

AN ECONOMIC REPORT

Public-Private Sector Interaction in the Budget

I. A BUDGET PERSPECTIVE

Georgia's productive capacities are activated by businesses who sense prospects of spending by consumers, businesses, and governments. Except for adjustment lags, Georgia's output mixes and levels then reflect the judged preferences of private purchasers, both inside and outside the state, and of elected officials who orient government buying to satisfy the demands of their constituents. Accordingly, households influence resource use both directly and indirectly. Their actions as buyers of output, suppliers of productive services, and voters make the public and private sectors of Georgia's economy overlap. More important, they force the government and private sectors to interact. Activity in the private sector induces voters to demand government outputs. But, government markets no productive services of its own and so has no self-generated purchasing power with which to respond. To meet calls from constituents, consequently, elected officials maintain routines which allow purchasing power to be drawn from individuals and businesses, which permit this purchasing power to command the resources for production of wanted government goods and services, and which allow for a politically-rewarding distribution of the resulting outputs within the private sector. For Georgia's state government and the year ending June 30, 2002 (FY 2002), the Governor's Budget Report: Fiscal Year 2002 captures the financial essence of these routines and of the complex public-private exchanges in which they play a part.

The Budget Report makes specific the yield of the state's reach into the private sector with taxes and fees. It reviews the performance of these revenue generators in the immediate past and provides estimates of their revenue yields in the immediate future. On the basis of these estimates, government can plan purchases from the private sector of the productive factors and services required to fashion and deliver its set of politically-chosen programs. In the private economy, value added by an activity is measurable by subtraction of factor costs from final sales. Outputs which risk adding less to receipts than to costs will be resisted. In the government economy, in contrast, the created outputs are typically not "sold." To decide the merit of a product or service, government takes its revenues to be reflective of costs (private sacrifices) and its expenditures on the production of government outputs to be reflective of benefits. The Budget Report builds in this approach. Government's programs, projects, and products have competed with one another for shares of the anticipated revenues. In total, a year's expected revenues limits the same year's expenditures. That is, the budget is "balanced." Such balance insures that, pecuniarily at least,

the total withdrawal from the private sector is matched by the total return. Beyond such rough weighing of participation, government's economic net value-added is not evaluated. Instead, political competition for the favor of the electorate is simply trusted to make government's use of withdrawn funds more beneficial on balance to the economic community than the use which the private sector would otherwise have chosen.

Were government's value-added measurable, it would be sought in the increased output, productivity, and wellbeing which government's actions promoted. Sometimes, government services are tantamount to "income" for selected recipients. Direct benefits are received without any specific exchanges. When government programs first have their impacts upon businesses rather than households, contributions to individual wellbeing become indirect. Besides services, government infrastructures (like roads, ports, and even educated persons) can add to the utility and productivity of the private sector. Often, government's influence will involve neither direct services nor goods but will reinforce the economic incentives of households and businesses. Regulation has this characteristic. The Budget Report does not track the various returns which can be expected to flow from government activities. However, it carefully delineates the many types of programs which are recommended for financing and announces the principal outcomes which are anticipated. The Budget Report's emphasis upon results-based-budgeting affirms that the state is striving for a better quantification of all effects.

II. AN ECONOMIC BACKGROUND

An economic background for the expenditure allocations of the Budget Report is presented in this section on public-private sector interaction. Emphasis is upon the way in which private-sector conditions constrain the power of taxes and fees to generate revenues. First, the pattern and level of revenues yielded by Georgia's taxes and fees in the past decade and in the past few quarters are outlined. Second, the sensitivity of the revenue yield to the characteristics of the private economy in both the long-term and the short-term are considered. Third, the characteristics of the private economy associated with variations in yields of taxes and fees are depicted. Finally, the properties of the economy which define the revenue-expenditure balance featured in the Budget Report for FY 2002 are outlined.

