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HOW MUCH PREFERENCE : EFFECTIVE PERSONAL INCOME TAX RATES FOR THE ELDERLY

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How Much Preference: Effective Personal Income Tax Rates for the Elderly

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Executive Summary

For many years, states have afforded preferential tax treatment to different subsets of the population. The poor are often insulated from the state income tax by standard deductions, personal exemptions, and special credits such as the earned income credit at the federal level. State and local governments have a long tradition of treating the elderly in a preferential manner. Many local governments give certain property tax exemptions for the elderly (most often for school taxes). States around the country also tend to give special income tax credits to the elderly or to exempt some of the income of the elderly from tax or apply larger standard deductions to elderly taxpayers than to non-elderly taxpayers.

A number of years ago, these credits and exemptions were supported on basic equity grounds. In 1970, the poverty rate of the elderly was 24.6 percent—a relatively high number. The financial status of the elderly has changed. In 1998, the poverty rate for the elderly was 10.5 percent (more than 2 percentage points lower than the overall poverty rate). This change in income status of the elderly reduces the equity argument for preferential tax treatment of the elderly. However, once credits and exemptions are established, they become very difficult to take away. In fact, state and local tax preferences for the elderly have tended to increase over the last two to three decades. This is particularly true of the tax treatment of the elderly vis-a-vis the state personal income tax. This report analyzes whether or not the differential state income tax treatment of the elderly is important in an economic and revenue sense, in Georgia and in the other 42 states plus the District of Columbia that impose a state income tax.

Georgia has been relatively generous with the state income tax treatment of the elderly. In 2001, the state allowed the elderly to exclude up to \$14,000 worth of income per person from tax. In addition, the state does not tax any social security income (which is similar to many other states). We take a look at whether or not the income exclusion and the higher standard deduction for the elderly matters much in terms of the rate of taxation of the elderly versus the non-elderly.

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We use a sample of federal income tax returns to analyze the effective tax rate paid by the elderly and the non-elderly in Georgia and in the other states imposing an income tax. What we find is that, in general, the elderly do face a significantly lower effective tax rate than the non-elderly in most states. The difference between the effective tax rate for the elderly versus non-elderly narrows as income increases; as the income of the elderly and non-elderly increases, the value of the exemptions for the elderly are diminished.

In Georgia, the average elderly taxpayer faces an effective state income tax rate of about 1.0 percent versus 2.56 for the non-elderly (for 1999 law). For taxpayers with income below \$40,000, the effective rates are 0.12 and 1.77 percent for the elderly and non-elderly respectively. This is a 93 percent difference in the tax rate faced by the two groups. For those with income between \$40,000 and \$200,000, the difference between the effective rate faced by the elderly and the non-elderly falls to 48.5 percent (a 1.93 percent effective rate for the elderly and a 3.75 percent rate for the non-elderly). These differences are significant and reflect a revenue loss to the state due to the lower effective tax rate on the non-elderly.

What does the preferential state income tax treatment for the elderly mean over the long-term? Georgia and the rest of the U.S. are getting older. As the population ages, the value of things like tax exemptions for the elderly will grow as more taxpayers are able to take advantage of such preferences. All else equal, states that grow older, faster, will witness less growth in revenue sources that allow tax preferences for the growing elderly population than if those preferences do not exist. We made a straightforward calculation of the impact of the state income tax treatment of the elderly on state income tax revenue growth. We assume that the growth in elderly and non-elderly population does not change the growth in income over time, and the average effective tax rates stay constant. That way, we can concentrate on the impact of the relative changes in population growth of the elderly versus non-elderly on the growth in state income tax revenue.

We conclude that in the ten states we examine (Georgia, California, Illinois, Michigan, New Jersey, New York, North Carolina, Ohio, Pennsylvania, and Virginia),

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state income tax revenues would have been significantly higher in all states except North Carolina if the elderly were taxed at the same effective tax rate as the non-elderly. Some of the differences are small. For example, in California, the difference is less than 0.13 percent over 10 years. However, in Georgia, the difference is significant, although still relatively small. We find that for the period 2000-2005, Georgia's state income taxes will be about 3 percent lower per year than they would be if the elderly faced the same, higher, effective tax rate as the non-elderly. From 2005-2015, the difference would be about 6 percent per year. This calculation assumes that the growth in income of the elderly and non-elderly is similar so that the difference in income tax revenue is due only to the difference in the growth of the elderly population versus the non-elderly and the difference in tax rates. For the last two decades, the growth in the income of the elderly has been at least as high as the overall population, and in many years, higher than that of the average population. If this trend continued, then the special state income tax treatment of the elderly would be even more costly than this analysis suggests.

Our analysis shows that most states give the elderly taxpayer some preferential treatment in their state income tax laws. Local governments also have specific provisions, but these are not considered here. Our results should not be taken to suggest that tax preferences for the elderly are "bad." The elderly support public services throughout a lifetime, and some people argue that the elderly have long paid into a system and that equity merits special tax reductions later in life. Still others argue that tax preferences must be analyzed along with the public expenditures consumed, like health care. It may be that expenditures on health and safety are larger for the elderly, but their use of roads and schools may be so dramatically lower that the expenditure side is a wash. This deserves significantly more research.

We conclude by noting that the state income tax treatment of the elderly does yield significant differences in effective tax rates between the elderly and non-elderly in most states. Georgia's tax treatment of the elderly results in state income tax revenues for 2005-2015 that are at least 6 percent lower per year than would be the case without the specialized treatment. In FY2001, this would amount to \$415 million dollars, or 60 percent of the revenue from the state corporate income tax.

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I. Introduction

Motivations of policymakers who enact tax relief for the elderly vary.¹ Over the past forty years, legislation at the federal level primarily focused on the goal of alleviating the high poverty rates experienced by the elderly. These efforts resulted in increased social security benefits and tax relief targeted at the elderly. To some extent, these measures achieved this goal, as evidenced with a reduction of the poverty rate for the elderly. In 1970, the poverty rate for individuals over 65 was 24.6 percent, considerably higher than the overall poverty rate for the nation. By 1998, the poverty rate for individuals over 65 years of age was 10.5 percent, compared to the overall poverty rate of 12.7 percent. Legislation enacted at the federal level aimed at the elderly garners a high degree of attention and analysis because federal programs affect the elderly throughout the nation and impact the income to the elderly to a greater degree than programs provided at the state level. However, tax relief provided by the states is significant and is provided through a number of tax instruments, including the property tax, the sales tax, and the individual income tax. This report focuses on the individual income tax relief to the elderly provided by the states and presents estimates of the magnitude of such tax relief.

Only a small body of research documents the types of tax relief offered to the elderly by states, the compliance rates, and the effects of the legislation, although that literature has recently begun to expand. Much of the recent literature focuses on the effects of an aging population on the social security system. More directly related to this report is a 1975 report produced for U.S. Department of Housing and Urban Development that focuses on property tax relief programs for the elderly and provides a good description of the programs offered by the different states, including an overview of the participation in those programs (Abt 1975). However, the report contains no comparison of the tax incidence of the elderly versus the non-elderly, but does indicate that some forms of tax relief result in lower compliance rates, either because of the complexities involved with compliance or the perceived stigma of the relief. The Urban

¹In this paper, the term 'elderly' applies to individuals 65 years of age or older, although some states provide tax relief for retirees who are younger.

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Institute (Penner 2000) published a report that documents selected characteristics of state income tax systems and includes the provisions related to the elderly. The report provides estimates of the impact of these preferences on different representative couples (over and under the age of 65) and finds a significant amount of relief in the tax system for the elderly.

In this report, we extend the evidence on the magnitude and implications of state income tax preferences for the elderly. We use individual tax returns to estimate the effective state income tax rate for the elderly and the non-elderly in order to measure the magnitude of the tax relief for the elderly. Using micro-level data from the IRS Statistics of Income, we simulate the personal income tax treatment for a sample of tax filers in each state with an income tax. We find that, given all of the different types of income tax preferences afforded the elderly, effective state personal income tax rates for the elderly relative to the rates for the non-elderly are significantly lower in some states than in other states. Based on this finding, we then address two questions:

- Is the net affect of tax differentials across states similar such that no state gives much of a net advantage to income earned by the elderly (relative to the non-elderly)?
- Given projections on the aging of the population, what are the long-term revenue implications of these preferences?

