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ABSTRACT

This paper presents new information on the fraction of adjusted gross income, and of wages and salaries, that is reported by taxpayers in the top one half of one percent of the income distribution. This corresponds to roughly five hundred thousand households in the late 1990s. This paper relies on data from the Treasury's Individual Income Tax Model for the period 1960-1995. The definition of adjusted gross income is standardized, so that changes in the tax law do not affect the measured concentration of AGI. The results suggest that the share of AGI reported by the highest income households increased significantly between the early 1980s and the mid-1990s, with most of the increase taking place in the years immediately following the Tax Reform Act of 1986. While we find some evidence of transitory changes in the concentration of income around major tax changes, which may be the result of income retiming by high income taxpayers, re-timing does not seem to explain most of the changes since 1986.

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The recent evolution of the U.S. income distribution has attracted substantial attention in both academic and popular discussions. A substantial body of research in labor economics has documented a widening disparity between the earnings of those in the bottom decile of the income distribution, and those in the top decile, during much of the last two decades. Various explanations have been proposed for this shift in the structure of labor earnings. These explanations include growing competition from low-skill foreign labor, increasing internationalization of the market for "stars" with correspondingly higher earnings for the best workers in various fields, and a shift toward greater use of computers and other workplace technologies that complement, and raise the productivity of, highly-skilled labor.

News accounts that discuss the income distribution often focus on a small set of highly compensated individuals, such as corporate executives, sports figures, or entertainers, who earn very high incomes in a single year. These highly visible top earners typically account for only a small fraction of those at the top of the income distribution. Moreover, it is difficult to generalize from their earnings to any more systematic analysis of the shape of the income distribution's upper tail.

Tax returns are the most reliable source of information on the incomes of high-income households. They provide effectively universal coverage, since virtually all high-income households must file income tax returns. They also provide more accurate information, subject to the idiosyncrasies of tax and accounting rules, than other sources of income information that are not subject to audit and verification. While these are important advantages, there are also limitations to studying income distributions from tax return data. One is that tax return data are only available with a several year lag. This makes it difficult to track the most current developments with regard to income distribution. A second difficulty with these data is that publicly available tax return data files do not include any information on the demographic, occupational, and other characteristics of households at the top of the income distribution. This makes it difficult to analyze intertemporal changes in the shape of the income distribution. A final limitation is that the tax return files that include large numbers of high-income households do not link taxpayers from one year to the next. This precludes the study of income distribution dynamics in the upper tail of the income distribution.

In this paper, we present summary information on changes over time in the fraction of aggregate income that accrues to households in the top one half of one percent of the population. We tabulate this information from the U.S. Treasury's annual releases of the Individual Tax Model data file over the period 1960 to 1995. The number of tax returns included in the Tax Model varies from year to year, but averages approximately one hundred thousand in recent years. The sampling algorithm that generates these files over-samples high income returns. This provides much more precision in studying the top of the income distribution than comparably sized, but randomly sampled, household surveys with the same number of observations.

To illustrate this point, consider the a year like 1995, when there were roughly one hundred million households in the United States. A random sample survey with one hundred thousand responding households and with equal response rates across different strata of the income distribution would include one thousand households in the top one percent of the income distribution. In practice, since high-income households are less likely than low-income households to respond to surveys, the actual sample size would probably be smaller. In the Individual Income Tax Model data for all years, however, there are more than 30,000 tax returns from households in the top one percent of the income distribution.

Our analysis focuses on the share of income that is reported by the households that comprise roughly the highest-income one half of one percent (0.5 percent) of U.S. households. We have done some sensitivity analysis, and found very similar results when we focus on the top one percent, or the top one-quarter of one percent, of households. Changes in the tax law over time, such as the expansion of the Earned Income Tax Credit in 1986 and changes in the personal exemption and the amount of the deduction for each dependent, have resulted in fluctuations in the ratio of tax filers to households. This is largely a result of changes in the probability that low-income households file tax returns under different tax regimes.