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III. STATE GOVERNMENT REVENUES

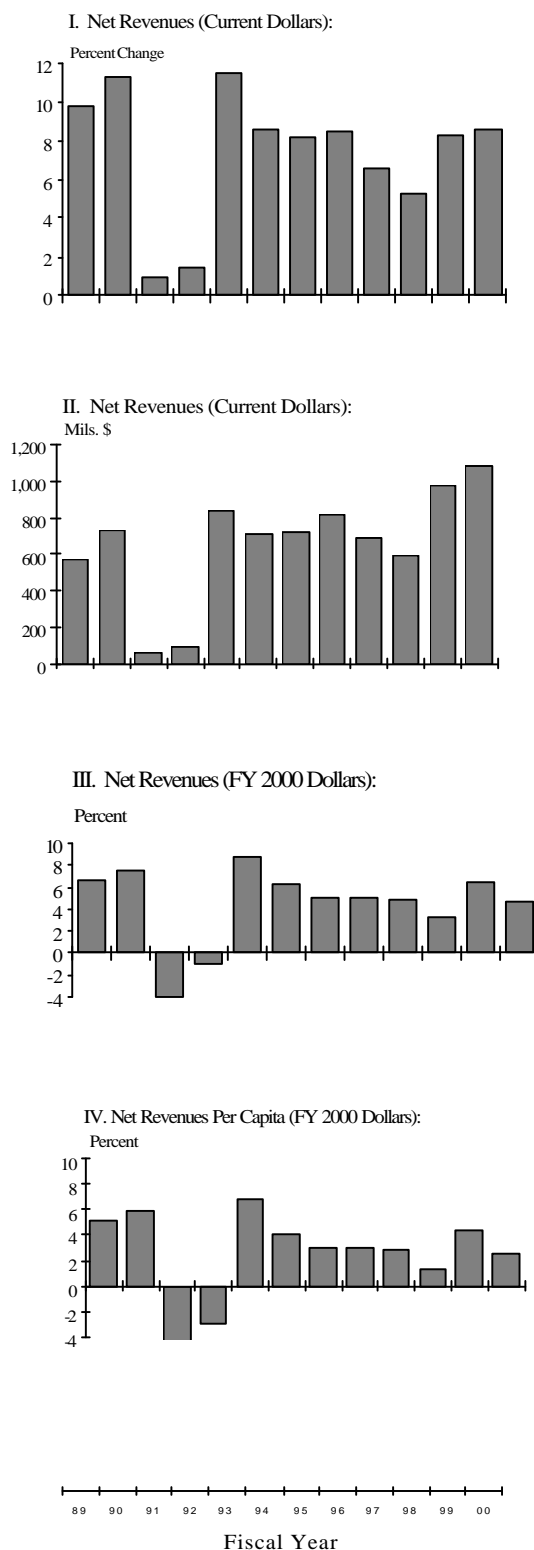
Aggregate revenues. During the decade of the nineties, government's taxes and fees provided a near-doubling of collections. In FY 1990, the high-mark and end of the expansion of the eighties, the revenue yield was \$7.2 billion. In FY 2000, revenues climbed to \$13.8 billion. Despite the meager advances registered in the first two years, the average annual rate of increase over the ten years rose to 6.7%. Significantly, the gain did not reach to the average advances of 9.9%, 11.4%, and 8.5% of the sixties, seventies, and eighties respectively. Inflation could be partially to blame. After adjustment for price changes, the average annual revenue growth in the nineties (3.7%) did inch above that of the eighties and seventies (3.6% and 3.4%). Nevertheless, it still fell short of that in the sixties (5.7%). In terms of variability of growth, a serious constraint on government's financial planning, unadjusted revenues in the nineties were more volatile than in any of the three preceding decades. In price-adjusted terms, nevertheless, revenue growth in the nineties was more stable than in the seventies or eighties. Yet, it remained less stable than in the sixties.

The growth record for FY 1989 through FY 2000 is represented in the panels of Figure 1. The first panel provides a reminder that, in years when the private economy weakens substantially, the reach-in of Georgia's tax-and-fee system may achieve little revenue growth. In fact, in recessions, revenues may grow by less than the rise in private personal income. Obviously, when growth dropped from around 10% in FY 1989 and FY 1990 to around 1% in FY 1991 and FY 1992, the challenge to program financing was considerable. Although a smaller drop, the slippage in revenue growth from above 8% over the years FY 1994 through FY 1996 to only 6.6% and 5.3% in FY 1997 and FY 1998 respectively likewise undermined planned (economical) service delivery. When allowance is made for increases in the prices which were faced (panel 3), government's purchasing power actually declined in both 1991 and 1992. In such years, maintenance of the quality and extent of government services becomes virtually impossible.

Should financial plans be tied to "new monies," the second panel carries the same warning as do the first and third. In two successive years, revenue gains fell below \$100 million even though the average increase over the eleven-year span was \$658 million. Because of revenue's upward trend, the dollar gain in FY 2000 was the largest of the period (\$1,086 million).