The next section of the report summarizes the issue and literature to date while Section III summarizes the structure of state individual income taxes in the U.S. The data and methodology are discussed in Section IV. Section V presents the estimates of tax rates by state for the elderly and non-elderly, while Section VI discusses the impact of the tax rate differentials on revenue. A concluding section completes the report.

II. Demographic Changes and Literature

During the past 50 years, the proportion of the U.S. population over 65 increased from 8.1 percent in 1950 to 12.7 percent in 1999. Demographers expect this trend to continue for the next 25 years. Campbell (1996) predicts that the number of elderly will double in 21 states between 1995 and 2025, but expects the bulk of the growth to occur after 2010. Two primary factors contribute to this demographic change. First, the Baby Boom generation (individuals born between 1946 and 1964) will begin to reach age 65 in 2011. Second, the life expectancy of individuals in the U.S. continues to increase, with individuals born in 2000 expected, on average, to live to 77.1 years of age. Life expectancy for individuals born in 2025 is expected to be 80.6 years of age.²

The data in Table 1 show the importance of this aging trend by state. As seen there, a number of western states (Idaho, Utah, Alaska, and Colorado) are expected to see larger gains in their elderly population than other states. This trend is projected for the next twenty-five years. The Northeastern states are expected to see the slowest (even negative) growth in the elderly over the next five to twenty-five years. This is in part due to a decline in the general growth of the population in the Northeast compared with fast growth in the West and South regions of the country and to the migration of the elderly to warmer climates.

A further indication of the importance of research on the implications of tax differentials between the elderly and the non-elderly is that the labor force participation rates for most groups above age 55 significantly declined from 1970 to 1998.³ If this trend continues, the proportion of individuals who will be eligible for tax relief will increase and most of these taxpayers will derive a significant amount of their income from sources other than wages.

²Source: U. S. Census Bureau's website, <http://www.census.gov/ftp/pub/ipc/www/idbsum.html>.

³For males, ages 55 to 64 years, the labor force participation rate in 1970 was 83.0 versus 68.1 in 1998; for males age 65 and older, the rate in 1970 was 26.8 versus 16.5 in 1998. For females age 65 and older, the rate in 1970 was 9.7 versus the 1998 rate of 8.6. However, for females ages 55 to 64, the labor force participation rate increased from 43.0 in 1970 to 51.2 in 1998.

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TABLE 1. AVERAGE ANNUAL GROWTH BY STATE POPULATION OVER AGE 65

	2000-2005	2005-2015		2000-2005	2005-2015
Alabama	1.07	2.81	Montana	2.34	3.85
Alaska	4.21	4.57	Nebraska	0.75	2.22
Arizona	2.27	3.68	Nevada	3.47	3.62
Arkansas	1.33	3.26	New Hampshire	0.85	3.11
California	0.40	2.93	New Jersey	0.06	1.70
Colorado	3.14	4.24	New Mexico	2.14	3.60
Connecticut	-0.22	1.54	New York	-0.31	1.32
Delaware	0.82	2.28	North Carolina	1.82	3.37
DC	-1.16	0.92	North Dakota	0.81	2.23
Florida	1.13	3.14	Ohio	0.38	1.63
Georgia	1.87	3.79	Oklahoma	1.36	2.98
Hawaii	0.89	2.87	Oregon	2.17	4.20
Idaho	3.18	4.34	Pennsylvania	-0.34	1.21
Illinois	0.13	1.61	Rhode Island	-0.68	1.33
Indiana	0.81	2.13	South Carolina	1.63	3.46
Iowa	0.45	1.79	South Dakota	0.73	2.02
Kansas	0.39	2.21	Tennessee	1.50	3.08
Kentucky	1.14	2.75	Texas	1.87	3.45
Louisiana	1.22	2.70	Utah	3.17	4.44
Maine	0.12	2.66	Vermont	1.10	3.12
Maryland	0.75	2.49	Virginia	1.45	3.12
Massachusetts	-0.38	1.67	Washington	2.10	4.28
Michigan	0.23	1.73	West Virginia	0.63	2.16
Minnesota	1.04	2.66	Wisconsin	0.71	2.23
Mississippi	1.10	2.56	Wyoming	2.90	4.23
Missouri	0.50	2.17			

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As the demographic mix in the states shifts to a greater proportion of elderly individuals, the value of the tax relief granted to the elderly increases and its effect on factor prices will become more pronounced. This effect on factor prices may lead to reallocations of resources within the economy as a whole and to shifts in the mix of businesses within each state. The extent of these possible shifts is a subject of much concern for all levels of government as the shifts can affect federal, state and local government revenue bases. Our concentration in this report is on the implications of state income tax preferences, but preferences for property taxes in the form of elderly exemptions are also growing and present a similar problem nationwide.

To date, researchers and policy makers have talked about the trade-offs between tax revenue and public expenditures associated with the elderly. The general tenor of the debate has been that yes, there are preferences afforded the elderly for state income taxes, but the elderly bring spending power to states and have “paid their dues” during their working careers. More recently, researchers have attempted to quantify the costs and benefits of public finance policies aimed at the elderly. Much of the research has been dedicated to forecasting the costs associated with social security and health care. Fuchs (1998), Hurd (1993), CBO (1998), and Cutler and Sheiner (1998), among others, project from moderate to severe federal budget problems associated with expenditures for social security and health care due to increases in the elderly population and the growth in health care costs.

To be fair, these increased expenditures for health and social security should be weighed against any decreases in expenditures associated with relatively large elderly populations: public school expenditures, recreation expenditures, and possibly road maintenance expenditures. Another part of the revenue-expenditure puzzle is what the wealth of the elderly brings to the public sector in terms of sales tax revenues and property values. Limited evidence suggests that sales tax revenues are negatively affected by increases in the elderly population—this is due to exemptions for medical and service expenditures which are relatively large consumption items in the budgets of the elderly but are largely untaxed (Mullins and Wallace 1996). Finally, it may be useful to view the tax benefits afforded the elderly in a life-cycle context—are the elderly

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receiving benefits now which are commensurate with what they put into the system during their working years? There is very little evidence on this issue because answering the issue involves using a sophisticated analytical technique and making some heroic assumptions regarding individual behavior over a long period of time.

Without using a life-cycle technique, Penner (2000) suggests that the tax benefits of the federal and state governments are not justified as does (Forman, 1995). Both of these authors show that federal and/or state income tax laws lend significant benefits to the elderly in terms of increased deductions and exemptions for certain types of income.

Wheeler (2000) estimated the impact of the elderly preferences in Georgia and projects that the aging of the population in Georgia is expected to have a small negative impact on state personal income tax revenues. The revenue loss associated with the elderly is mitigated by the general increase in the population in Georgia. Wheeler also assumes that consumption and other patterns of behavior will remain constant over the forecast period.

In this report we concentrate on the state income tax treatment of the elderly, a topic we believe to be under-studied. Penner (2000) quantified some of the preferences and found significant reductions in tax liabilities for a set of elderly representative taxpayers. We determine whether state personal income tax rates are lower on average for the elderly than the non-elderly. We make these calculations for the elderly population at large, and then by income groups. Using this information, we make some forecasts of impacts on state government finances due to the growth in the elderly population. We do not attempt to estimate the expenditure issues associated with the growth in the number of elderly, nor do we use a life-cycle approach to estimate the taxes paid and public goods consumed by the elderly over their entire life.

III. State Individual Income Taxes in the U.S.: Overview

Tax structures vary widely among the states, with 43 states and the District of Columbia levying an individual income tax. The state individual income tax is a major revenue raiser throughout the U.S., providing 33.9 percent of state tax revenues in 1998. In the aggregate, only the sales and gross receipts taxes provide more revenue to the states than the individual income tax. The primary reason the sales and gross receipts tax dominates the individual income tax in total state tax revenues is that more states use sales and gross receipts taxes. However, the individual income tax generates more revenue in more states than the sales and gross receipts taxes in the vast majority of states with an income tax.

