

Iowa's Aging Population

Implications for the State Budget, 2008-2030

Peter S. Fisher
Elaine Ditsler

December 2008

Iowa Fiscal Partnership

www.iowafiscal.org

The Iowa Policy Project

20 E. Market Street
Iowa City, IA 52245
(319) 338-0773 • www.iowapolicyproject.org

CHILD & FAMILY POLICY CENTER

1021 Fleming Building • 218 Sixth Ave.
Des Moines, IA 50309
(515) 280-9027 • www.cfpciowa.org

Preface

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Authors

Peter S. Fisher is research director at the Iowa Policy Project. He is a Professor in the Graduate Program in Urban and Regional Planning at the University of Iowa. A national expert on public finance, his reports are regularly published in State Tax Notes and refereed journals.

Elaine Ditsler is a former research associate at the Iowa Policy Project, where she specialized in analysis of economic and fiscal trends in the state of Iowa.

Iowa Fiscal Partnership

The Iowa Fiscal Partnership is a joint initiative of the Iowa Policy Project and the Child & Family Policy Center, two nonprofit, nonpartisan Iowa-based organizations that cooperate in analysis of tax policy and budget issues facing Iowans. IFP reports are available on the web at <http://www.iowafiscal.org>.

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Introduction

The budget implications of an aging population have been widely discussed at the federal level. In particular, the impending retirement of the baby boomers is expected to dramatically increase federal outlays for Social Security, Medicare and Medicaid in coming decades. Much less attention, however, has been paid to the effects of these demographic changes on state budgets. States are responsible for a substantial share of Medicaid spending in particular. On the other hand, it is often forgotten that the aging of the population does not just mean that the elderly share of the population will grow; it also means a decline in the share of the population that is young. In particular, relatively fewer persons of school age should moderate increases in state spending on education.

States have also been struggling to maintain a stable revenue stream to fund state and local services. Internet sales and the shift in spending from goods to services have eroded state sales tax revenue, while the state corporate income tax has declined dramatically in importance over the past 15 years. Over the next 20 years, the aging of the population may further constrain revenue growth. Income-tax revenue may grow more slowly due to a rising share of national income that consists of retirement income, combined with the preferential treatment of retirement income under state income tax law. Revenue from sales taxes may also be affected by the shifting demographics since the elderly have different spending patterns.

In this report we examine the financial challenges facing the state of Iowa in the coming 10 to 20 years as a result of demographic changes that will affect state revenues and key categories of spending. The report concludes with an assessment of the overall financial situation likely to face the state between now and 2030 and the policy choices the state will need to confront.

Demographic Trends

We all know that the U.S. population is getting older. The principal causes of this “graying” of the population are a long-term trend toward greater longevity, lower fertility rates in the second half of the 20th century, and the aging of the baby-boomer population.

Average life expectancy at birth in the United States, while less than in many other developed countries, increased from 68 years in 1949-51 to nearly 78 years as of 2004.¹ Life expectancy is expected to continue to increase in the next 20-30 years, though perhaps not as rapidly.² Fertility rates (live births per 1,000 women aged 15 to 44) declined sharply between 1960 and 1975. The overall fertility rate in

the U.S. was between 110 and 120 births per thousand in the 1950s, but had fallen to 65-68 by the latter 1970s and for the most part has remained in this range in the years since (the rate was 66 in 2004).³ Lower fertility rates resulted in fewer young people as a share of the total population. If fertility rates remain stable, however, they will not continue to be a contributory factor in the aging of the population into the future. Finally, in 2011, the oldest of the baby boomers will begin moving into the “65 and older” category, and by 2030 they will all officially be senior citizens.

It is common to compute a “dependency ratio” by dividing the number of persons under 18 or over 65 by those of “working age”: 18 to 64. This is meant to reflect the fact that those generating income through work must provide, directly to family members or indirectly through taxes, for the support of the young and the old. The old, of course, may in fact still be working, and many will be supported to an extent by their own past work in the form of savings. Still, Social Security, Medicare and Medicaid are financed largely by taxes on the employed. Although a rough number, the dependency ratio, does give us some idea of the demands on the public sector for schools, health care and child care for the young, and health care and income support for the old, through taxes on the working population.

Iowa’s population is projected to increase only 1 percent between 2000 and 2030, a consequence of Iowa’s aging population, the outmigration of younger persons, and fewer births (Table 1). Iowa’s 1 percent growth rate exceeds only West Virginia and North Dakota, which are projected to lose population over the same period. In fact, Iowa will begin to lose population after 2020. By 2030, about 22 percent of Iowa’s population will be over 64 years of age, ranking Iowa 12th highest in the proportion of senior citizens.

Table 1. Projected Population of Iowa by Age

Age	2010		2020		2030		2000- 2020		2000- 2030	
	Number	Pct. of total	Number	Pct. of total	Number	Pct. of total	Change	Pct. Change	Change	Pct. Change
Under 18	711,056	24%	697,369	23%	663,301	22%	-36,269	-4.9%	-70,337	-9.6%
18 to 64	1,848,964	61%	1,766,587	58%	1,628,685	55%	10,114	0.6%	-127,788	-7.3%
65+	449,887	15%	556,540	18%	663,186	22%	120,327	27.6%	226,973	52.0%
Total	3,009,907	100%	3,020,496	100%	2,955,172	100%	94,172	3.2%	28,848	1.0%

Source: U.S. Census Bureau, Population Division, Population Projections Branch.

From 2005 to 2030, Iowa’s child dependency ratio (children under 18 per 100 persons age 18 to 64) hovers around 40, rising slightly to 41 by 2030 (very similar to the national trend). On the other end, the elderly dependency ratio (persons age 65 and older per 100 persons age 18 to 64) was 24 in 2005 and rises to 41 by 2030, compared to a U.S. average of 35. Thus we cannot expect savings on education spending to offset increases in Medicaid expenditure.

As the baby boomers continue to move into higher age categories, the proportion of the population in the “old old” category (age 75-plus) will of course rise. This has particular implications for the long-term future of Medicaid, since a substantial share of Medicaid spending goes to long-term care.⁴

State Spending Projections

We focus our projections on state Medicaid, K-12 education and higher-education spending over the next 10 years, cautioning that these are rough projections meant to help policy makers and the public better prepare for the future. State budget projections are particularly difficult because spending is a function not only of the priorities set by state policy makers, but also of federal legislation and of available revenues that fluctuate over the business cycle. These public services, Medicaid and education

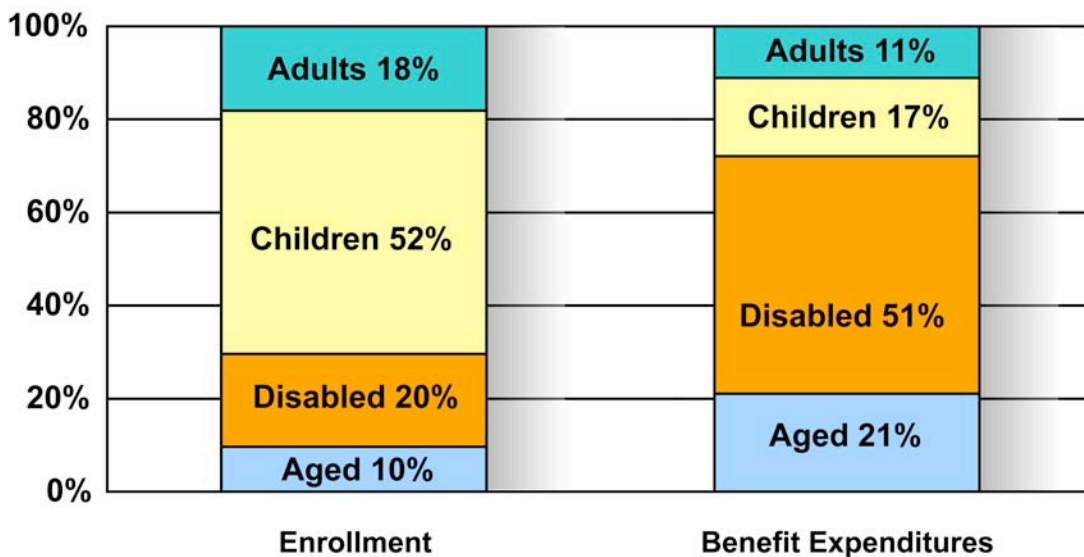
at all levels, alone account for about two-thirds of the state general fund, and their share of costs will likely continue to rise.⁵

Medicaid

Medicaid is a jointly funded federal-state program that provides medical assistance to certain low-income groups. In 2007, Medicaid accounted for about 14 percent of state general fund expenditures.⁶ State expenditures for medical assistance are matched by the federal government using a formula based on per capita income. Among the states, the federal share ranges from 50 to 76 percent; in Iowa, it is 62.6 percent for FY2009. In other words, the state is responsible for funding 37.4 percent of Medicaid spending for the current fiscal year.

In 2006, Medicaid covered approximately 29,000 Iowa seniors (non-disabled persons age 65 or over), 60,000 disabled persons, 54,000 low-income adults (under age 65) and 157,000 children. While seniors and the disabled comprise only 30 percent of Iowa Medicaid enrollees, they account for 72 percent of Medicaid spending (see Figure 1). At the national level, about 4 percent of Medicaid enrollees (almost all disabled or aged) account for nearly half of Medicaid spending.⁷ Thus, any projections of Medicaid spending growth would be wise to focus on trends in the disabled and aged populations.

Figure 1. Medicaid Enrollees and Expenditures by Enrollment Group, Iowa, 2006



Source: Special request to the Iowa Department of Human Services, Fiscal Management Division based on eligibility reports and Iowa Medicaid Management Information System expenditure reports.

Nationally, Medicaid spending growth slowed dramatically in recent years, falling steadily from 12.4 percent annual growth in 2002 (which is also about the average annual growth rate for the entire 1975 to 2001 period) to 2.8 percent annual growth in 2006. Slow enrollment growth, due to an improving economy and eligibility cuts, explained much of that slowdown. During the same period, annual enrollment growth fell from 9.9 percent to 1.6 percent.