Government's ultimate interest is in individuals. Consequently, the record of gains in inflation-adjusted

FIGURE 1
GROWTH IN GEORGIA'S REVENUES



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revenues per capita (panel 4) perhaps best signals the change in the value of services which government can deliver. In this series, the variability in growth noticed for the revenue aggregates has carried over; the declines in FY 1991 and FY 1992 reappear but are exaggerated. Moreover, in the final three years of the period, per capita revenues picture relative weakness rather than relative strength. Growth in FY 1998 through FY 2000 dropped well below that of the years FY 1993 through FY 1997; in FY 2000, growth slipped below that of FY 1999 and, save for the gain in FY 1998, was less than any positive increment in other years in the period

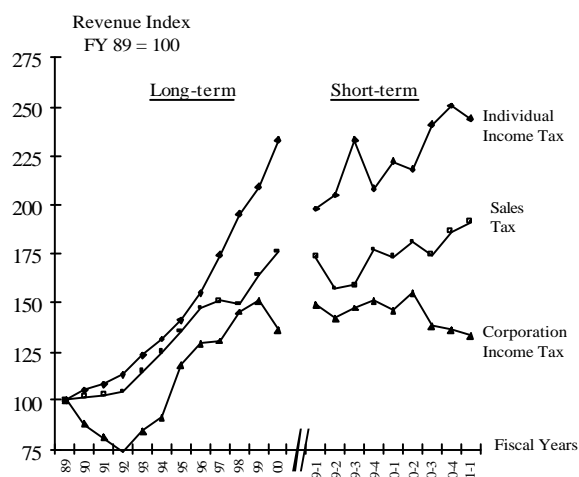
Revenue sources. Throughout the nineties, the state's revenue collections came mainly from individual income, sales, and corporate income taxes. As shown in Table 1, the proportion of total revenues originating in individual income taxes has risen from 39.8% in FY 1990 to 46.2% in FY 2000. Most of this share gain has come at the expense of the sales tax. Collections of sales taxes as fractions of total collections have dropped from 38.8% to 24.5% over the decade. In contrast, the shares of total revenues generated by the corporate income tax and by other lesser sources have changed little. Significantly, the share claimed by the corporate income tax has varied considerably.

TABLE 1 SHARES OF REVENUE BY SOURCE (Percent of Total)				
Fiscal Year	Individual Income Tax	Corporate Income Tax	Sales Tax	Other Sources
1990	39.8	6.6	38.8	14.8
1992	41.9	5.4	37.9	14.8
1994	40.2	5.5	37.9	16.4
1996	40.4	6.7	37.8	15.1
1998	45.4	6.7	34.2	13.7
2000	46.2	5.4	34.5	14.9

Revenue paths. The changed revenue shares fit the revenue paths of major sources which are depicted in Figure 2. Taking FY 1989 as base, collections of individual

income taxes have risen year by year through FY 2000. In fact, their path has been marked by accelerating growth. In contrast, revenues from sales taxes were slow to advance following the dip in private-sector output starting in FY 1990; upon economic recovery, they rose strongly for only four years. Their weakening in FY 1997 and slight decline in FY 1998 reflected in part the phased exemption of food for off-the-premises use from the base of the sales tax. Significantly, the contribution of the Olympic Games to sales activity within the state was insufficient to overcome the opposing effect of the tax change. Among the major

FIGURE 2
TIME PATHS OF MAJOR SOURCES OF
REVENUE: GEORGIA
(FY89 – FY00; 1 Q 99 – 1 Q 01)



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trend occurred in both 4 Q 99 and 2 Q 00, the decline in 1 Q 01 need not point to a turning point in the growth path.

IV. REVENUE LINKAGES

The growth record for aggregate revenues and its components does not distinguish between gains arising from peculiarities of tax-and-fee structures and those arising from the behavior of tax-and-fee bases. To test for reliability in the linkage of revenues to private-sector activity, three cobehaviors are considered.

