Public Transfer Accounts by Age and Education Level, US, 1964-2004: A Look at Inequality and the Public Sector.

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Abstract

A key function of governments is the redistribution of resources between individuals. In the United States, public transfers accounted for more than half of the $3.2 trillion dollars spent by the federal, state, and local governments in 2002. Tax and transfer programs include social security pension programs, provision of medical care, provision of education, welfare aid, workers compensation, job training, etc. We develop a set of Public Transfer Accounts for the United States for the period 1964 through 2004. These accounts track the average amount of taxes paid and benefits received from federal, state, and local governments based on the age and educational level of individuals. We use these accounts to analyze the redistributive effects of government transfer programs across age and time and education groups. Because of the strong association of educational attainment and income, these Public Transfer Accounts classified according to education groups can be used to gauge the progressive effects of government spending and tax policies over the last 40 years.

Data and Methods

Our main source of data is the Current Population Survey. It is available annually since 1964 in consistent format, and for earlier years for some purposes. In addition, some use is made of the Consumer Expenditure Survey, available since 1984. There are also expenditure surveys from 1888-90, 1917-19, 1935-36, 1960-61, 1970-71, 1980-81, and 1982-84. For this paper, our goal is to develop the Public Transfer Accounts for the recent time period 1964-2004. This will allows us to rely mainly on the Current Population Survey – which will greatly shorten the time required for data manipulation and analysis.

Developing estimates of public sector transfer accounts depends on two kinds of data: aggregate data on revenues and expenditures by sector and data that can be used to estimate the age profiles of public revenues and expenditure. In general, revenue and expenditure data are widely available. Data on age profiles can often be inferred based on the purposes of the program and information about users. School enrollment rates by age, for example, can be used to estimate expenditures by age.

We derive annual program expenditures from published government statistics (at the federal level, the Office of the President's *Budget of the United States Government* and at the state and local levels combined, the Bureau of the Census's *Annual Survey of Government Finances*). These expenditures are assigned to individuals based on age using survey data such as the Current Population Survey, which provides information on 25 transfer programs. Individuals report either dollar amounts received or program

participation. Aggregate totals taken from these surveys are usually 80-90% of the budget totals from government statistics. This is due both to underreporting in surveys and the fact that programs consist both of benefits and administrative costs. We inflate the estimate age profiles derived from the survey by a given percentage so as to match the government's budget totals.

Program participation rates are used for receipt of non-cash benefits like public education, public housing, food stamps, or medical care. For most non-cash benefits, we assume that program participants receive equal amounts of benefits. Therefore, program expenditures are distributed equally among all participants. For example, public high school expenditures are divided equally among all public high school students. In cases in which a single household member (for example, the mother) receives benefits on behalf of all household members (herself and her children), the entire benefit is allocated on a per-capita basis among all household members.

This project is an extension of the National Transfers Account project which is developing the "age dimension" of National Income and Product Accounts (www.ntaccounts.org). Much of the methodology and data are already well developed in that project. This makes the current work much easier as it is just an extension of those accounts to examine the "education/inequality" dimension. That is, much of the computer code is already written and the current task simply involves adding on educational information to the data sets.

Preliminary Results

We have estimated these Public Transfer Accounts for the year 2002. The full paper will extend the analysis from the year 1964 through 2004. Figure 1 shows the annual taxes paid by age and education level. College-educated taxpayers contribute much more – mainly a reflection of their higher incomes and not higher tax rates. The shapes of the tax profiles by age largely reflect differences in the age trajectory of earnings. Figure 2 shows the annual public benefits received by age and education. These benefits include public education, public provision of medical care (Medicare and Medicaid), as well as cash payments such as Social Security, SSI, and TANF. Note that children (those under age 18) are classified according to the educational level of the household head. Interestingly, the difference in benefit levels between education groups is not nearly as pronounced as the difference in tax levels.

The real power of the Public Transfer Accounts will come once we have assembled 40 years worth of data. This will enable us to examine the experience of cohorts and assess the redistribution effects of government spending in a longitudinal perspective.

