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# Education, Land, and Location

Edited by Gregory K. Ingram and Daphne A. Kenyon



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Edited by

*Gregory K. Ingram and Daphne A. Kenyon*

 LINCOLN INSTITUTE  
OF LAND POLICY  
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# 6

## *The Future Role of the Property Tax in the Funding of K–12 Education in the United States*

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Andrew Reschovsky

**I**n contrast to the way public education is funded in most countries, the United States has a long tradition of relying quite heavily on local government revenue from the property tax. Although the role of the federal and state governments in the funding of elementary and secondary education has grown in recent decades, in fiscal year 2010, the latest year for which comprehensive data exist, \$211 billion of property tax revenue went to fund public K–12 education, an amount equal to about 35 percent of total public school revenues (National Center for Education Statistics 2013b).

This reliance on the property tax to fund public schools continues even though the property tax is a highly unpopular tax and most state governments have long been taking steps to reduce reliance on the tax. Throughout most of the twentieth century, many states adopted state income and sales taxes with the explicit goal of using the newly generated revenues to replace revenue from the property tax. In the past several decades, most states have also adopted policies designed to directly limit property tax revenue. These policies include restrictions on increases in property tax assessments, property tax rate caps, and restrictions on increases in property tax levies.

The primary goal of this chapter is to explore the role that the property tax will play in the financing of public education in the years ahead. This is a particularly important issue now because there is good reason to believe that the alternative sources of revenue that have traditionally been used to fund elementary and secondary public education will fail to grow at rates sufficient to meet the funding needs of public education. Although the federal government plays a relatively

modest role in the funding of public education, the political pressure on it to deal with the nation's rising debt burden makes it likely that the federal role in funding education will decline over the next few decades. Meanwhile, in many states, for a number of reasons explored in this chapter, maintaining existing levels of state funding for public education is likely to be challenging.

If indeed the growth in federal and state education funding is at best stagnant, additional funding, if it is to be forthcoming, will need to come from local government sources. Currently, the property tax is by far the most important local source of public school revenues, accounting for over 80 percent of local government public school revenues (National Center for Education Statistics 2013b). Henry Coleman's chapter in this volume (chapter 7) explores the prospects for revenue alternatives to the property tax.

To provide a context for the discussion of the future role of the property tax, the next section outlines the role this tax has played in the funding of public education in the United States over the past few decades. The most recent available comprehensive data on the financing of public education in the United States are for the 2009–2010 school year; limited information about school funding is available for the post-2010 period.

The rest of the chapter focuses on potential sources of school funding in future years. Although it is impossible for anyone to predict with certainty future federal funding levels for public education, it is possible to look at the impacts on education funding of the Budget Control Act of 2011 and sequestration. Budget proposals by President Barack Obama and budget legislation passed by the House of Representatives and the Senate also provide some evidence on the range of likely trajectories for federal education funding. Although the states will no doubt vary widely with respect to education funding, several factors are likely to influence funding patterns in many states. On the revenue side, states that choose a mix of taxes that are relatively elastic are likely to generate more revenues over time. Decisions made by state governments about the definitions of their sales taxes and their individual and corporate income tax bases will have a large impact on the amount of tax revenues they will have available for the support of public education. Public education obviously competes for limited resources with other state fiscal needs. For example, states with particularly rapid growth in spending on Medicaid or with large unfunded pension liabilities will find it more difficult to devote resources to education.

In most states, decisions about property tax revenue are made by local governments, either independent school districts or municipal or county governments that serve as "parent governments" for dependent school districts. According to the latest data from the U.S. Census Bureau (Hogue 2013), in 2012 there were 12,880 independent school districts and 1,298 dependent school districts in the United States. Forecasting the behavior of all these local governments with respect to the property tax is a daunting task. This chapter reviews the literature related to a number of fiscal, political, and demographic factors that are likely to play a role in influencing decisions about future levels of school property taxation.

In a few states, notably Vermont and Michigan, the state government levies a property tax, which is used to finance public education. The focus in this chapter, however, is entirely on property taxes raised by local governments for the financing of elementary and secondary education.

### *The Role of the Local Property Tax in the Funding of Public Education*

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Constructing an accurate historical record of the amount of local property taxes raised to finance public education in the United States is extremely difficult.<sup>1</sup> For years prior to 1989, information on school finance came from the U.S. Census Bureau's once-every-five-years (quinquennial) Census of Governments. The government finances portion of the census included a section titled "Finances of Public School Systems." Prior to the 1977 Census of Governments, fiscal data, including revenue from property taxes, were collected only from independent school districts. No data were collected from the dependent school districts that served some or all students in 13 states and the District of Columbia. As a result, the pre-1977 quinquennial data undercounted the amount of education funding attributable to the property tax.

Starting with the 1977 Census of Governments, the Census Bureau began collecting data from both independent and dependent school districts. However, data on property taxes were collected only from independent school districts. Local government revenues that contributed to the financing of dependent school districts were reported as "parent government contributions." Parent governments were either municipal governments or county governments. Census data indicate that most of these governments' revenues come from property taxes. Not until 1993 did the Census Bureau begin publishing annual public school finance data that included the revenues and expenditures of both independent and dependent school districts. Like the quinquennial Census of Governments data, this series identified property tax revenue only from independent school districts, while the property tax revenue that provided funding for dependent school districts was included as part of total parent government contributions.

Fortunately, beginning in 1989 the U.S. Department of Education's National Center for Education Statistics (2013) began publishing data from its annual survey of state education agencies, the National Public Education Financial Survey. These data provide information at the state level on property tax revenues of both independent and dependent school districts. Like the Census of Governments, the National Center for Education Statistics also provides data at the state level on public education revenues from both the federal and state governments.

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1. See Murray and Rueben (2007) for a good discussion of issues involved in the measurement of school property tax revenue.

To construct a series of data starting in 1977 on the role of the property tax in the funding of public education in the United States, it was first necessary to estimate the proportion of parent government contributions to dependent school districts that can be attributed to property tax revenue. Data from the 1989 National Public Education Financial Survey indicated that 75.3 percent of parent government contributions came from the property tax. Data on municipal and county government revenues from the Censuses of Governments indicate that during the 1970s and 1980s, municipal and county governments reduced their reliance on the property tax at the rate of about 1.25 percent per year. Based on this information, appropriate percentages were applied to total parental government contributions in the years for which these data were available from the Census of Governments, namely 1977, 1981, 1982, and 1987.<sup>2</sup> Property tax revenue for the eight remaining intercensal years between 1977 and 1989 were imputed by linearly interpolating the share of local government revenues for all school districts coming from the property tax.

The second column of table 6.1 displays local government property tax revenue used to fund prekindergarten–grade 12 public education for the school years between 1976–1977 and 2009–2010. The data have been divided by the number of public school students in each year and converted to 2010 dollars using the consumer price index. The third column displays the annual percentage growth in real per pupil property tax revenue, and the third column lists property tax revenue as a percentage of total public education revenues raised by local governments. Finally, the last column lists local property tax revenue as a percentage of total public education revenues received from all levels of government.

Real property tax revenue grew in most years between 1977 and 2010, from \$2,469 per pupil in 1976–1977 to \$4,277 in 2009–2010.<sup>3</sup> Note that real per pupil property tax revenue continued to increase through the Great Recession (December 2007 to June 2009) and the year immediately following.

