

# *Are State and Local Revenue Systems Becoming Obsolete?*

**A**s recently as a year ago, state governments were awash in revenue. From 1995: I through 2001: I, state tax receipts grew at an annualized rate of 6.4 percent. Reports from state revenue officials suggest that growth in tax receipts has slowed considerably in recent quarters. Even before the tragic events of September 11, many state forecasters were projecting that tax revenues would barely keep pace with inflation over the course of state fiscal year 2002 (FY2002). Now, most assume that even under optimistic scenarios revenues will fall in constant-dollar terms.

The flow of tax revenues into state coffers has decelerated primarily because the economy has suffered a severe shock (it was weakening even before September 11) and delayed tax cuts enacted in earlier, more prosperous times have taken full effect. However, many tax analysts believe that long-term economic, technological, and political developments are also partially responsible and will continue to constrain state revenue growth even after the economy revives. These factors have also reduced revenues from the property tax, the largest source of tax revenues for local governments. According to some, these factors are so pervasive and persistent that they will eventually make current state and local tax systems obsolete.

This article discusses the impact on state and local revenues of three such factors: 1) the shift in the nation's mix of production and consumption from goods to services; 2) the proliferation of electronic commerce; and 3) the intensification of interjurisdictional competition. By way of background, Section I describes the mix of state and local revenues and how it has changed over the past two decades. Section II evaluates the implications of the shift from goods to services, especially for the revenue productivity of the sales tax. Section III focuses on the potential impact of

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author thanks Amanda Lydon and  
Willie Kwan for their valuable research  
assistance.*

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the proliferation of electronic commerce. Section IV discusses the degree to which the intensification of interjurisdictional tax competition has affected the revenue productivity of state and local taxation. Section V evaluates alternative ways to enhance the long-run stability and yield of state and local tax systems given the evolving economic and political environment.

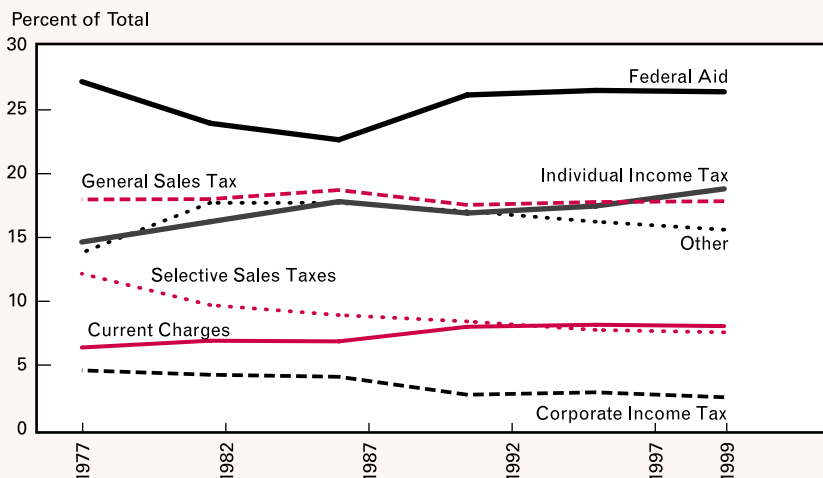
The article concludes that these systems are, indeed, out-of-sync with the economy's changing structure. The economic stocks and flows that they are designed to "meter" comprise a shrinking fraction of the nation's wealth and economic activity. Competitive pressures and administrative and legal impediments have inhibited state and local governments from "going after" relatively new, rapidly growing sets of potentially taxable assets and transactions. Numerous plans to modernize state and local revenues systems have been suggested, but most would sacrifice important tax policy goals or confront legal challenges. No solution presents state and local policymakers with a clear win-win situation, in which they could halt or reverse the decline in the revenue productivity of their taxes without sacrificing autonomy, competitiveness, neutrality, or administrative simplicity. The most promising strategy is greater voluntary coordination among tax jurisdictions in tax design and enforcement. More selective use of business tax incentives would also help state and local governments to raise adequate revenues without significantly sacrificing other tax policy goals.

### ***I. How Do State and Local Governments Raise Their Revenues?***

An analysis of the mix of the nation's subnational revenues reveals two reasons why both state and local governments are so concerned about long-run erosion of their tax capacity. First, both depend heavily on uncertain flows of fiscal assistance from a higher level of government. Second, many state and local govern-

Figure 1

### ***The Mix of State General Revenues, 1977 to 1999***



Note: The "Other" category consists of local government aid, property tax, motor vehicle tax, other taxes, and miscellaneous revenue.

Source: U.S. Census Bureau, *Census of Governments, 1977, 1982, 1987, 1992, 1997; Governmental Finances, 1999.*

ments lack a diverse mix of "own-source revenues"—taxes and user charges that they collect on their own authority.

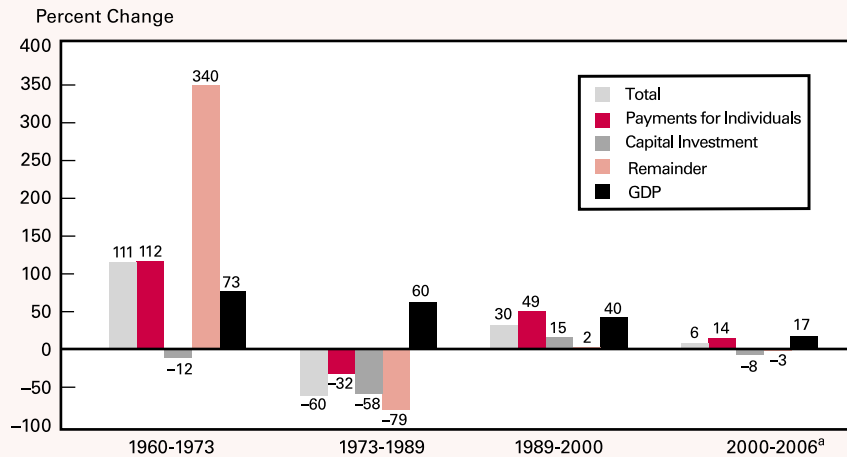
### ***Dependence on Intergovernmental Assistance***

In FY1999, the latest year for which data are available, federal grants-in-aid accounted for 26 percent of state general revenues, about the same as in FY1977 (Figure 1). During these 22 years, however, the level and composition of federal aid has changed considerably (Figure 2), making state fiscal policymakers wary of relying so heavily on it in the future. From 1960 through 1973, inflation-adjusted federal grants-in-aid increased 111 percent. While grants for capital investment shrank (as interstate highway construction slowed), other grant categories besides transfers to individuals grew three times faster than the total.<sup>1</sup> By contrast, from 1973 to 1989, the federal government cut intergovernmental assistance across the board, primarily in response to widening budget deficits, the spread of "devolutionist" philosophy, and the nation's determination to enhance its military

<sup>1</sup> Other grants besides transfers to individuals are primarily for education, employment and training, social services, and general government.

Figure 2

*Percent Change in Inflation-Adjusted Federal Grants to State and Local Governments, 1960 to 2006*



Note: Federal grants are deflated by GDP deflator for purchases of state and local governments. GDP is chained using 1996 dollars.

<sup>a</sup>Values for 2006 are forecasts made by DRI/WEFA in August 2001.

Source: U.S. Office of Management and Budget, *Budget of the United States, FY2002*; U.S. Bureau of Economic Analysis.

preparedness during the 1980s. As a result, state governments were forced to reduce their reliance on federal aid considerably over the course of the 1970s and 1980s. Although inflation-adjusted federal grants have increased by 30 percent since then, they have grown considerably more slowly than GDP. Most of the growth in federal aid has been concentrated in transfers to individuals (reflecting mostly increases in spending for Medicaid). This is the only category of federal aid projected to increase in inflation-adjusted terms from federal fiscal year 2000 (FFY2000) through FFY2006 by the Bush Administration in its proposed FFY2002 budget. After the events of September 11, state officials will probably assume that even less federal aid will be forthcoming.

