FISCAL RESEARCH CENTER

policybrief

March 2009, Number 190

BUOYANCY OF GEORGIA'S PERSONAL INCOME TAX

The Personal Income Tax (PIT) in Georgia accounts for the largest share of state tax revenue. In FY2007, total personal income tax revenue was $8.8 billion—out of $17.6 billion in net revenue collections for the state (50 percent of state net revenue). As seen in Figure 1, the growth in PIT revenues has been relatively steady until the 2001 recession, when the nominal growth actually turned negative for the first time in recent history. By FY2004, PIT receipts rebounded and have grown steadily until the most recent economic downturn beginning in 2008, when monthly receipts began to slow down. In general, the post-2001 recession period has seen increased volatility of personal income tax revenue.

The fluctuation in tax revenues with respect to the growth in the economy is referred to as the *buoyancy* of a tax. Buoyancy is measured as the percent change in tax revenues divided by the percent change in economic activity. The latter is usually measured by personal income. How tax revenues move with the economy (measured as buoyancy) is one criterion for evaluating a tax since it indicates whether the tax "keeps up" with growth in the economy. Year to year, the buoyancy also measures the volatility of the tax and the ability of government to meet the demands of their constituents. As an economy grows (and income of taxpayers grows), the demands for public services tend to increase. If tax revenues grow less quickly than the economy, then the public sector will not be able to meet increased demands for better schools and roads, more parks and trash collection, etc. Low tax buoyancy suggests that governments may face increased public pressure for better and/or more services with slower growing revenue sources. It is also important to know the buoyancy of specific revenue sources when forecasting revenues—if personal income is expected to grow, but tax buoyancy is less than one, we would not forecast revenues to grow at the same rate as the economy.

Figure 2 provides a long-term view of the buoyancy of Georgia's personal income tax from 1964 to 2007. The overall trend shows a downward trend in the buoyancy of the tax. In the most recent years, the buoyancy is quite erratic due to the changes in levels of income associated with the 2001 recession and resulting adjustment in taxable income. The most recent monthly data on income tax receipts shows a decline in collections, but we do not have current personal income tax data to compare for these most recent months. Overall, the long-term trend seems to suggest that the buoyancy is declining.

The goal of this policy brief is to review the trends in personal income tax revenue and provide some insight regarding recent patterns of PIT revenue growth in Georgia. We first describe the structure of the

Georgia State University | ANDREW YOUNG SCHOOL OF POLICY STUDIES

FIGURE 1. PERSONAL INCOME TAX REVENUES (NOMINAL, THOUSANDS)