First, the connection between aggregate revenues, the most general measure of yield, and personal income, the most general measure of private income, is assessed from two perspectives. The share of personal income absorbed

**FIGURE 3
DOMINANCE OF GEORGIA REVENUES¹**



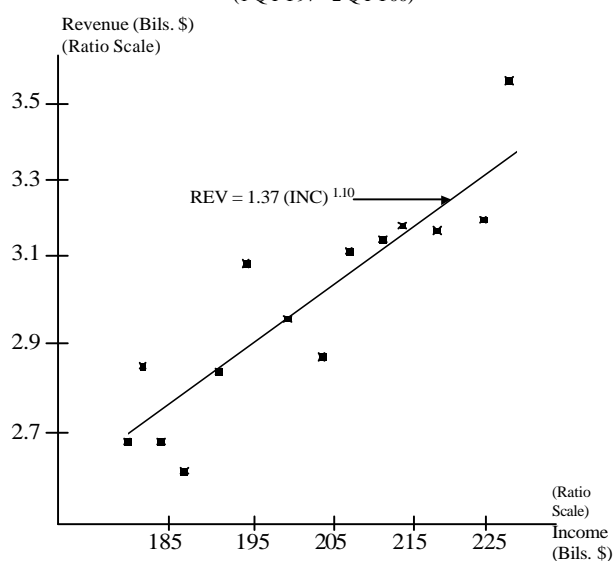
¹Ratio of State Net Revenues to Georgia Personal Income (Current Dollars)

by government is depicted in Figure 3. While there has been variation in the proportions of income going to government over the FY 1970-FY 2000 span, there has been no obvious trend in participation. Even the variations around the average share (5.98%) have been small (coefficient of variation of 0.26). Although personal income has risen by a multiple of 14.5 in the thirty years,

government's reach-in has never accounted for more than 6.4% (FY 1974) or less than 5.6% (FY 1984). Admittedly, legislation has regularly "fine tuned" the tax-and-fee structure and helped achieve this result. The preferences of elected officials might then be claimed to be of greater account for participatory stability than the tax-and-fee structures which were once introduced and subsequently modified. In any case, the 6.1% share of personal income going to government in FY 2000 complies with the thirty-year pattern. Interestingly, that share matches the FY 1970 fraction.

Another way of seeing aggregate stability in revenue generation appears in Figure 4. There, the quarterly revenue-income connection is viewed over four fiscal years. In such a short period, distortions from temporary influences implicit in personal income give rise to variability. After all, personal income is not the base for any tax or fee and so revenue likely will no more than approximate its path. Significantly, the variability of the relationship shows no signs of increasing. An "elasticity" of 1.10 marks the period relationship. Were this sensitivity to persist, dominance would obviously climb. Since it has not (Figure 3), elasticity probably has been offset by cyclical influences and by legislative adjustments of tax-and-fee structures.

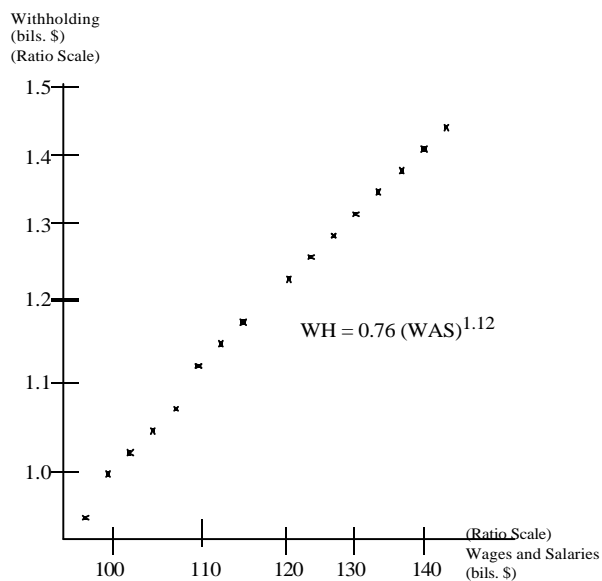
**FIGURE 4
REVENUE RESPONSE TO GEORGIA'S
PERSONAL INCOME
(1 Q FY97 - 2 Q FY00)**



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Second, since income taxes have had the most robust growth, a check on the linkage of tax withholding, a revenue element, to wages and salaries, a private-sector income, is instructive. Withholding is the principal component of the income tax; wages and salaries dominate taxable incomes. As Figure 5 reveals, the connection between yield and base has been close over the four years. The relationship shows withholding to be slightly progressive relative to personal income. A 10% increase in wages and salaries yields a 12% increase in taxes. Although the sensitivity (slope) appears not to have changed, an unexplained upward shift (intercept change) in the withholding-wage function occurred in 2 Q 97 and has persisted.

