard-sized container. This collection system allows one truck driver to do the job that otherwise requires several garbage collectors. More sophisticated telecommunications may make police patrols more effective. Computers can assist property assessors, recordkeepers, and school teachers. Studies of other cities indicate that significant cost savings are possible over the long run from modernizing the methods of producing public services.<sup>32</sup> Why not Philadelphia?

<sup>31</sup>See Anthony M. Rufolo, "Local Government Wages and Services: How Much Should Citizens Pay?" *Business Review*, Federal Reserve Bank of Philadelphia, January/February 1977.

<sup>32</sup>For a summary of studies on New York City, see *Year 4: A Report to the People of the City of New York* (New York: Rand Institute, 1974).

Making a good choice among these alternatives will require that people be clear about what they want. Public expenditures are undertaken not for their own sake but to achieve some aim. Efficiency in achieving the aim, rather than past practice or traditional departmental responsibility, should guide the selection of programs. In the effort to reduce crime, for example, improved street lighting and youth employment programs might accomplish more than adding to the police force.

In many areas, also, citizens can help hold public spending down by assuming volunteer responsibilities. In some neighborhoods even now, for example, citizen cooperation in reporting suspicious incidents is raising the level of public safety for less money than it would cost to expand professional police activities.

These two lines of attack—choosing public programs to fit public aims and promoting good citizenship instead of just spending more—could add a new dimension to the public service picture.

**Summary.** Government expenditure savings may be in the offing in response to declines in population or if some City functions are returned to the private sector. But increased productivity probably offers the most hopeful long-run solution for trimming local government expenses. It is an agreeable alternative to the traditional unpleasant seesaw of higher taxes and reduced services. Its success, however, depends upon the insistence of taxpayers and the incentives for cooperation offered to public employees and managers.

## CONCLUSIONS

Recent deficits for Philadelphia's City and School District have their origins in past spending, taxing, and financing decisions. The City has adjusted by raising local taxes and holding the line on real expenditures in departments that don't

receive funding from intergovernmental sources. These actions have returned the City's 1977 budget to surplus, though the surplus will not cover the large deficits from previous years. But the fiscal 1977 budget for the School District gets only a minimal boost on the revenue side from tax increases. Thus, despite spending restraint in some departments, the School District deficit continues to grow. Only severe expenditure cutting or increased contributions by the Commonwealth or City can bring balance to the current School District budget.

For the longer run, the underlying deficit pressures—sluggish local revenue sources, rising costs, and a high density of low-

income residents—remain. But there are options available to raise revenues and control expenditures. The fiscal health of this city requires progress on many fronts. A mix of higher tax rates, new taxes, and more user charges would add to Philadelphia's locally raised revenues. And other levels of government could be pushed to share more of their revenue with the City or to assume financial responsibility for current local programs. To cut expenditures, officials could turn some services back to the private sector and cut back, where possible, in response to a reduced population. But most attractive of all is the reduction of costs through innovative methods to improve worker productivity.



# APPENDICES



## APPENDIX I

### PHILADELPHIA CITY AND SCHOOL DISTRICT REVENUES

**FIGURE I.1**  
**CITY OF PHILADELPHIA**  
**Selected Fund Revenues\***  
**(Millions of Dollars)**

Revenue Source	1970	1973	1974	1975	1976	1977
<b>Local</b>						
Property Tax†	\$112.3	\$124.7	\$108.6	\$107.9	\$110.1	\$180.5
Personal Income Tax‡	196.7	257.2	286.2	285.1	296.5	407.8
Business Activity Taxes§	44.9	51.0	52.7	54.5	57.0	82.3
Local Nontax Revenue	71.0	93.8	105.2	107.7	114.8	135.0
<b>Total Local</b>	<b>424.9</b>	<b>526.7</b>	<b>552.7</b>	<b>555.2</b>	<b>578.4</b>	<b>805.6</b>
<b>Intergovernmental¶</b>						
<b>Federal</b>						
Revenue Sharing	—	67.9	51.1	52.2	51.1	51.1
Other Federal**	35.2	80.5	90.3	116.7	129.8	228.2
Commonwealth††	35.5	97.8	84.2	112.3	119.1	134.4
Other‡‡	2.0	3.3	1.8	4.3	2.2	3.9
<b>Total Intergovernmental</b>	<b>70.7</b>	<b>249.5</b>	<b>227.4</b>	<b>285.5</b>	<b>302.2</b>	<b>417.6</b>
<b>Total</b>	<b>495.6</b>	<b>776.2</b>	<b>780.1</b>	<b>840.7</b>	<b>880.6</b>	<b>1,223.2</b>

\*Selected funds include the General Fund, County Liquid Fuels Tax Fund, Pier Maintenance Fund, and Special Gasoline Tax Fund for all years. Other selected funds are: in 1970 the Model Cities-Program Fund, Neighborhood Development Fund, and Office of Economic Opportunity Fund; in 1973 and thereafter the Grants Revenue Fund; in 1974 and thereafter the Aviation Fund; in 1976 and 1977 the Bicentennial Fund, Community Development Fund, and the Traffic Court share of the Parking Facilities Fund. Excluded in all years are the Enterprise Funds, Sewer Fund, and Water Fund.

†Real estate tax and personal property tax.

‡Wage tax and earnings tax.

