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Methodological Issues in Measuring and Interpreting Taxable Income Elasticities

by

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**METHODOLOGICAL ISSUES IN MEASURING AND INTERPRETING TAXABLE
INCOME ELASTICITIES**

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1. Introduction

1.1. The Central Role of Behavioral Elasticities

The notion of a behavioral elasticity occupies a central place in the economic analysis of taxation. Undergraduate textbooks teach that the incidence of a tax depends on the relative elasticity of supply and demand, and that the excess burden of a tax per dollar raised is proportional to the sum of the compensated elasticities of demand and supply. Graduate textbooks teach that the optimal pattern of commodity taxes depends on the matrix of compensated cross-elasticities of demand, and that the optimal progressivity of the income tax depends (inversely) on the compensated elasticity of labor supply. Revenue estimators doing “dynamic” analysis need to take into account how the tax base contracts or expands as the tax rate changes.

Because of their central importance, an enormous amount of effort has gone into coming up with quantitative estimates of behavioral elasticities. As a result, the literature is chock full of estimates of the elasticity of behavior X with respect its tax rate, with one or the other elasticity being important for the question at hand. Recently, though, much attention has been focused on an elasticity that arguably is more important than all others because it summarizes all of what needs to be known for many of the central normative questions of taxation. This is the elasticity of taxable income with respect to the income tax rate.

In the past, the closest thing we have had to such a central parameter was the labor supply elasticity. In a static model where people value only two commodities – leisure and a composite consumption good – the real wage in terms of the consumption good is the only relative price at issue. This real wage is equal to the amount of goods that can be consumed per hour of leisure foregone (or, equivalently, per hour of labor supplied). At

Feenberg and Poterba (1993) use tax return data to calculate a time series of inequality measures that focuses on high-income households. Using interpolations of published SOI aggregated data, they calculate the share of adjusted gross income (AGI) and several components of AGI that were received by the top 0.5% of households arranged by income. After being approximately flat at about 6.0% from 1970 to 1981, it begins in 1982 to increase continuously to 7.7% in 1985, then jumps sharply in 1986 to 9.2%. There is a slight increase in 1987 to 9.5%, then another sharp increase in 1988 to 12.1%.

Feenberg and Poterba argue that this pattern is consistent with a behavioral response to the reductions over this period in the tax rate on high-income families. They also report that among the top income earners, the largest increase in share could be attributed to the top one-fifth of one percent. This fact, they assert, “casts doubt on the view that the factors responsible for the increase in reported incomes among high-income taxpayers, especially in the 1986-1988 period, are the same factors that were responsible for the widening of the wage distribution over a longer time period.” (p. 161) Rather, they argue, “it reflect[s] other factors including a tax-induced change in the incentives that high-income households face for reporting taxable income.” (p. 170).

It is well known that there are serious problems with comparing cross-sectional slices of income distributions, because it entails comparing different groups of households across years. The potential hazards of inferring behavioral response from comparing the behavior of two distinct groups of taxpayers can be mitigated by analyzing longitudinal, or panel, data on an unchanging set of taxpayers. Thus, analysis of panel data characterized the next wave of investigations of the taxable income elasticity.

Feldstein (1995a) investigates the high-income response to the Tax Reform Act of 1986 (TRA86) using tax return panel data that follows the same set of taxpayers from 1979 to 1988. Feldstein analyzes married couples for whom both 1985 and 1988 tax returns were available. He groups taxpayers by their 1985 marginal tax rate, calculates

this period. They conclude that changes in tax rates appear to be an important determinant of the income growth of the late 1980's, although the results are somewhat sensitive to the choice of sample and weighting. Their central estimate of the net-of-tax price elasticity is 0.6.

Moffitt and Wilhelm (1998) also investigate behavioral response to TRA86, but they make use of panel data from the 1983 and 1989 Survey of Consumer Finances. Because of data limitations, they study an income concept closer to AGI than to taxable income. They replicate the sizable tax elasticities for AGI found by Feldstein, and conclude that the elasticities arise from the behavior of the extreme upper tail of the income distribution.

All of the studies discussed so far focused on the effect of ERTA or TRA86 on taxpayer behavior. For reasons elaborated on below, study of tax changes which increased tax rates would be especially helpful. Carroll (1998) uses a panel of taxpayers spanning the tax increases of the 1990 and 1993 Acts to consider to what extent taxpayers change their reported incomes in response to changes in tax rates. The tax rate response is identified by comparing the change of higher income taxpayers to those of moderate income taxpayers in the face of the change in the relative taxation of these two groups, controlling for many non-tax factors such as the taxpayer's age, occupation, and industry. Carroll concludes that the taxable income price elasticity is approximately 0.4, smaller than the earlier studies of the tax reductions in the 1980's, but nevertheless a response that is positive and significantly different from zero.