Forty-one states impose a broad-based individual income tax; in thirty of these states, the individual income tax supplied more tax revenue than any other tax instrument during 1998. In ten states, the individual income tax ranked second to sales and gross receipts taxes in tax revenues; in one state, the individual income tax ranked third as a source of tax revenue. Two other states, Tennessee and New Hampshire, tax only capital income. In those states, the individual income tax is a minor component of the state's tax structure and makes only a small contribution to total revenues.

Under the various state individual income tax codes, special provisions target tax relief at the elderly. All forty-three states which levy an individual income tax offer special tax relief to the elderly. Some states means-test some or all of their relief. In some states, this tax relief applies only to retirement income; in other states, it applies to all taxable income, regardless of its source. Thirty-nine states exempt some or all social security income from taxation, while exemption of pension income from taxation varies widely across the states.⁴ Thirty-six states offer additional exemptions or credits

⁴For 1998, social security income of retired workers comprised, on average, 28 percent of total household money income for taxpayers over age 65. In addition to income subject to taxation, money income includes public assistance, veterans' payments, child support, and financial assistance from outside of the household. The sample used in this study includes only income subject to taxation and includes only individuals who filed a federal income tax return for tax year 1995. Although the income measure is more restrictive, the average income of these taxpayers over age 65 in the sample is considerably higher. The sample shows that, for 1995, social security income comprised slightly over 14 percent of income for taxpayers over age 65 in the 43 states which levy an individual income tax.

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for the elderly. Table 2 summarizes the income tax relief targeted to the elderly by state and indicates whether the relief is means-tested. We now turn to an analysis of the effects of these tax preferences for the elderly.

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**TABLE 2. STATE INCOME TAX RELIEF FOR THE ELDERLY, BY STATE,
TAX YEAR 1999**

State	Retirement Income Exemptions		Other	
	Social Security	Pensions ^d	Exemption	Credit
Alabama	Full	Full for government pensions	No	No
Arizona	Full	\$2,500 for government pensions	Yes	No
Arkansas	Full	\$6,000 for all pensions	No	Yes
California	Full	No exemption	No	Yes
Colorado	Full	\$20,000 (includes social security)	Yes	Yes
Connecticut	Yes ^a	No exemption	No	No
Delaware	Full	\$5,000 for all pensions	Yes	Yes
Georgia	Full	\$13,000 for all pensions	Yes	Yes ^a
Hawaii	Full	Full for all pensions	Yes	No
Idaho	Full	\$16,788 for government pensions (includes social security)	Yes	Yes
Illinois	Full	Full for all pensions	Yes	No
Indiana	Full	\$2,000 for fed. government pensions (includes social security)	Yes ^b	Yes ^a
Iowa	Partial	\$5,000 for all pensions	No	Yes
Kansas	Partial	Full for government pensions	Yes	No
Kentucky	Full	\$35,700 for all pensions	No	Yes
Louisiana	Full	Full for government pensions; \$6,000 for private pensions	Yes	No
Maine	Full	Same as federal treatment	Yes	Yes
Maryland	Full	\$16,100 (includes social security)	Yes ^a	No
Massachusetts	Full	Full for government pensions	Yes	No
Michigan	Full	Full for government pensions; \$34,170 for private pensions	Yes ^c	No
Minnesota	Full ^a	\$9,600 ^a for all income	Yes ^a	No

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**TABLE 2 (CONTINUED). STATE INCOME TAX RELIEF FOR THE ELDERLY,
BY STATE, TAX YEAR 1999**

State	Retirement Income Exemptions		Other	
	Social Security	Pensions ^d	Exemption	Credit
Mississippi	Full	Full	Yes	No
Missouri	Full	\$3,000 for private pensions*; \$6,000 for government pensions* (maximum for all)	No	Yes*
Montana	Full*	\$3,600 for all pensions*	Yes*	No
Nebraska	No	No exemption	Yes	Yes
New Hampshire	Full	Full	n.a.	n.a.
New Jersey	Full	\$7,500 for all pensions	Yes	No
New Mexico	Full	\$8,000 (includes social security)	Yes*	No
New York	Full	\$20,000 for all pensions	No	No
North Carolina	Full	\$2,000 for private pensions; \$4,000 for government pensions (maximum for all)	Yes*	No
North Dakota	Full*	\$5,000 for government pensions (includes social security)	No	No
Ohio	Full	Limited tax credits	Yes*	Yes
Oklahoma	Full	\$3,300 for private pensions*; \$5,500 for government pensions (maximum for all)	Yes	No
Oregon	Full	Full/partial for fed. government pensions	Yes*	Yes
Pennsylvania	Full	Full	No	No
Rhode Island	Federal rules	Federal rules	Yes	Yes
South Carolina	Full	\$15,000 for all income	Yes	No
Tennessee	Full	Full	Yes*	n.a.
Utah	Full	\$7,500 for all pensions	Yes*	No
Vermont	Federal rules	Federal rules	Yes	Yes
Virginia	Full	\$12,000 for all income	Yes	No

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**TABLE 2 (CONTINUED). STATE INCOME TAX RELIEF FOR THE ELDERLY,
BY STATE, TAX YEAR 1999**

State	Retirement Income Exemptions		Other	
	Social Security	Pensions ^d	Exemption	Credit
West Virginia	Federal rules	\$2,000 from government pensions	Yes	No
Wisconsin	Yes ^a	Full for some government pensions; others fully taxable	Yes ^a	Yes ^a

Notes: Amounts are for individuals who file single returns.

Alaska, Florida, Nevada, South Dakota, Texas, Washington, and Wyoming do not levy individual income taxes.

^a Means tested.

^b Indiana provides two special deductions for individuals over 65 years of age--one is means tested.

^c Michigan also allows a deduction for interest, dividends, and capital gains included in AGI if the individual is over age 65.

^d No age limits exist for pension deductions for Alabama, Arizona, Arkansas, Hawaii, Illinois, Kansas, Kentucky, Massachusetts, Mississippi, Missouri, Montana, New Hampshire, North Carolina, Ohio (except lump-sum distributions), Oregon, Tennessee, West Virginia, and Wisconsin. South Carolina and Utah provide lower deduction limits for taxpayers younger than age 65; Delaware provides lower deduction limits for taxpayers younger than age 60. Age limit for pension deductibility in Michigan depends on the source of pension income. The following states allow pension deductions for individuals with the age as indicated: Colorado, 55; Georgia, 62; Idaho, 65; Indiana, 62; Iowa, 55; Louisiana, 65; Maryland, 65; Minnesota, 65; New Jersey, 62; New Mexico, 65; New York 59 ½; North Dakota, 50; Oklahoma, 65; Pennsylvania, 59 ½.

Sources: State Income Tax Regulations, State Income Tax Forms and Instructions, Tax Year 1999.

IV. Data Source and Methodology

In this report, the 1995 Public Use File from the Internal Revenue Service provides the basic data needed to estimate the effects of the differences in tax treatment between the elderly and the non-elderly. The IRS file contains 50,396 detailed records for taxpayers who reside in states which impose individual income taxes. These records are for taxpayers who have federal adjusted gross income (FAGI) of \$200,000 or less for tax returns filed during calendar year 1995. Although the file is designed to make national level estimates, the records provide a good basis on which to estimate the different average effective state income tax rates of the elderly and the non-elderly. For state income tax incidence studies, this file is superior to other data sources because most states use federal income tax information as a starting point for calculating state individual income taxes. Thus, the file lacks only a small amount of detail needed for accurate estimation of average effective tax rates for state individual income taxes. To preserve the confidentiality of the individuals' records, certain data elements, such as alimony paid and received, home mortgage interest paid to financial institutions, etc. are 'blurred' by reporting those amounts as averages of a few records rather than as the exact or rounded amounts reported by the taxpayers. To further disguise the data, all fields in the file are rounded to the four most significant digits. For example, if an individual has wage income of \$110,533.55, the file contains wages in the amount of \$110,500; if an individual has itemized deductions of \$11,329.58, the file contains itemized deductions in the amount of \$11,330.