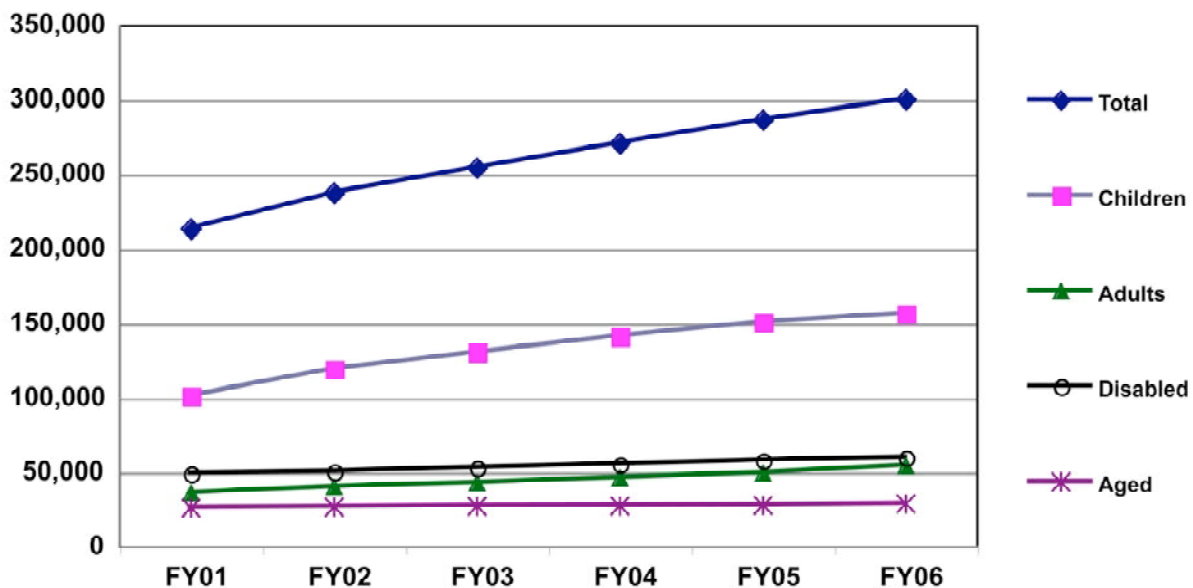
Medicaid spending growth is expected to rise rapidly again in 2007 for the U.S., after four consecutive years of slowing growth. Health-care inflation, the erosion of employer-sponsored health coverage and increases in provider rates are expected to push the number of persons receiving Medicaid to grow to above 5 percent in 2007. Between 2007 and 2017, the Centers for Medicare and Medicaid Services estimate total Medicaid spending will grow at an average of 7.4 percent annually.⁸ Growth in the state share of Medicaid spending is projected to be slightly higher (7.7 percent). Since 2005, most states have

experienced a decline in the percentage of federal matching funds for Medicaid (FMAP) and new regulations, including restrictions on “intergovernmental transfers,” have reduced federal contributions to state Medicaid programs.

New research by Richard Kronick and David Rousseau examines the capacity of states to sustain Medicaid and other state services through 2045.⁹ The authors carefully constructed and analyzed Medicaid spending projections within the context of overall health-care spending, demographic change, trends in categories of service, and economic growth. They projected that Medicaid spending will increase from 2.6 percent of Gross Domestic Product (GDP) in 2006 to 4.1 percent by 2025 and to 6.5 percent by 2045. The most important factors driving Medicaid projections were assumptions about growth in the number of disabled enrollees and the costs of long-term care. Social Security Administration projections through 2030 indicate a slowdown in growth in the disabled population after 2012 (Figure 5).

In the years between 2001 and 2006, before it leveled out in 2007, the number of children and adults enrolled in Medicaid in Iowa increased by about 50 percent.¹ The number of covered children grew from 101,000 to 157,000, and the number of adults from 36,000 to 54,000 (Figure 2). During the same five-year period, the number of covered disabled and aged individuals increased 22 percent and 10 percent, respectively. Overall, Medicaid enrollment in Iowa during this period grew at an average annual rate of 7.1 percent, compared to the national growth rate of 5.1 percent.

Figure 2. Medicaid Enrollment by Enrollment Group, Iowa, FY2001-06

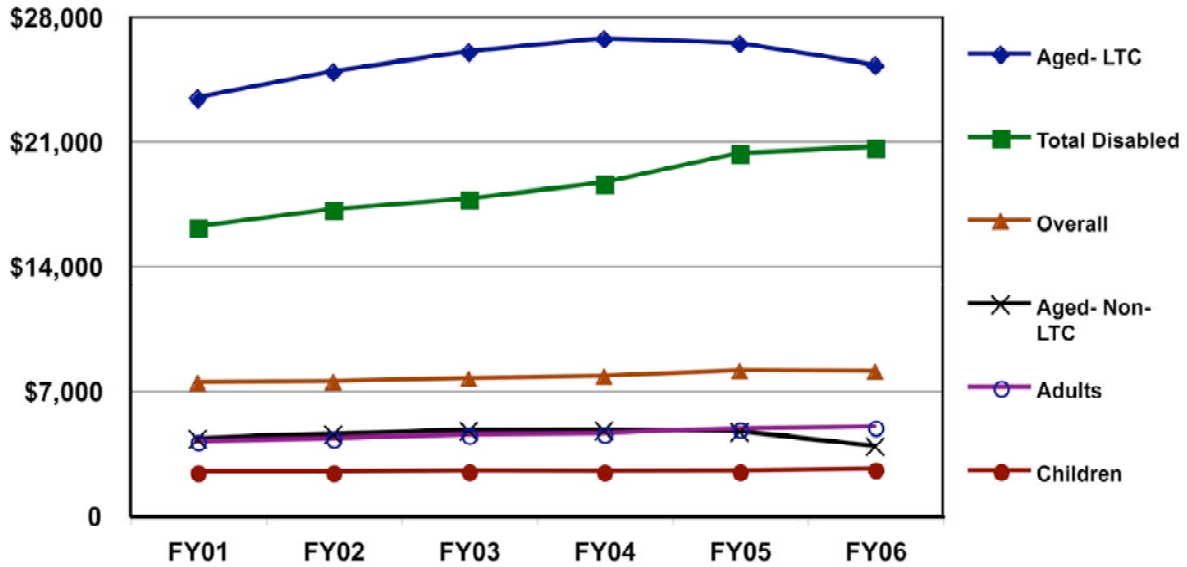


Source: Special request to the Iowa Department of Human Services.

Medicaid costs per enrollee are highest for the aged receiving long-term care, though this figure moderated somewhat in 2005 and 2006. In FY2006, Iowa’s Medicaid program provided long-term care services to 19,000 aged Iowans, at a cost of \$25,000 per enrollee (Figure 3). Another 10,000 aged enrollees who were not receiving long-term care services each had about \$4,000 in Medicaid claims. Per enrollee costs for the disabled increased about 28 percent from 2001 to 2006, to nearly \$21,000.

¹ Preliminary estimates from the Iowa Department of Human Services indicate that the number of adult Medicaid enrollees may have grown another 50 percent in FY2007, to about 70,000 enrollees.

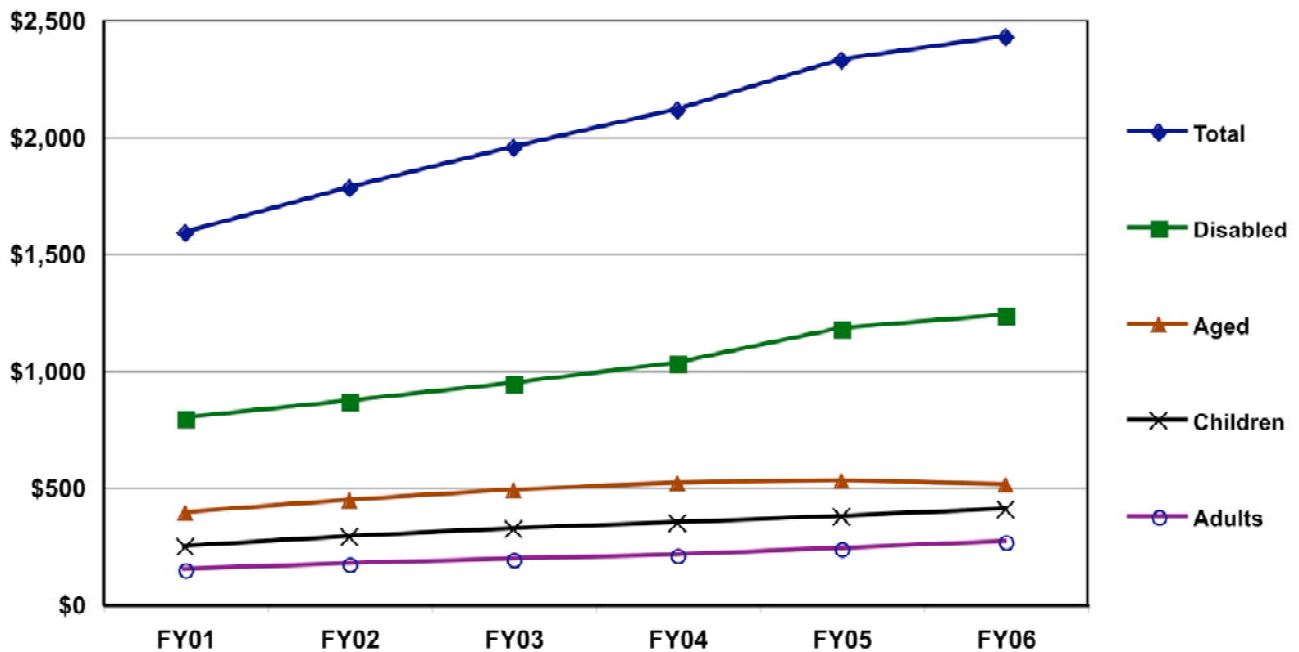
Figure 3. Per Capita Medicaid Expenditures in Iowa by Enrollment Group, FY2001-06



Source: Special request to the Iowa Department of Human Services. Costs represent total costs (both state and federal shares).

In terms of total expenditure, the most expensive group of Medicaid clients are the disabled, in part because Iowa has about twice as many disabled enrollees as aged enrollees. Despite the high per enrollee costs of long-term care, the aged overall account for only a little more than children or non-aged adults in terms of total expenditure, and total expenditure on the elderly has been rising less rapidly than for other enrollment categories in recent years (see Figure 4).