§Mercantile license tax, net profits tax, real property transfer tax, miscellaneous taxes such as those on amusements, auctions, bowling alleys, and parking lots.

||Licenses, fines, service charges, other revenues; revenue from City-owned leased utilities; reimbursement for debt service; park, civic center, and sports stadium revenues; Aviation Fund revenues; Pier Maintenance Fund revenues; adjustment for interfund transfers; and Traffic Court share of Parking Facilities Fund (1976 and 1977 only).

¶Received through the County Liquid Fuels Tax Fund, General Fund, Grants Revenue Fund, Special Gasoline Tax Fund; and the Bicentennial Fund and Community Development Fund (1976 and 1977 only).

\*\*Redevelopment Authority funds in 1970 (\$16.1 million), 1973 (\$20.4 million), 1974 (\$22.0 million), 1975 (\$21.7 million) added for comparability with 1976 and 1977; in 1970 \$13.4 million from Model Cities Fund, Neighborhood Development Fund, and Office of Economic Opportunity Fund. These last three funds, though special funds rather than operating funds, are included here because large portions of these revenues were shifted to the Grants Revenue Fund beginning in 1972.

††Commonwealth grants and combined U.S. and Commonwealth grants.

‡‡Payments from other government agencies such as Philadelphia Housing Authority and Philadelphia Redevelopment Authority.

SOURCES: *Annual Report of the Director of Finance of the City of Philadelphia* 1970, 1973, 1974, 1975, 1976; *City of Philadelphia, Mayor's Fiscal 1977 Operating Budget and Programs*; U.S. Bureau of the Census, *City Government Finances, 1969-70, 1972-73, 1973-74, 1974-75*.



**FIGURE I.2**  
**SCHOOL DISTRICT OF PHILADELPHIA**  
**General Fund Revenues\***  
**(Millions of Dollars)**

Revenue Source	1970	1973	1974	1975	1976	1977
Local						
Property Tax†	\$95.2	\$105.1	\$127.8	\$144.9	\$149.7	\$158.2
Personal Income Tax‡	7.5	8.3	8.4	8.7	8.5	12.3
Business Activity Taxes§	28.8	29.2	28.7	29.6	29.5	29.6
Local Nontax Revenue¶	1.7	7.4	8.1	5.1	5.1	4.0
Special Payments¶¶	—	12.0	—	5.4	7.5	8.0
Total Local	133.2	162.0	173.0	193.7	200.3	212.0
Intergovernmental**						
Federal	6.0	5.0	5.0	4.7	9.6	9.6
Commonwealth††	140.0	210.7	214.5	263.5	314.6	327.1
Total Intergovernmental	146.0	215.7	219.5	268.2	324.2	336.7
Total	279.2	377.7	392.5	461.9	524.5	548.7

\*Since 1974 includes Intermediate Unit.

†Current and delinquent real estate taxes.

‡Nonbusiness income tax and pari-mutuel taxes.

§General business tax, corporate net income tax, and rental occupancy tax.

¶ Payments in lieu of taxes, public utilities tax, interest on temporary investments, personal property tax, and miscellaneous revenues.

¶¶ Grant from City in 1973; payment from Cafeteria Fund in 1975 and thereafter.

\*\*Federal grants and funds from the Commonwealth directly as well as indirectly through the Intermediate Unit. Act 194 and 195 nonpublic school programs and Categorical Grants Fund excluded in all years.

††Since 1974 includes Intermediate Unit funds listed separately.

SOURCES: School District of Philadelphia, *Summary of the Proposed Operating Budget* for fiscal years beginning July 1, 1971, 1974, 1975, and 1976; adopted operating budget for 1977 dated May 27, 1976.

## APPENDIX II

# PHILADELPHIA CITY AND SCHOOL DISTRICT EXPENDITURES: NOMINAL AND REAL DOLLARS

### THE DEFLATOR LINKS NOMINAL TO REAL DOLLARS

Nominal or current-dollar measures of expenditures balance or break the budget in any given fiscal year, but it is useful to be able to compare expenditures across time discounting the impact of price changes. A common method of adjusting for price changes is dividing current-dollar figures by a price deflator. These price-adjusted expenditure figures—real expenditures or constant-dollar expenditures—are expressed with reference to the price level in a base year. In this study, the base year is 1970.

Figures II.2, 3, and 4 present three views of expenditures for the City of Philadelphia: nominal dollars, deflators, and real dollars. Figures II.5, 6, and 7 present the nominal expenditures, deflators, and real expenditures for the School District of Philadelphia. The data are presented by major expenditure elements for six fiscal years, 1970 and 1973 through 1977.

### METHOD OF CONSTRUCTING DEFLATORS

A product's price deflator is the weighted average of the price changes for the inputs required to produce it—labor, goods, and services. In constructing deflators for the City and School District, the budgets of the major expenditure elements are divided into three appropriation groups: wages and employee benefits, purchases of goods and services, and payments to debt service. Indexes of price change are estimated for all three appropriation groups, and weighted averages are calculated for their indexes: each index is multiplied by the fraction of expenditures its appropriation represents in an expenditure element, and these products are summed. See Figure II.1 for expenditure element weights and the Box in the text for corresponding price indexes.