The IRS file does not contain state identifiers or age indicators on the records for high-income taxpayers, but does include 42,519 high-income records.⁵ As with the data for taxpayers with lower income, the IRS blurs other data elements to further preserve the confidentiality of the taxpayers included in the sample. The lack of age identifiers precludes use of these records in the detailed estimation as the assumptions needed to generate results would be untenable. Further, data on high-income individuals are not needed to conclude that the taxation of the non-elderly differs significantly from

⁵High-income records are defined as records for individuals which have annual FAGI of more than \$200,000.

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that of the elderly and that the differences affect both factor and output prices because the information obtained from analyzing records of taxpayers with FAGI of less than \$200,000 provides conclusive evidence.⁶

To estimate average effective tax rates for individual taxpayers, we use a micro-simulation model which incorporates the 1999 tax code for the 43 states which impose an individual income tax. This model contains the unique characteristics of the different state income tax codes for which data are available, ranging from tax rates to exemptions and credits offered by the different states. Although the states' tax codes are the versions in effect for four years subsequent to the data used in the estimation, this timing difference should not materially affect the results for two reasons. First, individuals do not immediately respond to changes in state tax codes by altering their income earning, wealth accumulation, or spending patterns. Second, no major changes occurred in the federal income tax code for tax years 1995 through 1999 which caused individuals to significantly alter their behavior to shift the recognition of income.⁷

There are some shortcomings of these IRS data, such as age being reported only as over or under 65, lack of information on interest paid on government securities, lack of specific identifiers on types of pension income received (government or non-government), and the high income identifier as noted above. Even with these shortcomings, the IRS data are the best available to estimate the magnitude of the elderly and non-elderly tax rate differentials as they provide a wealth of income data and information on exemptions and other credits.

⁶The basis for this conclusion is that most taxpayers have AGI less than \$200,000; for 1995, only slightly less than 1.3 percent of all federal income tax filers had AGI of more than \$200,000 (Internal Revenue Service, 1997). Further, for 1995, only 5.7 percent of householders aged 65 and over have incomes in excess of \$75,000, while slightly more than 17.3 percent of householders in other age groups have incomes higher than \$75,000 (U.S. Bureau of the Census, 1997).

⁷As an example of how changes in tax laws can affect individuals' behavioral patterns, the Tax Reform Act of 1986 (TRA 86) caused individuals to alter their patterns for recognition of capital gains. The ratio of capital gains realizations to nominal GDP spiked for one year to approximately 0.075 from a norm of less than 0.04. While market conditions during the past 5 years caused capital gains realizations to steadily increase from slightly more than 0.02 percent to over 0.055 percent of nominal GDP, this behavioral changes should not materially affect the results shown in this paper because capital gains are not, in general, a significant portion of total income of individuals with incomes of less than \$200,000.

**V. State Personal Income Taxes: Effective Rates
for Elderly and Non-Elderly**

We now turn to the results. The results for the different states obtained by the micro-simulation model show that elderly taxpayers in most states have lower average effective tax rates than those of the non-elderly. Generally, states which closely follow the federal rules show smaller differences between the average effective tax rates of the elderly and the non-elderly. Tables 3 through 5 show average effective tax rates for all states which impose an income tax, for the non-elderly and the elderly based on taxpayers with Federal Adjusted Gross Income (FAGI) of less than \$200,000, both in total and for two income ranges. States which exempt either all or a large portion of pension or social security income and those that provide either generous credits or exemptions to the elderly relative to the tax relief offered to the non-elderly show the largest differences in average effective tax rates.

Table 3 shows that, for all taxpayers with FAGI of less than \$200,000, 33 of the 43 states which levy income taxes have statistically significantly lower average effective tax rates for the elderly compared with those of the non-elderly. In this income range, the largest percentage differential between average effective tax rates for the elderly and the non-elderly occurs in states which provide generous exemptions of income to the elderly. For 21 of the 33 states, the average effective tax rates for the non-elderly are at least one and one-half times higher than comparable rates for the elderly; the difference between the average effective tax rate of the elderly and the non-elderly for 13 of these states is greater than one percentage point. In two of these states, the exemption for social security income is means-tested; for the remaining 11 states, social security income is fully exempt from taxation. Most of these states also offer generous pension income exclusions. Michigan has the largest percentage difference between the two rates, which can primarily be attributed to generous exemptions offered to the elderly by the state--full exemption of social security income, \$34,170 exemption for pension income, regardless of the source⁸, and a special exemption for the elderly. Kentucky has

⁸Government pensions are fully exempt, although this exemption is limited to \$34,170 in the micro-simulation model due to lack of detail on the sources of pension income.

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TABLE 3. AVERAGE EFFECTIVE TAX RATES - TAXPAYERS WITH INCOMES LESS THAN \$200,000 - ALL STATES

State	Average Effective Tax Rates				
	Elderly	Non-Elderly	Overall	Difference (elderly- non-elderly)	%Difference (elderly- non-elderly)
Alabama	2.04*	2.25*	2.22	-0.21	-9.30
Arizona	0.95*	1.47*	1.38	-0.52	-35.4
Arkansas	1.27*	2.36*	2.21	-1.09	-46.2
California	1.50	1.54	1.53	0.04	-2.30
Colorado	1.46*	2.24*	2.13	-0.78	-34.8
Connecticut	0.95*	2.03*	1.94	-1.08	-53.2
Delaware	1.97*	2.67*	2.54	-0.70	-26.2
Georgia	0.99*	2.56*	2.36	-1.57	-61.3
Hawaii	2.35*	3.66*	3.40	-1.31	-35.8
Idaho	1.01*	2.20*	2.03	-1.19	-54.1
Illinois	1.27*	2.32*	2.13	-1.05	-45.3
Indiana	1.44*	2.66*	2.48	-1.22	-45.9
Iowa	1.92*	2.43**	2.33	-0.51	-20.9
Kansas	2.01*	2.22*	2.19	-0.21	-9.50
Kentucky	1.29*	2.93*	2.67	-1.64	-55.9
Louisiana	0.76*	1.23*	1.17	-0.47	-38.2
Maine	2.13	2.06	2.08	0.07	3.40
Maryland	1.81*	2.42*	2.33	-0.61	-25.2
Massachusetts	3.72*	4.56*	4.42	-0.84	-18.4
Michigan	0.74*	2.91*	2.55	-2.17	-74.6
Minnesota	1.80*	2.25*	2.18	-0.45	-20.0
Mississippi	0.56*	1.18*	1.10	-0.62	-52.5
Missouri	1.30*	1.60*	1.55	-0.30	-18.7
Montana	1.44*	2.15*	2.00	-0.71	-33.0
Nebraska	1.75	1.66	1.67	0.09	5.42
New Hampshire	1.15*	-0.06*	1.01	1.21	>100

How Much Preference: Effective Personal Income Tax Rates for the Elderly

TABLE 3 (CONTINUED). AVERAGE EFFECTIVE TAX RATES - TAXPAYERS WITH INCOMES LESS THAN \$200,000 - ALL STATES

State	Average Effective Tax Rates				
	Elderly	Non-Elderly	Overall	Difference (elderly- non-elderly)	%Difference (elderly- non-elderly)
New Jersey	0.94*	1.58*	1.49	-0.64	-40.5
New Mexico	1.12	1.98	1.85	-0.86	-43.4
New York	1.76*	2.30*	2.21	-0.54	-23.5
North Carolina	2.24*	1.93*	1.97	0.31	16.1
North Dakota	1.12	1.09	1.09	0.03	2.70
Ohio	1.23	2.04	1.92	-0.81	-39.7
Oklahoma	0.89*	1.13*	1.10	-0.24	-21.2
Oregon	2.68*	3.84*	3.63	-1.16	-30.3
Pennsylvania	1.51*	2.55*	2.37	-1.04	-40.8
Rhode Island	1.84*	2.59*	2.47	-0.75	-28.9
South Carolina	0.36*	1.81*	1.60	-1.45	-80.1
Tennessee	0.31*	0.11*	0.14	-0.20	>100
Utah	1.16*	1.73*	1.66	-0.57	-49.1
Vermont	1.12*	1.88*	1.78	-0.57	-30.3
Virginia	1.29*	2.99*	2.74	-1.70	-56.9
West Virginia	2.34	2.54	2.51	-0.20	-7.80
Wisconsin	2.03*	3.13*	2.96	-1.10	-35.1

Significance levels are based on comparisons of the effective tax rates of the elderly and the non-elderly using t-tests.