Since we do not want changes in the ratio of tax filers to households to affect our estimates of the shape of the income distribution, we follow the procedure developed in Feenberg and Poterba (1993) for defining the set of high-income households. We choose a base year, 1989, and we compute the number

of taxpayers who will be in the top 0.5 percent of the tax filer distribution. Since the basic income concept for tax filers is adjusted gross income (AGI), we label these households "Top AGI Recipients" (TARs), and we denote the number of such households in 1990 as $NTAR_{1989}$. This number is 558,778. We then use Census Bureau reports of the adult population in each year ($APOP_j$ for year j) to calculate the corresponding number of Top AGI Recipients for other years: $NTAR_j = NTAR_{1989}*(APOP_j/APOP_{1989})$. We then compute the aggregate income received by, and the composition of income for, these Top AGI Recipients in each year.

There is one important difference between the current study and our earlier (1993) paper: the span of data that we analyze. Our earlier work used Individual Tax Model data from the 1979-1989 period, along with interpolated data from earlier years. In the present study, we extend the set of Individual Tax Models that we analyze back to 1960, and we also include data from six additional recent years.

I. The Income Share of Very High Income Households, 1960-1995

Table 1 reports the share of several different income concepts that were reported by the top 0.5 percent of households between 1960 and 1995. The table includes information for every other year between 1960 and 1966, and every year since 1966. With one exception, we have standardized our measure of Adjusted Gross Income so that it is not affected by legislative changes, such as changes in the second earner deduction, the amount of dividend income that can be excluded from income, and other similar legislative changes.

The one component of AGI for which we present several standardizations is capital gains. The first three columns of Table 1 report the TAR share of three different income measures, corresponding to three different treatments of capital gains. In the first column, we show adjusted gross income modified to include the full value of net realized capital gains. In years when taxpayers were allowed to exclude 50 percent of their long-term capital gains from AGI, we add back the excluded half of gains to compute AGI plus "full gains." The income concept in column two excludes all capital gains from AGI. The TAR share of this income concept varies less from year to year than the TAR share of the income concept that includes full gains, because there is substantial volatility in annual gain realizations. Figure 1 plots the

data from the first two columns of Table 1 for the 1966-1995 period, the period for which we have uninterupted annual information.

The third column of Table 1 shows the TAR share of actual AGI for each year, i.e., AGI including whatever the current tax statute defines as the share of gains that are included in AGI. Because of changes over time in this inclusion fraction, it is difficult to interpret changes over time in the entries in the third column. In the years after 1986, when all gains were included in AGI, the first and third columns coincide.

Several conclusions emerge from the data in the first two columns of Table 1. First, there was a systematic upward trend in the share of income reported by top AGI recipients between the early 1970s and the early 1990s, with the sharpest increase taking place in the second half of the 1980s. The lowest value of the TAR share excluding capital gains is for 1973, while the lowest value of the TAR share including all gains occurs in 1976. The TAR shares in these years were respectively 5.16 percent and 6.10 percent. In the two decades since these low values were observed, the TAR share has increased by roughly 80 percent, to 9.7 percent for the income measure excluding capital gains, and to 11.25 percent for the income concept including all gains.

Ninety-five percent of the increase in the TAR share occurs in the years since 1980, but relatively little increase takes place during the 1990s. These data cast doubt on Austan Goolsbee's (2000a) claim, based on data on the compensation of chief executive officers of large corporations, that the share of top earners has increased continuously for the last two decades. Using the CEO compensation data assembled by Brian Hall and Jeffrey Liebman (1998), we have verified that the average income of CEOs has experienced a rapid growth from the early 1980s to the mid-1990s. If this growth described the income of all of the other households in the top one half of one percent of the income distribution, there would be continual increase in the TAR shares that we report in Table 1. However, the data do not suggest this pattern. We view this as evidence against the value of generalizing the recent CEO experience to the rest of the high-income households.

Second, the data show a decline in the TAR share of income between the early 1960s and the mid-1970s. In 1960, the top 0.5 percent of households reported 5.95 percent of AGI excluding capital gains. This share declined to 5.16 percent over the next thirteen years. For AGI including all capital gains, there is also a decline, from 7.55 percent in 1960 to roughly 6.25 percent in the mid-1970s. While the source of recent increases in the share of income accruing to high-income households has attracted substantial debate, much less attention has been focused on the decline in the TAR share earlier in our sample period.