The basic formula for calculating the deflator is:

$$\text{Deflator} = (\text{Wage Weight} \times \text{Wage Index}) \\ + (\text{Services Weight} \times \text{Services Index})$$

$$+ (\text{Materials Weight} \times \text{Materials Index}) \\ + (\text{Equipment Weight} \times \text{Equipment Index}).$$

The value of a price index or deflator may be interpreted as a percentage with the base value in the series (in this case the 1970 value) equal to 100 percent. An index with a 1976 value of 150 with a base of 1970 = 100 says that what used to cost \$100 in 1970 costs \$150 in 1976. See Figure II.3 for the City deflators and Figure II.6 for the School District deflators by expenditure element.

### DEFINITIONS AND SOURCES OF PRICE INDEXES

The individual price indexes used for the appropriation groups and the other special expenditure elements come from a variety of sources.

**Overall Deflators.** The overall deflators for the City and School District budgets are calculated by dividing the total nominal expenditures by the sum of the real expenditure estimates for the individual expenditure elements.<sup>1</sup>

**Wage and Employee Benefits Deflators.**<sup>2</sup> Average salaries were calculated for each year, 1973 through 1976. Unless otherwise noted, the wage indexes for 1976 were used for 1977, consistent with the assumption, incorporated into the published budgets, that wages would not be

<sup>1</sup>The overall school expenditure index for 1973 was used as the deflator for the City's Special Payment to the School District in that year (Figure II.6).

The School District's Undistributed Items and Refunds deflator was calculated for each year by taking the sum of nominal expenditures for the five education elements, plant operations and maintenance, and administration and support, and dividing it by the sum of real expenditures for these seven elements.

<sup>2</sup>Bureau of Labor Statistics, Middle East Region, *Philadelphia Municipal Employees, Compensation Chronology, 1953-1971*, Regional Report No. 3, November 1971; *Philadelphia Municipal Employees, Compensation Chronology* (Supplement No. 2), Report No. 15, November 1974.



increased. All salary series were indexed to their 1970 base values. The wage and salary indexes were used for the personal services component found in the individual expenditure elements shown in Figure II.1. They were used also in deflating the Pensions and Employee Benefits elements whose expenditure requirements often are proportional to wages.

Two wage indexes were used for the City—one for uniformed workers (police and firemen) and one for nonuniformed workers. The City Employee Benefits deflator is a weighted average of these two indexes. The price index for uniformed City employees is the average of the maximum and minimum pay for a police patrolman. The same index is used for both police and firemen, whose salaries are negotiated together. The price index for nonuniformed City employees is based on a weighted average of the 1976 average salaries for District Councils 33 and 47, the two unions that negotiate for the City's nonuniformed workers. The corresponding salaries for earlier years were derived from the standard negotiated wage increases for each union.

A single wage index was generated for the School District. An average salary for school employees was derived for each year by weighting the salaries for five typical positions by their shares of 1976 School District employment.<sup>3</sup> If a raise took effect in the course of the school year, a weighted average of the two salary levels was used. For 1977, the only raises incorporated into the budget, and consequently into the wage index, were the provisions for the second year of the custodial workers' 2-year contract.

**Deflators of Goods and Services.** The deflators used in the national income accounts for state and local government purchases of services, nondurable goods, and durable goods, were

taken as price indexes for purchase of services, materials and supplies, and equipment, respectively. Quarterly series were used to calculate indexes for each year 1973 through 1976.<sup>4</sup> Following the projections of price increases by the major econometric models of the U.S. economy, the 1976 indexes were increased by 6 percent to provide estimates for 1977.

**Philadelphia Consumer Price Index.** The Philadelphia CPI provides a measure of the overall trend in costs in the local economy. It was used as the deflator for the City's Debt Service and its Special Payment to the Parking Fund (1977).<sup>5</sup> For the School District, the local CPI was used to deflate Debt Service and Insurance and the Advance Funding Payback.

### CITY BUDGET DATA

City data for 1977 are not strictly comparable with data for earlier years for two reasons: (1) The budget includes maximum expected receipts and expenditures from grants from other governmental units to ensure that the Director of Finance will not have to ask Council to raise the budgeted ceiling on expenditures during the year. (2) A large proportion of the Grants Revenue Fund and Community Development Fund is budgeted to administrative offices which apportion it among the various City departments during the year; these expenditures then appear under the spending agencies in the Finance Director's report. The most important example of this is the CETA (Comprehensive Employment and Training Act) funds which were included in the proposed budget for the Commerce Department through 1976 and for the Managing Director in 1977. Actual expenditure figures in previous Finance Director's reports suggest that, in practice, these funds will be spent by many different agencies.

<sup>3</sup>The positions used were (1) Secretary II, twelve month, Step 7 (previously Step 5); (2) Principal, Class 5, Step 5; (3) Nonteaching Assistant I, ten month, Step 5; (4) Custodial Worker, pay grade 119, twelve month, Step 2; and (5) Teacher, bachelor's degree, Step 10.

<sup>4</sup>*Survey of Current Business*, 56, 1, Part II (January 1976), pp. 65ff., updated by the Department of Commerce by telephone.

<sup>5</sup>U.S. Department of Labor, Bureau of Labor Statistics, Mideast Regional Office, "The Consumer Price Index for Urban Wage Earners and Clerical Workers," issues for January 1970-September 1976.