* Significantly different from the other group (elderly vs. non-elderly) at the 1 percent level.

** Significantly different from the other group (elderly vs. non-elderly) at the 5 percent level.

*** Significantly different from the other group (elderly vs. non-elderly) at the 10 percent level.

How Much Preference: Effective Personal Income Tax Rates for the Elderly

a high percentage difference in the two rates, which can also be attributed to the generous exemptions and the special credit offered to the elderly—full exemption of social security income, \$35,700 exemption for all pension income, and a tax credit for the elderly. This pattern is common among the states which exhibit large differences in average effective tax rates for the elderly and the non-elderly.

A close look at the relative tax breaks afforded to elderly Virginia residents shows that the state provides much more generous exemptions to the elderly than to the non-elderly. For individuals who are 65 or older, the state allows an extra exemption of \$800, the same amount provided for children. However, a more significant effect on the differences between the average effective tax rates for the elderly and the non-elderly is the subtraction from federal adjusted gross income of \$12,000 of any type of income for all taxpayers age 65 or older. The non-elderly receive no comparable deductions.⁹ The special exemption of income is not means-tested. Thus, all elderly taxpayers benefit from this tax relief. Four other states have lower effective tax rates for the elderly but, in this income range the difference between the rates is not statistically significant.

Table 3 shows that six states have higher effective tax rates for the elderly in comparison with the non-elderly. Only three of these states show statistically significant effective tax rate differences between the two age groups, with two of those states, New Hampshire and Tennessee, taxing only interest and dividend income. As the elderly tend to derive a more significant portion of their incomes from capital, the higher average effective tax rates for the elderly are not surprising in these two states.

The other state that shows a statistically significantly lower average effective tax rate for the non-elderly is North Carolina. This anomaly results from both the composition of the sample for the state (the sample contains a high proportion of records for elderly individuals who have significantly higher incomes than the non-elderly), and the generous exemptions that the state offers taxpayers with children compared with exemptions provided to the elderly. For taxpayers with incomes of less than \$40,000

⁹The state allows annual exemptions from taxation of \$6,000 for taxpayers who were age 62, 63, or 64 at January 1, 2000. As ages of taxpayers are not disclosed in the IRS file, the exemption for these people is not considered in the micro-simulation model. Although child and dependent care expenses are allowed up to \$2,400 per dependent, to a maximum of \$4,800, not all non-elderly taxpayers incur qualifying expenditures.

How Much Preference: Effective Personal Income Tax Rates for the Elderly

North Carolina's results are similar to those of other states, with significantly lower average effective tax rates for the elderly (Table 4). The other three states which have higher effective tax rates for the elderly offer generous exemptions to families, in comparison with exemptions offered to the non-elderly, but the differences in the average rates for the elderly and the non-elderly are not statistically significant.

Table 4 presents the average effective tax rates for taxpayers with incomes less than \$40,000 and reveals more about the effects of the preferential treatment afforded to the elderly. For this income range, 38 states have statistically significantly lower average effective tax rates for the elderly, and in only one state, New Hampshire, is the rate for the elderly larger. Thirty-two states have average effective tax rates that are at least 50 percent lower for the elderly than for the non-elderly; fourteen of these states have differences of at least one percentage point between the rates for the elderly versus the non-elderly. The percentage differences in average effective tax rates between the elderly and the non-elderly are generally wider for lower-income taxpayers. Part of the reason for this difference is that 15 states means-test some of their tax relief provided to the elderly, allowing a larger percentage of income of the lower-income elderly to escape state income taxation, but restricting tax relief for elderly with higher incomes.

Tennessee provides an excellent example of how means-testing exemptions can cause the elderly with lower incomes to have lower effective tax rates than the non-elderly, but the opposite for taxpayers with higher incomes. The state taxes only dividends and interest but totally exempts such income from taxation for the elderly who have total income less than \$14,000 (\$23,000 for joint filers). When taxpayers exceed that threshold, they only receive an exemption of \$1,250 for each taxpayer. This structure results in a large jump in the tax burden for the elderly who have taxable income above the exemption limit. Joint filers who have income of \$22,999 owe no tax, while those with income of \$23,000 will owe tax on \$20,500 (assuming only two exemptions) at the 6 percent rate or \$1,830.

Illinois, with an average effective tax rate for the elderly almost 3 percentage points below that of the non-elderly, has the largest difference in average effective tax rates for taxpayers with AGI less than \$40,000, primarily due to the full exemption of

How Much Preference: Effective Personal Income Tax Rates for the Elderly

TABLE 4. AVERAGE EFFECTIVE TAX RATES - TAXPAYERS WITH INCOMES LESS THAN \$40,000

State	Average Effective Tax Rates				
	Elderly	Non-Elderly	Overall	Difference (elderly- non-elderly)	%Difference (elderly- non-elderly)
Alabama	1.61	1.80*	1.77	-0.19	-10.56
Arizona	0.47*	1.03*	0.94	-0.56	-54.37
Arkansas	0.67*	1.41*	1.30	-0.74	-52.4
California	0.23*	0.50*	0.47	-0.27	-54.0
Colorado	0.43*	1.49*	1.36	-1.06	-71.1
Connecticut	0.56*	0.77*	0.74	-0.21	-27.3
Delaware	0.15*	1.65*	1.43	-1.50	-90.9
Georgia	0.12*	1.77*	1.58	-1.65	-93.2
Hawaii	1.22*	3.14*	2.76	-1.92	-61.1
Idaho	0.30*	1.10*	0.98	-0.80	-72.7
Illinois	1.02*	3.97*	3.44	-2.95	-74.3
Indiana	1.42*	2.66*	2.46	-1.24	-46.6
Iowa	0.80*	1.40*	1.29	-0.61	-43.6
Kansas	1.03*	1.41*	1.35	-0.36	-27.0
Kentucky	0.77*	2.17*	1.93	-1.40	-64.5
Louisiana	0.25*	0.76*	0.70	-0.51	-67.1
Maine	0.61*	1.21*	1.14	-0.60	-49.6
Maryland	0.68*	1.58*	1.46	-0.90	-57.0
Massachusetts	3.03*	3.57*	3.48	-0.54	-15.1
Michigan	0.24*	2.48*	2.05	-2.24	-90.3
Minnesota	0.82**	1.18**	1.12	-0.36	-30.5
Mississippi	0.21*	0.64*	0.59	-0.43	-67.2
Missouri	0.39*	0.66*	0.61	-0.27	-40.9
Montana	0.21*	1.23*	1.04	-1.02	-82.9
Nebraska	0.68*	0.86*	0.83	-0.18	-20.9

How Much Preference: Effective Personal Income Tax Rates for the Elderly

TABLE 4 (CONTINUED). AVERAGE EFFECTIVE TAX RATES - TAXPAYERS WITH INCOMES LESS THAN \$40,000

State	Average Effective Tax Rates				
	Elderly	Non-Elderly	Overall	Difference (elderly- non-elderly)	%Difference (elderly- non-elderly)
New Hampshire	1.25*	0.07*	0.25	1.18	>100
New Jersey	0.17*	0.88*	0.76	-0.71	-80.7
New Mexico	0.30	1.23	1.09	-0.93	-75.6
New York	0.55*	0.86*	0.81	-0.31	-36.0
North Carolina	1.14*	1.59*	1.54	-0.45	-28.3
North Dakota	0.56*	0.72*	0.69	-0.16	-22.2
Ohio	0.47*	1.24*	1.12	-0.77	-62.1
Oklahoma	0.70*	1.08*	1.03	-0.38	-35.2
Oregon	1.49*	2.93*	2.67	-1.44	-49.1
Pennsylvania	1.42*	2.62*	2.40	-1.20	-45.8
Rhode Island	0.54*	1.94*	1.71	-1.40	-72.2
South Carolina	0.01*	0.67*	0.59	-0.66	-98.5
Tennessee	0.06*	0.10*	0.09	-0.04	-40.0
Utah	0.57*	1.14*	1.06	-0.57	-50.0
Vermont	0.43*	1.26*	1.13	-0.83	-65.8
Virginia	0.16*	2.05*	1.81	-1.89	-92.2
West Virginia	1.63	1.81	1.79	-0.18	-9.90
Wisconsin	0.95*	2.25*	2.06	-1.30	-57.8

Significance levels are based on comparisons of the effective tax rates of the elderly and the non-elderly using t-tests.