Local governments are even more dependent than their state counterparts on intergovernmental assistance, most of which comes to them from their state government. In FY1999, grants from state governments accounted for 35 percent of local general revenues (Figure 3). The percentage of school districts' general revenues coming from state aid is especially high (47 percent in FY1997, the latest year for which data are available).

In contrast to federal aid, state aid as a proportion of local general revenue remained fairly constant from 1977 to 1987 and exhibited a slowly rising trend from

1987 to 1997. However, nation-wide aggregate statistics hide wide interstate differences. Local governments in some states have seen a steep decrease in the fraction of their general revenues supplied by state grants. For example, between 1977 and 1997 state aid as a percentage of local general revenues fell from 40 percent to 30 percent in New York, from 47 percent to 38 percent in North Carolina, from 36 percent to 28 percent in Maryland, and from 35 percent to 27 percent in Maine. Moreover, state aid to local governments has grown more slowly than state spending as a whole since 1982 (Figure 4). Consequently, many local officials are uncertain about how much state assistance they will receive in the future.

### *Lack of Diversity in Own-Source Revenues*

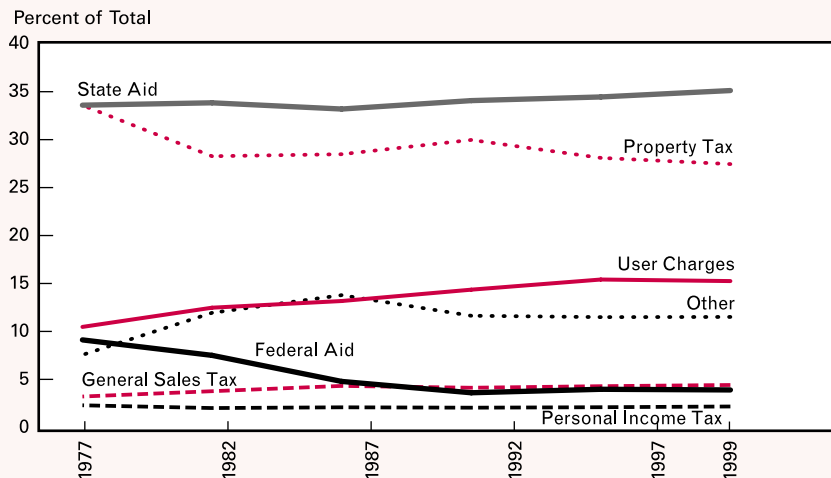
Apart from federal aid, states rely most heavily on the individual income tax and the general sales tax, each of which accounted for about a quarter of state general own-source revenues in FY1999. Selective sales taxes—primarily taxes on the sale of tobacco products, alcoholic beverages, and motor fuels—accounted for 17 percent in FY1977. However, they have since declined in importance because Americans have become more fuel-efficient (despite the growing popularity of sports utility vehicles), have cut back on smoking, and have substituted beer and wine for hard liquor.<sup>2</sup> The states have responded to this decline (as well as to relatively sluggish growth in corporate income tax receipts) mainly by increasing their reliance on the personal income tax and current charges.

With the general sales tax and personal income tax accounting for one-half of their general own-source revenues, the states are concerned about forces undermining the revenue productivity of either tax. Their concern has been magnified by the expanded fiscal responsibilities that they have been asked to

<sup>2</sup> Beer and wine are generally taxed at lower rates than hard liquor because they contain lower concentrations of alcohol.

Figure 3

### *The Mix of Local General Revenues, 1977 to 1999*



Note: The "Other" category consists of selective sales tax, corporate income tax, motor vehicle license tax, other taxes, and miscellaneous revenue.

Source: U.S. Census Bureau, *Census of Governments*, 1977, 1982, 1987, 1992, 1997; *Governmental Finances*, 1999.

assume during the past two decades. Demand for state roads and bridges, prisons, higher education, and environmental protection has intensified. Now that the federal government is preoccupied with com-

bating terrorism, the states may have to shoulder even more responsibility for domestic governmental functions.

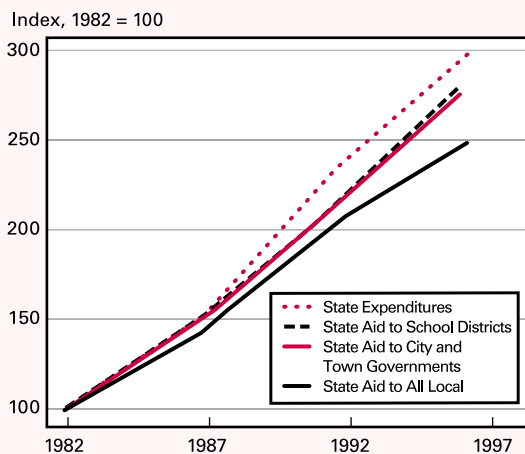
Moreover, aggregate state revenue figures obscure imbalances in the revenue structures of some states. Five states—Alaska, Delaware, Montana, New Hampshire, and Oregon—lack a sales tax. Oregon derives almost 44 percent of its general own-source state revenues from the personal income tax. Nine states—Alaska, Florida, Nevada, New Hampshire, South Dakota, Tennessee, Texas, Washington, and Wyoming—impose no broad-based personal income tax. Washington collects 47 percent of its general own-source revenues from general sales taxation. For states with such unbalanced revenue structures, erosion of a key tax base or

constraints on the rate at which that base can be taxed pose an especially serious threat to long-run fiscal health.<sup>3</sup>

Local own-source revenues are even less diversified than those of the states. The property tax, the mainstay of local taxation, accounted for 45 percent of all local own-source general revenues in FY1999. The comparable percentage for user charges, the second most important instrument of local own-source funding, was only 26 percent. In FY1977, local governments were even more reliant on the property tax than they are today. The "property tax revolt," epitomized by Proposition 13 in California and Proposition 2½ in Massachusetts, induced localities to substitute user charges for property taxes in their general own-source revenue mix. Local governments as a whole, and cities and towns in particular, have also increased their reliance on the sales tax. Income taxes have become an increasingly important revenue source for cities with populations exceeding 500,000. However, since the property tax remains the backbone of local revenue systems,

Figure 4

### *State Aid and State General Expenditures Indexed to 1982*



Source: U.S. Census Bureau, *Census of Governments*, 1977, 1987, 1992, and 1997.

<sup>3</sup> Since such states choose to rely especially heavily on one tax, they presumably understand the tradeoffs entailed by such a tax structure. Economic and political constraints on how intensively they can levy their preferred tax worsen the tradeoffs that these states face between revenue productivity and other tax policy goals.

forces eroding its long-term revenue productivity continue to worry local policymakers.

## II. The Shift from Goods to Services

The United States spends a much smaller fraction of its resources on producing goods and a much larger fraction on delivering private services than it did 40 years ago. In 1960, 42 percent of U.S. wages and salaries were earned in the goods-producing sector (manufacturing, mining, construction, and agriculture). Forty years later, the share attributed to goods production had fallen to 24 percent. By contrast, the share generated by delivery of private services rose over this period from 15 percent to 37 percent.<sup>4</sup> The mix of personal consumption also shifted away from goods and toward services. In 1960 American households allocated 41 percent of their consumption dollars to services. By 2000 this percentage had risen to 58 percent.