FIGURE 5
ALIGNMENT OF WITHHOLDING WITH
WAGES AND SALARIES: GEORGIA
(Calendar Quarters: 1 Q 96 – 2 Q 00)

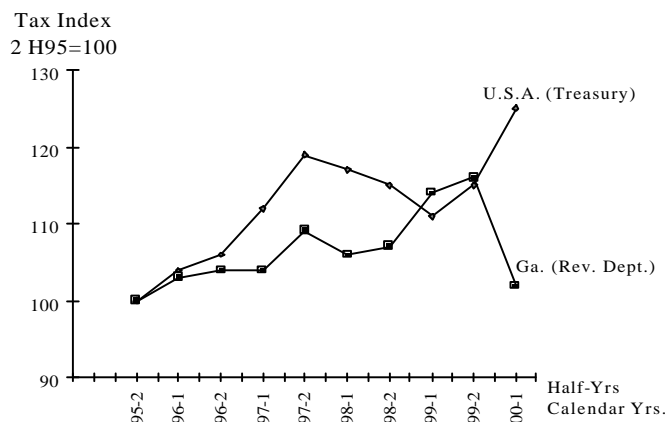


Third, because of the variability exhibited by the yield of the corporate income tax, influences other than the behavior of corporate income may be suspected. Government's reach to corporate income might not be reliable. Unfortunately, measures of corporate profits for Georgia are not available to test for confounders. However, for the U.S., both corporate tax liabilities and corporate profits are reported by the U.S. Treasury. Using this data, Figure 6 indicates that corporate tax liability has stayed in close relationship to corporate profits. Over the nineties, the average marginal tax rate has been about 28.5%. Since

FIGURE 6
RESPONSE OF CORPORATE TAX LIABILITY
TO CORPORATE PROFITS: U.S.A.
1990 -- 1999



FIGURE 7
CORPORATE INCOME TAX RECEIPTS:
U.S.A. AND GEORGIA
(2 Half-year Moving Average)



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Georgia's corporate income taxes usually follow the pattern of those in the nation (Figure 7), it can be supposed that Georgia's corporate profits are generally aligned with national profits as well. More particularly, it is reasonable to believe that collections of corporate income taxes by Georgia's Department of Revenue reflect the behavior of corporate income associated with or originating in Georgia.

V. THE PRIVATE ECONOMY

Output performance. In the government sector, the lack of an output measure has shifted the emphasis to spending on inputs as a measure of performance. In the private sector, the same approach would give prominence to absorption of major inputs like labor, capital, and managerial services. Certainly the popular attention given to unemployment and employment rolls affirms that input use matters. However, the private sector's periodic product is sold to someone (even the producer) and so its output can

be gauged. For Georgia, output can be assessed in terms of gross state product or, with slight distortion, total personal income. Since personal income is reported more frequently and with a shorter time lag, it becomes the preferred gauge. Of course, since wellbeing is

fundamentally an individual characteristic, per capita income commonly becomes the performance measure of rank.

Georgia's personal income has grown more strongly, but also more erratically, than U.S. personal income over the nineties (Figure 8). The average annual rate of increase of 7.0% was below the averages of 9.5% , 11.5%, and 9.1% of the prior three decades. After adjustment for price changes, the gain of the nineties slipped to 3.7%, about four-fifths of the 1960-1990 gain. In the most recent two years, growth in Georgia's personal income has stayed roughly in step with that in the nation, but, once again, has varied more.

FIGURE 8
GROWTH IN PERSONAL INCOME:
GEORGIA AND U.S.A.
(Current Dollars; Percent)