**FIGURE II.1**  
**WEIGHTS USED IN CALCULATING DEFLATORS FOR 1976\***

Expenditure Element	Fraction of 1976 Expenditures Going to			
	Personal Services (Wages)	Purchase of Services	Materials & Supplies	Equipment
<b>City</b>				
General Government	.418	.540	.035	.006
Police	.944	.011	.042	.003
Health	.511	.425	.060	.004
Welfare	.429	.520	.051	—
Streets	.738	.186	.072	.004
Courts	.789	.189	.016	.005
Fire	.962	.002	.022	.014
Recreation and Culture	.792	.107	.092	.008
Urban Development	.141	.856	.003	—
<b>School District</b>				
Early Childhood	.699	.272	.029	—
Elementary	.964	.003	.033	—
Junior High & Middle	.962	.008	.030	—
Senior High & Technical	.940	.017	.043	—
Special Education	.584	.391	.026	—
Plant Operation & Maintenance	.633	.068	.298	—
Administration & Support	.651	.164	.186	—

\*The City and School District budgets both have eight appropriation classes. In the present study, only the four largest City classes are considered in calculating weights—personal services (wages and salaries), purchase of services (from business firms or other governmental units), materials and supplies, and equipment. For the School District, only the first three classes are considered here. Contracted services for the School District include scholarships and the local share of Federal programs; materials and supplies include equipment as well as books. The expenditure figure used as the base for the percentage calculations is the sum of only these four (City) or three (School District) appropriation classes

rather than the total of expenditures listed in the budget.

SOURCES: City weights for 1973-76 based on *Annual Report of the Director of Finance of the City of Philadelphia* for each year; weights for 1977 based on City of Philadelphia, *Supporting Detail for Fiscal 1977 Operating Budget*. School District weights for 1973-75 based on data from School District of Philadelphia, *Summary of the Proposed Operating Budget for fiscal years beginning July 1, 1971, 1974, 1975, and 1976*. Weights for 1976 and 1977 based on data from the adopted operating budget for 1977, dated May 27, 1976.



**DEFINITION OF CITY EXPENDITURE ELEMENTS**

The City budget agencies (as used in the annual reports of the Director of Finance) included in each of the Federal Reserve's expenditure elements are listed below. Not all of these agencies appear in every financial report.

General Government: Council, Mayor's Office, Managing Director, Public Property, Art Commission, Licenses and Inspections, Board of Licenses and Inspections Review, Board of Building Standards, Zoning Board of Adjustment, Records, Philadelphia Historical Commission, Office of Director of Finance, Bicentennial, Revenue (formerly Collections), Procurement, Tax Review Board, City Treasurer, City Representative, Commerce, Philadelphia Civic Center, Law, City Planning Commission, Committee on Human Relations, Civil Service, Personnel Director, Auditing, Board of Revision of Taxes, City Commissioners, Fair Housing, Emergency Snow Removal, Fire Loss, Hero Award, Scholarships, Indemnities, Wage and Welfare Adjustment, Information and Complaints, Office of Civil Defense, Economic Development Unit, Development Coordinator.

Police: Police.

Health: Public Health, Philadelphia General Hospital, Advance for Hospital Authority.

Welfare: Public Welfare, Philadelphia Prisons, Riverview, Youth Study Center.

Streets: Streets, Water.

Courts: Clerk of Quarter Sessions, Register of Wills, District Attorney, Sheriff, Traffic Court, Common Pleas and Municipal Courts, Commonwealth Court, Supreme and Superior Courts, Defender Association.

Fire: Fire.

Recreation and Cultural Services: Recreation, Fairmount Park, Atwater Kent Museum, Camp William Penn, Philadelphia Free Library, American Flag House and Betsy Ross Memorial, Community College.

Urban Development: Philadelphia Anti-Poverty Action Commission, Model Cities, Philadelphia Redevelopment Authority, Urban Homestead.

Debt Service: Capital Budget Financing, Sinking Fund Commission.

Pensions and Employee Benefits: Employees' Disability Benefits and Workmen's Compensation Payments, Employees' Welfare Plan, Board of Pensions and Retirement, Social Security.

# NOMINAL ÷ DEFLATOR

FIGURE II.2

**CITY OF PHILADELPHIA**  
Selected Fund  
Nominal Expenditures\*  
(Millions of Dollars)

Expenditure Element	1970	1973	1974	1975	1976	1977
General Government	\$68.6	\$97.8	\$106.6	\$147.2	\$178.3	\$255.9
Police	85.2†	126.7	130.7	143.3	149.0	161.0
Health	45.2	79.8	78.1	86.3	97.7	99.8
Welfare	41.0	56.2	57.3	62.7	79.8	75.2
Streets	47.8	66.1	60.6	72.3	81.9	71.7
Courts	23.3	44.6	48.4	52.9	61.1	63.3
Fire	30.0	39.9	41.4	47.8	51.6	52.6
Recreation and Culture	29.2	39.5	39.7	46.6	54.9	54.5
Urban Development‡	29.8	43.4	37.5	37.0	29.8	57.3
Debt Service	59.4	80.0	83.3	84.9	93.8	125.8
Pensions and Employee Benefits	42.2	84.8	85.6	90.6	80.8	113.1
Special Payments§	—	12.0	—	—	—	7.1
Total	501.7	770.8	769.2	871.6	958.7	1,137.3