### Implications for the General Sales Tax

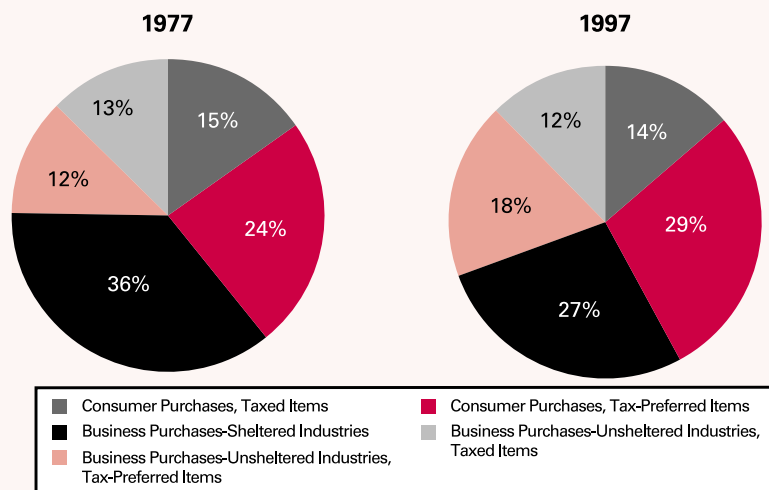
In order to understand these implications, one must consider *all* the various types of transactions that are potentially subject to general sales taxation ("total potentially taxable transactions"). (See Figure 5.) Such transactions consist of consumption by households and purchases by businesses. Consumed items can be further classified into those usually exempt from taxation or taxed at preferentially low rates ("tax-preferred" items) and items that are usually taxed without preferential treatment ("taxed" items). Tax-preferred items consist of food consumed at home and services. Food consumed at home is taxed preferentially in the majori-

<sup>4</sup> The remainder of wages and salaries were generated by the provision of public services and the distribution of goods in the private sector.

<sup>5</sup> According to the Federation of Tax Administrators, 32 of the 45 states and the District of Columbia that impose a general sales tax either exempt food at home or subject it to a relatively low statutory rate. See [www.taxadmin.org/fta/rate/sales.html](http://www.taxadmin.org/fta/rate/sales.html).

Figure 5

### Changing Mix of Consumer and Business Purchases of Taxed and Tax-Preferred Items, 1977 and 1997



Note: Taxed items for consumer purchases consist of all goods except food consumed at home. Tax-preferred items consist of all services and food consumed at home. Unsheltered industries consist of construction, transportation and warehousing, communications, private utilities, wholesale and retail trade, finance and insurance, real estate, and services except health, education, social services and nonprofit organizations. Sheltered industries consist of agriculture, mining, manufacturing, health services, educational services, social services, nonprofit organizations, and federal, state, and local governments.

Source: U.S. Bureau of Economic Analysis, *Survey of Current Business*, May 1984 and January 2001, Table 2.

ty of states because it is considered a necessity.<sup>5</sup> States generally tax services only to a limited extent for administrative and political reasons. When state sales taxes were first implemented, during the 1930s, services were considered too difficult to tax. Since delivery of services did not require records of inventory or production and were undertaken primarily by very small firms with minimal record-keeping capacity, the obstacles to enforcing a tax on these services were considered prohibitive. In addition, professional services, such as those provided by lawyers, accountants, engineers, and consultants, were considered politically too difficult to tax because professional organizations wielded (and still wield) considerable political influence.

Since services accounted for a much smaller fraction of the economy than did goods 70 years ago, the revenue consequences of excluding services from taxable sales were not considered significant. These consequences have become much more serious as the importance of professional and business services to the economy has grown (Brunori 2001). However, the political and administrative obstacles to taxing services remain. Attempts to do so by both Florida (in 1987) and



Massachusetts (in 1991) were defeated by vigorous lobbying on the part of interest groups representing those service providers who would have been most adversely affected. As of 1996, only three states—Hawaii, Washington, and South Dakota—taxed a wide array of services (Federation of Tax Administrators 1997).

Purchases by businesses can also be classified into a tax-preferred component (services and purchases of structures) and a taxed component (purchases of intermediate goods, machinery, and equipment). However, even purchases of taxed items are generally exempt from taxation if undertaken by firms in “sheltered” industries (manufacturing, mining, and agriculture). Such firms have been sheltered from sales taxation because, as exporters of goods to other states, they import revenues into a region and, therefore, are thought to drive its economic growth. All the purchases of governmental agencies and of most nonprofit organizations also fall into the tax-preferred category.

Thus, of all the potentially taxable transactions, only items of taxed consumption and purchases of taxed items by unsheltered firms actually enter into sales tax bases. In order to evaluate the impact of shifts in the composition of consumption and production on the revenue productivity of sales taxes, one must analyze how these shifts have affected the size of these two taxable slices of the total transactions pie.

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*Impact of shifts in the mix of consumption.* Services’ growing share of consumption has been identified as a principal cause of the sales tax’s declining revenue productivity (Bruce and Fox 2000, 2001; National Conference of State Legislatures and National Governors’ Association 1993). The tax’s diminishing effectiveness as a revenue raiser is reflected in the long-term decline in the ratio of taxable sales (as reflected in actual sales tax collections and statutory sales tax rates) to gross state product (GSP) generated by the private sector in states that impose the tax. From 1977 to 1992 this ratio fell by about 6 percentage points, from 44.6 percent to 38.8 percent. By 1997 it had risen slightly to just under 40 percent.<sup>6</sup>

The ratio’s increase since 1992 has been attributed to cyclical influences. According to this argument, taxed consumption is more procyclical than tax-preferred consumption. From the early 1990s until mid 2001, the economy enjoyed the longest expansion in postwar history. Responding in typical procyclical fashion, sales of taxed items grew more rapidly than gross domestic product (GDP) (Figure 6). Low interest rates and a strong stock market accentuated the procyclical response of these items, increasing the level of consumer debt and driving the nation’s savings rate below 1 percent. This cyclical surge, so the argument goes, more than offset the negative impact of the secular shift in consumption toward services. The ratio of taxable sales to GSP in states levying general sales taxes will resume its long-run decline now that the stock market has turned bearish, consumer debt has reached such a high level, and the economy is contracting, while the trend of substituting services for goods continues.

While this explanation is plausible, other possible explanations also fit the facts. For example, states may have gradually expanded sales tax exemptions to transactions not traditionally tax-preferred, or to purchases by businesses other than those in traditionally sheltered industries. In characterizing state and local sales tax policy in recent years, Fox (1998, pp. 42–43) has noted, “The aggregate effect of actual legislative decisions...appears to be a narrowing of the [sales tax] base, thereby making the sales tax a less productive revenue instrument....”

Moreover, the taxable sales/GSP ratio may not continue to decline in the future. There has been a secular as well as a cyclical decline in the share of the consumption of goods accounted for by food consumed at home. As a percentage of consumption, this tax-preferred item has declined continuously for four decades and fell by 6 percentage points between 1977 and 1997. Consequently, although services’ share of consumption rose by 12.5 percentage points over the same 20-year interval, taxable consumption’s share of total consumption fell by only 6 percentage points.<sup>7</sup>

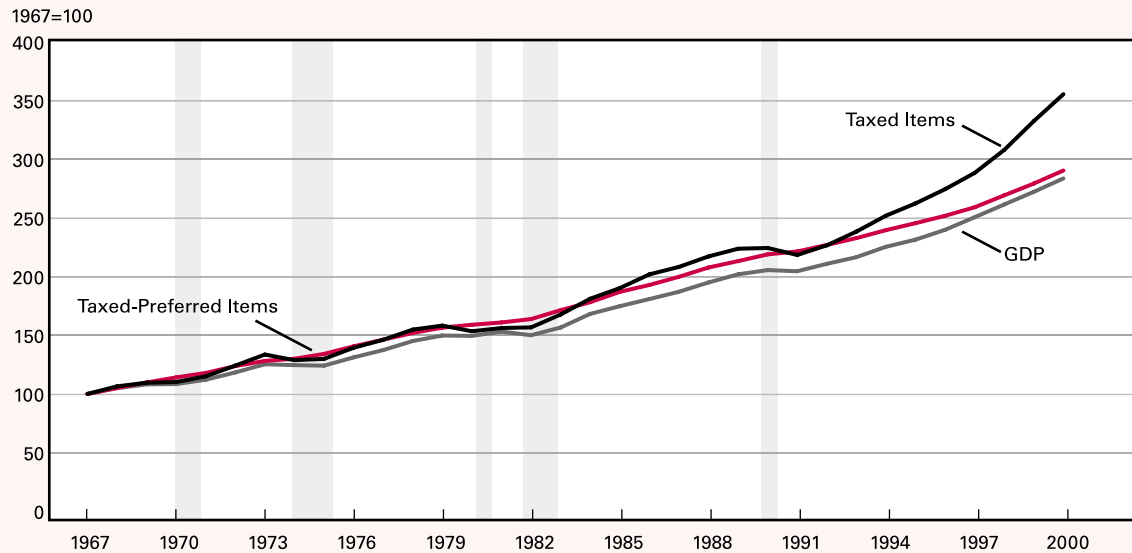
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<sup>6</sup>Statutory sales tax rates were taken from U.S. Advisory Commission on Intergovernmental Relations (1988). General sales tax collections were taken from U.S. Census Bureau, *Governmental Finances*, selected years. For each state with a general sales tax, the author divided the statutory rate into sales tax collections to obtain an estimate of taxable sales in that state.