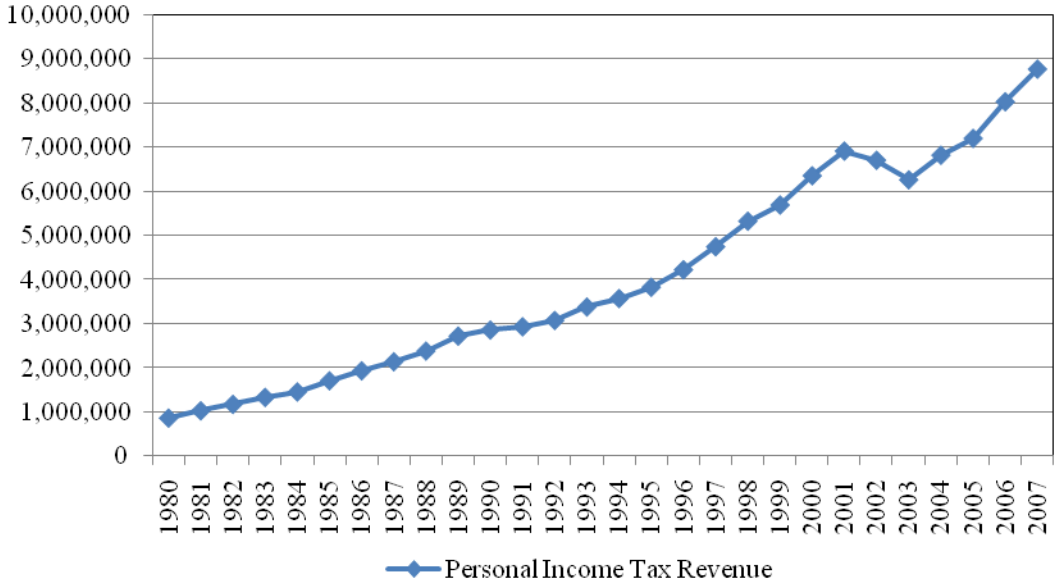
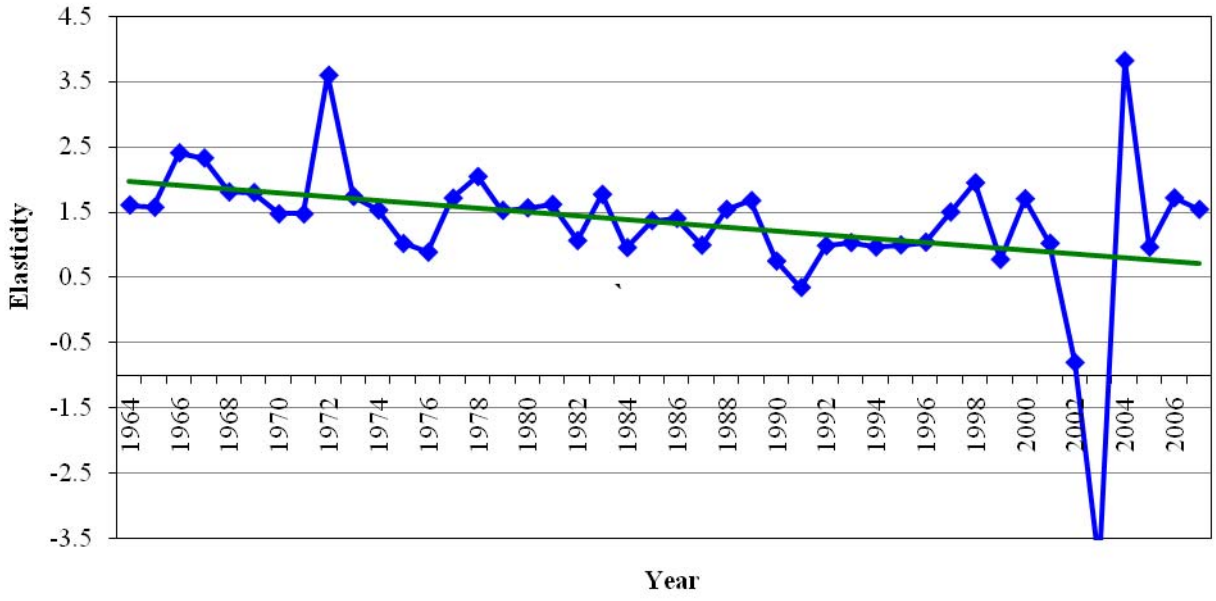


FIGURE 2. PERSONAL INCOME TAX BUOYANCY, GEORGIA 1964-2006



personal income tax and then turn to explanations for the trend in buoyancy.

Georgia's Personal Income Tax

To understand the growth and volatility of the personal income tax, it is useful to review the basic structure of the tax. Georgia's personal income tax is nominally a progressive income tax, with tax rates ranging from 1 to 6 percent on taxable income. The tax brackets are not adjusted for inflation and the basic structure has remained roughly constant since the 1950s. The structure is reported in Table I by filing status.

The basic computation of Georgia taxable income (GATI) begins with federal adjusted gross income (FAGI). From FAGI, a series of additions (interest on non-Georgia municipal and state bonds, lump sum distributions, and a few others) and subtractions (retirement income exclusion of $30,000 for 2007, social security benefits, contributions to Georgia higher education savings plan, and a few others) are made to arrive at Georgia Adjusted Gross Income (GAGI). From GAGI, a standard deduction or federal itemized deductions are allowed in addition to personal exemptions for dependents and taxpayers. These deductions are reported in Table II (2007 law).

Subtracting the standard deduction (or itemized deductions) and personal exemptions yields Georgia taxable income (GATI), to which the above rates are applied. Georgia's income tax system also provides a number of credits including a low-income credit, credit for low-emission vehicles, and others.