FIGURE II.3

**CITY OF PHILADELPHIA**  
Deflators  
(1970 = 100)

Expenditure Element	1973	1974	1975	1976	1977
General Government	125.6	132.5	141.1	153.1	158.4
Police	132.1	138.8	151.1	163.2	163.8
Health	125.2	132.5	141.2	154.3	158.9
Welfare	124.8	132.3	141.3	153.5	158.9
Streets	126.2	132.8	140.8	156.4	159.1
Courts	127.1	133.3	140.3	156.0	158.0
Fire	132.5	139.1	151.1	163.1	163.6
Recreation and Culture	126.8	133.3	141.3	157.1	159.5
Urban Development	123.2	131.7	141.1	150.4	158.2
Debt Service	114.3	125.4	139.2	148.0	156.9
Pensions and Employee Benefits	129.9	136.0	144.0	159.7	159.7
Special Payments	117.1	—	—	—	156.9
Total	126.0	133.4	143.3	155.9	159.4



## REAL

FIGURE II.4  
CITY OF PHILADELPHIA  
Selected Fund  
Real Expenditures  
(Millions of Dollars)

Expenditure Element	1970	1973	1974	1975	1976	1977
General Government	\$68.6	\$77.9	\$80.5	\$104.3	\$116.5	\$161.6
Police	85.2	95.9	94.2	94.8	91.3	98.3
Health	45.2	63.7	58.9	61.1	63.3	62.8
Welfare	41.0	45.0	43.3	44.4	52.0	47.3
Streets	47.8	52.4	45.6	51.3	52.4	45.1
Courts	23.3	35.1	36.3	37.7	39.2	40.1
Fire	30.0	30.1	29.8	31.6	31.6	32.2
Recreation and Culture	29.2	31.2	29.8	33.0	34.9	34.2
Urban Development	29.8	35.2	28.5	26.2	19.8	36.2
Debt Service	59.4	70.0	66.4	61.0	63.4	80.2
Pensions and Employee Benefits	42.2	65.3	62.9	62.9	50.6	70.8
Special Payments	—	10.2	—	—	—	4.5
Total	501.7	612.0	576.2	608.3	615.0	713.3

\*For a list of the funds used in compiling these data, see Figure I.1, note \*.

Certain interfund obligation transactions have been subtracted from obligations to avoid double counting. These are the instances in which the Grants Revenue, Aviation, County Liquid Fuels, or Special Gasoline Tax funds were charged for service and the General Fund was credited with revenue.

†Fairmount Park Patrol expenditures of \$5.3 million have been shifted from Recreation (under the Fairmount Park Commission) to Police in order to make 1970 comparable with succeeding years.

‡See Figure I.1, note \*\* for details on adjustments

required by the exclusion of Redevelopment Authority funds in 1970, 1973, 1974, and 1975 and special funds in 1970. Amounts equal to those added to Other Federal revenues have been added to Urban Development.

§In 1973, a payment was made to the School District. For 1977, a payment is budgeted from the General Fund to the Parking Fund.

SOURCES: Data for 1970, 1973, 1974, 1975, and 1976 are from the *Annual Report of the Director of Finance of the City of Philadelphia* for each of those years. Data for 1977 are from City of Philadelphia, *The Mayor's Fiscal 1977 Operating Budget and Programs*. Figures calculated by Federal Reserve Bank of Philadelphia.



NOM

**FIGURE II.5**  
**SCHOOL DISTRICT OF PHILADELPHIA**  
 General Fund  
 Nominal Expenditures  
 (Millions of Dollars)

Expenditure Element	1970	1973	1974	1975	1976	1977*
<b>Education</b>						
Early Childhood	\$6.0	\$7.5	\$7.8	\$8.2	\$10.4	\$10.3
Elementary	66.6	69.2	78.4	92.0	105.2	108.9
Junior High & Middle	37.3	38.8	49.6	51.7	53.4	54.6
Senior High & Technical	47.7	45.3	59.3	66.4	79.3	84.6
Special Education†	13.4	15.0	20.6	25.4	29.5	29.6
Education total	171.0	175.8	215.7	243.7	277.8	288.0
<b>Overhead</b>						
Plant Operations & Maintenance‡	28.1	39.9	45.6	57.6	67.5	66.4
Administration & Support§	34.7	37.1	42.6	57.1	65.1	66.4
Debt Service & Insurance	29.5	56.0	56.4	55.3	48.0	50.0
Advance Funding Payback	—	—	—	14.4	15.9	57.7
Employee Benefits¶	18.9	27.0	32.6	42.1	52.2	60.7
Undistributed Items & Refunds	0	4.4	0.6	0.4	0.4	5.7
Overhead total	111.2	164.4	177.8	226.9	249.1	306.9
<b>Total</b>	<b>282.3</b>	<b>340.1</b>	<b>393.0</b>	<b>470.7</b>	<b>526.5</b>	<b>594.9</b>