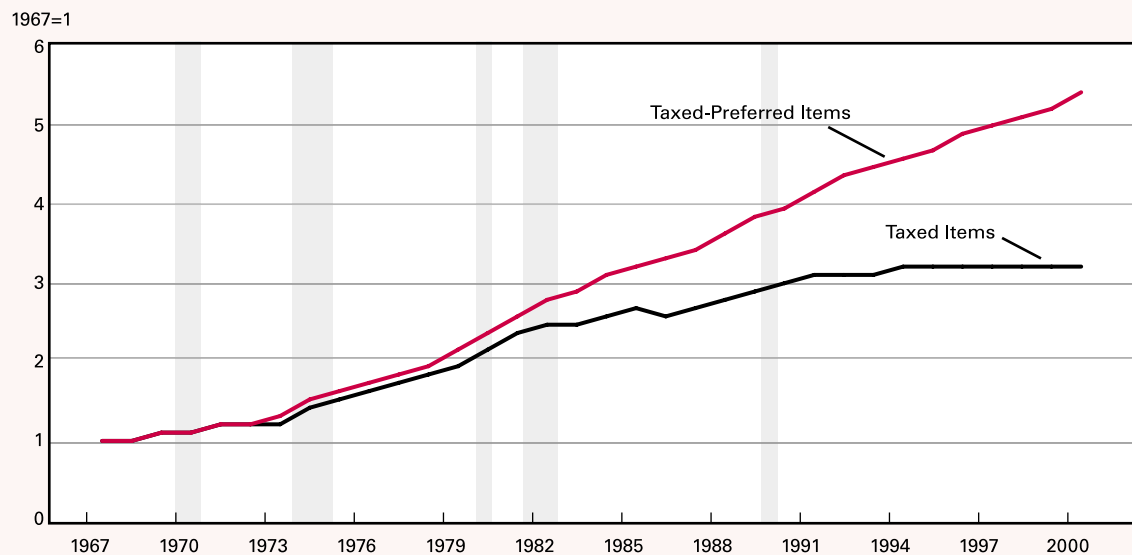
<sup>7</sup>As shown in Figure 5, in 1977 consumption’s share of total taxable transactions was 39 percent, while the share accounted for by consumption of taxed items was 15 percent. 15 percent / 39 percent equals 0.385. In 1997, the comparable ratio was 14 percent / 43 percent, which equals 0.326. The difference between the two ratios is  $0.385 - 0.326$ , or 0.06 (0.059).

Figure 6

*A. Indices of Taxed and Tax-Preferred Consumption and GDP, 1967 to 2000, Chain-Weighted 1996 Dollars*



*B. Deflators for Consumption of Taxed and Tax-Preferred Items, 1967 to 2000*



Note: Taxed items consist of all goods except food consumed at home. Tax-preferred items consist of all services and food consumed at home. Shaded areas are periods of recessions.  
Source: U.S. Bureau of Economic Analysis.

Furthermore, consumers have reduced the fraction of their outlays spent on taxed items largely because they have become relatively cheap, not because their preference for taxed items has weakened. As Figure 6a shows, between 1967 and 1991 taxed consumption grew by about the same percent-

age as tax-preferred consumption when adjusted for inflation. Since 1991, growth of taxed consumption has outstripped that of tax-preferred consumption, when measured in constant dollars. The price level of tax-preferred items has grown twice as fast as that of taxed items since 1967 (Figure 6b). Will this trend continue?

Many types of taxable goods have become cheaper because their production has shifted to overseas locations, where labor is relatively inexpensive. Furthermore, technological innovation has enhanced productivity and, therefore, reduced unit labor costs in the United States. The gap between U.S. and foreign labor costs will not keep widening forever. If expectations and wage demands of foreign workers rise, the gap could stabilize or even close. Nor will technological innovation necessarily enable reductions in the cost of producing taxed goods indefinitely. Furthermore, improved cost management may slow inflation in key service industries where price rises have been especially steep, such as medical care.

If the relative average price of taxable goods rose, consumers would substitute tax-preferred items for taxed ones. However, would the degree of substitution be so great that the ratio of taxed to tax-preferred items would resume its decline?<sup>8</sup> Quite plausibly, a rise in the relative price of taxed items on net would increase their share of consumption when measured in current dollars.

*Implications of shift in mix of production.* While the shift in consumption from goods to services may have narrowed sales tax bases somewhat, the shift in production from goods to services might have broadened them. Since unsheltered industries now produce a larger share of the nation's output than they did 25 years ago, they also account for a larger share of business-to-business purchases. As shown in Figure 5, the share of total potential business purchases accounted for by unsheltered industries

Table 1

*Components of Potentially Taxable Transactions as a Percent of Gross Domestic Product Generated in the Private Sector, 1977 to 1997*

	1977	1987	1997
1 Consumer Purchases	79.1	82.9	81.0
2 Taxed Items	30.7	29.5	26.3
3 Tax-Preferred Items	48.4	53.5	54.6
4 Business Purchases—Sheltered Industries	71.0	55.3	51.5
5 Intermediate Purchases	65.3	51.4	47.1
6 Machinery and Equipment	4.0	2.9	3.3
7 Structures	1.7	1.0	1.1
8 Business Purchases—Unsheltered Industries	47.3	51.9	56.2
9 Intermediate Purchases	39.2	42.1	46.4
10 Taxed Items	17.4	15.2	13.9
11 Tax-Preferred Items	21.8	26.9	32.5
12 Machinery and Equipment	5.4	6.2	7.3
13 Structures	2.7	3.6	2.6
14 Total Potentially Taxable Transactions	197.4	190.2	188.7
15 Taxed Consumption and Taxed Business Purchases (line 2 + line 10 + line 12)	53.5	50.9	47.4
	1977	1987	1997
1 Consumer Purchases	79.1	82.9	81.0
2 Intermediate Purchases	104.5	93.5	93.5
3 Machinery and Equipment	9.4	9.1	10.5
4 Structures	4.4	4.6	3.7

Source: U.S. Bureau of Economic Analysis, *Survey of Current Business*, May 1984, April 1992, and January 2001.

increased from 41 percent to 53 percent between 1977 and 1997.<sup>9</sup>

However, the mix of purchases made by unsheltered industries also changed over this 20-year period. The percentage of these purchases accounted for by taxed items fell from 52 percent in 1977 to 40 percent in 1997.<sup>10</sup> In other words, firms in unsheltered industries, especially services, increased their reliance on tax-preferred inputs, such as purchases of services. This shift in the mix of purchases made by unsheltered industries offset unsheltered industries' growing share of business purchases, reducing the share of total potential transactions accounted for by taxed items purchased by unsheltered industries from 13 percent to 12 percent.

Thus, between 1977 and 1997 the percentage of total potentially taxable transactions that fall within taxed categories fell by only 2 percentage points, from 28 percent to 26 percent. However, because total potentially taxable transactions as a percentage of private sector GDP fell by 9 percentage points, the ratio of taxed transactions to private sector GDP fell by 6 per-

<sup>8</sup>In the language of economics, would the price elasticity of substitution exceed 1?