Figure 4. Total Medicaid Expenditures (State and Federal) in Iowa by Enrollment Group, FY 2001-06 (millions of dollars)



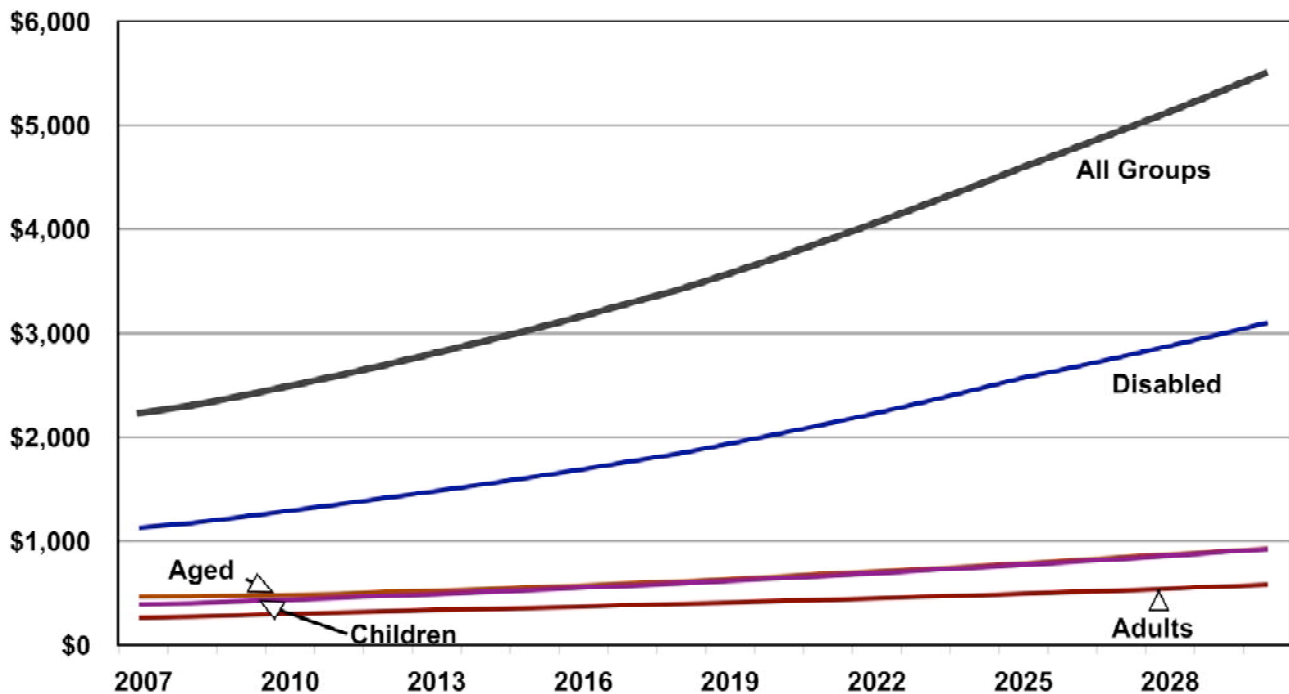
Source: Special request to the Iowa Department of Human Services. Costs represent total costs (state and federal shares).

Aged long-term care (LTC) enrollees accounted for 64 percent of aged Medicaid enrollees in Iowa in FY2006, but 92 percent of total expenditures for the aged. For the nation as a whole, LTC costs are a smaller share (about 80 percent) of total aged Medicaid expenditures. In spite of this, in fiscal year 2006, Iowa spent slightly less per aged enrollee than the national average.

Projections of state Medicaid spending are based on national projections of the growth of Medicaid enrollment as a share of population by enrollment group, and of Medicaid spending per enrollee by enrollment group. We begin with the Iowa Medicaid enrollees as a percent of the relevant Iowa population group (for example, 21.9 percent of children under 18 are enrolled in Medicaid) and assume that this population share will increase or decrease at the same rate as the national population share is projected to change. We also begin with Iowa spending per enrollee by group and assume that this spending will grow at the same rate as national spending per enrollee for that group.

The result is a projection of Iowa Medicaid spending in constant dollars by group, as shown in Figure 5. All categories of spending are expected to increase in inflation-adjusted terms, and total spending will have doubled by 2025. Spending on the disabled is projected to increase more rapidly than other categories, and as a result will account for 56 percent of the total Medicaid spending by 2030, up from 51 percent in 2007.¹⁰ Despite the aging of the population, the share of Medicaid spending on the aged is expected to decline slightly over this period, from 21 percent to 17 percent by 2030.

Figure 5. Projections of Total Medicaid Spending in Iowa by Enrollment Group, FY2007-30 (millions of 2006-07 dollars)



Source: Projections by the authors based on national projections by CMS and by Kronick and Rousseau

Nearly two-thirds of Iowa Medicaid spending comes from federal sources. We have projected the state's funding of Medicaid from state sources by assuming that the state share of total Iowa Medicaid spending will remain at 36 percent (see Table 2). (Some sources believe that the federal matching rate (FMAP) will decline slightly in the future; if so the state share will rise.) We do not distinguish among the various sources of state funding.

Table 2. Iowa Medicaid Funding, Fiscal Years 2007-09

	FY2007 actual	FY2008 projected	FY2009 projected
Federal funds	1,454,067	1,500,862	1,600,872
State funds	759,278	848,789	894,516
Total Medicaid spending	2,213,345	2,349,651	2,495,388
State share of total spending	34.3%	36.1%	35.8%

If the state spending on Medicaid from state funds grows at the same rate as projected total spending on Medicaid (in other words, if the state-federal shares are unchanged) then state Medicaid spending will rise from \$759 million in FY2007 to \$3.25 billion by 2030. If we adjust for inflation, the 2030 amount is nearly \$2.0 billion in 2007 dollars. And Medicaid spending will increase faster than the state economy, from 0.60 percent of state GDP in 2007 to 1.13 percent of state GDP by 2030. Financing Medicaid will thus require tapping a significantly larger share of the state economy for tax revenue.

K-12 Education

K-12 education has long been a primary function of state government, and a top priority for Iowans and their elected officials. The Department of Management has projected enrollment and state spending through 2020. Enrollment is expected to decline by 2.4 percent from 2007 to 2020, but increases in per pupil spending are expected to more than offset the effects of declining enrollment as parents and policy makers demand and expect higher standards, smaller class sizes and more highly qualified teachers. As a result, state aid for K-12 schools is likely to grow by more than 50 percent over this period (Table 3). Per pupil costs are expected to rise 5.1 percent per year on average, over twice the rate of inflation projected over this period by the Congressional Budget Office (CBO). The projections of the state share of education costs assume that the state aid formula remains unchanged and that allowable growth in student spending is 4 percent per year.¹¹

Table 3. Projections of State Aid for K-12 Education, Iowa, 2007-20

	Enrollment	State Foundation Aid	Per Pupil State Foundation Aid	Percentage Change in Per Pupil State Foundation Aid
FY2007	483,105	\$2,048,343,047	\$4,240	
FY2008	482,584	2,145,928,731	4,447	4.9%
FY2009	481,375	2,256,489,689	4,688	5.4%
FY2010	480,413	2,379,285,729	4,953	5.7%
FY2011	479,575	2,493,521,969	5,199	5.0%
FY2012	478,662	2,616,471,181	5,466	5.1%
FY2013	477,740	2,740,508,394	5,736	4.9%
FY2014	476,818	2,876,082,792	6,032	5.1%
FY2015	475,896	3,011,785,925	6,329	4.9%
FY2016	474,974	3,160,467,164	6,654	5.1%
FY2017	474,051	3,308,728,717	6,980	4.9%
FY2018	473,129	3,471,465,468	7,337	5.1%
FY2019	472,207	3,634,986,071	7,698	4.9%
FY2020	471,285	3,812,233,982	8,089	5.1%

Sources: FY2007-11 enrollment and expenditure projections from the Iowa Legislative Services Agency. FY2012 enrollment projection from the Iowa Department of Education. Authors' FY2013-20 enrollment based on census population projections of a 1.9 percent decline in Iowans under age 18 between 2010 and 2020. FY2012-20 state aid projections from Department of Management based on enrollment projections and using assumptions noted above.

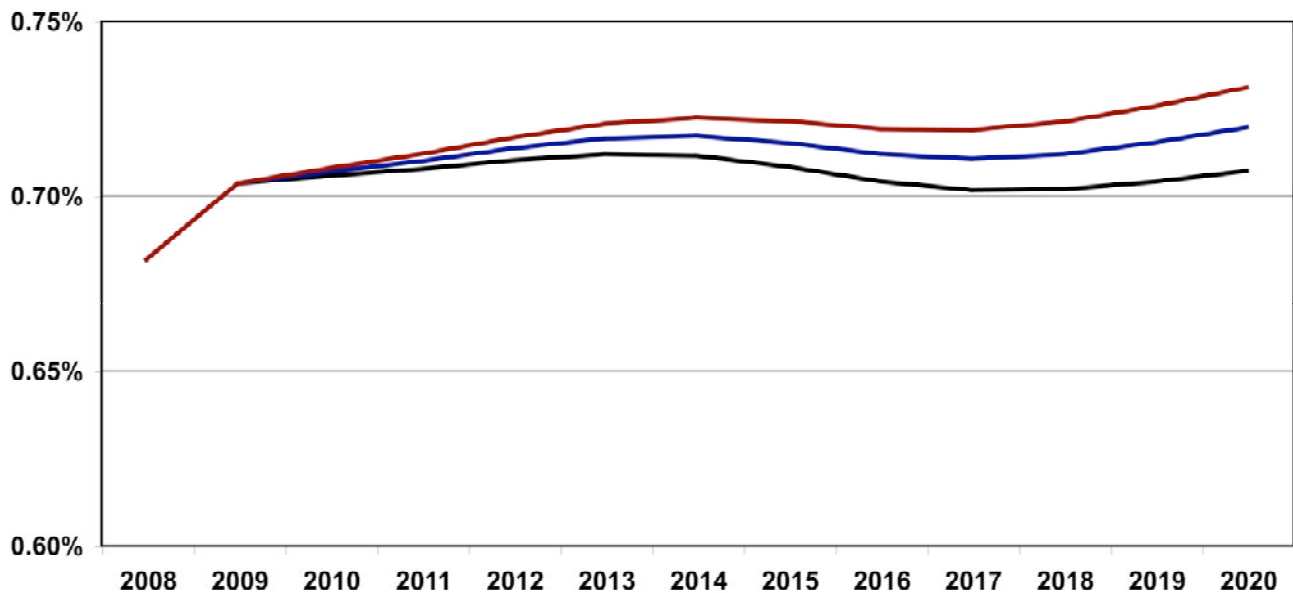
The estimates in Table 3 do not include costs of the new statewide voluntary preschool program for 4-year-olds. State costs of this program are expected to rise from \$15 million in fiscal year 2009 to \$109 million per year by 2014, where they will remain through 2020.