**FIGURE II.6**  
**SCHOOL DISTRICT OF PHILADELPHIA**  
 Deflators  
 (1970 = 100)

Education Element	1973	1974	1975	1976	1977
<b>Education Elements</b>					
Early Childhood	119.3	128.6	133.9	144.4	148.0
Elementary	117.7	125.4	132.7	142.4	144.7
Junior High & Middle	117.8	125.4	132.7	142.4	144.8
Senior High & Technical	117.8	125.4	132.8	142.8	145.2
Special Education	118.2	125.7	136.1	145.3	145.4
Education total	117.8	125.4	133.1	142.7	145.0
<b>Overhead</b>					
Plant Operations & Maintenance	117.0	134.2	138.3	148.6	152.8
Administration & Support	117.9	125.8	137.0	147.1	149.1
Debt Service & Insurance	114.3	125.4	139.2	148.0	156.9
Advance Funding Payback	—	—	—	—	156.9
Employee Benefits	117.9	125.2	131.9	141.7	143.7
Undistributed Items & Refunds	117.1	126.3	134.9	144.5	147.2
Overhead total	116.3	127.5	137.1	146.6	151.3
<b>Total</b>	<b>117.1</b>	<b>126.2</b>	<b>134.9</b>	<b>144.8</b>	<b>148.2</b>



# INFLATION ÷ DEFLATOR = REAL

FIGURE II.7  
SCHOOL DISTRICT OF PHILADELPHIA  
General Fund  
Real Expenditures  
(Millions of Dollars)

Expenditure Element	1970	1973	1974	1975	1976	1977
Education						
Early Childhood	\$6.0	\$6.3	\$6.1	\$6.1	\$7.2	\$7.0
Elementary	66.6	58.8	62.5	69.3	73.9	75.3
Junior High & Middle	37.3	32.9	39.6	39.0	37.5	37.7
Senior High & Technical	47.7	38.5	47.3	50.0	55.5	58.3
Special Education	13.4	12.7	16.4	18.7	20.6	20.3
Education total	171.0	149.2	171.9	183.1	194.7	198.6
Overhead						
Plant Operations & Maintenance	28.1	34.1	34.0	41.6	45.4	43.5
Administration & Support	34.7	31.5	33.9	41.7	44.3	44.5
Debt Service & Insurance	29.5	49.0	45.0	39.7	32.4	31.9
Advance Funding & Payback	—	—	—	10.3	10.7	36.8
Employee Benefits	18.9	22.9	26.0	31.9	36.8	42.2
Undistributed Items & Refunds	—	3.8	0.5	0.3	0.3	3.9
Overhead total	111.2	141.3	139.4	165.5	169.9	202.8
Total	282.3	290.5	311.3	348.6	363.6	401.4

\*Budget for full-year operation.

†Administrative costs of special education deducted and assigned to administration and support.

‡Plant operation and maintenance has been reported as school facilities since 1974.

§Field operations, school services, career education, instructional services (curriculum and instruction), transportation, superintendent, administrative services, municipal services, services for other funds, subsidy to the cafeteria fund, and administration of special education.

||Owed to Commonwealth in repayment of advance

funding for Special Education and, for 1977, Vocational Education as well.

¶All employee benefits expenditures generally distributed by the separate functions in the School District budget, including payments to the Pennsylvania Employees Retirement System and to Social Security as well as other employee benefits.

SOURCES: School District of Philadelphia *Summary of the Proposed Operating Budget* for fiscal years beginning July 1, 1971, 1974, 1975, 1976; adopted operating budget for 1977 dated May 27, 1976. Figures calculated by Federal Reserve Bank of Philadelphia.



## APPENDIX III

### CITY AND SCHOOL DISTRICT OF PHILADELPHIA EMPLOYMENT PATTERNS

**FIGURE III.1**  
**CITY OF PHILADELPHIA**  
**Number of Full-Time Employees by Expenditure Element\***

Expenditure Element	January 31, 1970	June 29, 1973	March 22, 1974	June 22, 1975	January 18, 1976
General Government	4,616	4,734	4,480	4,848	4,885
Police	8,187	8,981	9,200	9,264	9,089
Health	3,966	3,931	3,795	3,777	3,726
Welfare	1,858	2,129	2,078	2,445	2,410
Streets	4,107	4,549	3,972	4,855	4,702
Courts	2,410	3,376	3,403	3,429	3,447
Fire	3,064	3,058	2,939	3,236	3,138
Recreation and Culture	2,431	2,501	2,329	2,562	2,508
Urban Development	— †	325	324	319	319
Debt Service	1	1	1	1	1
Pensions and Employee Benefits	22	21	20	20	21
Total	30,662†	33,606	32,541	34,756	34,246

\*Full-time employees include permanent and interim employees for 1975 and 1976. For 1970, only permanent employees paid by the General Fund are included; for 1973 and 1974, permanent employees paid by the General Fund, Aviation Fund, Parking Facilities Fund, Regulation 32, and Capital and Print Shop Fund are included, along with "interim full-time filled positions under full funding grants."

†Figures not available for 1970 employment expenditures by Model Cities Fund, Neighborhood Development Fund, Office of Economic Opportunity Fund, and noncapital portion of Redevelopment Authority funds. These

omissions affect both Urban Development and total calculation.

SOURCES: *Trend of Philadelphia Municipal Employment ...*, Pennsylvania Economy League Report No. 356, April 1970; City of Philadelphia, Office of the Director of Finance, "Trends in Full-Time Permanent Employment, Selected Years 1956-1974," May 1975; Office of the Director of Finance, "Summary of Filled Positions of Employment of the City of Philadelphia for Payroll Periods Ending December 26, 1971, June 22, 1975 and January 18, 1976 by Fund," March 1, 1976.