Third, the data show a sharp increase in the TAR income share in the years following the Tax Reform Act of 1986 (TRA86). The TAR share of gain-exclusive AGI rose from 6.35 percent in 1986 to 9.82 percent in 1988, the first year when TRA86 was fully effective. Our earlier work (1993) noted this increase, and suggested that it might in part have been the result of high-income taxpayers responding to lower marginal tax rates by reporting more of their "true" income as taxable income. The precise channel through which such an increase in reporting might occur, for example through a decline in non-taxable employer provided benefits or through a reduction in tax evasion, is difficult to evaluate using only the information on tax returns.

Our newly-extended data sample shows that the increase in the TAR income share that we observed in the late 1980s has persisted throughout the first half of the 1990s, although it also provides some evidence of transitory "timing responses" in taxable income. There is a clear decline in the TAR share of both the gain-inclusive and gain-exclusive income measures in the years following 1988. For gain-exclusive AGI, the TAR share falls from 9.82 percent in 1988 to an average of 9.36 percent in the following three years. For AGI plus full gains, the decline is from 11.92 in 1988 to an average of 10.73 in the next three years. This pattern suggests that at least some of the increase in taxable income between 1986 and 1988 was probably due to transitory or "timing" factors, such as those suggested by Joel Slemrod (1994, 1996). However, the results do not suggest that all of the post-1986 increase in the AGI share of top AGI recipients was due to transitory factors, since there has been a persistent increase in this share.

Finally, the data in Table 1 suggest that there was some transitory adjustment in the timing of taxable income in 1992. The share of gain-exclusive AGI reported by the TARs rises from 9.39 percent in 1991, to 9.95 percent in 1992. It then declines to 9.29 percent in 1993. A similar pattern emerges for gain-inclusive AGI. The data do not suggest a sharp decline in the TAR share of taxable income since the Omnibus Budget and Reconciliation Act of 1993 (OBRA93) raised the top marginal income tax rate from 31 to 39.6 percent.

One criticism of comparing AGI shares at different points in time is that AGI is the sum of many components. These components may exhibit different time profiles that are concealed by a focus on the aggregate. To address this concern, the fourth column of Table 1 presents information on the share of wages and salaries that are reported by the 0.5 percent of households with the highest wage and salary incomes in each year. Figure 2 plots this series for the 1966-1995 period. The concentration of wage and salary income among the highest earners displays a pattern very similar to that for gain-exclusive AGI. It declines from the early 1960s until the early 1970s, and then increases gradually until the mid-1980s, at which point it rises from an average of 5.93 percent in 1984-1986 to an average of 7.38 percent in 1989-1991. The time series of wage and salary shares also shows a transitory increase in 1988, and another transitory increase in 1992.

II. The Concentration of Taxes, 1960-1995

The last two columns of Table 1 show the share of income taxes paid by the 0.5 percent of households with the largest income tax bills. The set of households in the top 0.5 percent of taxpayers may differ from the set in the top 0.5 percent of AGI recipients. We report two different measures of tax concentration, one (in column five) assuming that all capital gains were taxed, and the other (column six) assuming that capital gains were completely excluded from taxation. The difference between these measures is particularly important in the last few years of our sample. In 1995, for example, because capital gains are concentrated amongst high-income households, the tax share of the top 0.5 percent of taxpayers with all gains taxed would have been 24.2 percent, while that excluding all gains would have

been 22.9 percent. Since all capital gains have been included in taxable income since 1987, the entries in the fifth column of Table 1 for the 1987-1995 period correspond to actual tax concentrations.

The data in the last two columns of Table 1 show that as the concentration of taxable income has varied so too has the concentration of tax payments. The share of taxes paid by the 0.5 percent of the households with the largest tax bills declined between the early 1960s and the mid-1970s, and it has increased since then. In 1995, the top one half of one percent of taxpayers paid just under one quarter of all federal income taxes. The table shows the impact of OBRA93 on the tax share of the households with the largest tax bills. In 1992, the 0.5 percent of households with the largest tax bills paid 21.9 percent of federal income taxes. In 1993, this share rose to 23.3 percent, even though the share of taxable income for this group (column one, AGI including all capital gains) declined from 11.05 percent to 10.63 percent.