Higher Education

To our knowledge, the state of Iowa has not prepared projections of higher education spending. Our projections, therefore, are based on national projections contained in the report *State Budgets and the Aging of the Population: The Prognosis for the Next Twenty Years*.¹² We start with the projected population age 18 to 24 in Iowa and the current percent of that population that is attending one of three state-funded institutions: The University of Iowa, Iowa State University and the University of Northern Iowa. We then assume three different growth rates in the percent of young people attending these public higher education institutions, based on national projections of this percentage made by the National Center on Education Statistics. Finally, we assume that the cost of higher education will grow according to projections of the Higher Education Price Index. (See appendix for a more complete explanation.)

Our projections indicate that state spending on higher education will hover around 0.61 to 0.63 percent of state GDP from 2008 through 2020. In other words, for the next 10 years or so, given our assumptions, higher education spending will approximately grow along with the state economy. However, if the cost and enrollment trends continue through 2030, the growing numbers of 18- to 24-year-olds after 2020 will push spending higher as a share of the Iowa economy, possibly as high as 0.70 percent of state GDP by 2030.

Figure 6. Projected General Fund Spending on Higher Education as a Percent of State GDP (low, middle and high estimates)



Source: Projections by the authors. Higher education spending includes community college general support, funding of Board of Regents institutions from the state general fund, and spending of the Iowa College Student Aid Commission.

State Revenue Projections

Iowa state government is heavily reliant on income- and sales-tax revenue, as are most states. In fiscal year 2006, 83 percent of state tax receipts came from individual income taxes and sales and use taxes.¹³ Taxes, in turn, accounted for 90 percent of general fund receipts. For this reason, we focus our attention on the state's two major kinds of revenue: individual income taxes, and sales taxes.

Income Taxes

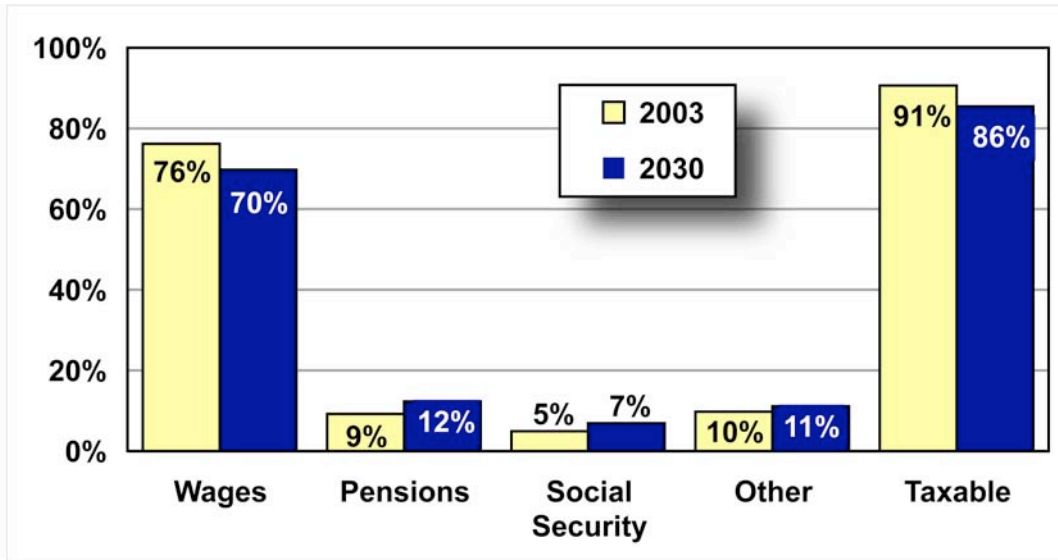
Iowa, like most states, taxes the income of the elderly more lightly than the non-elderly. The state income tax as of 2006 included three preferences for those age 65 or older: (1) an additional credit of \$20 per person, (2) a limit of 50 percent on the portion of Social Security benefits subject to taxation, rather than the 85 percent limit under the federal income tax, and (3) an exclusion of the first \$6,000 in pension income (\$12,000 for a married couple) from taxable income. As a result of tax legislation passed in 2006, the exclusion of Social Security benefits will gradually rise over the next eight years until all benefits are nontaxable, regardless of income, in 2014.¹⁴ This change to full exemption benefits only the most well-off one-third of Iowa seniors; the other two-thirds already paid no tax on Social Security benefits prior to the 2006 legislation. In addition, the minimum income threshold, below which no taxes are due, was \$13,500 for married couples (\$9,000 for individuals) regardless of age for the 2006 tax year. By the 2008 tax year, the thresholds will have risen to \$32,000 (\$24,000 for singles) for those age 65 or older.

These tax preferences for retirement income are phasing in just as retirement income becomes a much larger share of national income. Social Security and pension income represented 8.6 percent of GDP in 2003. But this percentage is expected to rise to 10.3 percent by 2013 and to 12.9 percent by 2025.¹⁵ The 49 percent increase in the share of retirement income from 2003 to 2025 (12.9 percent vs, 8.6 percent) mirrors closely the 47 percent increase in the share of the elderly in the total population over this period (from 12.4 percent in 2003 to 18.2 percent in 2025).

These trends in age and income sources will mean that an ever-growing share of the income earned by Iowa residents will consist of tax-exempt income earned by seniors. Thus the overall per capita tax base (Iowa taxable income) will shrink. The Iowa Department of Revenue (DOR) has recently provided estimates of this effect, as shown in Table 7 below.¹⁶ The projections start with 2003 incomes and population. Population by age through 2030 is then derived from U.S. Census projections. The DOR analysis incorporates all changes in future tax parameters and tax preferences that are scheduled to occur under current law, including those parameters (exemption amounts, credits, thresholds) that are automatically indexed for inflation. Incomes and indexed parameters are held constant at their current values.

To account for the effects of the declining real value of tax parameters that are not indexed, the DOR analysis reduces the value of these parameters by 2.2 percent per year, the Congressional Budget Office's projection of average inflation. This reduction applies to the elderly \$20 credit, the \$6,000/\$12,000 pension income exclusion, and the no-tax income thresholds. The result is an estimate of income-tax revenue under current law by the year 2030 reflecting the projected changing mix of taxpayers by age. This is compared to an estimate of tax revenue in 2030 with the current age distribution of taxpayers. Projections of 2030 revenues are also made using tax law that contains no elderly preferences.

Figure 7. Sources of Income as a Percent of Total Income of Iowa Taxpayers in 2003 and as Projected for 2030



Source: Amy Rehder Harris and Michael Lipsman. *The Elderly Population and Iowa Tax Revenues: As One Goes Up, Must the Other Come Down?* Iowa Department of Revenue, August 2006.

If there were no elderly preferences in Iowa’s income tax, the very small projected increases in total population combined with the aging of the population would increase income-tax revenues for a period of time, reaching a peak in 2015 at \$2.27 billion. The revenue increase occurs, in part, because population aging means fewer taxpayers in the two age groups with lowest income: under 25, and 25-34. After 2015, revenues fall, reaching \$2.22 billion in 2030. The revenue gain from aging (assuming no elderly tax preferences) occurs in part because the demographic shift increases the number of taxpayers, the old being more likely than the young to file and owe income taxes. The increase in revenue occurs despite the fact that effective tax rates (taxes as a percent of adjusted gross income) are lower for the elderly, even in the absence of special preferences by age. Thus more elderly pay taxes, but those who do pay fall in slightly lower tax brackets, on average.

Under 2006 law, with elderly tax preferences fully phased in but with all non-indexed parameters losing real value, the effect of population aging by the year 2030 is a \$40 million reduction in income-tax revenue (see Table 4). This represents a drop of 2.0 percent compared to revenues in that year with a fixed (2003) age distribution.

**Table 4. Effect of Aging Population on Iowa Income Tax Revenue in 2030
(Revenues in millions of 2003 dollars)**

Tax Law	Age Distribution of the Population*		Difference Due to Aging	
	Fixed	Projected	Dollars	Percent
No elderly tax preferences	\$2,165.5	\$2,215.0	\$49.5	2.3%
With elderly tax preferences under 2006 law	\$1,958.2	\$1,918.3	(\$39.9)	-2.0%
With 2006 elderly preferences indexed	\$1,920.6	\$1,865.3	(\$55.3)	-2.9%

* Total population as projected for 2030 but with age proportions same as in 2003 (fixed) or as projected for 2030.
Source: Amy Rehder Harris and Michael Lipsman, “The Elderly Population and Iowa Tax Revenues: As One Goes Up, Must the Other Come Down?” Iowa Department of Revenue. Prepared for the Federation of Tax Administrators Revenue Estimation and Tax Research Conference, August 2006.

The DOR study also considered the likelihood that the Legislature would from time to time increase the elderly preferential tax parameters to offset the effects of inflation, or that they would index them automatically to inflation. This would affect the value of the elderly credit, the pension income exclusion, and the no-tax income threshold. All of these thresholds would have lost 81 percent of their real value by the year 2030, in the absence of legislative action, due to the projected 2.2 percent annual inflation. The last set of estimates in Table 6 shows the projected revenue if all of these parameters were indexed for inflation beginning in 2007. The revenue decline due to aging increases from \$40 million to \$55 million with indexing. If recent history is a guide, the revenue loss will be somewhere between these two figures, the Legislature increasing the parameters at some point but stopping short of indexing.

In short, the changing age distribution will be responsible for a drop in state individual income tax revenues of somewhere between 2 and 3 percent, given current tax law with its substantial preferences for seniors. This estimate holds all other factors constant, including overall economic growth and rising real incomes, in order to isolate the effects of population aging.