In 1978, California voters approved Proposition 13, which imposed a 1 percent cap on property tax rates and limited the annual growth in the assessed value of property to no more than 2 percent. The assessed value of any parcel returned to the market value only upon sale of the property. In the years following Proposition 13, a number of other states adopted similar property tax limits. A somewhat different approach to limiting property taxes was enacted in Massachusetts in 1980. While Proposition 2½ there placed a ceiling on property tax rates (at 2.5 percent of the market value of property), rather than limiting growth

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2. The estimated share of parent government contributions from the property tax was 87.4 percent in fiscal year 1977, 84.2 percent in 1980, 83.2 percent in 1981, and 77.2 percent in 1987.

3. These per pupil numbers were calculated by dividing inflation-adjusted local property tax revenue in the United States in any given year by total public school enrollment in that year. These calculations are equivalent to weighted averages of property tax revenue per pupil by state, with more weight given to states with more public school pupils.

**Table 6.1**

Local Government School Property Tax Revenue per Pupil and Local Government Property Tax Revenue as a Percentage of Local and Total Public Education Revenues, 1976–1977 to 2009–2010

School Year	Property Tax Revenue per Pupil		Local Property Tax Revenue as a Percentage of:	
	(in 2010 dollars)	Percentage Change	Local Revenues	Total Revenues
1976–77	2,469		83.0	39.7
1977–78	2,484	0.6	81.6	38.8
1978–79	2,269	-8.7	80.1	35.8
1979–80	2,141	-5.6	78.7	34.1
1980–81	2,128	-0.6	77.2	33.5
1981–82	2,181	2.5	77.1	34.7
1982–83	2,249	3.1	76.3	34.3
1983–84	2,313	2.8	75.5	34.3
1984–85	2,343	1.3	74.7	33.2
1985–86	2,424	3.5	73.9	32.5
1986–87	2,703	11.5	81.0	35.5
1987–88	2,725	0.8	79.4	35.0
1988–89	2,981	9.4	77.8	35.8
1989–90	3,030	1.7	76.7	35.9
1990–91	3,060	1.0	77.1	36.0
1991–92	3,117	1.8	77.9	36.6
1992–93	3,026	-2.9	74.5	35.2
1993–94	3,261	7.8	78.6	37.6
1994–95	3,126	-4.1	77.2	35.9
1995–96	3,101	-0.8	77.2	35.4
1996–97	3,138	1.2	76.9	34.9
1997–98	3,196	1.8	76.1	34.1
1998–99	3,338	4.4	77.8	34.4
1999–00	3,346	0.3	77.4	33.4
2000–01	3,424	2.3	76.8	33.0
2001–02	3,549	3.7	78.5	33.6
2002–03	3,626	2.2	78.9	33.7
2003–04	3,799	4.8	79.2	34.8
2004–05	3,817	0.5	78.3	34.4
2005–06	3,910	2.4	77.2	34.2

**Table 6.1**  
(continued)

School Year	Property Tax Revenue per Pupil		Local Property Tax Revenue as a Percentage of:	
	(in 2010 dollars)	Percentage Change	Local Revenues	Total Revenues
2006–07	4,017	2.7	76.9	33.9
2007–08	4,040	0.6	77.3	33.6
2008–09	4,237	4.9	79.4	34.7
2009–10	4,277	1.0	80.6	35.3

Sources: Calculations based on U.S. Census Bureau (various years) and National Center for Education Statistics (2013b).

in the assessed value of property, it limited the annual growth in property tax levies to the higher of 2.5 percent or the rate of net new construction. The only way to exceed the levy limit was by voter approval of a local referendum authorizing a levy limit override. A number of other states have followed the Massachusetts approach and enacted limits on property tax levies. It is likely that the observed decline in per pupil real property tax revenue during the late 1970s and early 1980s was attributable at least in part to the spread of property tax limitations.

Despite these widespread efforts to limit property taxes, the data in the fourth column of table 6.1 indicate that school districts continue to rely on the property tax for about 80 percent of their locally raised revenues. Although the share of local revenues from the property tax dropped from 83.0 percent in 1976–1977 to 73.9 percent in 1985–1986, from the late 1980s through 2010 the share generally remained within a few percentage points of 80 percent.

The numbers in the last column of table 6.1 show the property tax as a percentage of the total general revenues available to school districts in the United States from all sources. They show that in the 33 years from 1977 to 2010, the property tax has remained remarkably stable at around 35 percent. In 2009–2010, the property tax contributed 35.3 percent of total public education revenues.

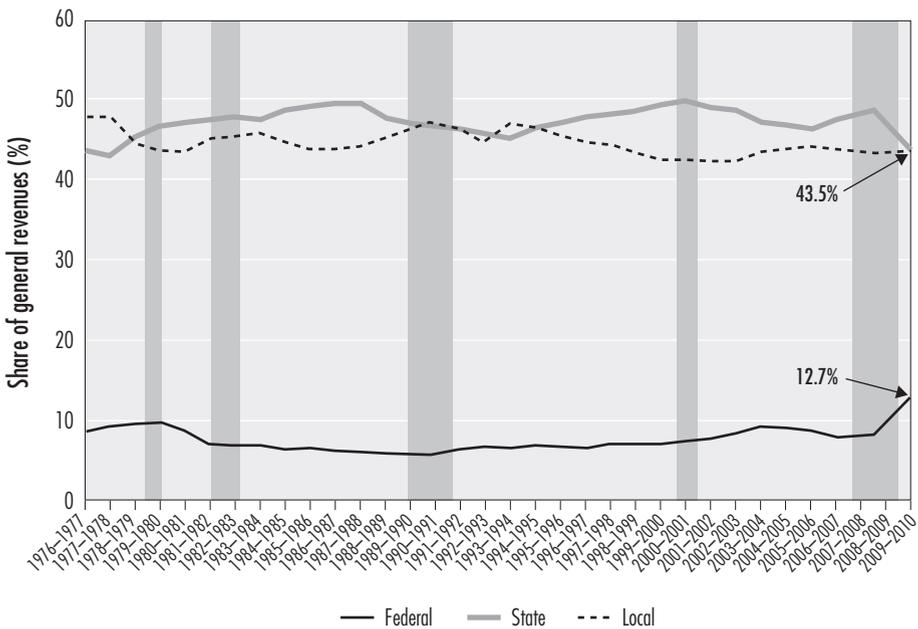
McGuire and Papke (2008) used a somewhat different methodology to calculate school property tax revenue as percentage of total public school revenues in the average state. They report that in 1986–1987, the property tax comprised 34.6 percent of total education revenues; in 2003–2004, their latest year, the percentage fell to 29.4 percent. My calculations of property tax revenue as a percentage of total revenues in the average state in the same two years show a decline from 34.0 percent to 30.7 percent.<sup>4</sup> The 2009–2010 average percentage

4. Note that the percentages in table 6.1 were calculated by dividing total property tax revenue in the United States by total education revenues, rather than calculating the average of these ratios across all states.

was 31.0. The reason the reliance on the property tax in the average state has declined over the past couple of decades, while in aggregate property tax revenue has remained a nearly constant share of total public education revenues, is because some of the larger states and other states that rely very heavily on property taxation increased their reliance on the property tax during that period.