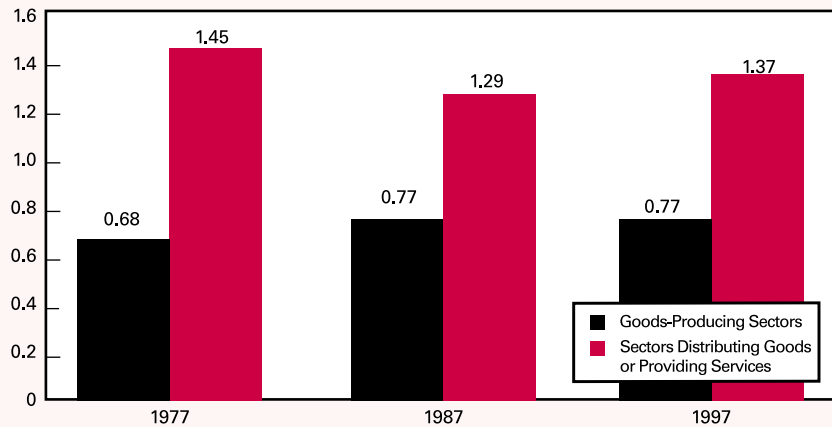
<sup>9</sup>In 1977, unsheltered industries accounted for 25 percent of total transactions, while all industries accounted for 61 percent. 25 percent/61 percent equals 0.41. In 1997, the comparable percentage was 30 percent/57 percent, or 0.53.

<sup>10</sup>In 1977, taxed items accounted for 13 percent/25 percent, or 0.52, of purchases by unsheltered industries. By 1997 the comparable percentage had fallen to 12 percent/30 percent, or 0.40.



Figure 7

*Ratio of Realty to Personalty for Goods-Producing Sectors and Other Sectors, 1977, 1987, and 1997*



Note: Goods-producing sectors are agriculture, mining, construction, and manufacturing. See text footnote 12 for explanation of how the ratio of realty to personalty was calculated.

Source: U.S. Bureau of Economic Analysis; U.S. Internal Revenue Service, *Statistics of Income—Corporate Income Tax Returns*, 1977, 1987, and 1997.

centage points (Table 1).<sup>11</sup> The portion of potentially taxable transactions that declined the most relative to private sector GDP was intermediate purchases. This decline, in turn, reflects the high ratio of intermediate purchases to output that generally characterizes sheltered industries. As production has shifted from sheltered to unsheltered industries, it has become less “intensive” in intermediate purchases, a rich source of transactions potentially subject to sales taxation. This change in the mix of production has played a more important role in the erosion of sales tax bases than scholars have generally recognized.

### *Implications for the Property Tax*

Property taxes paid by businesses are usually levied on two types of tangible assets: realty (land and buildings) and personalty (machinery, equipment, and inventories). In general, goods-producing sectors, such as manufacturing, mining, and agriculture, are more capital intensive than other sectors of the economy. A shift in the mix of production away from goods, therefore, may have slowed growth in the value of taxable property, diminishing the revenue productivity of the property tax.

<sup>11</sup> The numbers do not add up because of rounding.

Yet, on the whole, the shift in production away from goods may not have eroded property tax bases as much as some analysts have contended. As Brunori (2001, p. 130) has observed, “In recent years, the trend has been to eliminate or dramatically reduce taxes on businesses’ tangible personal property.” As a result, the property tax in the United States has increasingly become a tax on realty (Youngman 1998). On the whole, firms producing goods have a relatively low ratio of realty to personalty (Figure 7). Consequently, the nationwide ratio of realty to personalty may have risen or at least remained constant during the last two decades, increasing or leaving unchanged the portion of tangible business property that local governments tax

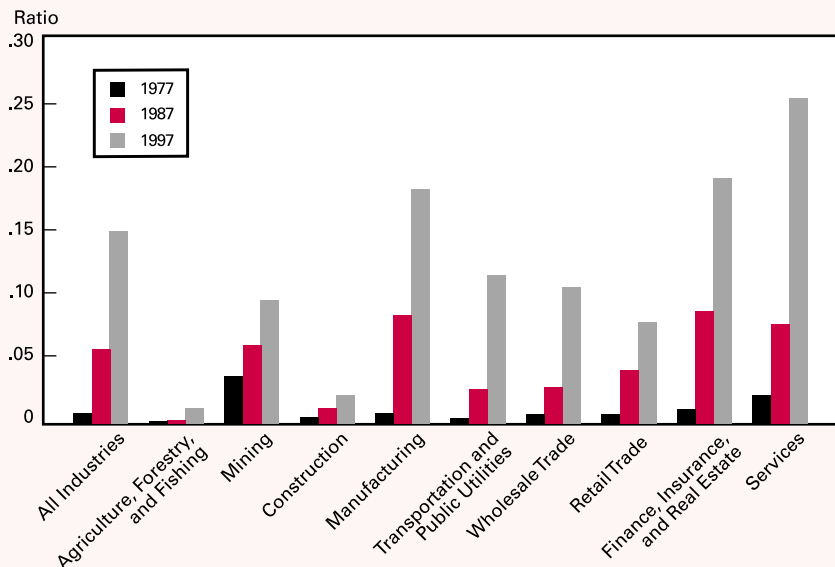
most intensively.

Historical trends in this ratio can be analyzed using nationwide inventory and capital stock data published by the U.S. Bureau of Economic Analysis and selected balance sheet data from corporate tax returns compiled by the U.S. Internal Revenue Service. A proxy for realty, the ratio’s numerator, is the value of land and structures in the private sector. The proxy for personalty, the denominator, is the sum of private inventories and machinery and equipment.<sup>12</sup> Estimated in this manner, the ratio of realty to personalty fell between 1977 and 1999 from 1.19 to 1.18, a difference of only one-hundredth of a point.<sup>13</sup> The stability of this ratio reflects the interplay of several offsetting trends. On the one hand, the value of tangible

<sup>12</sup> The total values of structures, machinery and equipment, and inventories were taken directly from the public web site of the U.S. Bureau of Economic Analysis (BEA), [www.bea.gov](http://www.bea.gov). The total value of land was estimated in the following manner: 1) The values of land and of depreciable assets reported by corporations filing active U.S. corporate income tax returns (Form 1120) were compiled for each of nine major industrial divisions. These data are presented in the U.S. Internal Revenue Service’s *Statistics of Income—Corporate Income Tax Returns* (1977, 1987, 1997). The ratio of these two values was computed for each industrial division for each year. Values of this ratio for 1999 were assumed to be identical to those for 1997. It was then assumed that, for each industrial division, the value of this ratio was the same as the ratio of land to the sum of the stocks of structures and machinery and equipment reported by the BEA.

Figure 8

### *Growth in Ratio of Intangible Assets to Tangible Assets, 1977 to 1997*



Source: U.S. Internal Revenue Service, *Statistics of Income—Corporate Income Tax Returns*, 1977, 1987, and 1997.

business property grew slightly faster in sectors relatively intensive in realty than in other sectors and the percentage of tangible business property accounted for by inventories declined in all sectors. On the other hand, the percentage of tangible business property comprising machinery and equipment increased in most sectors.

While these various trends may have had a neutral impact nationwide, the shift away from goods production has contributed to a sharp reduction in the property tax capacity of some local jurisdictions. In particular, those cities that have lost much of their manufacturing base and have not been able to replace it with firms in rapidly growing industries have experienced considerable fiscal stress. Such cities have lost manufac-

turing jobs not only because of the shift in production away from goods but also because they have had difficulty competing for factories with suburbs and other cities.

Furthermore, while the nationwide ratio of realty to personalty may have been stable between 1977 and 1997, the ratio of the value of realty nationwide to GDP fell sharply, from 0.81 to 0.69. This decline largely reflects the growing importance of intangible assets (such as patents, databases, software, formulas, and trademarks) in the nation's mix of business assets. In 1977 the ratio of intangible to tangible assets was less than 0.01; 20 years later it was 0.15 (Figure 8). Because intangible assets are so difficult to value and to locate geographically, most states do not subject them to property taxation (Youngman

1998). Consequently, the shift in producers' asset mix toward intangibles has slowed growth in the property tax base considerably.