Sales Taxes

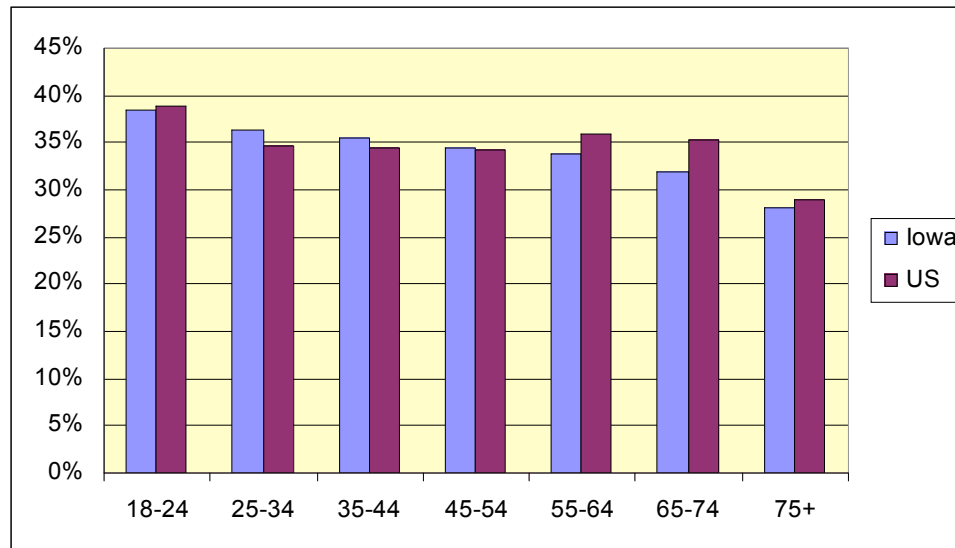
The effects of an aging population on sales and excise tax revenue depend on (1) how income changes with age, (2) how age affects what we spend that income on, and (3) how states define the tax base — what spending is taxed and what is not. It has become widely accepted that the elderly spend a smaller share of their incomes on items subject to sales or excise taxes, primarily because a larger share of household budgets must go to health care, which is exempt from tax in most states. It follows that the aging of the population will result in declining sales tax revenue on a per capita basis, as a larger share of the population is made up of households spending less on taxable goods and services. In fact, Menchik estimated that by 2030 the effects of aging would be, on average, a 5 percent drop in state sales-tax receipts.¹⁷

We know how spending patterns vary with age from the Consumer Expenditure Survey (CEX), conducted periodically by the Bureau of Labor Statistics. Previous work has shown that spending on items frequently exempted by states sometimes falls and sometimes increases with age.¹⁸ Not surprisingly, spending on health insurance and drugs increases dramatically with age. Spending on health services is lower for the young and highest in the 75 and older category, but those age 65-74 spend about the same as those in the 55-64 age bracket. On the other hand, elderly households tend to spend *less* per person on many other goods and services that states frequently choose not to tax: maintenance and repair services, personal care, apparel services, entertainment and utilities.

Our research relies on data from the 2005 CEX detailing spending by age of the household head (or “reference person”) for each of four regions. (The CEX sample is not large enough to permit the identification of state-specific spending patterns.) We then apply actual state sales and excise tax law, state by state, to determine the share of spending that is taxable by state. The 2007 state sales tax bases are based on a component of the 50-state tax model developed by the Institute on Taxation and Economic Policy (ITEP).¹⁹ The result of this analysis is a state-by-state estimate of sales and excise taxes paid by age group under 2007 state tax law defining the base, July 1, 2007, tax rates, and 2004-05 income and spending patterns from the CEX.

The Iowa sales tax base is somewhat broader than the average in its coverage of services, while exempting all food for home consumption, prescription drugs, health care and utilities. The percent of expenditures that are subject to sales and excise tax in Iowa is above the national average in the 25-45 age brackets, but a little below the national average for those age 55-74 (see Figure 8).

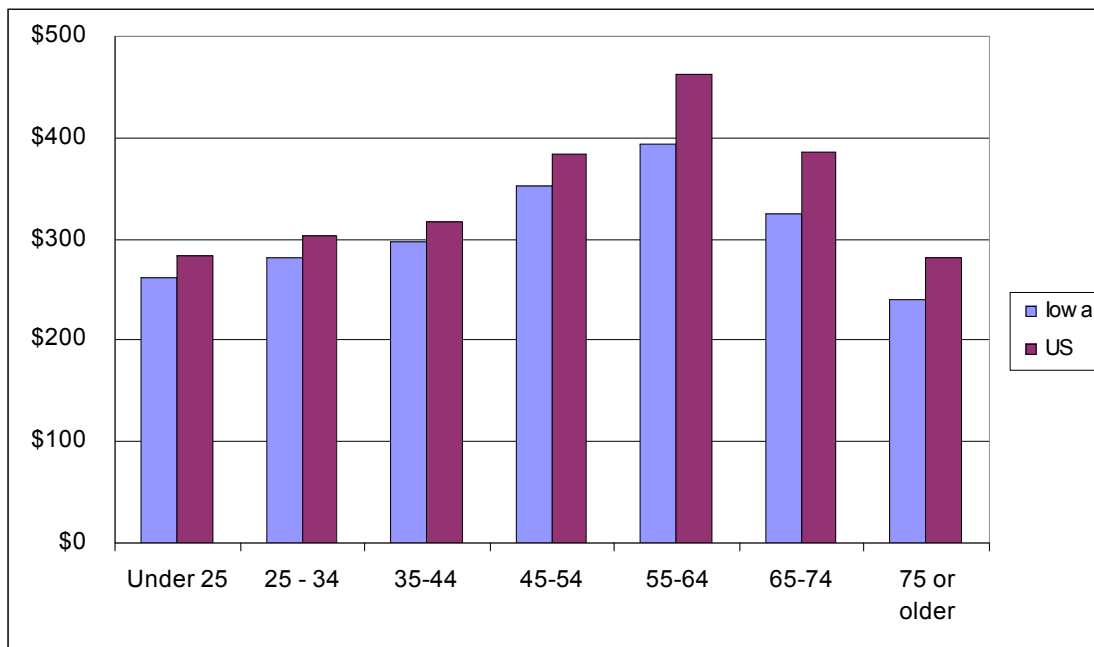
Figure 8. Percent of Spending that is Taxable, by Age Group, Iowa and U.S., 2007



Source: Authors' calculations based on CEX expenditure and income data, and sales tax bases from the ITEP model.

Sales and excise tax revenue in Iowa, on a per-capita basis, rises through the prime earning years of 55-64, then declines, as it does for the U.S. as a whole. But in Iowa, per-capita revenue fails to rise as high, relative to younger households, in the 55-64 age bracket, and declines more precipitously in the 65-74 and 75 or older age brackets (see Figure 9). This is due to differences in the base of the sales tax in Iowa. The effective tax rate (sales tax as a percent of total expenditure) on those 65 or older is 1.5 percent, compared to 1.8 percent for those age 18-44. The ratio of these two rates is 0.82, well below the national average of 0.90; Iowa has a sales tax base more favorable to the elderly than the average state.

Figure 9. Average State Sales Tax Paid Per Capita, by Age of Household Head, 2007 Tax Base and Rates: U.S. and Iowa



Source: Authors' calculations based on CEX expenditure and income data, and sales tax bases from the ITEP model.

By the year 2030, 22.6 percent of the Iowa population is projected to be age 65 or older, compared to 20.0 percent for the nation as a whole. Combined with a tax base more favorable to the elderly, the result is a greater demographic impact on revenue. Iowa also taxes the high-spending age groups at 97 percent of the rate on low-spending age groups, compared to 102 percent for the country as a whole. Thus the 1.9 percent population shift toward higher-spending age groups fails to produce as much of a gain in revenue (a lesser rate applied to greater per capita spending). As a result of all these factors, Iowa sales tax revenue increases by just 0.4 percent, less than the national average, when the 2020 age distribution is substituted for 2005 demographics, and decreases 0.3 percent with the substitution of the 2030 age distribution.

Predictions of declining sales tax revenue due to the aging of the population have focused on the growth in the share of the population over 65, and the lower effective sales tax rate on those over 65. From 2005 to 2030, the share of the population age 65 or older in Iowa is projected to increase from 14.7 percent to 22.4 percent, a 53 percent increase in the share over the 25-year period. Furthermore, the sales tax base in Iowa favors the elderly, as it does in most states (see Figure 8). The logical conclusion is that a shift in population from the young to the old is a shift from the higher taxed to the lower taxed and must produce a drop in revenue.

This approach ignores another factor: how much each age group actually spends. When a young household is replaced by an older one, we are also replacing a low-spending household with a higher-spending one. A smaller tax rate applied to larger per capita spending can generate more, not less, sales tax revenue. The low-spending groups are those under age 45 and those 75 or older. Iowa households in these age groups spent an estimated \$15,700 per capita in 2005. The high-spending groups include those in the prime earning years, 45-64, plus those age 65 to 74. On average households in this age range spent an estimated \$21,400 per capita. Even those older than 74 spent more per capita (\$17,000) than any of the age groups under 45.

In summary, the aging of the population in Iowa will not have a substantial effect on per capita sales-tax revenues through the year 2030, though Iowa will fare worse in this regard than most other states. Only four states will experience smaller gains between 2005 and 2020, and only seven states will experience larger declines in revenue through the year 2030. This appears to result from a sales-tax base that is somewhat more favorable to the elderly and to the lower-spending age groups than in most states.