There are staggering policy implications to whether the taxable income elasticity is 0.4, 1.8, something in between, or something outside this range. Using an elasticity of 1.04, the lowest from his earlier paper, Feldstein (1995b) calculates the deadweight loss to be 30 percent of the revenue raised by the personal income tax, estimates that a marginal increase in revenue achieved by a proportional raise in all personal tax rates would generate a deadweight loss of two dollars per incremental dollar of revenue raised,

Stiglitz (1980) show that the optimal linear income tax rate, which is the summary measure of progressivity, is inversely proportional to the compensated labor supply elasticity with respect to the net-of-tax wage rate. In the model with only leisure and one composite consumption good, taxable income is equal to labor income and, with pre-tax wage rates assumed to be fixed, the elasticity of taxable income is equal to the elasticity of labor supply.

Now, we enrich the consumer choice problem by allowing multiple goods, some set of which are not taxable, perhaps because expenditure on them is deducted from taxable income. In this case the expression for the optimal marginal tax rate remains essentially unchanged, but labor income is replaced by taxable income and the relevant elasticity becomes the compensated elasticity of taxable income with respect to the net-of-tax rate $(1 - t)$. As Slemrod and Yitzhaki (1996) discuss, this logic applies not only to substitution from taxed to untaxed goods, but also to avoidance and evasion. In all these cases, taxpayers will undertake behavior that reduces tax liability up to the point that the marginal cost equals the marginal tax saving. In the real substitution case, the cost is an otherwise unattractive bundle of goods. With avoidance, the cost may be expenditures on professional assistance. With evasion, the cost may be exposure to the uncertainty of an audit and any attendant penalties for detected evasion.

Thus, the compensated elasticity of taxable income accounts for all of the tax-induced responses that have a social cost, and for this reason is superior to a narrow focus on the labor supply elasticity. There are, though, many caveats to its use in normative analysis. I turn next to this topic.

2.1.1. Comprehensive Definition of Taxable Income

When higher taxes induce individuals to shift away from activities that increase tax liability, what do they shift toward? In the simple model, they shift toward completely untaxed activities such as leisure. In practice, people may shift toward

the extent that tax increases raise tax payments outside of the narrow tax base under study, the welfare cost per dollar of revenue raised is lower than would otherwise be calculated. The general indicator of excess burden is the difference between the revenue raised assuming no behavioral response and the revenue raised with behavioral response. In narrow cases (i.e., in a static model with only labor income taxes), that is well captured by the taxable income elasticity. In other cases (i.e., with more than one tax base, or a multi-period model), the taxable income elasticity is less appropriate.

2.1.2. The Taxable Income Elasticity as a Policy Instrument

In the standard model, where the focus is on the extent to which taxes cause people to substitute toward untaxed leisure, the behavioral elasticity depends entirely on people's preferences, in particular the degree of substitutability between the taxed and untaxed good. It is well understood that the elasticity of substitution need not be the same for all people, or even for the same person at different levels of income or at different consumption baskets; however, for analytical convenience it is often assumed there is a single, constant elasticity.

As already discussed, the leakage resulting from a tax increase also arises from such things as increases in tax evasion, or the use of tax shelters, in business reorganizations, and so on. What characterizes all of these responses is that the extent of response is itself subject to government control. The evasion elasticity will depend on the enforcement system in place, the tax shelter response will depend on the extent of passive loss limitations and accelerated depreciation, and the extent of business reorganization will depend on how tightly drawn are the rules that govern, for example, qualifications as a Subchapter S corporation. The response of taxable capital gains realizations depends on the carryover of basis at death.