However, only part of this shift in the mix of producers' assets can be attributed to the shift in the composition of output away from goods. Although the largest absolute increase between 1977 and 1997 occurred in the services sector (from 0.02 to 0.25), the ratio of intangibles to tangibles also rose sharply in most other industrial sectors, including those producing goods. For example, the ratio of intangibles to tangibles in manufacturing rose from less than 0.01 to 0.18, almost the same increase as the ratio in finance, insurance, and real estate. The growth of "knowledge-based" production has not been confined to the economy's fastest-growing sectors.

<sup>13</sup> As an alternative method of estimating the nationwide ratio of realty to personalty, the author used data on inventories, depreciable assets, and land from the U.S. Internal Revenue Service's *Statistics of Income—Corporate Income Tax Returns* for corporations. The ratio of machinery and equipment to total depreciable assets for each industrial division was assumed to be the same as that reported in data provided by the U.S. Bureau of Economic Analysis. According to this method, the nationwide ratio of realty to personalty rose from 1.06 in 1977 to 1.14 in 1997.

### *III. The Rise of Electronic Commerce*

The proliferation of electronic commerce poses daunting challenges to state and local tax policymakers, especially in designing sales taxes and corporate income taxes. According to the latest projections, performed by Forrester Research Inc. (as

reported in Bruce and Fox 2001), the value of taxable sales conducted via e-commerce will mushroom from \$754 billion in 1999 to \$1.91 trillion in 2003. Of the 2003 amount, all but \$127 billion will consist of business-to-business transactions. Other estimates of the value of business-to-business e-commerce in 2003 range from \$634 billion to \$2.94 trillion (Fraumeni 2001). According to Bruce and Fox, Forrester Research, Inc. projects that by 2011 the total value of e-commerce will rise to \$6.09 trillion. Of this amount, all but \$304 billion will come from business-to-business transactions.

### *Implications for the Sales Tax*

The potential erosion of sales tax bases by the expansion of e-commerce is one of the most salient and controversial issues in public finance today. Electronic transactions—and, for that matter, all remote transactions, including catalog purchases—that cross jurisdictional boundaries are currently taxable only under the use tax. In theory, purchasers buying taxable items from vendors located in another taxing jurisdiction must pay a use tax, equal in rate to the sales tax the purchaser would have paid had the goods been purchased “in-jurisdiction.” Attempts at enforcing use taxes, especially on sales from businesses to households, have met with limited success. Estimated rates of enforcement of use taxes on business-to-business sales range from 40 percent to 60 percent, while estimated enforcement rates on business-to-household transactions fall into the single digits (Brunori 2001).

The potential spread of remote sales, especially in electronic form, has dramatically raised the revenue stakes of limited use-tax enforcement. A number of task forces have been examining the possibility of imposing enforcement responsibilities on remote vendors, requiring them to collect use taxes imposed by the jurisdictions in which their customers are located. To date, opponents of taxing remote sales have persuaded the Congress that, given the large number of state and local jurisdictions levying sales taxes and the wide variation in their tax practices, the costs of such enforcement arrangements would be too burdensome to be constitutional (under the due process clause and the interstate commerce clause). The 1992 Supreme Court decision in *Quill Corp. v. North Dakota* (504 U.S. 298) concerning state and local sales taxation of mail-order catalog sales is the seminal ruling in this area. However, several scholars have questioned whether constitutional barriers to sales taxation of e-commerce are insurmountable (Hellerstein

1997, 1998, 2000; McLure 1998; Wright and Rothstein 1999). In particular, the development of new tax software and a movement to streamline and to simplify state and local sales tax laws might enable remote collection and remittance both to pass constitutional muster and to be administratively feasible (see Mikesell 2000).<sup>14</sup>

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## *The revenue consequences of e-commerce expansion on state and local sales tax revenues are highly uncertain.*

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The revenue consequences of e-commerce expansion on state and local sales tax revenues are highly uncertain. The wide range of the estimates that have been reported is attributable to uncertainty over three critical underlying issues: 1) the extent to which e-commerce will spread, 2) the extent to which expanding e-commerce will replace other forms of remote sales, and 3) the extent to which sales tax bases will erode anyway because of the shifting composition of consumption and output. According to the latest estimates, done by Bruce and Fox (2001), the state revenue loss resulting from the spread of e-commerce as a percentage of total state tax revenues will rise from 1.1 percent in 2001 to 3 percent in 2006 and then fall slightly to 2.9 percent by 2011. The comparable percentages at the local level are projected at 0.4 percent, 1 percent, and 0.9 percent. These percentages assume that a significant proportion of e-commerce will substitute for telephone sales, also untaxable under current law, thereby blunting the revenue impact.

### *Implications for the Corporate Income Tax*

The spread of e-commerce complicates two important issues in the implementation of state taxes on corporate income. First, under what circumstances does a corporation have a sufficiently large presence within a state to render it liable for the state's corporate income tax? (In legal terms, under what circum-

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<sup>14</sup> An example of such efforts is the National Tax Association's Communications and Electronic Commerce Tax Project. See [www.ntanet.org](http://www.ntanet.org).

stances does the corporation have “nexus”?) Second, given that a corporation has nexus, how does the taxing state determine its fair share of a multistate or multinational corporation’s total taxable income, that is, how is the income of such a corporation “apportioned”? Under current rules for establishing nexus and apportioning income, states have had difficulty taxing the income of corporations engaged primarily in electronic commerce.

A federal law enacted in 1959 (P.L. 86–272) forbids a state to levy an income tax on a firm whose only business activity within the state’s borders is solicitation of purchases of tangible goods to be shipped to customers outside the state. Consequently, if Massachusetts residents and businesses buy computers over the Internet from a company with no facilities or workers located within the Commonwealth, that company is not liable for the Commonwealth’s corporate income tax. P.L. 86–272 was enacted to protect companies engaged in mail-order sales, not electronic commerce. Growth in profits subject to state corporate income taxes may be depressed to the extent that companies engaging in e-commerce replace traditional “bricks and mortar” competitors.<sup>15</sup>

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*Even if an e-commerce company has nexus within a state, the state may be able to tax only a small portion of its profits given current state apportionment rules.*

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Even if an e-commerce company has nexus within a state, the state may be able to tax only a small portion of its profits given current state apportionment rules. Apportioning corporate income has been a troublesome issue since the beginning of state corporate income taxation. Multijurisdictional entities are so thoroughly integrated that formulas designed to allocate their income geographically are in large part arbitrary and therefore controversial.

The traditional factors used to apportion such income, chosen because their geographic loci are identifiable, are payroll, tangible property, and sales. A relatively large portion of the property owned by e-commerce companies is intangible (for example, “intellectual property”). Intangible property is generally omit-

ted from apportionment formulas because, as noted in Section II, its value and geographic location are so difficult to determine. With intangible property left out of the property factor, electronic-commerce companies can locate their facilities and payroll in states with no corporate income tax, thereby avoiding most state corporate income taxation. Applying the sales factor to e-commerce companies also poses special problems. Sales of tangible goods are sited in the jurisdiction where the purchaser takes possession. Sales of services, however, are assigned to the jurisdiction where the majority of the income-generating activity involved in providing the service is performed. Electronic commerce often entails the simultaneous sale of both services (such as electronic transfer) and tangible property. Applying traditional siting rules is difficult in these circumstances.

Furthermore, it is difficult to determine the location of economic activity generating income through electronic commerce. Should such activity be sited where the Internet server facilitating the transaction is based? Where the vendor using the Internet is located? Where the customer is located? These questions raise a host of difficult technical issues that have generated, and will continue to generate, contentious and costly litigation.<sup>16</sup>

#### ***IV. The Increasing Pressure on Jurisdictions to Compete***

States, colonies, and municipalities have engaged in fiscal competition for more than 350 years. As Alice Rivlin asked rhetorically five years ago, “Haven’t states and localities always competed for jobs and industry, both here and abroad, using whatever incentives they could lay their hands on?” (Rivlin 1996, p. 20).<sup>17</sup> Indeed, to some observers, the persistence and ubiquity of such competition imply its inevitability among fiscally autonomous subnational governments. As long as businesses, shoppers, and vacationers are mobile, states and municipalities will continue to design their revenue systems in part to attract and to retain them.