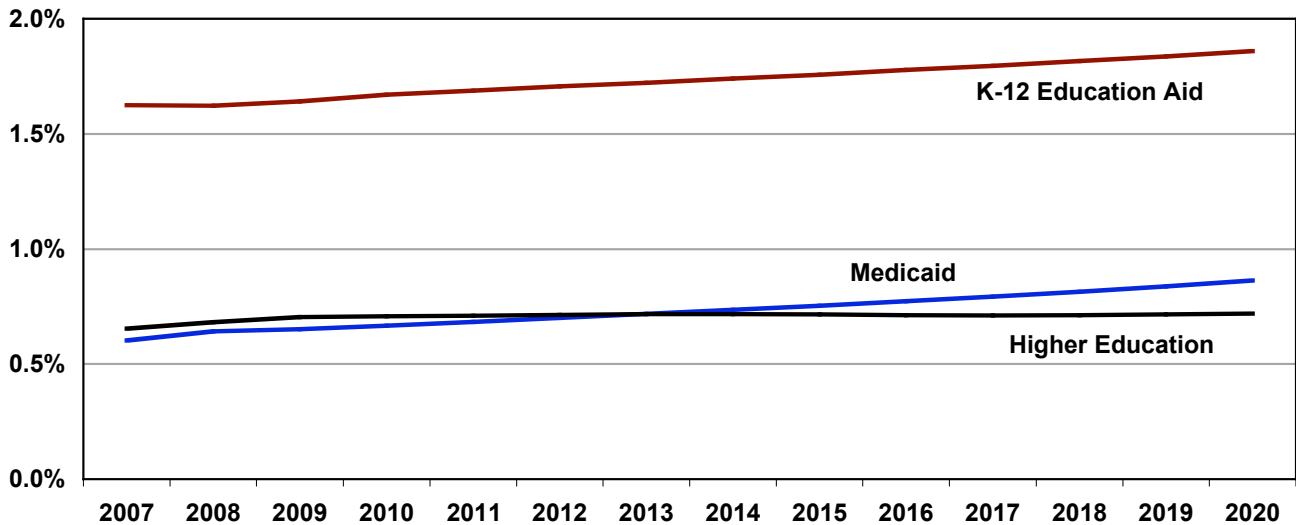
The Prognosis for Iowa

Two of the three largest categories of state spending — Medicaid and K-12 education — are projected to grow at 6.4 percent and 5.1 percent per year, respectively, from 2007 to 2017, over twice the rate of inflation (2.2 percent) projected by the Congressional Budget Office. Higher education, on the other hand, is projected to grow more slowly, at 3.2 percent, but still more rapidly than inflation. Since these categories of spending account for over half of the state general fund, these trends will put considerable pressure on the state budget.

Whether health and education spending grow relative to the Iowa economy depends on the rate of growth the state experiences. U.S. population projections for the state imply a certain rate of economic growth and are the starting point for state Medicaid and education expenditure. The other factors driving these spending projections are costs. If we assume that per capita GDP will grow in Iowa at the same rate that is projected for the country as a whole, we can project the state's economic growth (in terms of total GDP) implied by the population forecasts. In other words, we project total Iowa GDP based on national per capita GDP growth and projected population growth in Iowa. State GDP rises from about

\$121 billion in fiscal 2006 to \$205 billion in 2020 and \$289 billion by 2030. State Medicaid expenditure would then rise from 1.8 percent of state GDP in fiscal 2007 to about 2.2 percent by 2020 and to 3.1 percent by 2030. State spending on K-12 education, on the other hand, would rise from 1.62 percent of state GDP to about 1.86 percent by 2020, while higher education spending would be approximately stable at 0.62 percent of state GDP through 2020.

Figure 10. Projected Iowa State Spending on Medicaid and Education as a Percent of State GDP, Fiscal Years 2007-20

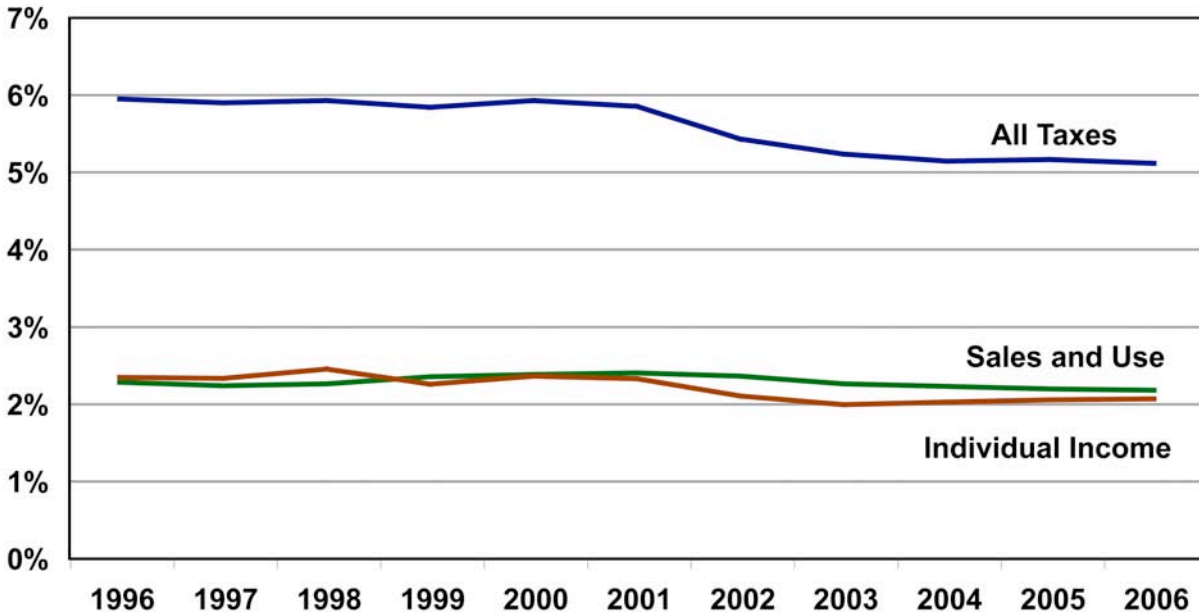


Source: Authors' calculations based on U.S. Census population projections, national projections of growth in real per capita GDP, and projections of state spending cited previously.

In order to fund state spending that is rising as a share of the state economy, state revenue will also have to rise relative to the economy. In recent years, Iowa state taxes have actually been declining as a share of state GDP; Figure 11 below shows the trend from Fiscal Year 1996 through 2006. Overall net general fund receipts declined from 1.6 percent of state personal income in the early to mid-1990s to 1.3 percent by 2003-2004, and have risen slightly to 1.4 percent in the 2006-2008 period.

The decline in revenues as a share of the Iowa economy resulted in large part from aggressive tax cutting in the late 1990s, and continued tax cuts through the recession of 2001 and the subsequent recovery. The largest cuts that occurred from 1996 through 2004 are increased exemptions on retirement income implemented in 1996 and 1999, the 10 percent across-the-board income tax cut implemented in 1998, reductions in inheritance and estate taxes in 1998 and 2003, the hospital sales tax exemption implemented in 1999, the phase-out of the sales tax on residential utilities begun in 2001, and the insurance premium tax reduction phased in over several years beginning in 2004. Together, these and other tax cuts were responsible for a reduction in revenue of \$650 million by fiscal year 2004, and when fully phased in will cut annual revenues by \$979 million (two-thirds of which is accounted for by the cuts cited above).²⁰ Additional tax preferences for seniors enacted in 2006 will add another \$118 million per year in revenue losses when fully phased in by 2014;²¹ these preferences provided benefits mostly to the highest-income one-third of Iowa seniors.²² All of these tax cuts together add up to a total of about \$1.1 billion in annual revenue losses resulting from tax reductions enacted over a 10-year period, representing about one-sixth of the state's general fund.²³

Figure 11. Iowa Net Tax Revenues as a Percent of State GDP, FY1996-2006



Source: Iowa Department of Revenue Annual Reports

Other factors will likely contribute to continued slow growth in state tax revenues in the coming years. In particular, the cost of business tax credits has grown dramatically. In Fiscal 2001, about \$100 million in tax credits were awarded to businesses, a number which had increased fivefold by 2007.²⁴ Most of these credits had an economic development purpose; the largest are the enterprise zone credits, the High Quality Job Creation Program, the Research Activities Credit, and the Industrial New Jobs Training Program. Projections indicate that in excess of \$400 million in liabilities for tax credits already awarded will be felt each year from fiscal 2010 through 2012. The actual amounts will no doubt be substantially higher as new credits are awarded. These tax credit expansions have contributed to a substantial decline in revenue from the corporate income tax, which accounted for over 7 percent of state tax revenue in the early 1980s, but less than 3 percent in recent years.²⁵

Iowa faces a fiscal future of rising costs and stagnant revenues. All told, tax cuts enacted since 1996 and tax credits awarded or to be awarded will take \$1.5 billion or more out of the budget each year for the foreseeable future, a sum equal to almost a quarter of the state's general fund. Even if Iowa tax revenue were to stabilize at about 5 percent of state GDP, this would hardly keep up with growth in general fund spending. If education and Medicaid spending, which currently account for about 67 percent of the state's general fund, rise from 2.9 percent to 3.4 percent of GDP by 2020, as projected in Figure 9 above, then other programs will have to be cut or additional revenue sources will have to be found. Alternatively, the state will have to find ways to cut education and Medicaid services to keep them from consuming a larger share of the state budget.

State Fiscal Futures and Policy Choices

Future Trends in State Spending

The aging of the Iowa population between now and 2030 will result in a smaller share of the population consisting of school-age children (5 to 18), which might be expected to moderate increases in education spending as a share of the economy. However, the population share is expected to decline just from 17.3 percent in 2007 to 16.4 percent in 2030.²⁶ Furthermore, it is expected that the trend toward a greater percentage of school-age children attending public schools will continue. Over the same period, 18- to 24-year-olds will also represent a declining share of the population according to Census projections, falling from 10.2 to 8.4 percent, but the share of 18- to 24-year-olds attending post-secondary institutions is expected to grow from 56 percent in 2008 to somewhere between 74 and 80 percent.²⁷ Furthermore, public expenditure per K-12 pupil has risen faster than the general rate of inflation as has the cost of higher education, and these trends are expected to continue. These factors combine to produce projections of state education spending, both K-12 and post-secondary, that increase as a share of the Iowa economy (state GDP) over the next 20 years.

It is often assumed that the aging of the population will have a large effect on state Medicaid spending, since the share of the population age 65 to 84 will increase from 12.1 percent in 2007 to 18.9 percent by 2030, and the share that is 85 or older (where much of long-term care spending occurs) will grow from 2.6 to 3.6 percent. While the aged currently account for about 12 percent of all Medicaid enrollees, they account for 25 percent of Medicaid spending, most of that going to long-term care. However, the growth in the size of the aged Medicaid population is not the major contributor to the anticipated growth in Medicaid spending. In fact, the share of the population age 65 and over that is enrolled in Medicaid nationally is expected to decline from its current level of 12.2 percent to 10.0 percent by 2030, and spending per aged enrollee is expected to increase more slowly than spending per enrollee in the other Medicaid categories.

The projected growth in overall Medicaid spending is largely attributable to rising health-care costs generally, as national health expenditure is projected to increase from 15.7 percent of GDP in 2006 to 24.7 percent of GDP by 2025 (and to 34.2 percent by 2045). New technologies and prescription drugs are the primary reasons why health spending has grown more rapidly than GDP.²⁸ In addition, the share of all children who are Medicaid enrollees, the share of adults age 18 to 64 who are Medicaid enrollees, and the share of the total population who are disabled enrollees, are all expected to grow (the latter share growing most rapidly). It is as a result of these latter trends, more so than the rising share of the population that is aged and the cost of long-term care, that Iowa total Medicaid spending is expected to rise in real terms from \$2.2 billion in fiscal 2007 to \$5.5 billion by 2030 (in 2006-07 dollars). As a share of the state economy, Medicaid spending from state funds is expected to rise from about 0.60 percent to nearly 1.13 percent over this period.