Our analysis focuses only on the payments of individual income taxes, and it does not consider the possibility that the mix of individual and corporate income taxes has changed over time. If such shifting takes place in response to tax changes, as Roger Gordon and Slemrod (1998) suggest, then the concentration of individual income taxes alone may overstate actual changes in tax concentration.

III. Sources of Income for High Income Households

The tax return information that underlies Table 1 can also provide information on the composition of income for households at the very top of the income distribution. Table 2 reports the percentage of the total income of the households in the top 0.5 percent of the income distribution that accrues from wages and salaries, interest and dividends, and other income, for years between 1962 and 1995. Figure 3 plots these data for the 1966-1995 period. The table shows several striking changes over time. In 1962, only 3.3 percent of the income of this top AGI group took the form of wages and salaries, while 92.6 percent was interest and dividends. By 1995, the pattern had shifted, with wages and salaries accounting for 27.9 percent of the total, and interest and dividends representing only 19.3 percent of the income received by top AGI households. It is possible that the growth of options in executive compensation, which Goolsbee (2000b) notes can lead to option gains that are reported as wage and salary income, has blurred the traditional distinction association of wages and salaries as labor income.

The sharp growth of the "other income" category, which includes some income components such as partnership income and rental income that may represent a combination of labor income and capital income, also makes it difficult to determine precisely how relative importance of "capital income" and "labor income" have changed. The data nevertheless suggest that labor income has become more important over time as a source of income for households at the top of the income distribution, and that realized capital income in the form of dividends and interest has become less important. The most rapid growth in the share of wages and salaries in the income of the TARs occurred between 1971 and 1980. This was the period following the enactment, in the Tax Reform Act of 1969, of the 50 percent maximum tax on earned income. For taxpayers facing the 70 percent top marginal tax rate of the late 1960s, or the 77 percent rate once the Vietnam War surtax was included, the reduction to a top rate of 50 percent represented a marked increase in the after-tax value of labor income.

The data in the first column of Table 2 suggest that wage and salary income exhibit some irregularities in 1988 and 1992, the years that we have already identified as prime examples of income shifting. In 1988, the share of wages and salaries in the income of the TAR group was 32.1 percent, up from 23.9 percent in the previous year and much higher than the 20.7 percent value in the next year. In 1992, the wage and salary share rose to 45.5 percent, up from 20.4 percent in 1991 and much higher than the 31.1 percent value for 1993. These patterns suggest that one way households responded to the anticipated changes in marginal tax rates that took place in these years was by re-timing the receipt of wage and salary income. Popular news accounts in late 1992 noted that bonuses for employees at many financial services companies were being paid earlier than usual, to take advantage of lower marginal tax rates that were expected to apply to 1992 rather than 1993 income. Such shifts would result in a higher fraction of financial services employees than usual reporting taxable income that placed them in the top 0.5 percent of households, when ranked by taxable income.

In studying data like those in Table 2, it is important to remember that reported capital income is not the same as accruing capital income. This caveat may be particularly significant in the last few years of our sample, when some households have been the beneficiaries of large increases in the market value

of their portfolios. The strong increase in U.S. stock market values during the 1990s has made the change in net worth for many households very different from their reported taxable income. This is particularly evident in the case of the executives for some technology-oriented firms that have gone public in the late 1990s, after our sample period ends. Such individuals can experience dramatic changes in net worth from one year to the next, and if they realized the gains on their stockholdings, they would be included in the TAR category. If such investors do not sell their shares, however, their reported income for tax purposes may be quite modest, and in some cases they may not even report enough income to warrant inclusion in the 0.5 percent of households with the highest taxable incomes.

A similar argument could be made in many previous periods, for example during the rising equity market of the 1960s, or (in reverse) during the sharply declining stock market of the early 1970s. The general message is that in the absence of data on accruing capital gains and losses, not just on stocks but on the broad portfolio of assets that comprise household net worth, it is difficult to draw inferences about the role of capital versus labor income for high income households.