Although prior to 1977 school finance data from the U.S. Census Bureau did not include any information on dependent school districts, information from independent school districts shows a long-term decline in the share of total public school revenues from local sources. In 1942, 64 percent of the general revenues of independent school districts came from local sources. The local share averaged 57 percent during the 1950s and declined to 55 percent in 1972. Figure 6.1 displays the shares of public education revenue from each of the three levels of government for the years 1976–1977 through 2009–2010. The local government share of revenues of all school districts in the United States was 47.8 percent in 1977 and declined to 43.4 percent in 1980 and 1981. The decline in the share of public school revenues from local sources during this period corresponded with large increases in the state share. This pattern reflects in large part state actions

**Figure 6.1**  
General Revenues for Public Education, Share by Level of Government, 1976–1977 to 2009–2010



Note: Shaded areas indicate duration of recessions.  
Source: National Center for Education Statistics (2013a).

to reduce reliance on the perennially unpopular property tax. The move toward more state education funding was also spurred by a series of court decisions. The *Serrano* decisions<sup>5</sup> in California in the 1970s were followed by a number of successful court cases in other states. In most of these decisions, the courts found that the heavy reliance on property taxation resulted in funding systems that conflicted with state constitutions' education and equal protection clauses (Corcoran and Evans 2008).

The state share of public education funding reached nearly 50 percent in 1987. After dipping in the early 1990s, it rose back to about 50 percent in 2000–2001. As a result of the increasing share of state funding, the contribution of the property tax to school funding fell to 33 percent. Between 2002 and 2004, a large number of states reduced funding for public education as a means of closing state budget gaps (Reschovsky 2004). One reason for the relative stability of property tax revenue during that period was the fact that many states increased property taxes to replace reduced state aid. Dye and Reschovsky (2008) found evidence that on average local school districts increased property taxes by 23 cents for every dollar in reduced state education aid.

Undoubtedly due to the sharp drop in state tax revenues in most states as a result of the Great Recession, the state share of education funding dropped from 48.3 percent to 43.5 percent between 2008 and 2010. Because the federal stimulus legislation resulted in a sharp rise in federal aid to education in 2009 and 2010, the local share of education funding remained largely unchanged.

After a sharp increase starting in 1999, housing prices in many parts of the country started to fall precipitously in 2006. A similar pattern existed in commercial real estate prices, but the peak in the market was about a year later than the peak in the housing market. It is important to note that even though the market value of property was declining rapidly from 2006 through 2009, school property tax revenue continued to grow during this period. A likely reason that changes in market values are not immediately reflected in changes in property tax revenue is that taxes are levied on assessed values and in many communities there are substantial lags between changes in market prices and reassessments, and a further lag between the determination of assessed values and the political decisions on changes in property tax levies. Recent research confirms the existence of a lag of approximately three years between changes in housing prices and changes in property tax revenue (Chernick, Langley, and Reschovsky 2012; Lutz 2008; Lutz, Molloy, and Shan 2011).

These funding trends help explain why, despite the unpopularity of the property tax, its role in funding public education in the United States has remained largely unchanged over the past 30 years. First, the property tax has continued to contribute about four-fifths of local public education revenues over the past few

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5. *Serrano v. Priest*, 5 Cal. 3d 584 (1971), *Serrano v. Priest*, 18 Cal. 3d 728 (1976), and *Serrano v. Priest*, 20 Cal. 3d 25 (1977).

**Table 6.2**

The Role of the Local Property Tax in Funding Public Education, by State, 2009–2010

	Property Tax as a Percentage of Local Revenues	Local Revenues as a Percentage of Total Revenues	Local Property Tax as a Percentage of Total Revenues
Alabama	47.5	31.0	14.7
Alaska	52.3	21.7	11.3
Arizona	80.2	40.1	32.1
Arkansas	85.0	32.0	27.2
California	79.8	32.0	25.5
Colorado	81.3	48.0	39.0
Connecticut	97.0	56.4	54.7
Delaware	84.6	29.1	24.7
District of Columbia	38.4	90.9	34.9
Florida	84.6	52.3	44.3
Georgia	71.5	47.2	33.8
Hawaii	0.0	3.5	0.0
Idaho	83.1	21.4	17.8
Illinois	87.6	59.2	51.8
Indiana	74.8	41.6	31.1
Iowa	68.9	46.5	32.0
Kansas	82.9	33.7	27.9
Kentucky	71.1	31.3	22.3
Louisiana	41.9	37.9	15.9
Maine	94.6	47.1	44.6
Maryland	47.6	50.7	24.1
Massachusetts	93.8	50.9	47.7
Michigan	86.9	32.5	28.2
Minnesota	67.9	26.6	18.0
Mississippi	79.4	31.2	24.8
Missouri	78.9	55.4	43.8
Montana	79.6	29.3	23.3
Nebraska	88.9	53.7	47.7
Nevada	56.3	58.8	33.2
New Hampshire	95.2	55.4	52.8
New Jersey	93.9	54.2	50.9

**Table 6.2**  
(continued)

	Property Tax as a Percentage of Local Revenues	Local Revenues as a Percentage of Total Revenues	Local Property Tax as a Percentage of Total Revenues
New Mexico	78.8	15.5	12.2
New York	89.5	49.5	44.3
North Carolina	79.0	26.5	20.9
North Dakota	78.4	32.4	25.4
Ohio	82.5	44.6	36.8
Oklahoma	78.6	32.9	25.8
Oregon	82.5	38.2	31.5
Pennsylvania	80.1	53.2	42.6
Rhode Island	97.3	53.6	52.1
South Carolina	77.3	42.3	32.7
South Dakota	85.1	48.4	41.2
Tennessee	48.7	41.4	20.1
Texas	91.1	44.9	40.8
Utah	75.0	36.3	27.2
Vermont	2.2	7.8	0.2
Virginia	56.0	52.3	29.3
Washington	82.9	29.5	24.4
West Virginia	90.3	28.9	26.1
Wisconsin	91.9	44.7	41.1
Wyoming	91.8	29.3	26.9
United States	81.1	43.5	35.3

Source: Calculations based on National Center for Education Statistics (2013a).

decades, and second, the local share of education funding has remained relatively unchanged.

Table 6.1 and figure 6.1 are based on aggregate U.S. data on education funding. The importance of the property tax in funding education varies tremendously across states. Table 6.2, which is based on data from 2009–2010, illustrates the role the local property tax plays in school funding in each state and the District of Columbia. To help understand why the importance of the property tax varies across states, the table provides data on property tax revenue as a percentage of

locally raised education revenues and the importance of locally raised revenues in the total funding of public education in each state.

In Connecticut, Illinois, New Hampshire, New Jersey, and Rhode Island, the property tax accounts for over half of total public education revenues. The important role of the property tax is due in part to the fact that it is the source of nearly all local education revenues—for example, 97 percent in Connecticut and Rhode Island and 88 percent in Illinois. In addition, in all five states, over half of total education revenues come from local government sources. In Illinois, 59 percent of total education revenues come from local school districts.

At the other end of the spectrum, the property tax contributes less than 16 percent of total education revenues in Alabama, Alaska, Louisiana, and New Mexico.<sup>6</sup> One reason the property tax is relatively unimportant in these states is that substantial amounts of local revenues come from non-property tax sources. In Louisiana, for example, the property tax contributes only 42 percent of local revenues. The second reason is that local governments raise only a small portion of the revenues that finance public education: 31 percent in Alabama, 22 percent in Alaska, 38 percent in Louisiana, and 16 percent in New Mexico.

Most states fall in the middle; they utilize other sources of local revenues in addition to the property tax, and the responsibility for funding education is relatively equally split between the state and local governments.