* Significantly different from the other group (elderly vs. non-elderly) at the 1 percent level.

** Significantly different from the other group (elderly vs. non-elderly) at the 5 percent level.

*** Significantly different from the other group (elderly vs. non-elderly) at the 10 percent level.

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pension and social security income from taxation, coupled with an additional exemption of \$1,000 for each elderly taxpayer. Michigan and Virginia also show large differences in the average effective tax rates between the elderly and the non-elderly for this income range, for the reasons previously noted.

Georgia's average effective tax rates for both the elderly and the non-elderly are low, with the elderly's rate being significantly below that of the non-elderly. Both elderly and the non-elderly Georgia taxpayers with incomes less than \$40,000 benefit from a means-tested tax credit allowed by the state, based on the number of exemptions claimed, with an extra exemption of \$1,300 provided for individuals who are age 65 or over. Additionally, for the elderly, the state also allows full exemption of social security income from taxation and the exemption of a maximum of \$13,000 for pension income. Elderly taxpayers can exempt from taxation up to \$4,000 of wages per taxpayer over age 65, provided the total exemption for wages plus pension income does not exceed \$13,000.

Table 5 shows that the elderly with incomes between \$40,000 and \$200,000 have significantly lower average effective tax rates in 30 states. The states which closely follow the federal income tax treatment display a greater tendency to have insignificant differences in effective tax rates between the elderly and the non-elderly. The effects of generous exemption rules for the elderly related to pension, social security, and income in general are apparent in the large differences in average effective tax rates in states such as South Carolina, Kentucky, and Virginia. The difference between the elderly and the non-elderly in the average effective tax rates for this income range are less likely to be as large as those for taxpayers with AGI of less than \$40,000. Only 9 states have a difference in rates of at least one percentage point for the upper-income range, compared with 14 states for taxpayers with AGI less than \$40,000; only 7 of the 9 states have more than a 50 percent difference between the rates of the elderly and the non-elderly.

Table 5 shows that South Carolina has the widest difference between average effective tax rate for the elderly and the non-elderly for taxpayers with incomes between \$40,000 and \$200,000. This low rate for the elderly primarily arises from the full

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TABLE 5. AVERAGE EFFECTIVE TAX RATES - TAXPAYERS WITH INCOMES BETWEEN \$40,000 AND \$200,000

State	Average Effective Tax Rates				
	Elderly	Non-Elderly	Overall	Difference (elderly- non-elderly)	%Difference (elderly- non-elderly)
Alabama	2.89*	3.16*	3.12	-0.27	-8.50
Arizona	1.70*	2.22*	2.13	-0.52	-23.4
Arkansas	2.55*	4.19*	3.97	-1.64	-39.1
California	2.64*	2.94*	2.88	-0.30	-10.2
Colorado	2.36*	3.11*	2.98	-0.75	-24.4
Connecticut	2.56*	3.31*	3.19	-0.75	-22.7
Delaware	2.90*	3.79*	3.59	-0.89	-23.5
Georgia	1.93*	3.75*	3.48	-1.82	-48.5
Hawaii	3.65*	4.60*	4.40	-0.95	-20.7
Idaho	3.65*	4.32*	4.26	-0.67	-15.5
Illinois	1.74*	2.53*	2.39	-0.79	-31.2
Indiana	2.15*	3.04*	2.94	-0.89	-29.3
Iowa	3.61*	4.22*	4.09	-0.61	-14.5
Kansas	3.15*	3.41*	3.37	-0.26	-7.60
Kentucky	2.50*	4.24*	4.01	-1.74	-41.0
Louisiana	1.56*	2.06*	1.99	-0.50	-24.3
Maine	3.22**	4.05**	3.82	-0.83	-20.5
Maryland	2.73*	3.39*	3.28	-0.66	-19.5
Massachusetts	4.54*	5.74*	5.55	-1.20	-20.9
Michigan	1.67*	3.41*	3.18	-1.74	-51.0
Minnesota	3.82*	4.46*	4.37	-0.64	-14.3
Mississippi	1.24*	2.49*	2.29	-1.25	-50.2
Missouri	2.44*	3.24*	3.08	-0.80	-24.7
Montana	3.69*	4.42*	4.24	-0.52	-11.8
Nebraska	3.93*	3.25*	3.37	-0.68	-20.9
New Hampshire	1.19*	0.21*	0.37	0.98	>100

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TABLE 5 (CONTINUED). AVERAGE EFFECTIVE TAX RATES - TAXPAYERS WITH INCOMES BETWEEN \$40,000 AND \$200,000

State	Average Effective Tax Rates				
	Elderly	Non-Elderly	Overall	Difference (elderly- non-elderly)	%Difference (elderly- non-elderly)
New Jersey	1.60*	2.24*	2.13	-0.64	-28.6
New Mexico	2.97*	3.58*	3.49	-0.61	-17.0
New York	2.97*	4.11*	3.90	-1.14	-27.7
North Carolina	3.63*	2.54*	2.72	0.82	32.2
North Dakota	1.80	1.70	1.72	0.10	5.90
Ohio	2.57*	3.45*	3.31	-0.88	-25.5
Oklahoma	1.21	1.23	1.23	0.02	1.60
Oregon	4.14*	4.95*	4.81	-0.81	-16.4
Pennsylvania	1.78*	2.61*	2.48	-0.83	-31.8
Rhode Island	3.60	3.82	3.79	-0.22	-5.70
South Carolina	0.84*	3.80*	3.31	-2.96	-77.9
Tennessee	0.64*	0.15*	0.21	0.49	>100
Utah	2.30	2.46	2.44	-0.16	-6.50
Vermont	3.11	2.95	2.96	0.16	5.40
Virginia	2.17*	4.03*	3.71	-1.86	-46.2
West Virginia	4.03	4.07	4.07	0.04	1.00
Wisconsin	3.75*	4.52*	4.41	-0.77	-17.0

Significance levels are based on comparisons of the effective tax rates of the elderly and the non-elderly using t-tests.

* Significantly different from the other group (elderly vs. non-elderly) at the 1 percent level.

** Significantly different from the other group (elderly vs. non-elderly) at the 5 percent level.

*** Significantly different from the other group (elderly vs. non-elderly) at the 10 percent level.

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exemption of social security income from taxation, the generous exemption of \$18,000 for joint taxpayers and \$15,000 for all other taxpayers, and the exemption offered for elderly individuals at the federal level. For the elderly, the actual tax rate may be slightly lower because the rate obtained by the micro-simulation model ignores any additional income exemptions for two income-earners households. However, South Carolina's average effective tax rate for the non-elderly is overstated to some extent because the state laws permit a special exemption of \$2,750 for dependents under six years of age. As the IRS file does not contain age indicators exemptions to families, in comparison with exemptions offered to the non-elderly, but the differences in the average rates for the elderly and the non-elderly are not for dependents, all dependents are assumed to fall outside this narrow range of ages. In 2000, 6.6 percent of South Carolina's population is expected to be 0-4 years of age; if that amount is extrapolated to include individuals who are 5 years old, 8.3 percent of the population will be eligible for this additional tax deduction. However, this omission is not expected to significantly alter the results because the exemption is a relatively low amount compared to the exemption afforded to the elderly.

Other states which show the most marked differences between the average effective tax rates of the elderly and the non-elderly are Virginia, Kentucky, Georgia, and Michigan. The factors causing these wide differences in average effective tax rates were previously discussed and center primarily around the total exemption of social security earnings and the generous exemptions afforded to the elderly for pension income or income in general.