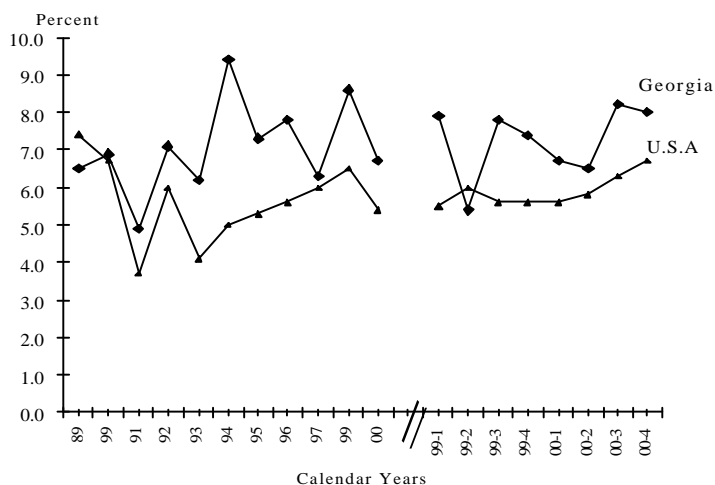
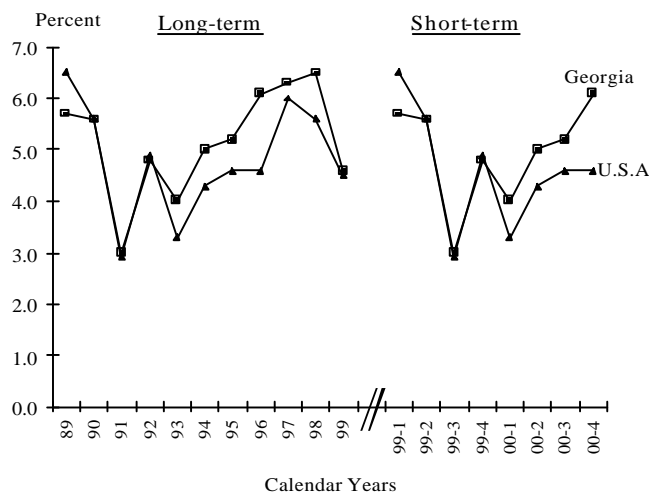


FIGURE 9
GROWTH IN PER CAPITA INCOME:
GEORGIA AND U.S.A.
(Current Dollars; Percent)



As evident in Figure 9, Georgia's per capita income rose in each year of the nineties. Climbing by an average rate of 4.9% per year, per capita income in 1999 was 1.5 times that of 1990. From 1993 through 1999, the percentage increase exceeded that for the United States. Nevertheless, the average rate of increase was barely two-thirds of Georgia's rate for the sixties and eighties and only half of that for the seventies. When adjusted for price changes so as to give a

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measure of per capita purchasing power, the gain in the nineties averaged 2.0% per year, well below that of sixties (4.5%) and eighties (2.9%) but above the recession-plagued years of the seventies (1.6%). Per capita income's growth in the nineties was slightly below the 2.2% growth in government's per capita revenues. In the most recent two fiscal years, Georgia's per capita income continued its climb. During 3 Q FY00 and 4 Q FY00, in fact, per capita income (current dollars) rose more rapidly than in the preceding six quarters.

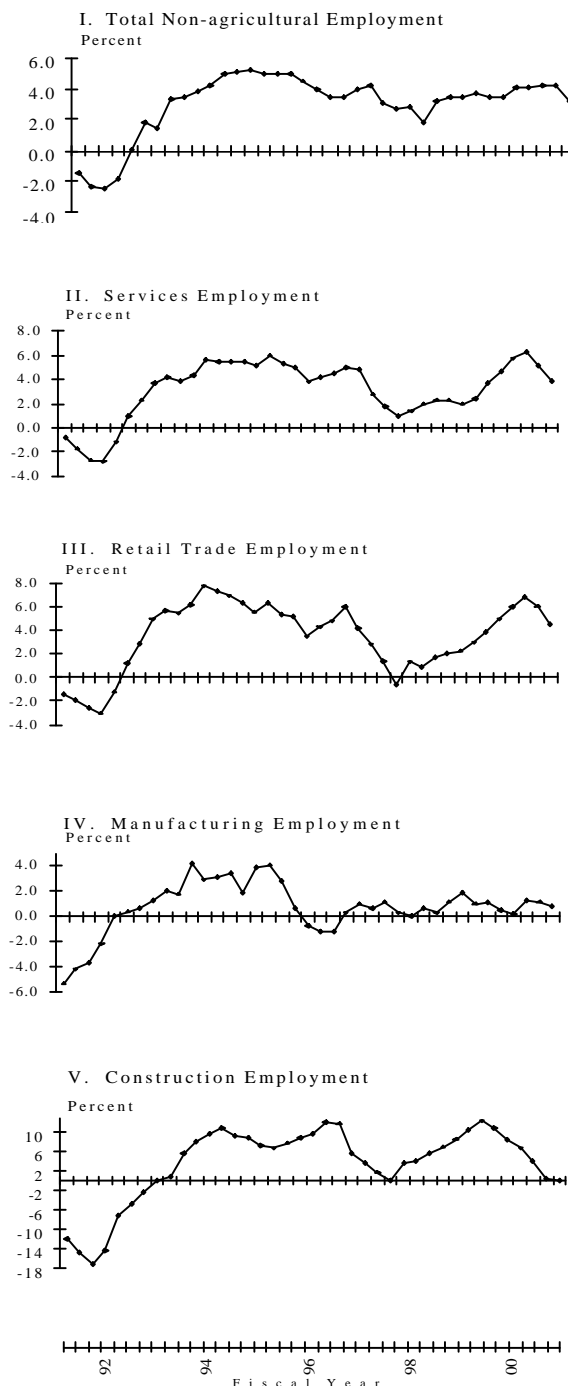
Employment of labor. The noted increases in Georgia's personal income have been possible because of increased productivity and increased inputs. Non-agricultural employment climbed by an annual average rate of 2.7% in the nineties. In the three preceding decades, average gains per year were 4.3%, 3.0%, and 3.3% respectively. The growth pattern for the most recent decade is represented in Figure 10. Growth in total non-agricultural employment reached a peak in early 1994 and has followed a declining trend in the years following. Growth in employment in services has been particularly strong but volatile. Annual rates of gain in employment in retail trade have reached higher levels (7.8%) but have also shown greater variation. Still, the strongest (and weakest) growth in the decade has been reflected by employment in construction (12.1% and -17.2% respectively). Manufacturing employment has displayed modest gains. Especially in the last four years, this industry's growth has been the most stable.