What this means is that the characterization of an optimal tax system must include not only the tax rate structure but myriad other instruments that subsume, but are not

This is the logic adapted by Feldstein (1997), who argues that, if the taxable income elasticity is 1.04, a public good should be provided only if its benefit-cost ratio exceeds 2.65. This reasoning is, however, based on the results from representative consumer models in which distributional issues are absent. In these models, lump-sum taxes are ruled out by assumption because otherwise the problem would become trivial: that is the most efficient way to raise revenue. In richer models of many persons, uniform lump-sum taxes are available, but for redistributive reasons are not used exclusively. As Wilson (1991) argues, if poll-tax financing is available and the government is optimizing over available taxes, then it must be the case that the relatively large deadweight loss associated with distortionary finance is offset by desirable equity advantages at the margin. Mirrlees (1994, p. 226) succinctly summarizes the point as follows: "Although it is optimal to have distortionary taxation, this is for distributional reasons, and does not imply that marginal increases in the public expenditure requirement would or should increase rather than decrease 'aggregate distortion.'"

Kaplow (1996) extends this argument to situations away from the optimum. The point is that, although higher marginal tax rates are necessary for increasing tax progressivity, they are not necessary for financing additional public goods.

3. Empirical Issues

3.1. Controlling for Underlying Trends

In both ERTA and TRA86 the largest rate cuts applied to the highest tax brackets, so that a positive taxable income elasticity implied larger increases in reported taxable income among affluent Americans, and thus an increase in the apparent inequality of income. One obvious methodological problem is to separate out the influence of the tax changes from non-tax factors affecting the steadily increasing dispersion of (taxable) income. A voluminous literature (much of it summarized in Levy and Murnane (1992)) has documented an increase in inequality in the U.S.. Karoly (1994) presents Census

earning inequality between the 90th and 10th percentiles, and some macroeconomic variables that might differentially influence incomes at different percentiles. Based on the evidence up to 1985, the “demand-side,” earnings inequality variable is the dominant explanation. However, the regression using data up to 1990 assigns almost all the increase in the high-income share of AGI to be associated with the decline in the top tax rate on wage income. These findings imply one of two things: (i) that in the mid-1980s there was a break in the relationship between the non-tax factors affected the top 0.5% of the population and the factors affecting earnings dispersion more generally, or (ii) that the increase in the taxable income of the high-income families was primarily tax-driven. I suspect that the second explanation applies, although Fullerton (1996) argues that, because TRA86 involved extensive tax definition as well as rate changes, it is difficult to confidently conclude that the change in rates was the critical factor.

Another post-TRA86 empirical strategy was to pray for tax increases on the rich, in the hope that whatever biases were creeping into estimates of the taxable income elasticity based on the 1981 and 1986 tax cut experience would be offset in analyses of tax increases. Of course, these prayers were answered in the tax increases of 1990 and 1993, and Carroll (1998) has emphasized the possibility that his lower estimates of the taxable income elasticity are at least partly due to this offsetting bias.

Another empirical strategy used by both Auten and Carroll (1998) and Carroll (1998) is to include variables that measure the non-tax factors that might have differentially affected income growth over the period spanning the tax change. Dummy variables for Census regions are an uncontroversial example. More problematic is the use of dummy variables for occupation. The idea is that a differing occupational mix may explain why a given income group may have experienced a different percentage change in taxable income. As Auten and Carroll discuss, this is a sensible strategy to the extent that the dummy variables account for relative increases in labor productivity due to technological advances or higher demand due to more global integration. However, to

much of the focus of this literature is on high-income individuals whose marginal tax rate is not in danger of falling below the top.

The empirical research in this area has adopted a number of different approaches to this problem. Feldstein (1995) groups taxpayers by their pre-TRA86 marginal tax rates. Auten and Carroll (1998) instrument for the difference in logged net-of-tax rates by constructing a taxpayer's 1989 tax rate using actual 1985 taxable income inflated to 1989 levels and under 1989 tax law; this procedure, they argue, eliminates the effect on tax prices of taxable income due to tax-induced behavioral responses. Carroll (1998) uses as an instrument the constant tax law last-dollar marginal tax rate evaluated at the average taxable income over the seven-year period considered. Moffitt and Wilhelm (1998) investigate several different instruments, including education and occupation, and conclude that those which are successful in discriminating between the high-income group and the balance of the population yield similarly sizable tax elasticities.

3.2.2. What is the True Effective Tax Rate?

The taxable income studies to date assume that the tax rate that affects incentives can be summarized by the marginal individual income tax rate. Taxpayers in special tax situations, such as those subject to the alternative minimum tax, are generally excluded from analysis. Even with these deletions, the true effective marginal tax rate can vary substantially from the statutory rate. It is well known that they are affected by such things as deduction phaseouts, but this can also occur due, for example, to the presence of avoidance or evasion, the interaction between business and personal taxation for business owners and principals and the use of stock options for compensation. This means that the analysis of the response to a change in the tax rate is a simplification the implications of which may vary across tax regimes. The magnitude of any bias introduced is not known.

reducing their tax burdens. This implies that estimates based on an assumption of a single elasticity will produce a weighted average of taxpayers' elasticities, where the elasticities of taxpayer groups that experience a higher variation in the change in net-of-tax-rate term receive higher weight. In fact, there is no assurance that the estimated elasticity will lie within the bounds of the true sub-group elasticities.