Table 6 presents more detailed analysis of average effective tax rates in ten of the most populous states that have income taxes. Small sample sizes of the elderly preclude the use of the six income ranges used by the IRS in its *Statistics of Income* publications; instead, the data for two ranges were combined for this analysis, allowing us to examine the average effective tax rates for five different income ranges. The results show progressivity through all income ranges for all states, with the exception of Pennsylvania, which has a flat-rate structure and few exemptions. Pennsylvania law does not permit personal exemptions or standard or itemized deductions, so income

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TABLE 6. AVERAGE EFFECTIVE TAX RATES - FIVE INCOME GROUPS - TEN OF THE MOST POPULOUS STATES

State	Income Range	Effective Tax Rates (percent)				
		Elderly	Non-Elderly	Overall	Dif. (elderly- non-elderly)	%Dif. (elderly- non-elderly)
California	Overall	1.50*	1.54*	1.53	-0.04	-2.60
	\$0-\$20,000	0.06*	0.15*	0.14	-0.09	-60.0
	\$20,000-\$30,000	0.27*	0.75*	0.68	-0.48	-64.0
	\$30,000-\$50,000	0.76*	1.34*	1.26	-0.58	-43.3
	\$50,000-\$100,000	1.85*	2.22*	2.16	-0.37	-16.7
	\$100,000-\$200,000	4.31	4.44	4.42	-0.13	-2.90
Georgia	Overall	0.99*	2.56*	2.36	-1.57	-61.3
	\$0-\$20,000	0.00*	1.17**	1.02	-1.17	>100
	\$20,000-\$30,000	0.17*	2.41*	2.19	-2.24	-93.0
	\$30,000-\$50,000	0.68*	3.03*	2.79	-2.35	-77.6
	\$50,000-\$100,000	1.59*	3.70*	3.41	-2.11	-57.0
	\$100,000-\$200,000	2.58*	4.31*	4.03	-1.73	-40.13
Illinois	Overall	1.27*	2.32*	2.13	-1.05	-45.3
	\$0-\$20,000	1.00*	2.05*	1.87	-1.05	-51.2
	\$20,000-\$30,000	0.82*	2.29*	2.03	-1.47	-64.2
	\$30,000-\$50,000	1.17*	2.45*	2.20	-1.28	-52.2
	\$50,000-\$100,000	1.52*	2.50*	2.33	-0.98	-39.2
	\$100,000-\$200,000	1.97*	2.61*	2.50	-0.64	-24.5
Michigan	Overall	0.74*	2.91*	2.55	-2.17	-74.6
	\$0-\$20,000	0.15*	2.21*	1.77	-2.06	-93.2
	\$20,000-\$30,000	0.31*	2.64*	2.23	-2.33	-88.3
	\$30,000-\$50,000	0.74*	3.13*	2.84	-2.39	-76.4
	\$50,000-\$100,000	1.18*	3.35*	3.08	-2.17	-64.8
	\$100,000-\$200,000	2.56*	3.69*	3.55	-1.13	-30.6

How Much Preference: Effective Personal Income Tax Rates for the Elderly

TABLE 6 (CONTINUED). AVERAGE EFFECTIVE TAX RATES - FIVE INCOME GROUPS - TEN OF THE MOST POPULOUS STATES

State	Income Range	Effective Tax Rates (percent)				
		Elderly	Non-Elderly	Overall	Dif. (elderly- non-elderly)	%Dif. (elderly- non-elderly)
New Jersey	Overall	0.93*	1.58*	1.47	-0.65	-41.1
	\$0-\$20,000	0.03*	0.57*	0.48	-0.54	-94.7
	\$20,000-\$30,000	0.21*	1.19*	1.03	-0.98	-82.4
	\$30,000-\$50,000	0.58*	1.43*	1.27	-0.85	-59.4
	\$50,000-\$100,000	1.10*	1.88*	1.76	-0.78	-41.5
	\$100,000-\$200,000	2.47*	3.14*	3.04	-0.67	-21.3
New York	Overall	1.76*	2.30*	2.21	-0.54	-23.5
	\$0-\$20,000	0.19*	-0.33*	-0.25	0.52	>100
	\$20,000-\$30,000	0.79*	2.00*	1.83	-1.22	-61.0
	\$30,000-\$50,000	1.74*	3.12*	2.91	-1.38	-55.7
	\$50,000-\$100,000	2.65*	3.95*	3.72	-1.30	-32.9
	\$100,000-\$200,000	3.87*	4.84*	4.68	-0.97	-20.0
North Carolina	Overall	2.24*	1.93*	1.97	0.31	16.1
	\$0-\$20,000	0.76*	1.12*	1.07	-0.36	-32.1
	\$20,000-\$30,000	1.64*	2.20*	2.14	-0.56	-25.5
	\$30,000-\$50,000	2.13*	2.36*	2.33	-0.23	-9.70
	\$50,000-\$100,000	3.72*	2.55*	2.73	1.17	45.6
	\$100,000-\$200,000	5.03*	2.75*	3.11	2.28	82.9
Ohio	Overall	1.23*	2.04*	1.92	-0.81	-39.7
	\$0-\$20,000	0.15*	0.54*	0.48	-0.39	-72.2
	\$20,000-\$30,000	0.71*	1.86*	1.65	-1.15	-61.8
	\$30,000-\$50,000	1.18*	2.55*	2.32	-1.37	-53.7
	\$50,000-\$100,000	2.20*	3.40*	3.26	-1.20	-35.3
	\$100,000-\$200,000	3.69**	4.37**	4.25	-0.68	-15.6

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**TABLE 6 (CONTINUED). AVERAGE EFFECTIVE TAX RATES - FIVE INCOME GROUPS -
TEN OF THE MOST POPULOUS STATES**

State	Income Range	Effective Tax Rates (percent)				
		Elderly	Non- Elderly	Overall	Dif. (elderly- non-elderly)	%Dif. (elderly- non-elderly)
Pennsylvania	Overall	1.51*	2.55*	2.37	-1.04	-40.8
	\$0-\$20,000	1.52*	2.43*	2.25	-0.91	-37.4
	\$20,000-\$30,000	1.07*	2.64*	2.35	-1.57	-59.5
	\$30,000-\$50,000	1.33*	2.59*	2.38	-1.26	-48.7
	\$50,000-\$100,000	1.75*	2.61*	2.49	-0.86	-33.0
	\$100,000-\$200,000	2.09*	2.72*	2.63	-0.63	-23.2
Virginia	Overall	1.29*	2.99*	2.74	-1.70	-56.9
	\$0-\$20,000	0.01*	1.08*	0.94	-1.07	-99.1
	\$20,000-\$30,000	0.26*	2.90*	2.56	-2.64	-91.0
	\$30,000-\$50,000	0.64*	3.57*	3.16	-2.93	-82.1
	\$50,000-\$100,000	1.93*	4.01*	3.70	-2.08	-51.9
	\$100,000-\$200,000	3.28*	4.43*	4.22	-1.15	-26.0

Significance levels are based on comparisons of the average effective tax rates of the elderly and the non-elderly using t-tests.

* Significantly different from the other group at the 1 percent level.

** Significantly different from the other group at the 5 percent level.

*** Significantly different from the other group at the 10 percent level.

generally becomes taxable at low income levels, causing average effective tax rates to generally be more uniform, regardless of income level, for individuals who derive their incomes from roughly the same sources. Full exemption of income is given to pensions, social security, and unemployment compensation, which causes the elderly, as the primary earners of pension and social security income to have lower effective tax rates those of the non-elderly. Elderly taxpayers in the highest income bracket tend to derive a higher than average amount of their income from taxable sources, such as interest, dividends, or wages, causing their rates to be higher than the other elderly taxpayers.

Most states show a significant difference in effective tax rates between the elderly and the non-elderly at all income levels, with California and New Jersey

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providing the exceptions.¹⁰ California provides tax credits in lieu of personal exemptions and allows taxpayers who are 65 years of age or older to take two exemptions rather than one. The total credit allowed for an elderly taxpayer in 1999 was \$174. However, the tax relief provided for taxpayers with any dependents is almost twice as high, at \$277 per dependent for 1999. The only other tax relief that California provides to the elderly is the full exemption from taxation of social security benefits. While the elderly have statistically significantly lower average effective tax rates than the non-elderly in the lower income ranges, the differences in the tax relief offered to the non-elderly and the elderly tend to diminish markedly for income between \$100,000 and \$200,000.