VI. PROSPECTS

Indicators: revenues. Among the time paths of Georgia's revenue sources, the most recent data (1 Q FY01) suggests slackening growth for both individual income taxes and corporate income taxes. Because the growth slippage (2.8%) in individual income tax revenues has been for only one quarter, "noise" in collections could be all that is reflected. However, individual taxes account for a far greater proportion of revenue growth than their proportion of revenue yield. In FY 2000, the proportions were 61% and 46% respectively as compared with 34% and 29% for sales taxes. Consequently, even a slight easing of gains in individual income taxes would have significant bearing on growth in revenues.

The slippage in corporate income taxes is of longer duration (one year) than in individual income taxes. It is also deeper (14.2%). Moreover, in view of the tight relationship between tax liabilities and profits for corporations in the nation (Figure 6), the decline in collections most probably points to weakness in the profits

FIGURE 10
CHANGES IN EMPLOYMENT: GEORGIA¹
(1 Q 1991 - 3 Q 2000)



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of corporations paying taxes to Georgia. In past recessions, Georgia's corporate tax collections have fallen sharply (30% in the 1990 recession) and ahead of the general slippage of revenues.

Indicators: economy. Wages and salaries, accounting for most of the changes in withholding (Figure 5), continue to climb sharply over year-ago levels (9%). However, when quarter-to-quarter advances are considered, wages and salaries were rising less rapidly in 2 Q FY00 than in any quarter in the preceding year. With non-agricultural employment increasing in 1 Q FY01 at half the pace of a year earlier, the slowing of growth in wages and salaries should be expected. Only productivity gains high than currently experienced could keep wages and salaries rising while employment slips.

The surge in employments in the retail trade and service industries, close to a 7% rate in the past two years, hints of growth well in excess of industry sales. Increments of this size will then not continue even if retail sales and services deliveries were to be sustained. Already, employment in services (1 Q FY01) has fallen from 7.1% in the middle of 1999 to around 3.3% in the middle of 2000. In construction, an indicator of forthcoming purchases of

equipment and appliances, the growth in employment of roughly 9% in 1998 and 1999 was followed by a shrinkage to between 0% and 2% in 2000. Significantly, construction gains in Georgia were far weaker than for the U.S. as a whole.

Major risks. Both the Georgia and U.S. private economic sectors have been spurred by nearly 5 years of double-digit advances in business purchases of information processing equipment and software. As a share of U.S. gross private domestic investment, purchases of equipment and software have climbed to outrank structures and residential investment. Anecdotal evidence suggests that businesses are now hesitating to continue investments in short-life capital with small marginal gains in performance. A slowing of growth in investment would feed through the private sector to ease expansions in income and employment.

Prospects. Given clear signs of weakening revenue and employment growth and of threats to income gains from investment slackening, the increment in state revenues expected for FY 2002 is smaller than in the two prior fiscal years. The level of state general funds is expected to rise to \$14.4 billion in FY 2002, an increase of 7.3%.