Personal Income Tax Buoyancy

If personal income is a good approximate measure of the economy, then we would expect tax revenues to increase as personal income increases. However, over time, if tax rates were reduced, that would reduce the growth in tax revenues. Also, if exemptions, deductions, and credits were increased, the tax base would shrink, and so we would expect revenue growth to slow. Tax revenue growth is also related to how efficiently taxes are collected. If the tax administration is doing a good job, we expect that tax revenue growth will keep up with income growth—all else held constant. Finally, tax revenue growth is linked to tax compliance. Taxpayers may become more or less compliant over time or over economic conditions—which would affect the growth in tax revenue. Tax collections as a share of income is therefore made up of the ratio of tax collections to income tax liability, the ratio of income tax liability to taxable income, and the ratio of taxable income to personal income.

A simple decomposition of these effects is as follows:

$$T_c / Y = (T_c / T_l) * (T_l / TI) * (TI / Y) \quad (1)$$

Where:

T_c = Income Tax Collections
Y = Personal Income
T_l = Income Tax Liability
TI = Taxable Income

In this simple expression relating the tax revenue to income, a change in tax collections as a share of Y is made up of (in order of the identity on the right hand side of equation (1)): the collection ratio (affected by compliance and administration), the tax rate (affected by changes in the rate and bracket structure), and the tax base (affected by exemptions, deductions, credits, etc.).

To better understand and potentially explain the income tax buoyancy in Georgia, it is useful to look into each of these pieces: changes in the tax rates, changes in the tax base, and changes in administration and compliance. We turn next to a discussion of possible reasons for the long-term trend.

Factors Affecting Personal Income Tax Buoyancy

The base of Georgia's taxable income is made up of income from wages, capital, proprietors, and some small items such as alimony and unemployment compensation. Using data from the U.S. Internal Revenue Service, we find that in Georgia, the main component of the tax base is wage and salary income. The share of wage and salary income in federal AGI has fallen some over the last decade from 76 percent in 1997 to 72 percent in 2006, while the share of capital gains in federal AGI has seen the largest increase from 5.8 percent in 1997 to 8.3 percent in 2006. Capital gains (net of losses) are quite variable over time given the impact of market shocks on realized capital gains. However, it is interesting to note this trend of increase in capital gains reported in taxable income of Georgians.

Missing from Georgia's tax base is income from social security, public welfare payments, and some retirement income. Using data from the Bureau of Economic Analysis, we analyze trends in income that is largely taxable (wages and capital income from dividends, interest, and rent (DIR)) and income that is mostly non-taxable in Georgia (transfer payments). The share of each

Table I. Structure of Georgia's Personal Income Tax

----------Singles----------		---Married Filing Separate--		----Joint, Head of Household---	
Rate	**Taxable Income**	**Rate**	**Taxable Income**	**Rate**	**Taxable Income**
1%	< $750	1%	< $500	1%	< $1,000
2%	$750-$2,250	2%	$500-$1,500	2%	$1,000-$3,000
3%	$2,250-$3,750	3%	$1,500-$2,500	3%	$3,000-$5,000
4%	$3,750-$5,250	4%	$2,500-$3,500	4%	$5,000-$7,000
5%	$5,250-$7,000	5%	$3,500-$5,000	5%	$7,000-$10,000
6%	>$7,000	6%	>$5,000	6%	>$10,000

Table II. Standard Deductions, Georgia's Personal Income Tax

Standard Deduction	
Single/Head of Household:	$2,300
Married Filing Separate:	$1,500
Joint, Head of Household:	$3,000
Additional Deduction[1]:	$1,300

Exemptions	
Dependents:	$3,000
Taxpayers:	$2,700

[1] For elderly (65 or older) or blind.

of those items, wages, DIR, and transfer payments to total personal income is graphed in Figure 3. The wage share of personal income has declined about 3.4 percentage points between 1990 and 2007 from 60.7 percent to 57.3 percent of personal income, while the transfer income share has increased from 11 percent to 13.7 percent, and the DIR share has fluctuated over the years at just slightly above or below 16 percent.