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Table 1: Percentage of Various Income Measures Reported by Top 0.5 Percent of Households, 1960-1995

Year	Adjusted Gross Income Plus Full Gains	AGI Less Capital Gains	AGI With Statutory Capital Gains	Wage and Salary Income	Share of Taxes, with Full Gains	Share of Taxes, Gains Excluded
1960	7.55	5.95	6.57	4.26	n.a.	n.a.
1962	7.07	5.68	6.31	4.17	16.0	15.4
1964	7.64	5.91	6.70	4.17	17.9	17.1
1966	7.28	5.64	6.36	4.00	16.9	16.2
1967	7.70	6.61	6.65	4.11	17.5	17.7
1968	8.11	5.64	6.81	4.03	17.5	16.4
1969	7.41	5.31	6.27	3.94	15.6	14.7
1970	6.36	5.28	5.75	3.93	14.2	13.8
1971	6.67	5.27	5.88	4.04	15.0	14.5
1972	6.81	5.21	5.91	4.14	15.1	14.4
1973	6.35	5.16	5.65	4.14	13.9	13.4
1974	6.28	5.42	5.77	4.32	14.3	14.0
1975	6.18	5.43	5.73	4.50	14.5	14.3
1976	6.10	5.28	5.61	4.53	14.4	14.3
1977	6.26	5.34	5.71	4.62	14.5	14.2
1978	6.19	5.34	5.68	4.71	13.9	13.7
1979	7.03	5.41	5.98	4.79	14.8	14.5
1980	7.00	5.51	6.03	5.03	14.2	13.9
1981	7.18	5.53	6.11	5.20	13.3	13.1
1982	7.83	5.78	6.54	5.39	14.5	14.2
1983	9.62	5.97	6.87	5.71	15.6	15.4
1984	8.79	6.21	7.17	5.92	16.7	16.0
1985	9.34	6.36	7.46	5.93	17.3	16.5
1986	12.19	6.35	8.60	5.95	20.3	18.3
1987	9.34	7.67	9.34	6.79	19.5	18.1
1988	11.92	9.82	11.92	7.93	22.1	20.6
1989	10.90	9.20	10.90	7.25	19.7	18.5
1990	10.75	9.51	10.75	7.55	19.7	18.8
1991	10.53	9.39	10.53	7.34	20.5	19.7
1992	11.05	9.95	11.05	8.30	21.9	21.1
1993	10.63	9.29	10.63	7.76	23.3	22.4
1994	10.61	9.29	10.61	7.39	23.0	22.0
1995	11.25	9.70	11.25	7.86	24.2	23.0

Source: Authors' tabulations using annual SOI Individual Tax Model data.

Table 2: Sources of Income for Top Income Recipients, 1962-1995

Year	Wages and Salaries	Interest and Dividends	Other Income
1962	3.3	92.6	4.1
1964	3.3	88.5	8.2
1966	4.4	83.9	11.8
1967	3.3	33.7	63.0
1968	6.2	76.9	16.8
1969	6.3	75.7	18.0
1970	6.3	77.2	16.4
1971	5.8	66.3	27.9
1972	11.8	58.6	29.6
1973	11.4	61.8	26.8
1974	12.5	54.8	32.7
1975	13.3	54.6	32.1
1976	14.5	46.2	39.3
1977	14.9	51.9	33.2
1978	18.7	49.2	32.1
1979	18.3	48.1	33.6
1980	22.3	46.9	30.8
1981	22.8	49.5	27.7
1982	18.9	43.7	37.3
1983	22.3	32.4	45.3
1984	19.0	24.5	56.4
1985	18.8	27.2	54.0
1986	25.5	24.3	50.3
1987	23.9	28.4	47.7
1988	32.1	32.4	35.5
1989	20.7	30.8	48.5
1990	25.0	31.2	43.8
1991	20.4	33.6	46.0
1992	45.5	16.9	37.6
1993	31.1	18.2	50.7
1994	22.5	19.8	57.7
1995	27.9	19.3	52.8

Source: Authors' tabulations using annual SOI Individual Tax Model data.