Auten and Carroll (1998) deal with this possibility by estimating separate elasticities by occupation category. Not surprisingly, they find the highest elasticities for people categorized as "investors," an elasticity of 2.9, and for those categorized as self-employed, with an elasticity of 1.65.

3.5. Which Measure of Taxable Income?

Another set of methodological issues arises in the analysis of tax policies such as TRA86, which involve substantial changes in the definition of taxable income. First of all, using a concurrent definition of taxable income will confound tax-induced changes in behavior with definitional changes. For example, the base broadening of TRA86 would, ceteris paribus, show taxable incomes to have increased, perhaps to different degrees at different income levels. This is why Slemrod (1996) adjusted downward the post-TRA86 Feenberg-Poterba (1993) measures of the high-income shares; otherwise, the change from including 40% of capital gains in taxable income to 100% would increase the measured high-income share even in the absence of any behavioral response.

Researchers have been aware of this problem, and in response have attempted to use either a consistent pre- or post- definition. When the issue is deductions or credits, for data availability reasons it is easier to use the broader definition, because otherwise the investigator needs, but will not have, measures of deductions or credits that are not reported in the year with the broader base; the argument is reversed when new sources of income are added to the tax base. Because the former type of broadening was more

decrease in the net-of-tax rate from 1 to $(1-t_1)$. The response of L to the decline in tax rate from t_0 to t_1 probably understates its response when γ is constant. On the other hand, the response of the pre-reform base ($wL - C_2$) will probably overestimate the partial elasticity of L with respect to a change in t because the relative price of C_2 in terms of both C_1 and leisure increases. Using a consistent post-reform definition will produce a change in taxable income that is less than what is obtained using the pre-reform definition by the decline in C_2 .

An excellent example of this issue concerns interest deductions. TRA86 eliminated the deductibility of consumer interest, and Maki (1996) and others have noted that there was a large shift into still-deductible, and highly substitutable, home equity loans. Using the post-TRA86 definition will include in the measured taxable income change the decline in consumer interest, and cause a downward bias to the true change in taxable income from a change in t with no other change in relative price.

Although they are not consumption goods *per se*, the treatment of realized capital gains with respect to TRA86 is another important illustration of this issue. Recall that at the same time TRA86 dropped the top tax rate from 50% to 28%, it increased the fraction of long-term capital gains included in taxable income from 40% to 100% so, ignoring other provisions in the law, the effective tax rate rose from 20% to 28%. As already noted, using a concurrent definition of taxable income would confuse behavioral response with definitional change. But, as the earlier argument suggests, the choice of which consistent definition is used matters -- using the post-reform definition (100% inclusion) will certainly produce lower estimates of the taxable income elasticity (not to mention difficult timing issues), and neither will generate unbiased estimates of the taxable income elasticity with respect to a change in the tax rate on ordinary, non-capital gains, income holding constant the relative price of capital gains and ordinary income. In practice, both Feldstein (1995) and Auten and Carroll (1998) focus on measures of taxable income which exclude capital gains entirely -- they are consistent across years,

was almost completely recouped by 1995. Goolsbee (1998) argues that an important factor in the short-run response was a large increase in 1992 in the exercise of stock options by high-income executives; he concludes that the short-run elasticity of realized, taxable compensation with respect to the tax increase of 1993 was almost ten times higher than the long-run elasticity.

When a future tax change is anticipated, the behavioral response and attendant revenue changes before the change are relevant for assessing the welfare implications. Whether a tax change is perceived to be permanent or not will also affect the interpretation of the measured elasticity of response. If, say, a tax cut is perceived to be temporary, we will observe the response to a reduction not only in the relative price of taxed versus untaxed activities in the year of the cut, but also to a reduction in the relative price of taxed activities that year versus taxed activities in the future, so that the measured response is likely to be higher than would apply to a permanent tax change. This is another example of how in practice a tax change can affect more than one relative price. With respect to long-term decisions, the response to a tax change perceived to be temporary will often be less than to one perceived to be permanent.