Given data limitations, it is possible only to calculate changes in the reliance on property taxation for individual states for the years after 1987–1988. In eight states and the District of Columbia, property taxes as a percentage of total public education revenues fell by more than 10 percentage points between 1988–1989 and 2009–2010. These states include Michigan, New Hampshire, Vermont, and Wisconsin, all of which had major school funding reform during that period. In an additional 19 states, the reliance on the property tax declined by less than 10 percentage points over the 21-year period, while in the remaining 23 states, property taxes as a share of total school revenues actually rose.

### *Education Finance in the Three Years After 2010* —————

The latest available data on the property tax revenue of U.S. school districts are for the 2009–2010 school year. Although the Great Recession officially ended in June 2009, the fiscal impacts of the recession, the financial crisis, and the housing market collapse continued long after that. Using limited information available about the funding of public education for the period between school year 2009–2010 and school year 2012–2013, this section provides a partial picture of recent developments in school funding.

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6. Both Hawaii and Vermont do not rely on the local property tax. Hawaii has a single state-run school district, and in Vermont a portion of school funding comes from a statewide property tax.

The U.S. Census Bureau releases on a regular basis the Quarterly Summary of State and Local Tax Revenue, which provides data for the whole nation on state-only and state and local tax revenues. The latest release includes data through the first quarter of 2013 (U.S. Census Bureau 2013b). Comparing these data with data from the National Public Education Financial Survey indicates that in fiscal year 2010, school property taxes accounted for 46 percent of total property tax revenues in the United States. The data in the first column of table A6.1 present quarterly 12-month total property tax revenues of all local governments in the United States from the first quarter of 2005 through the first quarter of 2013. These data demonstrate that since the end of fiscal year 2010 (the second quarter of 2010), nominal property tax revenue in the United States has remained basically unchanged. This contrasts with the previous five-year period, during which nominal property tax revenue grew by about 40 percent.

As illustrated in the third column of table A6.1, per capita real property tax revenue peaked at \$1,594 in the 12 months ending with the fourth quarter of 2009. Three and a quarter years later, per capita real property tax revenue declined to \$1,462, a reduction of 8.3 percent. Although there is no way to know whether property taxes used to fund education and other local government public services followed identical paths, it is quite reasonable to assume that between 2010 and 2013, inflation-adjusted per capita school property tax revenue fell.

We do know that over the same period, many state governments reduced aid to local schools. A survey conducted by the Center on Budget and Policy Priorities found that in 26 states, per student state aid to elementary and secondary schools for the 2012–2013 school year was lower than in the previous year (Oloff, Mai, and Leachman 2012). The survey also indicated that in 35 states, real state aid per student in 2012–2013 was lower than it was in 2008. These reductions exceeded 20 percent in Arizona, Alabama, and Oklahoma and were greater than 10 percent in 13 additional states. A similar story is told by recent census data. Between 2008 and 2010, total state funding for public education declined by 8.3 percent in nominal dollars. If this figure were adjusted for inflation and enrollment increases, the percentage reduction in state funding would be even larger. The latest available census data indicate that state support of public education grew in nominal dollars by 3.2 percent between 2010 and 2011.

Primarily in 2010, the federal government, through the American Recovery and Reinvestment Act of 2009, targeted over \$50 billion for the support of public education. In a number of states, the federal stimulus money replaced state aid on a dollar-for-dollar basis. Without these federal funds, the cuts in state aid to education would undoubtedly have been substantially larger.

It is hardly surprising that reductions in revenues have led to cuts in spending on public education. Over the past few years, the media have provided ample anecdotal evidence that many local school districts around the country have increased class sizes, reduced educational programs, fired teachers, and closed schools. The latest census data indicate that total spending by elementary and

secondary public school districts declined by 0.5 percent between 2009 and 2010 and by an additional 1.1 percent between 2010 and 2011 (U.S. Census Bureau 2013a).

Additional evidence of cuts in public education comes from the current employment surveys of the Bureau of Labor Statistics. The data indicate that local government education employment reached a peak of 8,113,500 in June 2009. Four years later, in June 2013, 340,000 fewer people were employed, a 4.2 percent reduction (U.S. Bureau of Labor Statistics 2013).

### *The Prospects for Growth in Federal and State Education Funding*

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The future need for property tax revenue for the funding of public education in the United States will depend both on the amount of money that will be needed to fund education over the next few decades and on the growth of revenues from alternative sources of funding. Projecting expenditure needs, actual expenditures, and actual revenues is a difficult task. These projections depend on the rate of future economic growth; demographic trends; future policy initiatives (for example, the possible expansion of pre-K public education); and national, state, and local political developments. This section includes a discussion of some of the factors that are likely to influence the growth of public education expenditures and revenues over the next decade.

#### **PUBLIC EDUCATION SPENDING OVER THE NEXT DECADE**

Pressure to increase spending on public education could come from several sources. First, the number of students to be educated may grow. According to projections made by researchers at the National Center for Education Statistics, enrollment (measured by students in average daily attendance) in the school year 2021–2022 will be about 3.3 million higher than in 2012–2013 (Hussar and Bailey 2013). These projections indicate that the rate of growth in public school enrollment will be substantially higher in the next nine years than it was during the previous nine years (2003–2004 to 2012–2013). The annual rate of growth is expected to increase from 0.31 percent to 0.71 percent, and the average annual increase in enrollment from 80,000 to 341,000.

If history provides any guide, real current expenditures per pupil will increase over the next decade. Data compiled by the National Center for Education Statistics (2013c, table 5) indicate that current expenditures per public school student in constant 2009–2010 dollars grew from \$7,967 in 1994–1995 to \$10,652 in 2009–2010, representing an average annual rate of increase of 1.96 percent.

A number of recent developments provide some hope that over the coming years, the historical rate of per pupil spending growth can be slowed. Many educators believe that the effectiveness of teaching can be improved through the use of technology. Especially promising is the use of computers to enable individual-

ized learning. As part of the American Recovery and Reinvestment Act of 2009, the U.S. Department of Education established the Investing in Innovation Fund (i3), which provides grants to help finance promising educational innovations, including those aimed at increasing the effective use of technology in education.<sup>7</sup> Kenyon (2012) argues that the expanded use of technology holds real promise for reducing costs.<sup>8</sup> To date, however, very little research exists on the relationship between educational technology and the costs of education.

There is also hope that the increasingly widespread use of Common Core academic standards, the use of high-stakes student testing, and the linking of teacher compensation and retention to student academic performance will increase the efficiency of public education. In addition, in a survey of literature class size and student performance, Matthew Chingos (2013) concludes that many school districts have overinvested in class-size reduction. He argues that some students would benefit if class sizes were increased and the budgetary savings were used in more cost-effective ways, such as investments in early childhood programs or computer-assisted instruction.

Despite the promise of these potentially cost-reducing developments, public education faces two challenges that might well lead to higher educational expenditures in the future. There is widespread agreement among labor economists that economic success in today's labor market requires a higher level of knowledge and skills than in the past. At the same time, the economic reward for high skills has been growing over time. For today's youth to compete successfully in the global economy, they will need to leave secondary school education with an increased portfolio of skills and knowledge. Unfortunately, existing evidence suggests that on average American students' level of expertise, especially in the areas of mathematics and science education, is below that of students in many other countries. Based on 2009 results (the latest available) from the Program for International Student Assessment (PISA), 15-year-olds in the United States scored no better in both reading and science literacy than the average student in countries that belong to the Organisation of Economic Co-operation and Development (OECD) and scored below average in math literacy (National Center for Education Statistics 2012). These international comparisons serve to highlight the importance of taking steps, such as investing in curriculum upgrades and improving the quality of instruction, to increase the opportunities for American students to acquire more knowledge and higher-level skills. These efforts will almost certainly require an investment in additional resources, especially in the area of teacher training.