What is the impact on personal income tax revenues of this change in the composition of income? There are various ways to analyze the effect of this trend, but here we look at the difference in actual personal income tax revenue versus the potential income tax revenue that would result if wages were still 60.7 percent of personal income. In 2007, using an average personal income tax rate of 3.8 percent, personal income tax revenues would have been about 5 percent higher if wages were at their relative 1990 level. This amounts to about $430 million in additional revenue in 2007. This change increases the average buoyancy since 1990 from 0.909 to 0.946—substantially closer to one. The current relative composition of income appears to be one important reason for a general decline in the personal income tax buoyancy.

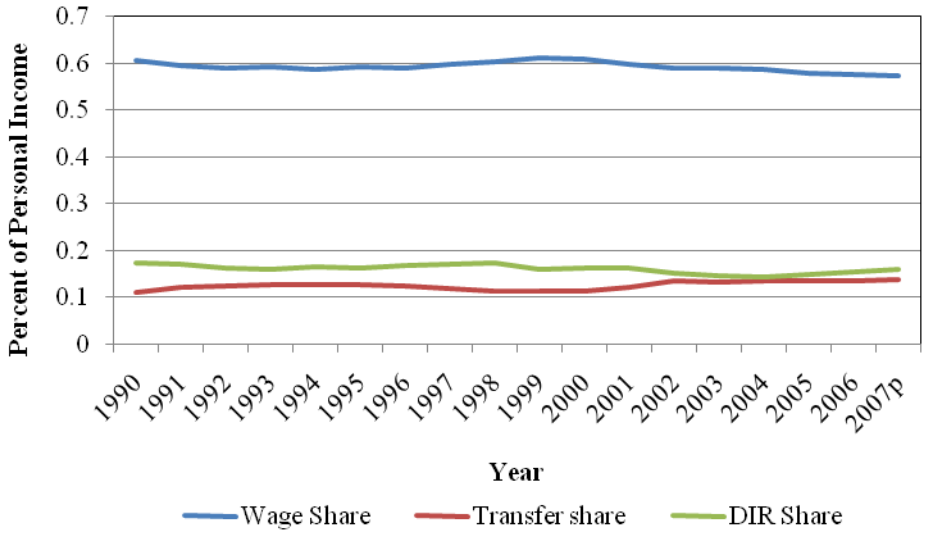
The trend in the buoyancy of personal income tax revenues is also related to fluctuations in income, especially in higher wage paying jobs. Data needed to analyze the fluctuation in types of income are hard to come by. We use the administrative data from Georgia's ES202 data base (quarterly wage reporting for employers with employees covered by state unemployment insurance) and unemployment insurance filings to look for patterns in job losses and job recovery by level of income. The results of that analysis are provided in Figure 4, which plots the average wage of newly unemployed (for those with quarterly earnings of $15,000 or more) by quarter and the average wage of the re-employed at the quarter of re-employment. The wage levels are adjusted to 2000 levels, so the impact of inflation is controlled for. We notice that during the 2001 recession, individuals were hired back at earnings that were somewhat less than their levels of earnings at the time they were let go from their jobs. This would be consistent with the reduced buoyancy of the recession period—not only was personal income not growing, the higher income individuals witnessed a downward adjustment in their overall earnings once they re-entered the labor force. This would reduce the buoyancy of the income tax to a small extent.

The average wage at exit and entry becomes more coincident after the 2001 recession, but there is a great deal of fluctuation in the quarterly level of the entry and exit wage. For example in the third quarter of 2004, the average entry/exit wage was about $800 more than the same for the third quarter of 2005. This pattern does not definitively increase or reduce the buoyancy of personal income tax revenues, but it will increase the variability of the buoyancy and is an interesting pattern for further investigation.

While rates and brackets have not been adjusted in many years, there have been tax expenditures added to the personal income tax. Tax expenditures arise from exemptions, deductions, credits, or other special treatment in the tax code that reduces the potential level of tax revenue. In the case of Georgia's personal income tax, over the past twenty years, there has been an expansion of the level of personal exemption, standard deductions, and exemption for retirees in addition to a number of tax credits that reduces the potential level of personal income tax liability. In 2005, the Fiscal Research Center estimated the value of these personal income tax expenditures at over $500 million, with a growth rate of between 1.5 and 3 percent per year. Since that time, the retiree's income exemption has been increased, and will max-out this year at $35,000 per taxpayer. Of the current personal income tax expenditures, the retiree's income exemption is the one likely to grow somewhat faster than the others. This is due to the aging trend in Georgia, where Census projects that the population over age 65 in Georgia will increase by over 79 percent between 2000 and 2020, while the total population increase will be 32.5 percent over the same period. Current tax expenditure estimates suggest that the value of this gap could grow by about 1.7 percent per year—which amounts to a very small impact on income tax revenues (relative to personal income) and therefore does not answer much of the question related to the change in income tax buoyancy.