4. Conclusions

Taxes trigger a host of behavioral responses designed to minimize the burden on the individual. In the absence of externalities or other market failure, and putting aside income effects, all such responses are sources of inefficiency, whether they take the form of reduced labor supply, increased charitable contributions, increased expenditures for tax professionals, or a different form of business organization, and thus they add to the burden of taxes from society's perspective. Because in principle a taxable income elasticity can capture all of these responses, it holds the promise of more accurately summarizing the marginal efficiency cost of taxation than a narrower measure of taxpayer response such as the labor supply elasticity, and therefore is a worthy topic of

elasticity, emphasizing the point that it is certainly not an immutable parameter that is constant over time.

Although the taxable income elasticity can be useful in summarizing the welfare cost of raising tax rates, I believe that understanding the anatomy of the behavioral response remains an important research desideratum. Recent research (especially Moffitt and Wilhelm, 1998) suggests that the recent surge in the taxable income of high-income individuals is not primarily due to labor supply increases, but exactly what the source is remains a puzzle, discussed but not disposed of by Slemrod (1996) and Sammartino and Weiner (1997). Understanding the precise nature of the response can provide clues to what extent the responses represent income shifting, suggesting where to look to track down revenue offsets. This understanding can also be important in the context of the literature on macroeconomic growth effects, where it is often argued that some activities (such as labor supply) have positive externalities; others (such as tax advice) almost certainly do not.

I conclude that the recent attention placed on the elasticity of taxable income is, on balance, a good thing. It is so because it highlights the fact that most of the behavioral response to taxation does not consist of real substitution responses, such as labor supply changes, but rather retiming of transactions, shifting of income from one base to another, reshuffling of financial transactions, and so on. All of these behaviors have social cost, and are worthy of scholarly analysis. They are, though, a slightly different kettle of fish than real substitution responses, and require careful attention to such matters as revenue offsets and to the fact that the elasticity of the tax base is a matter of government policy rather than a constant given by Nature.

Goolsbee, Austan. "It's Not About the Money: Why Natural Experiments Don't Work on the Rich." OTPR Working Paper No. 98-7. Ann Arbor: Office of Tax Policy Research, University of Michigan, 1998.

Gordon, Roger, and Joel Slemrod. "Are 'Real' Responses to Taxes Simply Income Shifting Between Corporate and Personal Tax Bases?" OTPR Working Paper No. 98-9. Ann Arbor: Office of Tax Policy Research, University of Michigan, 1998.

Kaplow, Louis. "The Optimal Supply of Public Goods and the Distortionary Cost of Taxation." *National Tax Journal* 49 No. 4 (December, 1996): 513-33.

Karoly, Lynn. "Trends in Income Inequality: The Impact and Implications for Tax Policy." In *Tax Progressivity and Income Inequality*, edited by Joel Slemrod. Cambridge: Cambridge University Press, 1994.

Levy, Frank, and Richard Murnane. "U.S. Earnings Levels and Earnings Inequality: A Review of Recent Trends and Proposed Explanations." *Journal of Economic Literature* 30 No. 3 (September, 1992): 1333-81.

Lindsey, Lawrence. "Estimating the Behavioral Responses of Taxpayers to Changes in Tax Rates: 1982-1984. With Implications for the Revenue-Maximizing Tax Rate." *Journal of Public Economics* 33 (1987): 173-206.

Maki, Dean M. "Portfolio Shuffling and Tax Reform." *National Tax Journal* 49 No. 3 (September, 1996): 317-30.

Mirrlees, James A. (1994), "Optimal Taxation and Government Finance." In *Modern Public Finance* edited by John M. Quigley and Eugene Smolensky, 213-31. Cambridge, MA: Harvard University Press, 1994.

Moffitt, Robert, and Mark Wilhelm. "Taxation and the Labor Supply Decisions of the Affluent." OTPR Working Paper No. 98-8. Ann Arbor: Office of Tax Policy Research, University of Michigan, 1998.

Okun, Arthur M. *Equality and Efficiency: The Big Tradeoff*. Washington, D.C.: The Brookings Institution Press, 1975.

Parcell, Ann D. "Income Shifting in Response to Higher Tax Rates: The Effects of OBRA93." Office of Tax Analysis, U.S. Department of the Treasury, Washington, D.C.

Sammartino, Frank, and David Weiner. "Recent Evidence on Taxpayers' Response to the Rate Increase of the 1990's." *National Tax Journal* 50 No. 3 (September, 1997): 683-705.

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