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7. The president's fiscal year 2014 budget includes \$215 million for the i3 program.

8. Although the expanded use of technology may reduce the costs of education, there is some danger that the capital costs associated with technology may deter the adoption of technology in school districts with limited resources.

The 2011 results of the National Assessment of Educational Progress (NAEP) indicate that large gaps exist in the academic performance of students from economically disadvantaged families relative to that of students from nondisadvantaged families. Large achievement gaps also exist between racial groups. As the nation becomes more ethnically and racially diverse, and especially as income inequality rises, the challenges of closing these academic achievement gaps grow. Although for the nation as a whole NAEP scores for all racial groups have been rising and racial achievement gaps have been slowly narrowing, the gaps between pupils from high- and low-income families have been increasing over time (Reardon 2011). As argued forcibly by Helen Ladd (2012), closing these gaps will require not only more effective education programs in our schools but also investments in preschool education, after-school and enrichment programs targeted to low-income students, and programs to ensure that poor children receive adequate health care and nutrition.

The trajectory for spending on public education over the next decade will depend on countless decisions about both spending and revenues at the federal, state, and local levels. Those who argue for increased spending on education will undoubtedly point to increased enrollments, the need to improve the quality of instruction and academic standards as a means of preparing students to be competitive in an evolving economy, and the need to improve the quality of education, especially for students from economically disadvantaged families and minority families. Whether these calls for increased public education spending will be successful will depend largely on the willingness of governments at all levels to increase revenues devoted to education.

#### FEDERAL FUNDING OF PUBLIC EDUCATION

Budget debates at the federal level are dominated by the nation's long-term debt problems. In a recent budget update, the Congressional Budget Office (2013) estimates that the U.S. government debt held by the public will be equal to 75.1 percent of gross domestic product (GDP) at the end of fiscal year 2013. This level of debt compares to an average debt-to-GDP ratio of 39 percent over the past 40 years. After declining between 2014 and 2018, rising health care costs, combined with an aging population, will lead to growing budget deficits and a steadily increasing federal debt as a percentage of GDP.

Most observers agree that any solution of the nation's long-term debt problems will require a combination of entitlement reform and revenue increases. In fact, both the Bowles-Simpson and the Domenici-Rivlin debt reduction plans rely on a mix of revenue-enhancing tax reforms; spending cuts; and Medicare, Medicaid, and Social Security reforms.<sup>9</sup>

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9. President Obama's National Commission on Fiscal Responsibility and Reform was chaired by Erskine Bowles, former chief of staff to President Bill Clinton, and Alan Simpson, a former Republican senator. Their original plan was released in 2010, and they issued a revised plan in early 2013. Another plan was written by the Debt Reduction Task Force, associated with

Under current law, the federal government provides financial resources to states and to local school districts to support elementary and secondary education through two major grant programs. The first is Title I of the Elementary and Secondary Education Act of 1965, which targets funds to school districts with heavy concentrations of students from low-income families. The second grant supports special education programs for students with mental or physical disabilities. In fiscal year 2013, Congress appropriated \$13.8 billion for Title I grants and \$12 billion for special education. Given the partisan divisiveness that currently pervades the U.S. Congress, it is difficult to predict how the ongoing fiscal debates concerning the appropriate policies to deal with the federal debt will affect the future funding trajectory for both Title I and special education grants.

Federal expenditures on elementary and secondary education are characterized as discretionary expenditures. While avoiding major entitlement reform, Congress over the past couple of years has enacted legislation mandating cuts in discretionary expenditures. In 2011, the debate over the federal debt ceiling led to the passage of the Budget Control Act of 2011, which required Congress to reduce spending over the next decade by \$1.2 trillion, in part by placing tight caps on the growth of total discretionary spending. The failure of the bipartisan Joint Select Committee on Deficit Reduction, also called the super committee, to agree on further debt reductions led to automatic across-the-board cuts in defense and nondefense discretionary spending known as sequestration. According to data released by the U.S. Department of Education (2013), sequestration resulted in a 5.21 percent cut in both Title I and special education appropriations for fiscal year 2013. Although the bipartisan budget agreement signed into law by President Obama in December 2013 will reduce sequestration cuts in 2014 and 2015, it did nothing to reduce the long-run decline in inflation-adjusted federal spending on nondefense discretionary programs.

After growing at a rapid rate in the first part of the past decade, total appropriations for both Title I and special education grew quite slowly between 2005 and 2012, before falling in 2013. Federal appropriations for Title I were 8 percent higher in 2013 than in 2005. Adjusting for inflation using the consumer price index, Title I appropriations fell by 10 percent between 2005 and 2013. The growth rate of special education funding was even slower during the same period. Whereas current-dollar special education appropriations grew by 2.6 percent during this eight-year period, in real terms they declined by 14.5 percent.

While the FY 2014 congressional budget agreement specifies annual maximum spending for nondefense discretionary programs over the next 10 years, it does not indicate future appropriations levels for elementary and secondary education. However, at least a quarter of all nondefense discretionary programs

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the Bipartisan Policy Center, a Washington-based nonprofit organization. The task force was chaired by Pete Domenici, a former Republican senator, and Alice Rivlin, former director of the Congressional Budget Office and vice chair of the Federal Reserve Board.

are grants to state and local governments, and approximately 25 percent of these grants are for education (Office of Management and Budget 2012). Although it is always possible that Congress will make larger budget cuts to federal government agencies such as the FBI or the IRS than to grants to state and local governments, it is highly unlikely. Thus, budgetary targets for nondefense discretionary spending in the federal budget provide a reasonable estimate of the range of future trends in appropriations for federal education grants to state and local governments.

Figure 6.2 plots nondefense discretionary spending as a share of gross domestic product from 1972 through 2023. Spending levels for the last 10 years of this period reflect current law estimates from the Congressional Budget Office. Over the past 50 years, nondefense discretionary spending has generally ranged between 3 and 5 percent of GDP. As illustrated in figure 6.2, spending caps mandated by the Budget Control Act of 2011 adjusted for sequestration and for the temporary easing of the sequestration cuts called for in the FY 2014 budget will result in a continuing decline in nondefense discretionary spending as a share of GDP. After 2016, the spending-to-GDP ratio will fall below 3 percent (Bernstein 2013).