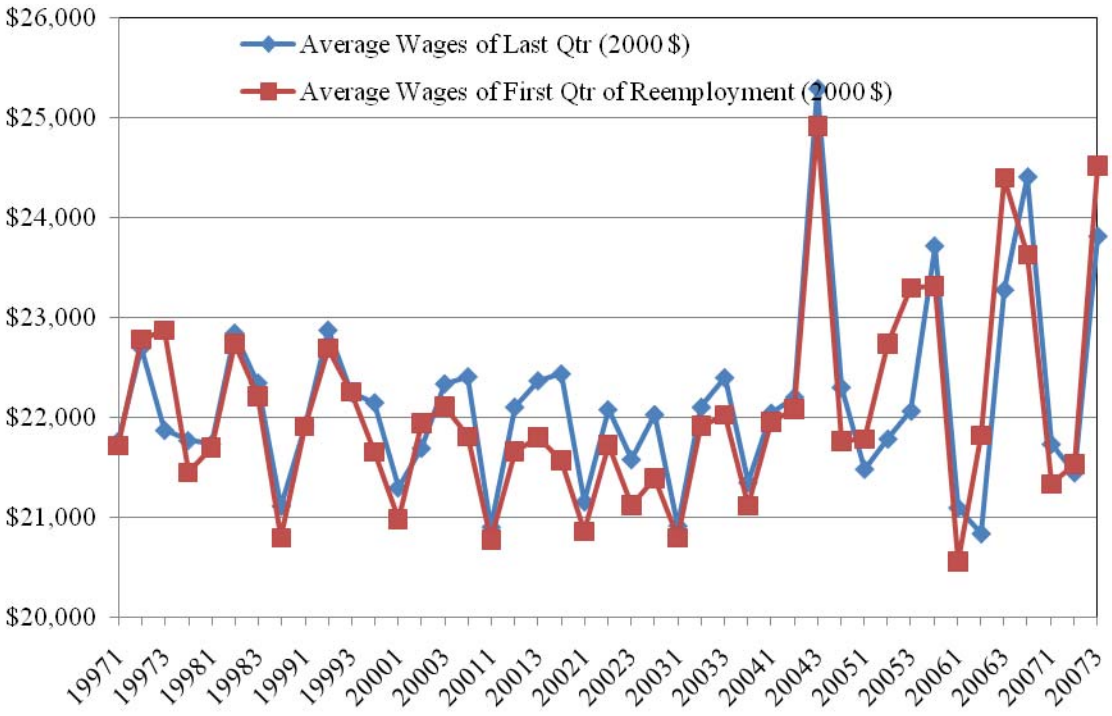
Finally, there is the issue of compliance and administration and their impact on the personal income tax buoyancy in Georgia. It is difficult to obtain data on either issue. If compliance or administration were the cause of the falling buoyancy, we would say that more people were evading or avoiding the personal income tax and/or the tax administration was doing less well in terms of its collection efforts. The Georgia Department of Revenue (DOR) now publishes statistics on the number of accounts processed by the Compliance Division and the resulting collections by the Division (FY2000 forward). There has been a marked increase in the number of accounts processed—growing

FIGURE 3. WAGE, TRANSFERS, AND DIVIDENDS, INTEREST, AND RENT (DIR) SHARE OF PERSONAL INCOME, GEORGIA 2990-2007



Source: Bureau of Economic Analysis

FIGURE 4. AVERAGE WAGE OF NEWLY UNEMPLOYED AND AVERAGE WAGE AT RE-EMPLOYMENT (GEORGIA)



from 7 percent annual growth in 2000-02 to over 14 percent by 2004, before dropping off to 3 percent in 2006. While this activity applies to all revenue sources, it does suggested increase administrative activity that might boost personal income tax revenues from 2002 to 2004. This might help explain the "boost" in personal income tax buoyancy in 2004. The compliance/administrative link to explain the personal income tax buoyancy is yet another area for further analysis.