Figure 1. Average Annual Taxes Paid by Age and Education

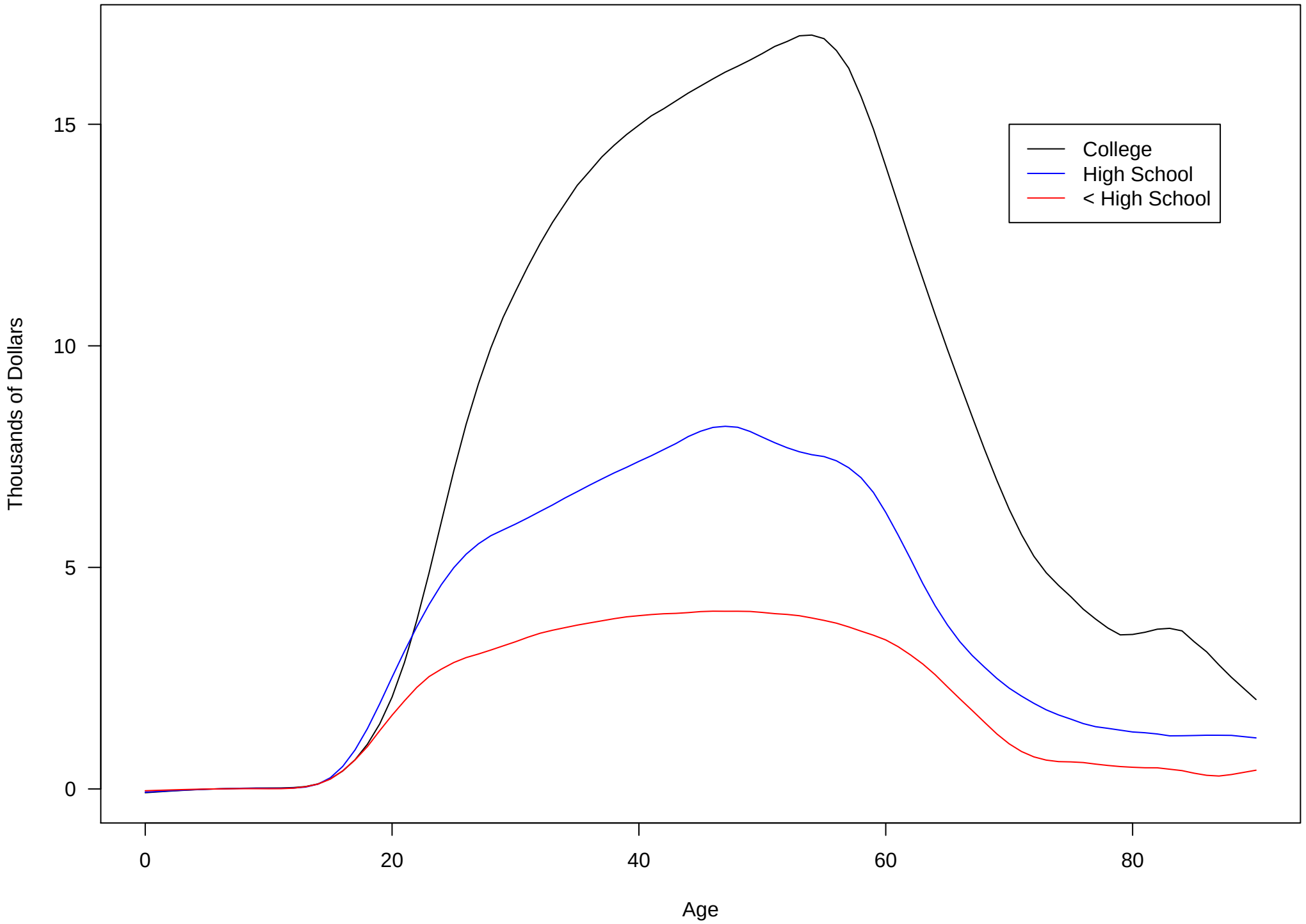

Figure 2. Average Annual Benefits Received from Government, by Age and Education