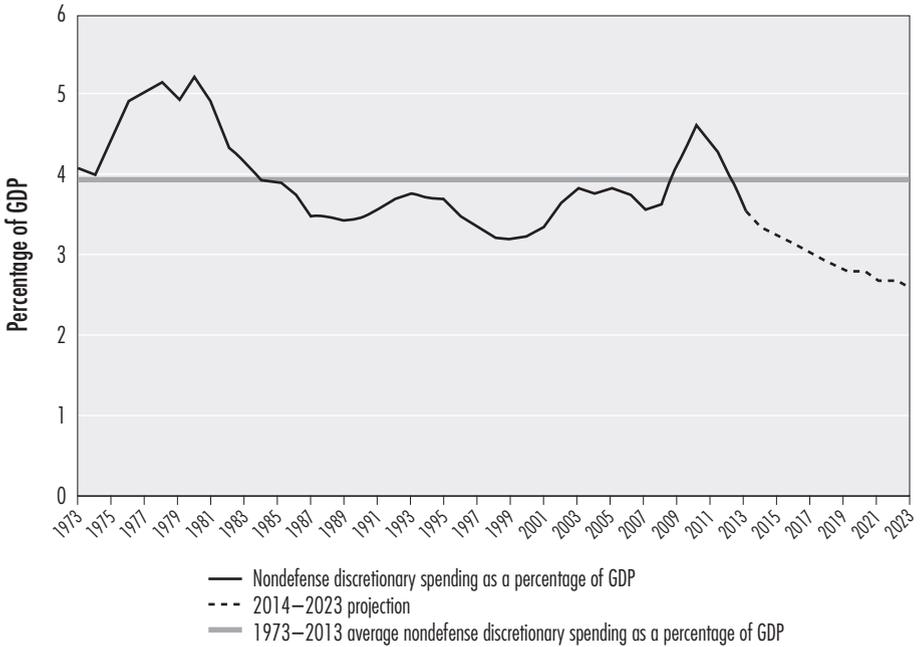
Although predicting with any degree of certainty the future path of federal fiscal policy is impossible, given the magnitude of the nation's long-term debt problem, spending cuts that have already been put in place, and the aversion of both political parties to raising federal taxes on the middle class, there is a high probability that at least over the next decade or two, the federal government's contribution to the funding of elementary and secondary education will be reduced.

#### STATE FUNDING OF PUBLIC EDUCATION IN THE SHORT RUN

In response to plummeting revenues during and immediately after the Great Recession, the majority of states cut state aid to elementary and secondary public education. As the economy began to recover, state tax revenues rose, and most states responded by increasing funding for public education. Anecdotal evidence suggests that increases in state education aid have been modest, and in many states state aid, though rising, still remains substantially lower than it was just prior to the recession. For example, Florida's 2013 budget increased state aid by less than \$400 per pupil, but aid was cut by \$1,417 per pupil over the four previous years. In Virginia, despite an increase in the number of students, direct state education aid in 2012–2013 was 12 percent below its level in the pre-recession year 2006–2007 (Virginia General Assembly 2013). In New York State, the 2013–2014 state budget increased education aid by more than \$1 billion, but even counting this new aid, total state aid was \$4 billion below the amount a previous legislature decided was the minimum needed for public schools to provide a "sound basic education" (Campaign for Educational Equity 2013).

States have been slow to increase state education aid for a couple of reasons. First, as demonstrated by Harris and Shadunsky (2013), not only was the decline in state revenues more severe in the Great Recession than in any recession since

**Figure 6.2**  
**Nondefense Discretionary Spending as Share of GDP Since 1973 with 2014–2023 Current-Law Projections**



Source: Based on data from Congressional Budget Office (2013).

the Great Depression, but on a number of different dimensions, the recovery has been more anemic than after past recessions. In many states, it has taken more than four years for nominal state tax revenues to return to their pre-recession levels. Johnson and Leachman (2013) compared the change in state tax revenues during the current recovery to the changes in revenues during the recoveries following the past three U.S. recessions. They found that five years after the start of the Great Recession (in December 2007), state revenues in real terms were about 5 percent lower than they were at the start of the recession. This contrasts to the recessions of 1981–1982, 1990–1991, and 2001. Real revenues grew substantially during the five years after the beginning of each of these recessions. In the case of the severe 1981–1982 recession, the revenue increase five years out was over 20 percent.

In the coming years, increased funding for state education aid might be modest even in states with above-average growth in state revenues if other state spending is given higher priority. A number of states responded to budget gaps during the Great Recession by suspending state payments to employee pension funds or by spending down balances in state rainy-day funds. Now, during the

recovery, these states may face either statutory or constitutional mandates to replenish these funds as quickly as possible. As a result of both slow state revenue growth and the need to replenish various funds, returning to pre-recession levels of state education aid may take at least several more years.

### LONG-RUN PROSPECTS FOR STATE EDUCATION AID

The long-term prospects for increased state education aid depend on the future growth trajectory for state tax revenues and on the extent to which other state spending priorities will crowd out state spending on elementary and secondary education.

In fiscal year 2011, the average state raised 30 percent of its tax revenues from the general sales tax, 30.5 percent from the individual income tax, 5.1 percent from the corporate income tax, and the rest from selective sales taxes, licenses, and miscellaneous taxes (U.S. Census Bureau 2012a).<sup>10</sup> There are good reasons to question whether, at least in some states, revenues from the three major sources of state tax revenues will continue to grow in proportion to the growth rate of the economy.

In principle, general sales taxes apply to consumer spending on goods and services. In practice, many states exempt most services from taxation. In 1959, services made up 45 percent of total consumer spending. At the end of 2012, services comprised 66 percent of consumer expenditures (U.S. Bureau of Economic Analysis 2013). The result is a steady erosion of the sales tax base. This trend of the increasing consumption of services is likely to continue over time. While some states have been successful in expanding their sales tax bases to include more services, such attempts in other states have proved politically impossible.

The narrowing of sales tax bases is being further accelerated by the inability of state governments to effectively collect taxes on purchases made by state residents from out-of-state sellers. Although in the past most of these purchases were associated with mail-order sellers, increasingly individuals are avoiding the payment of sales taxes through Internet purchases. The National Conference of State Legislatures has estimated that state governments lost approximately \$23 billion in 2012 due to Internet and mail-order sales (Kuhl 2012).

As the importance of Internet commerce expands, state governments' sales tax bases will continue to erode unless Congress passes legislation requiring out-of-state mail-order and Internet sellers to collect state and local sales taxes on all purchases.<sup>11</sup>

In recent years, a number of state legislatures have adopted new business tax exemptions and exclusions. For example, in 2011 Wisconsin enacted a new

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10. The median share of tax revenues from the general sales tax was 29.7 percent; from the individual income tax, 34.3 percent; and from the corporate income tax, 4.8 percent.

11. The Marketplace Fairness Act, if passed by Congress, would require the collection of state and local sales taxes on all purchases made by Internet or mail-order sellers with annual sales in excess of \$1 million.

corporate income tax credit that, when fully phased in, will eliminate most corporate tax liabilities for manufacturing firms operating in the state. The intense competition among states for economic development has contributed to the declining share of state tax revenues from corporate income taxes. In 1987, 8.6 percent of state tax revenues came from the corporate income tax; by 1997, the corporate tax share of revenues had declined to 6.9 percent; and in 2011, the latest year for which data are available, the corporate income tax accounted for 5.3 percent of state tax revenues.<sup>12</sup>

In 2013, at least eight states passed legislation that cut the individual income tax. Several states are considering proposals to completely eliminate the state income tax (Johnson and Leachman 2013). Although the specific rationales for these policy initiatives differ by state, in general they are driven by a belief that lower income taxes will lead to enhanced economic growth by attracting new residents and businesses. Despite this belief, there exists no credible empirical evidence that low reliance on state income taxation leads to enhanced state economic growth.

In recent decades, many states have enacted individual income tax provisions designed to provide favorable tax treatment of their elderly residents (Conway and Rork 2012). These provisions take the form of special deductions, exemptions, or credits targeted explicitly to some or all elderly taxpayers. In addition, many states partially or completely exclude from state taxation Social Security benefits and/or retirement income from pensions or individual retirement accounts. Appendix B in Cubero and colleagues (2013) is a summary of the income tax preferences provided by each state in 2011.