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<sup>15</sup> There is widespread agreement, however, that favoring e-commerce over “bricks and mortar” sales distorts production techniques and unfairly discriminates against traditional retailers.

<sup>16</sup> For further discussion, see McLure (2000); Frieden (2000); Hellerstein (1997); National Conference of State Legislatures and National Governors’ Association (1993).

<sup>17</sup> For historical overviews, see Wilson (1989); LeRoy (1994); Chi (1989); Chi and Leatherby (1997); Burstein and Rolnick (1996); Enrich (1996); Gilbert (1995).

Despite its “bad rap” in the 1990s, fiscal competition can be beneficial. Most scholars would agree that in moderation it enhances the operational efficiency of state and local governments. Furthermore, attempts by cities and towns to attract specific types of households and businesses increase the likelihood that a given household or firm will find a community with a set of fiscal characteristics that best suits its tastes. (See

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*Most scholars would agree that in moderation fiscal competition enhances the operational efficiency of state and local governments.*

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Tiebout 1956; Oates and Schwab 1988; Kenyon and Kincaid 1991; Kenyon 1997.) Why, then, has fiscal competition become so controversial that some respected scholars and officials are calling upon the federal government to curtail it?

Concern about such competition has intensified because it “has escalated into a bidding crescendo that is injuring the winners as well as the losers” (Rivlin 1996, p. 21). Burstein and Rolnick (1996) characterize it as a “negative sum game,” in which jurisdictions shortchange themselves on critical public goods (such as education and infrastructure) to finance incentives for prospective employers. However, most jobs created by such employers, so the argument goes, would have been created anyway (McEntee 1996). Too few public goods are produced, and all governments are worse off. Competitive tactics become self-defeating and mutually destructive. By contrast, some analysts, such as Matthey and Spiegel (1996), contend that fiscal competition can enhance efficiency by offsetting the existing bias against new investment embedded in the nation’s federal, state, and local tax laws.

Fiscal competition has intensified for a variety of reasons. During the late 1970s and early 1980s, the combination of soaring energy costs and persistently high rates of unemployment galvanized states and municipalities to do *something* to attract and to maintain jobs for their constituents. The shift to services has also been partially responsible. Industries requiring proximity to primary resources (such as steel) or central locations (such as autos) have declined in importance in the United States while sectors that are grow-

ing, such as services, are more footloose. Even within mature goods-producing industries, new communications technology and deregulation have enhanced firms’ geographic mobility. Stiffer competition from overseas has also played a role in motivating jurisdictions to offer whatever inducements are necessary to attract and to retain businesses. Noting the greater mobility of new firms and their weak attachment to any particular place, critics of fiscal competition contend that such firms will be increasingly successful in playing off one jurisdiction against the other.

Evidence that subnational fiscal competition has intensified is clear-cut. For example, in a survey of the 50 states conducted for the Council of State Governments in 1997, Chi and Leatherby (1997) found that all 50 states had increased the level and variety of business tax and financial incentives during the previous 20 years. Thirty-eight of the 50 states reported an increase in the use of such incentives during the five prior years. When asked about expected utilization of such incentives during the remainder of the 1990s, 25 states expected an increase, 22 no increase, and only 2 a decrease (1 did not respond).

The same trend emerges in surveys of employers. In 1995, Regional Finance Associates Inc., an economic consulting firm, surveyed over 200 manufacturing, retailing, and distribution companies that were clients of KMPG Peat Marwick LLP. Of those responding, 73 percent indicated that during the previous year they were offered subnational financial incentives worth more than those they were offered five years earlier. Another gauge of competitive intensity is the increase in the value of incentives awarded per job created. In 1980, Tennessee offered Nissan a package of incentives worth about \$11,000 per job to be created by a new plant. In 1993, Alabama offered \$168,000 per promised job to Daimler Benz for a new Mercedes Benz factory. Blue Water Fibre obtained an \$80 million inducement package from Michigan for a paper-recycling mill employing 34 people, a price tag of about \$2.4 million per job (Farrell 1996).<sup>18</sup>

The damper that competition places on subnational corporate income taxation is reflected in changes over the past 40 years in the ratio of state and local corporate income tax collections to corpo-

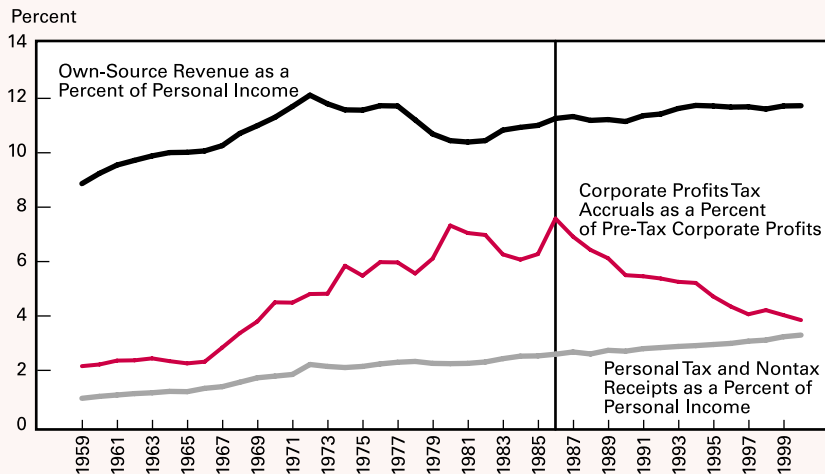
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<sup>18</sup> Examples such as these have been cited by those wishing to curtail the use of financial incentives as a competitive tactic as evidence of their lack of cost-effectiveness. Scholarly analyses of the degree to which state and local taxes in general, and fiscal incentives in particular, increase employment and investment within a region vary widely and are inconclusive. (See Wasylenko 1997; Bartik 1995 and 1997; McGuire 1997.)



Figure 9

### Trends in State and Local Tax Burdens, 1959 to 2000



Note: State and local corporate profits tax accruals are expressed as a percentage of nationwide pre-tax corporate profits. Profits include IVA (inventory valuation adjustments) and CCA (capital consumption allowances); they exclude rest-of-the-world profits and profits of the Federal Reserve System. Own-source revenue is the sum of corporate profits tax accruals, indirect business tax and nontax accruals, and personal tax and nontax receipts.

Source: U.S. Bureau of Economic Analysis, *National Income and Product Accounts*, Tables 1.14, 2.1, and 3.3.

rate profits (Figure 9). During the 1960s and 1970s, this ratio increased steadily, as the demand for state and local public services grew. After the ratio hit a local peak of 7.3 percent in 1980, it dropped sharply because in that year the federal government enacted large increases in depreciation allowances.<sup>19</sup> These increases in effect reduced the percentage of corporate profits subject to federal tax. State and local corporate tax burdens were affected because, in the interest of administrative simplicity, most states and municipalities tie their definition of taxable corporate profits closely to their federal counterpart. The state and local corporate tax burden rose sharply again in 1987 because the federal Tax Reform Act of 1986 eliminated or narrowed several corporate tax deductions, including depreciation allowances. After peaking again in 1986 at 7.6 percent, the state and local corporate tax burden fell steadily to 3.9 percent by 2000. By contrast, the ratio of state and local personal taxes and charges to personal income rose fairly steadily from 1.1 percent in 1959 to 2.7 percent in 1987 and continued to rise to 3.4 percent in 2000.<sup>20</sup> Total state and local governmental tax and non-tax receipts as a percentage of personal income in 2000 were only slightly below their peak level,

reached in 1973. Thus, while the burden of state and local personal taxes has risen and that of state and local revenues as a whole has remained fairly constant, the burden of state and local corporate income taxes—the type that impinges most directly on corporate profitability—has been almost halved. These discrepancies suggest that competitive concerns played a large role in cutting the corporate tax burden.