Figure 1: Percent of AGI Reported by Top 0.5% of AGI Recipients, 1966-1995

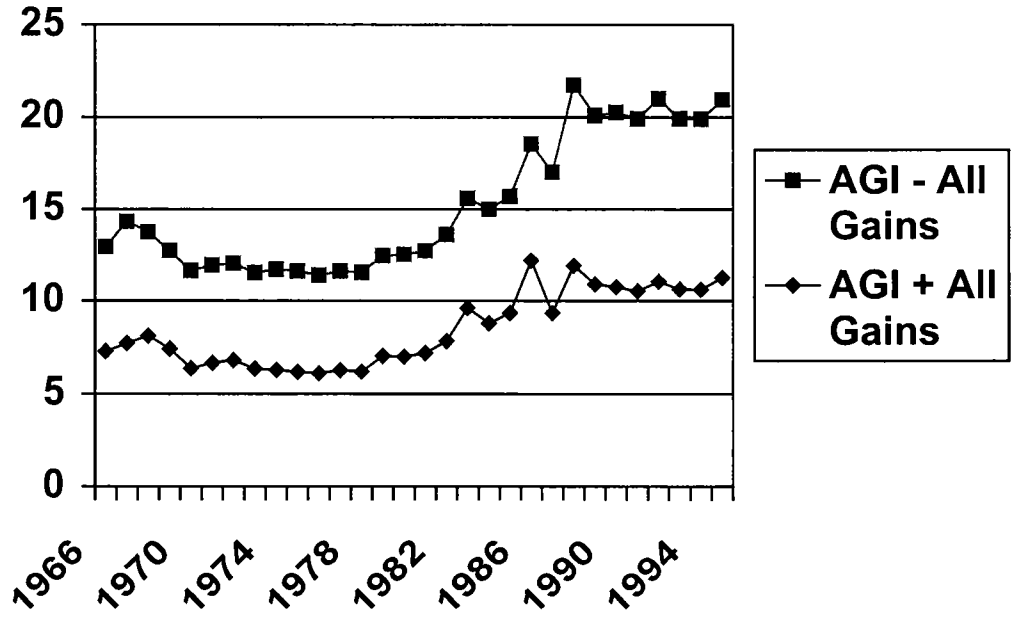

Figure 2: Percent of Wage and Salary Income Reported by Top 0.5% of Wage Income Recipients, 1966-1995

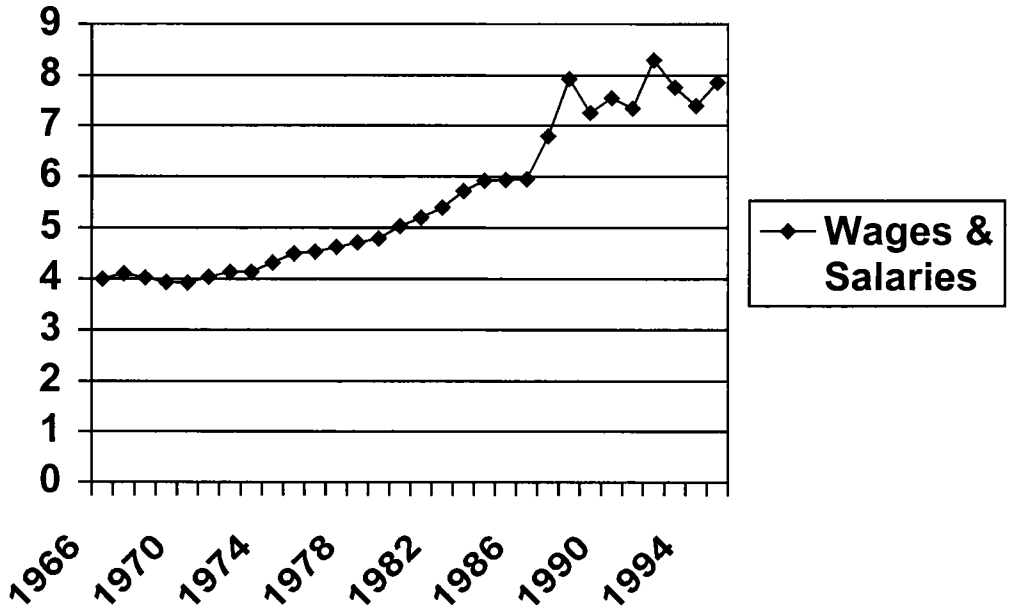

Figure 3: Percent of Top AGI Recipient Income from Wages and Salaries, Interest and Dividends, and Other Income, 1966-1995