Regardless of the merits of these tax preferences, the rapid aging of the population implies that both the number of elderly taxpayers and the share of total income from Social Security, pensions, and retirement accounts will grow. The revenue consequences of these trends will be substantial. Population projections made by the U.S. Census Bureau indicate that while the non-elderly adult population (ages 20–64) is projected to grow by 18.3 percent between 2010 and 2040, during that same time period the elderly population (age 65 and above) will grow by 102 percent (Vincent and Velkoff 2010). In a study of the taxation of retirement income in Wisconsin, Cubero and colleagues (2013) estimate that retirement income as a share of total federal gross income will grow from 17 percent in 2010 to 24 percent in 2040. As retirement income grows as a share of total income, the revenue loss from providing tax preferences to elderly taxpayers will increase rapidly.

Even if states raise sufficient revenues, there is no guarantee that state support for public education will remain robust. In some states, pressures on state

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12. The numbers for 1987 and 1997 are from the quinquennial Census of Governments, and the number for 2011 is from the U.S. Census Bureau's Annual Survey of State Finances. The growth in the use of noncorporate forms of business organization has also contributed to the reduction in revenue from the corporate income tax.

governments to meet other state priorities may crowd out spending on education. A report issued by the State Budget Crisis Task Force (2012), chaired by Richard Ravitch and Paul Volcker, highlights the increasing fiscal pressure that states will feel from Medicaid and from unfunded pension and retiree health care benefits. In most states, spending on Medicaid is growing faster than state tax revenues. This pattern is likely to persist as long as health care costs in the United States continue to grow at a faster rate than the economy. An increase in the number of people eligible for Medicaid, driven in part by the aging of the population, also contributes to rising costs. In the long run, Medicaid expansions that are part of the Affordable Care Act of 2010 are likely to put upward pressure on Medicaid expenditures by state governments. If enacted, congressional proposals to convert Medicaid to a block grant would place additional fiscal pressures on state governments and would undoubtedly heighten the competition between public education and Medicaid for state resources.

Over the next few decades, many state governments will need to increase contributions to their state pension systems. While some states have fully funded systems, many states' systems are seriously underfunded. Unless these states substantially increase state contributions, most experts agree that many pension systems will eventually have insufficient resources to pay beneficiaries. Rauh (2010) estimates that a number of state pension systems will have insufficient money to pay beneficiaries within 15 years, while Munnell and colleagues (2011) conclude that most state plans will have enough money to last at least 30 years.

As pension benefits enjoy strong legal protection, once pension plans run out of money, state general fund revenues will have to be used to meet pension obligations, again leaving fewer resources available to finance public schools. Many state governments have also promised to provide their employees with health insurance benefits in retirement. Unlike pensions, these benefits are generally financed on an ongoing basis, further increasing the fiscal pressures state governments will face over the next few decades.

### ***What Role Will the Property Tax Play in Funding Public Education?*** \_\_\_\_\_

In the coming decades, if funding for public education from the federal and state governments does not grow or grows at rates below historical trends, maintaining current levels of education spending will require that local school districts play a more important funding role than they have in the past couple of decades. Historically, the property tax has been the most important source of local funding for public education. The unanswered question is whether this heavy reliance on the property tax is likely to continue.

One reason this question is extraordinarily hard to answer is that with few exceptions, education-related expenditure and revenue decisions are made by thousands of individual school districts and local governments. Although some

empirical research exists, predicting future fiscal decisions by these local governments is a complicated and challenging task. Local fiscal decisions depend on local economic, social, demographic, and political factors. State governments influence these decisions through the magnitude and nature of the aid they provide. States also influence the decisions of local governments through the imposition of expenditure mandates and often limitations or restrictions on revenue decisions. Developing accurate predictions of the future flow of school property tax revenues will require a substantial amount of empirical research, generally conducted on a state-by-state basis.

It is likely that property tax revenue decisions over the next few years will continue to be influenced by the fallout from the Great Recession. The slow pace of the economic recovery, the persistently high unemployment rate, and continued economic uncertainty, exacerbated by political gridlock, all are likely to dampen the willingness or ability of local decision makers to raise property taxes.

In some parts of the country, housing prices fell by more than 50 percent between 2006 and 2012. Millions of homeowners lost their homes to foreclosure, and many continue to owe more on their mortgages than the current value of their homes. Although little evidence exists to date, it is not unreasonable to imagine that reductions in housing wealth may result in increased taxpayer opposition to property taxation. Many communities that were particularly hard hit by the recession and the housing crisis suffered a sharp drop in the value of their property tax bases. In these locations, property tax revenues are likely to fall, especially in states that impose property tax rate limits.

Sjoquist and Fatehin (2013) assessed recent changes in school property taxation in Georgia. Between 2009 and 2012, sharp drops in housing prices and a high rate of foreclosures contributed to broad declines in per pupil property values (called “net digest” in Georgia). Although average school mill rates increased each year, they compensated for only a portion of the decline in property values. The result was a 5.4 percent average annual reduction in real property tax revenue between 2009 and 2012. The prospects for the coming years are uncertain. While the lag in reassessments suggests that the assessed values of property will continue to decline for a couple of years, county school districts face a constitutionally imposed mill rate cap of 20 mills. Sjoquist and Fatehin report that many school districts are now at or near the rate limit. The only way many of these districts can prevent further declines in property tax revenue is if voters approve an increase in the mill rate in excess of the cap. The prospects for such approval are uncertain.

Another example of recent school property tax reductions comes from Wisconsin, where local school district fiscal decisions interact with state aid cuts and property tax limitations. Since the mid-1990s, the state has imposed revenue limits on all school districts. These limits, which can be exceeded only through the passage of override referenda, apply to the annual increase in the sum of property tax revenue and state general aid. Amiel, Knowles, and Reschovsky (2012) report

that until 2009, nearly all districts set their property tax levies at the maximum allowed under their revenue caps. Beginning in 2009, however, the number of school districts that chose to “under-levy” has increased dramatically. While on average about 5 percent of school districts under-levied prior to 2009, the rate of under-levying rose to 18 percent in 2011.

In the longer run, the future growth of property taxation will depend in large part on the willingness of local residents to support property tax increases to finance elementary and secondary education. Although the evidence is far from definitive, some data suggest that three demographic trends may result in reduced support for school property taxation. First, not only is the share of the population over age 65 growing rapidly, but second, the number of households with children under age 18 has been falling over time. In 1960, 49 percent of American households consisted of families with children under age 18. That percentage fell to 38 percent in 1980, 33 percent in 2000, and 30 percent in 2010 (U.S. Census Bureau 2012b, table 59). The third demographic trend is the growing racial and ethnic diversity of the U.S. population. In 2012, 37 percent of the U.S. population were classified as minorities, and the Census Bureau projects that minorities will be 57 percent of the population by 2060 (U.S. Census Bureau 2012c).<sup>13</sup> Furthermore, the share of public school students who are nonwhite will grow from 47.6 percent in 2010 to 52.3 percent in 2021, with the largest growth being among Hispanic students.<sup>14</sup>

#### THE ELDERLY AND SUPPORT FOR EDUCATION

The literature includes a number of studies that have investigated the relationship between the share of elderly in a community and the support for education. Although many of the studies focus on education spending, at the local level decisions about increased education spending are generally linked to support for higher school property taxes. To date, the evidence is mixed, with some studies finding that an increase in the elderly population is associated with a lower level of support for education, and other studies finding either no relationship or that more elderly are associated with increased support for education.