In North Carolina, as highlighted in the earlier discussion, lower-income elderly have a lower tax burden than the non-elderly. The data in Table 6 again show that the tax structure results in lower tax burdens for the elderly at lower income levels, i.e., below \$50,000. As incomes increase, however, the effective tax rates for the two groups become closer. For taxpayers with AGI in the \$50,000-\$100,000 range, the elderly have a significantly higher tax burden than the non-elderly; the difference is even more marked for taxpayers in the highest income range, \$100,000-\$200,000. Although the results show that, overall, North Carolina has significantly higher effective tax rates for the elderly than the non-elderly, these results are misleading, emphasizing the importance of examining the tax effect for different income ranges.

¹⁰Results for the elderly in California for both the highest income level and overall, are not statistically significantly different from those of the non-elderly. For New Jersey, the results show that the elderly in the lowest-income bracket (\$0-\$20,000) do not have statistically significantly lower rates than the non-elderly.

VI. The Impact of Tax Differentials

We believe that the average tax rates presented above provide evidence that state income tax laws are such that the elderly are provided significant benefits in the form of lower tax rates in most states. In some cases, the difference in tax rates between the elderly and non-elderly are 50 percent or more. In most cases, the differences are closer to the 10-20 percent range. We analyze the implications of these effective tax rate differences on future state income tax revenues as a result of the change in age composition of the population.

We take a very simple approach to forecasting the effect of the tax differential on state personal income tax revenues. Tax revenues can be expressed as:

$$\text{Income tax revenues} = \text{Average tax rate} \times \text{average taxable income} \times \text{population}$$

Over time, growth in tax revenues come from increases in the tax rate, or increases in population, or increases in income. We consider separate tax revenue expressions for the elderly and for the non-elderly. For simplicity we assume that population is the only variable that changes over the forecast period, i.e., we assume that average tax rates and the distribution of average taxable income for the elderly and non-elderly remain the same over the forecast period. This is obviously not true, but if we have all the variables changing, we lose the focus of the impacts of the change in the elderly population on state income tax revenues.

We assume that the growth in the population aged 25-64 represents the growth in the “non-elderly” taxpaying population and the growth in the population over age 64 represents the growth in the elderly taxpaying population. We calculate the change in tax revenue as:

$$\begin{aligned} \text{Change in revenue} = \\ \text{Growth in tax revenue from the elderly} + \text{growth in tax revenue from the non-elderly} \end{aligned}$$

where:

Growth in tax revenue from the elderly = average tax rate for the elderly x growth in the elderly population.

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Growth in tax revenue from the non-elderly = average tax rate for the non-elderly x growth in the non-elderly population.

This gives us a simple forecast of the average annual growth in state personal income tax revenue attributed to the growth in the relative populations. These figures are found in column 1 and 2 (case 1) of Table 7 for the 10 largest states. We then calculate a hypothetical growth in state income tax revenues. In this second case, we assume that there are no state income tax preferences for the elderly and that their income is similar to that of the non-elderly, so the effective tax rate faced by the elderly is the same as that faced by the non-elderly. These figures are found in column 3 and 4 in Table 7 (case 2). The difference between the growth in case 1 and case 2 gives us a straightforward measure of the difference in average annual growth of state income tax revenues due to the preferential tax treatment of the elderly. This is found in the last column of Table 7.

As seen there, the ratio of the average annual growth in the ratio of elderly to non-elderly population varies significantly within our sample of 10 states. The age-category differences in state personal income tax rates will exacerbate the fiscal effect of the population trend in those state in which the tax differentials are relatively large and the growth in the share of the elderly in the population is more pronounced. The last column of Table 7 shows the difference in the growth rate of state personal income taxes under the tax scenarios. The states facing the biggest slow-down in their personal income tax revenues are those with large effective tax differentials and large annual increases in the elderly relative to the non-elderly. Michigan, Georgia, and Virginia are expected to see the most pronounced decrease in the growth of their personal income tax revenue growth due to the relatively large tax differentials as well as the large increases in elderly population. Of these 10 states, only North Carolina's income tax growth is positively impacted by the tax treatment of the elderly. This is due in large part to the means testing of elderly preferences and relatively high levels of income of the elderly in the state.

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**TABLE 7. SIMULATED STATE PERSONAL INCOME TAX REVENUE GROWTH: 10 LARGEST CITIES
(AVERAGE ANNUAL GROWTH IN PERCENTAGE, 2005-2015)**

State	Case 1		Case 2		Difference in revenue growth due to state income tax preferences for the elderly (1+2) - (3+4)
	Growth in revenue associated with growth in elderly population, actual tax rate	Growth in revenue associated with growth in non-elderly population	Growth in revenue associated with growth in elderly population, using same tax rate as non-elderly	Growth in revenue associated with growth in non-elderly population	
	(1)	(2)	(3)	(4)	
California	4.40	4.54	4.51	4.54	-0.12
Georgia	3.75	5.91	9.70	5.91	-5.95
Illinois	2.04	2.69	3.74	2.69	-1.69
Michigan	1.28	2.77	5.03	2.77	-3.75
New Jersey	1.58	2.37	2.69	2.37	-1.11
New York	2.32	2.87	3.04	2.87	-0.71
North Carolina	7.55	4.18	6.50	4.18	1.04
Ohio	2.00	1.80	3.33	1.80	-1.32
Pennsylvania	1.83	1.92	3.09	1.92	-1.26
Virginia	4.02	6.32	9.33	6.32	-5.30

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This exercise helps to put a value to the cost of differential state income tax treatment of the elderly relative to the non-elderly. In some states, the effects are significant. In Georgia, the annual cost of these preferences amounts to about 60 percent of the revenue take from the state corporate income tax. In other states, the effect is much smaller. As this exercise was done for only the state personal income tax, the total cost of the preferential tax treatment of the elderly at the state and local levels is obviously higher.

VII. Conclusions

Many states provide income tax breaks for various groups. The number of states with special income exemptions and credits for the elderly has been on the rise for a number of years, so that in most states, there is some type of specialized income tax treatment for the elderly. We find that the differences in effective income tax rates for the elderly and non-elderly are significant in over 70 percent of the states that utilize income taxes. This is a function of both the tax law as well as income composition of the elderly and non-elderly.

What does the preferential state income tax treatment for the elderly mean over the long-term? Georgia and the rest of the U.S. are getting older. As the population ages, the value of things like tax exemptions for the elderly will grow. All else equal, states that grow older, faster, will witness less growth in revenue sources that allow tax preferences for the growing elderly population than if those preferences do not exist. We calculated a straightforward simulation of the impact of the state income tax treatment of the elderly on state income tax revenue growth. We assume that the growth in elderly and non-elderly population does not change tax revenue nor does it change the growth in income over time. That way, we can concentrate on the impact of the relative changes in population growth of the elderly versus non-elderly on the growth in state income tax revenue.

We conclude that in the ten states we examine (Georgia, California, Illinois, Michigan, New Jersey, New York, North Carolina, Ohio, Pennsylvania, and Virginia), state income tax revenues would have been higher in all states except North Carolina if the elderly were taxed at the same effective tax rate as the non-elderly. Some of the differences are small. For example, in California, the difference is less than 0.13 percent over 10 years. However, in Georgia, the difference is significant, although still relatively small. We find that for the period 2000-2005, Georgia's state income taxes will be about 3 percent lower per year than they would be if the elderly faced the same, higher, effective tax rate as the non-elderly. From 2005-2015, the difference would be about 6 percent per year. This is assuming that the growth in income of the elderly and non-elderly is similar so that the difference in income tax revenue is due only to the

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difference in the growth of the elderly population versus the non-elderly and the difference in tax rates. For the last two decades, the growth in the income of the elderly has been at least as high as the overall population, and in many years, higher than that of the average population. If this trend continued, then the special state income tax treatment of the elderly would be even more costly than this analysis suggests.

Future research should look at the cost of other tax preferences for the elderly, at both the state and local level. However, research should also be aimed at the expenditure side of the story. There is debate regarding how much the elderly should pay for in terms of public goods. After all, if someone has paid into state and local budgets for 30 or more years, should they continue to pay for services such as education? On the flip-side, the elderly may demand more of certain services such as transportation and health care. A full analysis of the differential treatment of the elderly and non-elderly will look at all of these dimensions.

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