Gauging the revenue impact of business-oriented state and local tax incentives, as opposed to other forms of state and local tax competition, is difficult. States and localities generally do not formally identify and catalog all features of their tax systems designed to enhance their competitive standing, let alone attempt to estimate the impact of these features on revenues. The City of

New York is an exception to this rule. The City's *Annual Report on Tax Expenditures* (2001) analyzes those provisions of its tax laws that provide tax incentives for specific types of economic behavior or tax relief for certain narrowly defined groups of taxpayers under specific circumstances. According to the *Report*, in FY2000 the City granted property tax relief explicitly designed to promote economic development costing an estimated \$586 million in forgone revenue, a little more than 7 percent of citywide property tax revenues. Similar tax incentives embedded in the City's business profits taxes cost the City an estimated \$397 million in FY1997 (the latest year for which data are available), approximately 19 percent of revenues from that source.<sup>21</sup>

<sup>19</sup> This liberalization of depreciation allowances was part of the Economic Recovery Tax Act of 1981.

<sup>20</sup> In the National Income and Product Accounts, state and local personal tax and nontax receipts include state and local personal income taxes, motor vehicle license taxes, fines, and selected other tax and nontax sources for which individuals, as opposed to businesses, are liable. Property taxes and sales taxes are not included.

<sup>21</sup> For New York State as a whole, tax-exempt industrial and commercial property as a percentage of total equalized value has been lower: 4 percent and 2 percent in FY1989 and FY1999, respectively (New York State, Office of Real Property Services 1989, 1999).

## V. Conclusion and Policy Implications

The economic and political forces imposing fiscal stresses on our nation's state and local governments are difficult to analyze. A number of cyclical and secular forces have converged simultaneously, some exacerbating fiscal stress and some ameliorating it. As a result, projecting future trends in the fiscal capacity of state and local governments is fraught with uncertainty. Yet, given the possibility of intensifying fiscal pressures, state and local policymakers should consider ways of making their tax systems more stable and

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*Given the possibility of intensifying fiscal pressures, state and local policymakers should consider ways of making their tax systems more stable and revenue-productive.*

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revenue-productive. Unfortunately, the options available to them sacrifice other tax policy objectives.

Policymakers have considered including a wider array of services in taxable sales. Inclusion of services purchased by households would promote neutrality by putting the consumption of goods and services on a more equal tax footing. The development of computerized record-keeping has reduced some of the obstacles deterring the broader taxation of services in the past. Policymakers would probably eschew the taxation of health services, one of the fastest-growing components of the services sector, on the grounds that incurring medical expenses is generally involuntary.<sup>22</sup> The taxation of business services, another large and rapidly growing component, would diminish tax neutrality by discriminating against industries that rely on them heavily and are not vertically integrated. Professional service firms, whether serving firms or households, might be able to maintain their untaxed status because of their political clout, even in the face of a broad movement to tax services. Spending on those services most likely to be made taxable, personal services pro-

vided by nonprofessionals, accounts for a larger portion of the incomes of low-income and lower-middle-income households than of the incomes of middle- and high-income households (Mikesell 1993). As a result, their inclusion in sales tax bases could increase the regressivity of state and local taxes.

Reducing sales tax preferences for purchases of intermediate goods and machinery equipment by manufacturers, mining concerns, and farms might merely substitute one set of tax-induced distortions for another. While firms in these sectors would be treated more like those in currently unsheltered industries, vertically integrated industries within these three sheltered sectors would gain a tax advantage. Any increase in the taxation of business-to-business purchases discriminates in favor of vertically integrated industries because they are not penalized by the pyramiding of the tax as it is shifted forward to successive stages of production.

Many state and local governments have embarked on a major campaign to simplify sales taxes and to make them more uniform across jurisdictions.<sup>23</sup> Such streamlining is needed to convince the Congress and the courts that remote collection of use taxes on electronic transactions is constitutional and administratively feasible. Achieving this goal, however, will require complex negotiation and compromise by state and local governments throughout the nation and a loss of autonomy and discretion that subnational policymakers have been reluctant to cede in the past.

How, if at all, should policymakers rein in subnational fiscal competition? At one extreme, some scholars and officials are calling on the Congress and/or the courts to penalize or prohibit certain state and local business incentives. They argue that the constitutional prohibition against interference with the free flow of interstate commerce (Constitution, Article I, section 8) gives the federal government ample authority to step in (Burstein and Rolnick 1996; Enrich 1996; McEntee 1996; Hellerstein 1996; Frickey 1996; Kramer 1996). Short of prohibition, the federal government could hold back grant money to states and municipalities that implement extremely aggressive, self-defeating competitive incentives.

Yet calls for federal intervention have elicited a negative reaction from some (for example, Ebel 1997; Fox 1997; Toft 1996). In arguing against intervention, opponents offer the following points: 1) for all its flaws, a system of decentralized autonomous government is still the "least worst," as international evidence linking decentralization with economic growth has shown; 2) rules implementing federal regulation of competition would have to be so complex that, like so

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<sup>22</sup> For this reason, most states already exempt sales of medical devices and prescription drugs.

<sup>23</sup> The principal formal organization through which they are working is the Streamlined Sales Tax Project. For further details, see the Project's web site: [www.geocities.com/streamlined2000](http://www.geocities.com/streamlined2000).

many other federal mandates, they would create more problems than they would solve; 3) formally constraining interstate and interjurisdictional competition within the United States would still leave states and municipalities vulnerable to competitive pressure from overseas; and 4) other tactics short of federal intervention could succeed, or at least should be tried, before subnational governments are compelled to sacrifice more of their autonomy.

Other recommendations to dampen mutually destructive competition include the following:

1. Voluntary compacts among states and municipalities to refrain from competition, to create more uniformity in taxation, and even to share revenues (Rivlin 1996). Unfortunately, the track record of such voluntary compacts has not been good (see Reich 1996). However, if the stakes become high enough, policy-makers might find coordination to be an increasingly attractive option.

2. State and municipal "right-to-know" laws, which require beneficiaries of fiscal incentives to provide information that will help citizens to evaluate these incentives' "bang for the buck." Such laws would require reporting of jobs expected to be created or retained if the subsidized project were implemented, jobs actually created or retained because of the project, and the compensation paid to jobholders.

3. "Clawback" provisions, which would require incentive recipients to meet certain conditions, such as the creation or retention of a minimum number of jobs at a specified minimum wage for a specified minimum amount of time. If the beneficiary fails to meet the agreed-upon objectives, it must repay the public subsidies it has received to the conferring governments.

4. Increased hiring of skilled cost-benefit analysts by state and local governments to help evaluate the costs and benefits that competitive financial incentives entail.

5. Abandonment of the corporate income tax, the tax most prone to competitive erosion. As Pomp (1998)

has argued, in this age of globalization conglomerates have become so far-flung and intricately organized that state and city tax officials are having increasing difficulty enforcing corporate income taxes. Reporting requirements that would enhance enforcement and compliance, such as combined reporting, have been fervently and successfully opposed by large corporations. Quite simply, state and city tax departments are increasingly "outgunned" in attempting to enforce this tax. According to Pomp, the tax has little future.

States and municipalities are turning increasingly to tactics numbers 2 and 3 on this five-point list. According to a comprehensive study directed by the National Association of State Development Agencies,

For most incentive programs, policy makers have established eligibility criteria to ensure sound investments in achieving predetermined public policy goals. Accountability measures and other protections such as clawback provisions are built into the programs.... States and communities are beginning to add these clawback provisions as a standard element of their incentive offers to firms (Poole et al. 1999, p. 14).

Further evidence of growing demand for greater corporate accountability can be found in LeRoy (1994) and periodic reports posted on the web site of Good Jobs First, a project sponsored by the Institute on Taxation and Economic Policy, Citizens for Taxation, Washington, DC ([www.goodjobsfirst.org](http://www.goodjobsfirst.org)).

Whatever state and local tax reforms are adopted, long-run potential threats to the revenue productivity and stability of subnational revenue systems should be continuously reevaluated. With the federal government shifting its priorities in the wake of the attacks on September 11, the states and their municipalities might be called upon to shoulder significantly wider domestic fiscal responsibilities. They should possess revenue systems that will enable them to meet these responsibilities effectively.

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