Several studies using state-level data, including Poterba (1997), found a strong negative relationship between per student spending on education and the percentage of the population age 65 and over. Harris, Evans, and Schwab (2001), using district- and county-level data, found that elderly populations had a small but negative impact on educational funding. Poterba (1998) and Ladd and Murray (2001) delineated four main reasons older populations may support public

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13. The Census Bureau defines minorities as everyone except the single race, non-Hispanic white population.

14. These percentages are based on my calculations of National Center for Education Statistics enrollment projections, available in Hussar and Bailey (2013).

education spending. First, the elderly may support education in order to improve wages in the future, and by extension Social Security and Medicare funding. Second, they may believe that high-quality schools will be capitalized into higher home values. Third, the elderly might believe intrinsically in the value of public education, or they may feel altruistic toward future generations, particularly if they have grandchildren attending school in their communities. Finally, if Tiebout sorting leads individuals to move to locations based on the public services provided, elderly persons with a lower demand for K-12 education may move to low-spending school districts, thereby leaving educational spending unchanged by their presence.

Berkman and Plutzer (2004) found that the support of the elderly for local public education spending depends on how long they have resided in a community. New elderly residents are less likely to support funding for public education than are long-standing elderly residents. Similarly, Gradstein and Kaganovich (2004) developed a model supporting the contention that a growing elderly population increases support for education. Fletcher and Kenny (2008), using a median voter framework, found that the elderly are associated with only a very small drop in the support of education. Based on survey data, Brunner and Balsdon (2004) concluded that there was less support among the elderly, compared with the young, for school bond initiatives. More recently, Figlio and Fletcher (2012) directly addressed the issue of Tiebout sorting by developing a method to isolate the impact of aging in place. Their empirical results indicate that as people become elderly, they reduce their support for public education.

#### **THE IMPACT OF THE DECLINING SHARE OF HOUSEHOLDS WITH SCHOOL-AGE CHILDREN**

There has been little research on the consequences of the declining share of households containing school-age children. Within any given school district, a decline in the number of households with children could reduce the political support for public education and the willingness to raise school property taxes. However, if fewer families have children, the school property tax levy on the average resident for educating the community's children is relatively low, and thus there may be fewer objections to increasing property taxes. More research is needed to determine the impact of a decline in the share of households with school-age children on education spending and taxes.

#### **RACIAL AND ETHNIC DIVERSITY AND SUPPORT FOR PUBLIC EDUCATION**

Research on the impact of growing racial and ethnic diversity on support for school property taxes is limited. In one recent study, Figlio and Fletcher (2012) found that elderly taxpayers are more likely to support cutting education revenues when the local community includes a large proportion of nonwhite students. Consistent with the "benefits view" of property tax incidence, which argues that

the property tax is in effect the price local residents pay for public sector benefits, it would not be surprising if the greatest support for property taxation came in small, homogeneous communities. Bradbury (1991) and Wallin and Zabel (2011) provide evidence from Massachusetts that the probability of passing referenda to increase property tax levies in excess of state-imposed limits is higher in small, high-income communities than in larger, more diverse communities. Although many of the Massachusetts communities that have been most successful in passing override referenda are quite racially homogeneous, to date there has been no research that links racial and ethnic homogeneity to the support of override referenda. Further research is needed to explore the impact of rising racial and ethnic diversity in the U.S. population on the support for school property taxation.

### *Conclusions*

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This chapter focuses on the role of the property tax in the funding of public elementary and secondary education in the United States. The broader context, however, is the question of how Americans will choose to finance public education in the future. A combination of the rising costs of federal entitlement programs and the apparent political aversion to raising revenues suggests that moving forward, it is very likely that the federal government will play a diminished role in the funding of elementary and secondary education. Although it is impossible to generalize about the fiscal behavior of the 50 states, many face a common set of pressures that will influence future fiscal support of public education. On the revenue side, most states rely heavily on revenue sources that are failing to keep up with the growth of the economy. In some states, political leaders are taking steps to reduce their reliance on their most elastic source of revenue, the individual income tax. On the spending side, there is a chance that in many states funding for education will be at least in part crowded out by the growing costs of Medicaid and other health care-related state expenditures. In some states, large unfunded employee pension liabilities will further reduce the ability, or perhaps the willingness, of states to increase resources devoted to public education.

The property tax has historically provided most of the local-level contributions to the financing of public education. The data on school property tax revenue provided in this chapter demonstrate the abiding stability of the property tax. Despite the unpopularity of this tax, and despite efforts in all states to limit it, the property tax has continued to provide a remarkably constant share of public education funding.

Funding public education in the United States at a level adequate to educate our youths and to provide the foundation for maintaining the nation's position in the global economy will likely require a continued and perhaps enhanced role for the property tax. Much research is needed to assess whether the property tax can meet this challenge and perhaps how it can be transformed into a more popular tax.

**Table A6.1****Local Government Property Tax Revenue in the United States, 2005–2013**

Year and Quarter	Nominal Local Government Property Tax Revenue		Per Capita Real Property Tax Revenue	
	(in millions of dollars)	Percentage Change from Previous Quarter	(in 2011 dollars)	Percentage Change from Previous Quarter
2005: Q1	320,262	1.6	1,313	0.6
2005: Q2	326,275	1.9	1,325	0.9
2005: Q3	330,250	1.2	1,326	0.0
2005: Q4	340,582	3.1	1,351	1.9
2006: Q1	347,349	2.0	1,363	0.8
2006: Q2	351,740	1.3	1,363	0.0
2006: Q3	352,568	0.2	1,352	-0.8
2006: Q4	364,225	3.3	1,386	2.6
2007: Q1	370,317	1.7	1,398	0.8
2007: Q2	376,423	1.6	1,408	0.7
2007: Q3	378,841	0.6	1,405	-0.2
2007: Q4	389,097	2.7	1,426	1.5
2008: Q1	388,859	-0.1	1,407	-1.3
2008: Q2	390,856	0.5	1,396	-0.8
2008: Q3	398,490	2.0	1,402	0.4
2008: Q4	418,967	5.1	1,465	4.5
2009: Q1	437,272	4.4	1,526	4.1
2009: Q2	442,915	1.3	1,546	1.4
2009: Q3	450,142	1.6	1,574	1.8
2009: Q4	458,389	1.8	1,594	1.2
2010: Q1	454,513	-0.8	1,568	-1.6
2010: Q2	458,612	0.9	1,567	-0.1
2010: Q3	462,307	0.8	1,572	0.3
2010: Q4	458,535	-0.8	1,551	-1.3
2011: Q1	456,710	-0.4	1,534	-1.1
2011: Q2	455,459	-0.3	1,515	-1.3
2011: Q3	453,316	-0.5	1,491	-1.6
2011: Q4	453,619	0.1	1,477	-0.9
2012: Q1	452,492	-0.2	1,460	-1.1
2012: Q2	454,109	0.4	1,456	-1.3

*(continued)*

**Table A6.1**  
(continued)

Year and Quarter	Nominal Local Government Property Tax Revenue		Per Capita Real Property Tax Revenue	
	(in millions of dollars)	Percentage Change from Previous Quarter	(in 2011 dollars)	Percentage Change from Previous Quarter
2012: Q3	461,171	1.6	1,470	0.9
2012: Q4	461,413	0.1	1,461	-0.6
2013: Q1	464,616	0.7	1,462	0.1

Source: U.S. Census Bureau (2013b).

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