Of course, it is quite possible that upward trends in per pupil education spending will come to a halt, and that the country will find a way to contain rising health-care costs. Evidence from other countries suggests that the U.S. can spend health-care dollars more cost effectively. Canada, Germany, Japan, France, Australia and the United Kingdom all spend considerably less on health care as a share of GDP, while experiencing better health outcomes on many measures than the U.S.²⁹ Efforts to control general health-care inflation are the most effective ways to control Medicaid spending growth.³⁰

The Prospects for State Revenue Growth

The aging of the population will probably produce a decline in state income tax revenue of 2 to 3 percent in Iowa, due largely to the adoption of tax preferences for seniors. Other things equal, an increasing population share of persons age 65 and older will reduce income-tax revenue because a smaller share of total income earned in a state will be taxable income. By itself, however, the aging population distribution will not have much effect on state sales-tax revenue, at least through the year 2030. This is largely because the overall demographic shift will on balance favor higher-spending age groups (which includes those age 65 to 74) relative to lower spending age groups (which includes younger adults). Aging by itself will probably produce a small decline in sales tax revenue in Iowa, less than one-half of 1 percent.

Our estimates of the effects of an aging population on state income- and sales-tax receipts are based on the assumption that real incomes are constant, in order to isolate the impact of demographic change. In fact, real incomes are expected to rise. Furthermore, the effects projected here could be moderated by the projected tendency of those over 65 to postpone retirement and to work longer. The labor-force participation rate of those 65 and older had been on the decline for decades but bottomed out in the 1980s and has been increasing steadily since the mid-1990s.³¹

Real income growth could be expected to boost state sales-tax revenue. Holding state policy constant (that is, assuming the sales-tax base and rate does not change), and assuming spending grows with income, a given percentage growth in income should translate into the same percentage growth in taxable spending and sales tax revenue. The CBO estimates that wages and salaries will remain 46.0 percent of national income through 2017, so that real growth in GDP of 2.8 percent implies real growth in wage and salary income of 2.8 percent annually. However, the sales-tax base is likely to shrink as a share of total spending.

The sales-tax base continues to be eroded by two trends: the rising share of expenditures on services (generally not taxed) rather than goods (generally taxed), and the rising share of purchases made over the internet, where taxation is spotty, at best. John Mikesell has shown that the sales-tax base represented 51.3 percent of all sales in the median state in 1990; by 2006 the base had declined to just 42.1 percent of sales.³² This represents a rather alarming decline over a period of just 16 years. As for internet sales, Bruce and Fox estimated in 2004 that by 2008 such sales will be costing the state of Iowa \$155 million to \$243 million, depending on the growth in internet sales.³³

Conclusions

New and unanticipated demands on the public sector have arisen in recent years: homeland security measures, investments to combat global warming, expansions of publicly funded health care in response to the decline in employer-provided insurance, the need to extend free public education to preschoolers or beyond high school. Responding to such demands will become increasingly difficult as revenues fail to keep pace with economic growth.

The aging of the population, combined with the income-tax preferences granted to seniors and a sales-tax base that favors persons over 50 more so than other states, is very likely to reduce real state revenues over the next two decades. At the same time, the Medicaid population will grow, and Medicaid spending will consume a larger share of state budgets. The growth in health-care costs is the critical factor here, more so than the aging of the population. This was the CBO's conclusion in looking at the projections for the federal budget over the next 10 years,³⁴ and it appears to hold for the states as well.

An even more important determinant of future state fiscal health, however, is state tax policy. While the growth in Medicaid spending is driven largely by health-care costs and demographics, states have considerable control over the future path of income- and sales-tax revenues. Continuing policies of the past — tax cuts in good times and bad, inadequate rainy-day funds, expanding tax preferences for seniors, failure to adapt the sales tax to a changing economy of services and internet purchases, and a shift toward more regressive and less elastic revenue sources — all of these policies will make it more and more likely that Iowa will face a future of chronic, structural deficits.

Appendix

Data Sources and Explanation for Spending Projections

Population changes in Iowa

Population figures for fiscal years 1992-2007 are intercensal estimates from the U.S. Census Bureau, population estimates program. Figures for 2008-2030 are from the U.S. Census Bureau population projections program. Population estimates and projections were converted from calendar to fiscal years by averaging the July 1 estimates for the start and end of the fiscal year.

Higher Education Enrollment in Iowa

Enrollment figures for higher education are as of the fall enrollment period for the fiscal year for the three state universities. For 2008-2030, the authors projected enrollment by multiplying the census projections of the population age 18-24 for Iowa for each year by an estimate of the percent of persons in that age group who will be enrolled in public institutions of higher education. The National Center for Education Statistics has prepared low, middle and high enrollment projections through the year 2017. These projections result in a percent of persons in the national 18-24 age group attending public higher education institutions that rises from 44.2 percent in 2004 to 50.5 percent, 51.5 percent, or 52.5 percent, respectively, by 2017. In Iowa, the percent of 18-24 year olds attending public colleges and universities was 22 percent in 2006. We assume that the proportion attending will rise at the same rate as the national as projected by NCES, thus rising to 25.3, 25.8 or 26.2 percent by 2017 (low, middle, and high estimates). We then assume that this enrollment/population ratio will continue to grow from 2018-2030 at the same average rates embodied in the NCES estimates for 2008-2017. (The NCES estimates show an accelerating trend over this period; it seems doubtful that this acceleration could continue for the next 13 years, so we have chosen to use the average over the longer period.) This results in low, middle and high estimates of the percent of 18-24 year olds enrolled by 2030 of 29.9 percent, 31.1 percent, and 32.2 percent, respectively.

Price Indexes.

The CPI (Consumer Price Index, All Urban Consumers) is an average of the two half-year index values corresponding to the fiscal year. Sources: Actual figures from the Bureau of Labor Statistics through 2007; projections through 2018 by the Congressional Budget Office (CBO), *The Budget and Economic Outlook, Fiscal Years 2007-2018*, February 2008. Projections from 2018-2030 assume that the CBO projected annual inflation of 2.2 percent for 2007-2018 continues through 2030. This assumption is maintained for the low, middle and high estimates of spending.

GDP deflators for state and local government are converted to fiscal years by averaging the quarterly index values for each of the four quarters of the fiscal year. Source: Actual from U.S. Dept. of Commerce, Bureau of Economic Analysis, "Implicit Price Deflators for Gross Domestic Product," through 2007. Projections of the GDP deflator from 2008-2030 are based on the historical premium of the deflator over the CPI. The high projection assumes that the 2.10 percent average premium from 2002 to 2007 prevails throughout the projection period. From 1991-1999, the deflator actually grew less rapidly than the CPI. The low projection assumes that recent history is more of an anomaly, and uses the average premium over the longer period from 1991 to 2007 of 0.59 percent. The middle projection is midway between these two estimates, or 3.54 percent.

The price index for higher education comes from *2007 HEPI: The Higher Education Price Index*, (Commonfund Institute), through 2007. The projected HEPI for 2008-2030 is based, as with the GDP deflator, on the historical premium of the HEPI over the CPI. The high projection assumes that the 1.14 percent premium that prevailed from 2002-2007 continues, for a total annual growth in the HEPI of 3.34 percent. The low projection is based on the .91 percent premium from 1991-2007, and the middle projection is an average of the two, 1.03 percent.

Iowa Gross Domestic Product

Gross domestic product (GDP) is an average of the quarterly GDP figures for each of the quarters in the fiscal year. Sources: Actual (through 2007) from the Bureau of Economic Analysis; projections through 2018 from Congressional Budget Office, Feb. 2008 (see above); projections 2019-2030 from the 2008 Annual Report of the Board of Trustees of the Social Security Administration, found by multiplying the previous year's GDP by one plus the SSA projected annual growth in real GDP from 2017-2030 of 2.1 percent and then by one plus their projected annual GDP inflation of 2.4 percent.

Iowa State Spending

Projected state spending on higher education for each year 2008-2030 is found by multiplying the previous year's spending by one plus the percent increase in projected enrollment in public higher education institutions for that year times one plus the percent increase in the projected HEPI for that year.

Medicaid projections for 2008-2030 are derived from other research. For 2008-2017 we take as the middle estimate the year-by-year forecast of the percent growth in Medicaid spending of the Centers for Medicare and Medicaid Services (CMS), as presented in their report *National Health Expenditure Projections 2007-2017*. Average annual growth was approximately 7.67 percent. For 2018-2030 we assume continued growth of 7.7 percent per year for our middle estimate. (Our middle projections are then approximately consistent with Kronick and Rousseau's forecasts of state Medicaid spending as a percent of GDP in 2025). We base our low forecast on Kronick and Rousseau's lower bound on Medicaid spending as a share of National Health Expenditure (NHE) of about 14 percent by 2030 (as opposed to about 17 percent in their middle forecast). We base the high forecast on their upper bound on Medicaid's share of NHE by 2030 of about 20 percent. These lower and upper bounds imply annual growth rates in state Medicaid spending from 2008 through 2030 of 6.8 percent and 8.5 percent, respectively.

**Table A. Actual and Projected Enrollment and Expenditures for Medicaid in Iowa
Fiscal Years 2001, 2006, 2017, and 2030 (current dollars)**

	Actual		Projected		Percent of Total			
	2001	2006	2017	2030	2001	2006	2017	2030
Enrollment								
Children	101,482	156,828	162,912	165,266	48%	52%	49%	48%
Adults*	36,411	54,441	71,193	67,992	17%	18%	21%	20%
Disabled	49,257	59,965	69,138	77,129	23%	20%	21%	22%
Aged	26,310	29,010	31,799	36,075	12%	10%	9%	10%
Long term care	14,668	18,668			7%	6%		
Other	11,642	10,342			5%	3%		
Total	213,460	300,243	335,043	346,463	100%	100%	100%	100%
Per Capita Expenditures								
Children	\$2,450	\$2,602	4,287	9,113				
Adults*	4,167	4,959	6,517	13,852				
Disabled	16,198	20,671	31,675	66,248				
Aged	14,969	17,673	22,759	41,958				
Long term care	23,440	25,300						
Other	4,296	3,906						
Overall	\$7,458	\$8,094	\$12,166	\$26,182				
Total Expenditures (\$mill.)								
Children	\$248.6	\$408.0	\$698.4	\$1,506.1	16%	17%	17%	17%
Adults*	151.7	270.0	463.9	941.9	10%	11%	11%	10%
Disabled	797.9	1,239.5	2,190.0	5,109.6	50%	51%	54%	56%
Aged	393.8	512.7	723.7	1,513.7	25%	21%	18%	17%
Long term care	343.8	472.3			22%	19%		
Other	50.0	40.4			3%	2%		
Total	\$1,592.1	\$2,430.2	\$4,076.1	\$9,071.2	100%	100%	100%	100%

*Non-disabled, non-aged adults.