**FIGURE III.2**  
**SCHOOL DISTRICT OF PHILADELPHIA**  
**Pupils and Staff by Education Element\***

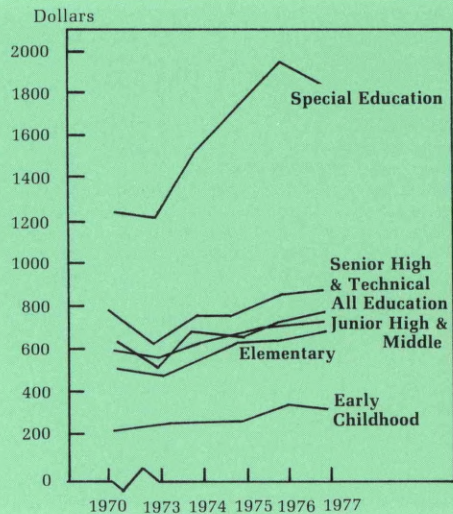
Education Element	1970	1973	1974	1975	1976	1977
<b>Early Childhood</b>						
Pupils	25,200	23,300	22,600	22,500	22,300	22,000
Staff	514	434	429	554	546	539
Pupils per Staff	49	54	53	41	41	41
<b>Elementary</b>						
Pupils	126,100	119,900	114,200	109,100	112,000	108,200
Staff	6,385	5,634	5,802	6,637	7,322	7,229
Pupils per Staff	20	21	20	16	15	15
<b>Junior High &amp; Middle</b>						
Pupils	59,700	62,600	59,900	58,800	51,900	50,500
Staff	3,654	3,845	3,656	3,665	3,521	3,451
Pupils per Staff	16	16	16	16	15	15
<b>Senior High &amp; Technical</b>						
Pupils	62,300	63,100	64,400	65,500	66,300	66,800
Staff	3,702	3,761	3,947	4,189	4,573	4,690
Pupils per Staff	17	17	16	16	14	14
<b>Special Education</b>						
Pupils	10,800	10,500	10,800	10,600	10,600	11,100
Staff	1,314	1,405	1,892	1,851	2,340	3,021
Pupils per Staff	8	7	6	6	5	4
<b>All Education</b>						
Pupils	284,100	279,400	272,900	267,500	263,100	258,700
Staff	15,569	15,079	15,726	16,896	18,302	18,930
Pupils per staff	18	19	17	16	14	14

\*Pupils enrolled in November of the fiscal year to nearest hundred and School District teaching and non-teaching staff allocated by education element.

SOURCES: Budget Office, School District of Philadelphia; *Proposed Operating Budget* for each succeeding year.

**FIGURE III.3**  
**SCHOOL DISTRICT OF PHILADELPHIA**  
**REAL EXPENDITURES PER PUPIL**  
**BY PROGRAM**

SOURCE: Budget Office, School District of Philadelphia.





## APPENDIX IV

### HOW PHILADELPHIA TAXES COMPARE

The feasibility of raising tax rates in one city depends in part on the size of the tax burden in other cities. The Finance Department of the City of Washington has estimated the 1974 combined state and local tax burdens of hypothetical families in the nation's 30 largest cities.<sup>1</sup> According to these estimates, a Philadelphia family of four with an annual income of \$15,000 paid less tax than comparable families in seven other cities.<sup>2</sup> Such a family paid approximately 10.4 percent of its income to the major state and local taxes—property, income, sales, and auto.<sup>3</sup>

While the Philadelphia 1974 tax burden was well above that in Denver, Houston, and Jacksonville, among others, it was only slightly above the 30-city average reflected by Pittsburgh. It was below the average for such other large cities as Boston, New York, and Los Angeles. Rate increases for 1977 raise this Philadelphia family's tax bill from \$1,555 to \$1,871, or from 10.4 to 12.5 percent of its income.<sup>4</sup> If taxes elsewhere had remained unchanged, Philadelphia's 1977 tax bills still would be below those of Boston, Milwaukee, New York, and Buffalo.

The composition of Philadelphia's revenues is not typical. According to the Washington study, Philadelphians pay relatively low property taxes—much less than the 30-city average and about as little as the residents of Denver and Houston; even at this, the Washington study may have overestimated the property tax bite on Philadelphians.<sup>5</sup> Further, sales and auto taxes are lower in Pennsylvania than in any of the other states represented. And, finally, the combined state and City income taxes paid by Philadelphia residents are the highest of all the cities sampled. They were more than twice the 30-city average even at the 1974 tax rates. For Philadelphians, then, lower property taxes appear to have been offset by higher income taxes (Figure IV.1).

<sup>1</sup>*Tax Burdens in Washington, D. C. Compared with Those in the Nation's Thirty Largest Cities, 1974*, District of Columbia, Department of Finance and Revenue, February 1976.

<sup>2</sup>*Tax Burdens in Washington*, Table A, p. 24. For the \$15,000 income example, Philadelphia ranked eighth behind Boston, Milwaukee, New York, Buffalo, Los Angeles, Chicago, and Baltimore. The \$15,000 case was selected from among several examples as being the closest to the estimate of Philadelphia's median family income in 1974.