Conclusions

The growth in personal income tax revenues in Georgia has, over time, lost ground relative to the increase in personal income. As detailed above, there are many reasons for the reduction in personal income tax buoyancy, as well as reasons for the increased variability of the buoyancy. In this policy brief, we started an investigation of some of the likely factors that might explain this change in buoyancy over time. By decomposing rate, base, and administrative/compliance issues related to personal income tax growth, we attempted to isolate reasons for the reduction in buoyancy over time. A number of possible explanations were isolated—increases in income exemptions for retirees, wage income stability, administrative measures by the DOR, and income composition. At this point, the most promising explanation in terms of its magnitude is the changing composition of personal income away from taxable wages toward less-taxable fringe benefits. This and other possible explanations need further investigation to better understand their current and future impact on the growth of Georgia's personal income tax revenue.

ABOUT THE AUTHOR

Sally Wallace is Professor of Economics and Associate Director of the Fiscal Research Center of the Andrew Young School of Policy Studies at Georgia State University. Dr. Wallace's main interests are domestic and international taxation and intergovernmental fiscal relations.

ABOUT FRC

The Fiscal Research Center provides nonpartisan research, technical assistance, and education in the evaluation and design the state and local fiscal and economic policy, including both tax and expenditure issues. The Center's mission is to promote development of sound public policy and public understanding of issues of concern to state and local governments.

The Fiscal Research Center (FRC) was established in 1995 in order to provide a stronger research foundation for setting fiscal policy for state and local governments and for better-informed decision making. The FRC, one of several prominent policy research centers and academic departments housed in the School of Policy Studies, has a full-time staff and affiliated faculty from throughout Georgia State University and elsewhere who lead the research efforts in many organized projects.

The FRC maintains a position of neutrality on public policy issues in order to safeguard the academic freedom of authors. Thus, interpretations or conclusions in FRC publications should be understood to be solely those of the author. For more information on the Fiscal Research Center, call 404-413-0249.

RECENT PUBLICATIONS

Buoyancy of Georgia's Personal Income Tax. This brief analyzes the growth in Georgia's Income Tax and explores reasons for trends over time. (March 2009)

Growth and Local Government Spending in Georgia. This report is a technical analysis that estimates the effect of local government spending on economic growth at the county level in Georgia. (February 2009).

Georgia Revenues and Expenditures: An Analysis of Their Geographic Distribution. This report presents a geographic analysis of "who bears the burden" of state taxes and who benefits from state public expenditures. (February 2009)

Trends in Georgia Highway Funding, Urban Congestion, and Transit Utilization. This report examines transportation funding, as well as urban congestion and transit utilization in Georgia as well as six other states for fiscal years 2000 and 2005. (October 2008)

Options for Funding Trauma Care in Georgia This report examines several options for funding trauma care in Georgia through dedicated revenue sources, with the objective of raising approximately $100 million. (October 2008)

Distribution of the Georgia Corporate and Net Worth Tax Liabilities, 1998 and 2005. This brief illustrates the distribution of corporate and net worth income tax liabilities among Georgia corporations. (September 2008)

The Effect of Insurance Premium Taxes on Employment. This report provides estimates of the effect of the insurance premium taxes on state-level employment in the insurance industry. (September 2008)

Variation in Teacher Salaries in Georgia. This report documents the variation in K-12 public school teacher salaries in Georgia and discusses the causes of variation in teacher salaries within and across districts. (August 2008)

For a free copy of any of the publications listed, call the Fiscal Research Center at 404/413-0249, or fax us at 404/413-0248. All reports are available on our webpage at: frc.gsu.edu.

Buoyancy of Georgia's Personal Income Tax - Brief

Publisher(s): Fiscal Research Center of the Andrew Young School of Policy Studies

Author(s): Sally Wallace

Date Published: 2009-03-01

Subject(s): Community and Economic Development; Government Reform