Source: 2001 and 2006: Special request to the Iowa Department of Human Services. 2017 and 2030: projections by the authors based on national projections by CMS and by Kronick and Rousseau.

Table B. How Iowa Has Financed Medicaid, Fiscal Years 2007-2009

	FY2007 actual	FY2008 estimated	FY2009 appropriated
General Fund	664,312	631,594	657,929
Healthy Iowans Tobacco Trust Fund	35,327	35,327	0
Senior Living Trust Fund	53,039	65,000	111,753
Health Care Trust Fund		99,518	114,943
Other state funds	6,600	17,350	9,891
Total state funds	759,278	848,789	894,516
	FY2007 actual	FY2008 projected	FY2009 projected
Total Medicaid spending	2,213,345	2,349,651	2,495,388
Less state funds	(759,278)	(848,789)	(894,516)
Federal share	1,454,067	1,500,862	1,600,872
State share of total spending	34.3%	36.1%	35.8%

Total spending from state sources on Medicaid for fiscal years 2007 through 2009 is shown in Table B above. As can be seen, the majority comes from the general fund, but about one-fourth of the state's funding for the current and previous fiscal years comes from the Health Care Trust Fund (set up to receive money from the \$1.00 increase in the state tobacco tax), the Healthy Iowans Tobacco Trust Fund (established by capitalizing future receipts from the tobacco settlement), from the Senior Living Trust Fund, and from other sources. Most of the Medicaid spending budgeted in the Health Care Trust Fund and the Senior Living Trust Fund is offset by transfers into those funds from the state general fund. Furthermore, money is fungible. Medicaid spending from those funds, in other words, is money that cannot be spent on other state programs and has the same effect on state taxpayers as money appropriated directly from the general fund.

Notes

¹ U.S. Department of Health and Human Services, National Center for Health Statistics (NCHS), *National Vital Statistics Reports*, vol. 54, no. 14, April 19, 2006; and NCHS web site, “Deaths: Preliminary Data for 2004,” accessed August 16, 2007. <http://www.cdc.gov/nchs/fastats/deaths.htm>

² See Amanda Senega, “The Future of Human Life Expectancy: Have We Reached the Ceiling or is the Sky the Limit?” *Research Highlights*, no. 8., March 2006. Washington, D.C.: Population Reference Bureau.

³ U.S. National Center for Health Statistics, *National Vital Statistics Reports*, vol. 55, no. 1, September 29, 2006, Table 1. Live births, birth rates, and fertility rates, by race: United States, specified years 1940–55 and each year, 1960–2004. http://www.cdc.gov/nchs/data/nvsr/nvsr55/nvsr55_01.pdf. The higher fertility rates from 1946 to 1960 were, of course, what produced the baby boom. These rates were similar to what prevailed in the early part of the 20th century, followed by declining rates during the great depression and World War II. The difference is that infant mortality rates were lower in the 1950s than in the pre-war era, producing a larger population blip. So, arguably, the baby boom and the declining fertility rates from 1960 to 1975 are the same phenomenon viewed from different perspectives as to what rate is “normal.”: current rates (the baby boom therefore an oddity) or the pre-war rates (the baby boom being a return to normalcy, followed by a new regime of lower rates).

⁴ The Centers for Medicare and Medicaid Services define long term care in this fashion: “A variety of services that help people with health or personal needs and activities of daily living over a period of time. Long-term care can be provided at home, in the community, or in various types of facilities, including nursing homes and assisted living facilities. Most long-term care is custodial care.”

⁵ Sources: Legislative Services Agency, “Graybook” for fiscal years 2007 – 2009.

⁶ This is total Medicaid spending from state funds (including non-general funds, as shown in Table 2 below) as a percent of net general fund spending. This is justified because total general fund spending includes much of the revenue transferred into the various funds that is then spent on Medicaid.

⁷ *Low Medicaid Spending Growth Amid Rebounding State Revenues*, Kaiser Commission on Medicaid and the Uninsured, October 2006, available online at <http://www.kff.org/medicaid/7569.cfm>

⁸ Centers for Medicare and Medicaid Services, “National Health Expenditure Projections 2007-2017,” available online at http://www.cms.hhs.gov/NationalHealthExpendData/03_NationalHealthAccountsProjected.asp ;

Congressional Budget Office, “Fact Sheet for CBO’s March 2007 Baseline: Medicaid,” March 2007, <http://www.cbo.gov/budget/factsheets/2007b/medicaid.pdf>

⁹ Kronick, Richard and David Rousseau, “Is Medicaid Sustainable? Spending Projections for the Program’s Second Forty Years,” *Health Affairs*, 26, no. 2 (2007): w271-w287.

¹⁰ Nationally, Medicaid spending on the disabled goes for a variety of services, the largest categories being prescription drugs (20 percent), inpatient hospital services (13 percent), and intermediate care/nursing facilities (18 percent). See Centers for Medicare and Medicaid Services, Health Care Financing Review 2007 Statistical Supplement, Table 13.21, at <http://www.cms.hhs.gov/MedicareMedicaidStatSupp/downloads/Table13.21.pdf>

¹¹ Assumptions include 4 percent allowable growth rate each year; uniform levy stays at \$5.40 per \$1,000 of taxable valuation; regular program and special education foundation level remain at 87.5 percent; AEA foundation level remains at 79 percent; property valuations increase an average of 1.25 percent annually.

¹² This report is forthcoming in the fall of 2008.

¹³ Iowa Department of Revenue, 2006 Annual Report.

¹⁴ Of the 41 states that have a broad-based personal income tax, 26 fully exempted social security benefits as of 2006, with Wisconsin joining the ranks in 2008 and Iowa by 2014; 36 provided some sort of exemption or credit for at least some kinds of pension income and some taxpayers. *State Taxation of Pensions and Social Security in 2006*, Washington, D.C.: AARP, 2007. Available at http://assets.aarp.org/rgcenter/econ/ib84_taxation.pdf

¹⁵ See Table 2 in Charles Bruner and Mike Crawford, “Iowa’s Personal Income Tax: Reform for Iowans at Any Age.” Iowa Fiscal Partnership, April 2005.

¹⁶ Amy Rehder Harris and Michael Lipsman, “The Elderly Population and Iowa Tax Revenues: As One Goes Up, Must the Other Come Down?” Iowa Department of Revenue. Prepared for the Federation of Tax Administrators Revenue Estimation and Tax Research Conference, August, 2006.

¹⁷ Paul Menchik. “Consumption Patterns, Demographic Change, and Sales Tax Revenue: Is Yet Another Fiscal Shock on the Horizon?” pp. 367-378, in *Proceedings of the 2003 Conference of the National Tax Association*, 2004.

¹⁸ op. cit.

¹⁹ The output of this model can be seen on the Institute on Taxation and Economic Policy web site in the 2003 report *Who Pays?* at <http://www.itepnet.org/wp2000/text.pdf>.

²⁰ Spreadsheet titled “State of Iowa General Fund Tax Cuts FY1996-2004,” Iowa Department of Management.

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- ²¹ Iowa Legislative Services Agency, Fiscal Division.
- ²² “Giving the Richest a Break.” Backgrounder, Iowa Fiscal Partnership, May 3, 2006.
- ²³ The fiscal year 2009 general fund budget calls for \$6.1 billion in spending.
- ²⁴ Iowa Department of Revenue, “Revenue Estimating Conference Tax Credits Contingent Liabilities Brief,” April 2, 2008.
- ²⁵ See *Restoring Fairness & Revenue: Reform Measures for Iowa’s Corporate Income Tax*. Iowa Fiscal Partnership, November 2006. <http://www.iowapolicyproject.org/2006docs/061128-ifp-CIT-2pgr.pdf>
- ²⁶ U.S. Census Bureau, population estimates program (2007) and population projections program (2030).
- ²⁷ This assumes that the share of 18-24 year olds attending public universities in Iowa grows at the same rate as this share is projected to grow nationally. Given that Iowa’s share is already higher than the national (56 percent versus 46 percent) this share may not grow as rapidly, but may top out sooner.
- ²⁸ D. M. Cutler and M. McClellan, “Is Technological Change in Medicine Worth It?” *Health Affairs*, Sept./Oct. 2001 20(5):11–29
- ²⁹ Zuckerman, Stephen and Joshua McFeeters, *Recent Growth in Health Expenditures*, The Commonwealth Fund, March 2006, available online at http://www.commonwealthfund.org/usr_doc/Zuckerman_recentgrowth_914.pdf
- ³⁰ Kronick, Richard and David Rousseau, “Is Medicaid Sustainable? Spending Projections For The Program’s Second Forty Years,” *Health Affairs*, 26, no. 2 (2007): w271-w287
- ³¹ See *Older Workers: Are there more older people in the workplace?* Bureau of Labor Statistics, July 2008. At http://www.bls.gov/spotlight/2008/older_workers/pdf/older_workers_bls_spotlight.pdf
- ³² John L. Mikesell, “State Retail Sales Tax Burdens, Reliance, and Breadth,” *State Tax Notes*, July 12, 2004; and John Mikesell, “State Sales Taxes in Fiscal 2006: Adding Diversity to the National Revenue Portfolio,” *State Tax Notes*, Sept. 3, 2007.
- ³³ Bruce, Donald and William F. Fox. “State and Local Sales Tax Revenue Losses from E-Commerce: Estimates as of July 2004,” *State Tax Notes*, August 2004.
- ³⁴ Congressional Budget Office, *The Budget and Economic Outlook: An Update*, August 2007, page 3.