Philadelphia's ranking drops to ninth for the \$20,000 case and to eleventh for the \$30,000 and \$40,000 examples. It rises to sixth and seventh for the \$10,000 and \$5,000 cases, respectively. This suggests that the state and local property tax system in Philadelphia is slightly more regressive than in other places with closely comparable tax burdens. (A regressive tax system is one in which taxes take a larger fraction from lower incomes than from higher ones.) Among all 30 cities, however, Philadelphia ranked as having the thirteenth most progressive tax system. See *Tax Burdens in Washington*, Table I, p. 33.

<sup>3</sup>Federal taxes are assumed to be levied equally throughout the country and consequently do not affect the analysis of tax

differences. The division of state and local responsibilities for the financing of certain services, however, may vary across states.

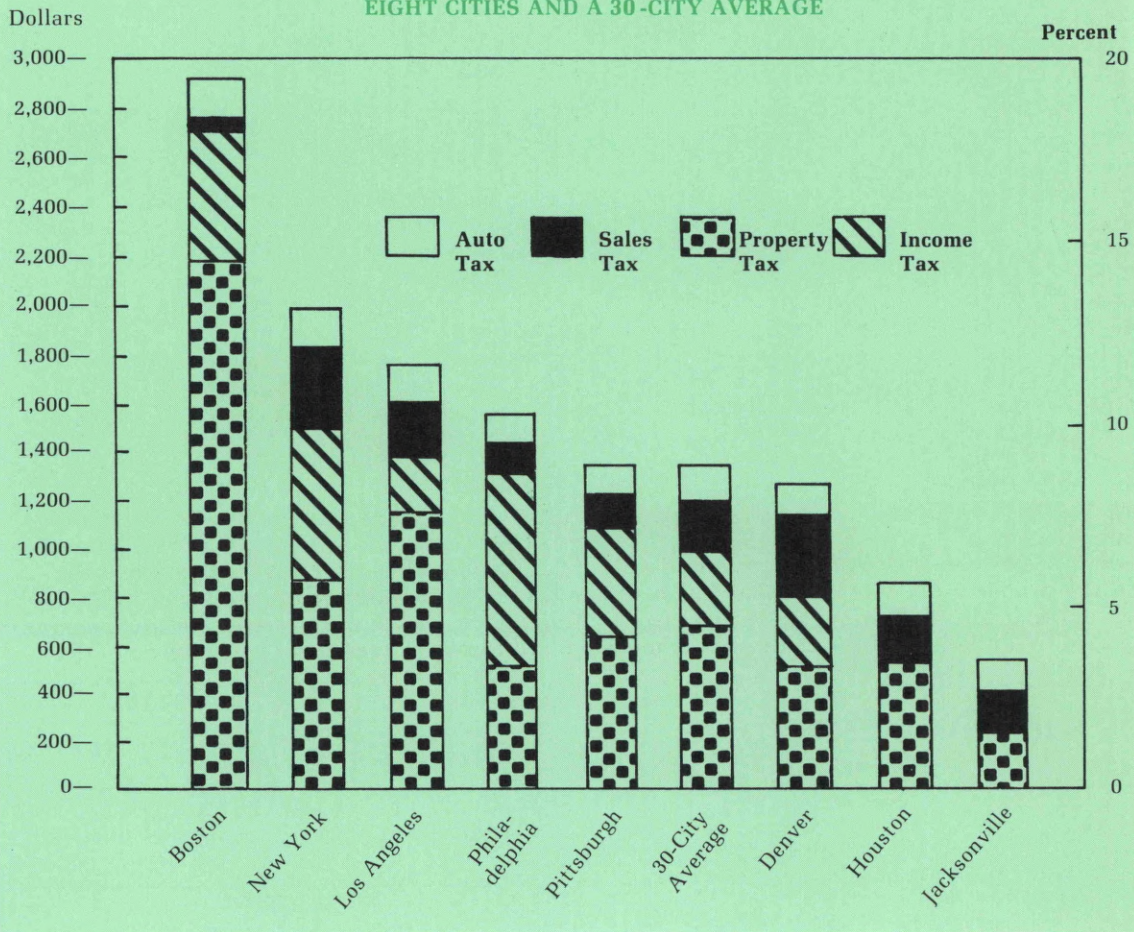
<sup>4</sup>Including increases in property taxes of \$150, in income taxes of \$160, and in auto taxes of \$16.

<sup>5</sup>The Washington study estimated property taxes at \$511 for a Philadelphia family with an annual income of \$15,000 and a house valued at \$18,240. But this estimate may not reflect the relatively low values of houses in Philadelphia, where a family with a \$15,000 annual income may own a \$17,000 house or a \$16,000 house and thus have a lower property tax bill. Further, the Washington study based its calculation on an assumption made by Pennsylvania's State Tax Equalization Board that assessment ratios would be set at 62.5 percent, but the ratio in Philadelphia stands at only 41.6 percent. This lower ratio also reduces the tax bill estimate. Nevertheless, the Washington study's figure for Philadelphia has not been adjusted here, since the conditions that make for an overestimate of Philadelphia's tax bills may operate just as strongly elsewhere in Pennsylvania and across the nation.



FIGURE IV.1

MAIN STATE AND LOCAL TAXES FOR A FAMILY OF FOUR EARNING \$ 15,000 IN 1974:  
EIGHT CITIES AND A 30-CITY AVERAGE



**BUSINESS  
REVIEW**

Federal Reserve Bank of Philadelphia